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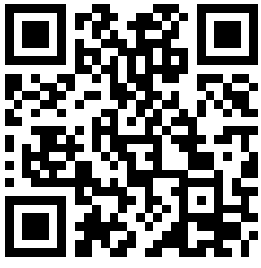
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Lectures

ON SOME

IMPORTANT POINTS IN CONNEXION WITH THE

SURGERY OF THE URINARY ORGANS.

Delivered at the Royal College of Surgeons,

BY SIR HENRY THOMPSON, F.R.C.S.,

SURGEON EXTRAORDINARY TO HIS MAJESTY THE KING OF THE BELGIANS, PROFESSOR OF SURGERY AND PATHOLOGY TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL, EMERITUS PROFESSOR OF CLINICAL SURGERY, ETC.

LECTURE IV.

Impaired Vesical Function: its Various Forms and Consequences.

MR. PRESIDENT AND GENTLEMEN,—I have selected the subject embodied in the following title, "Impaired Vesical Function and its Results," because I venture to think that it is one which has not received the degree of attention from the profession which its importance demands. I feel little doubt you will concede that such an opinion is not likely to be expressed without sufficient warrant and due consideration. It is, however, a fact, which many years' intercourse with my brethren by way of consultation, not only here but abroad, has brought very prominently under my notice, that impaired vesical function is, among the many cases brought to me for solution, a morbid condition which is the cause of symptoms more frequently overlooked than any other in the range of urinary pathology.

[The lecturer cited various illustrations in support of this statement, and proceeded]:—

Let it be understood at the outset that the cases now alluded to do not necessarily belong to that large category in which hypertrophied prostate is the mechanical obstacle to the due performance of vesical function, and the indications of which are pretty generally, although not always, recognised. Prostatic change accounts for incompetency on the part of the bladder in a large proportion of cases, but it is by no means the cause in all. There are, indeed, numerous examples of impaired function due to causes in which disease of the prostate has no share. But before proceeding further we will inquire what are the natural functions of the bladder regarded as a reservoir of urine. The first function of the bladder is its ability to retain a considerable quantity of urine without occasioning any inconvenience to the individual, and without arousing in him any consciousness of its presence; and the mechanical attribute essential to the healthy organ is large extensibility of all its coats. The second function of the bladder is the ability to empty itself easily and completely at the will of the individual; and in order to accomplish this the coats of the reservoir must possess elasticity, which is a mechanical attribute, and also contractility, which is to be regarded as a "vital" one.

[The minute anatomy of the structures constituting the walls of the bladder was then briefly sketched, and their actions in relation to function described. The lecturer then continued]:—

It will now become sufficiently obvious how strong is the probability that various morbid conditions may have the effect of impairing the two vesical functions—viz., the one, of expanding, to retain a quantity of urine; the other, of contracting, to expel the whole of it—and that so delicate an apparatus may be deranged by more than one form of disease. And such is the fact. Regarding the views now generally received, I think that three chief modes by which impairment of the vesical retaining function takes place are recognised, and may be represented as designating three classes as follows:—

Class 1.—Enlargement of growth from the prostate, obstructing, more or less completely, the urethra at its entrance to the bladder, and so presenting an obstacle which the expulsive power of the bladder and associated muscles cannot surmount.

Class 2.—Loss of nerve-power to the muscles of the organ, constituting paralysis.

Class 3.—"Atony" of the structures of the bladder, invalidating their action, a term of doubtful import, and ordinarily so employed as to comprehend all other forms of vesical incompetence not designated by Classes 1 and 2.

The first class, constituted by prostatic hypertrophy and outgrowth, is familiar to all surgeons; and the frequency with which this condition impairs the vesical functions is sufficiently obvious. Nevertheless, its proneness to occasion habitual retention of urine is more frequently overlooked or disregarded than it ought to be.

It is not my intention to devote much time to this familiar topic, but in connexion with it there is a fact having an important bearing on practice to which I desire to call attention. An elderly man, who has been for some time annoyed with unduly frequent micturition, seeks advice and is treated by his medical attendant, who at first naturally endeavours to improve the general health, and does so, probably with some slight advantage to the local trouble complained of. Subsequently he suspects prostatic enlargement, examines his patient by rectum, and, finding no trace of it there, concludes that it is absent. Nevertheless, the most complete form of organic occlusion at the neck of the bladder may be present, giving rise to the symptoms complained of. There is little doubt that a very small prominence at the point named is not seldom the occasion of absolute incompetence on the part of the patient to relieve his bladder. While the effect of a very large hypertrophy is generally a modification more or less considerable of that function, the very small growth often arrests it altogether. The existence of the little eminence is not demonstrable during life by any means that I know of, although its presence may be suspected, and on good grounds be regarded, as probable. Now, the morbid condition before us is one which possesses an interest not merely for the collector of varied specimens for pathological classification, but also for the practical surgeon who aims at restoring a lost function, in this case one of extreme importance. It is notorious that during the present century, if not before, operations have been devised, chiefly by foreign surgeons, for dividing prostatic enlargements from the neck of the bladder by cutting instruments introduced by way of the urethra. These operations, it is quite certain, have not been attended with much success, although their partisans claim to have achieved excellent results by certain methods. Nevertheless, I do not hesitate to make this statement, because nothing would be easier than to produce persons who, having lost for years the function of micturition, and having depended solely upon the catheter, had regained their natural power as the result of operation; and no proof would be so strikingly conclusive, as the production of one such patient. Such evidence, however, has not been forthcoming; individuals have been met with who, suffering from retention due to some temporary although chronic cause, were submitted to operation, and the results have been claimed as examples of successful treatment by operation on an hypertrophied prostate.

I shall not discuss this topic at length, but having recently had the opportunity of investigating the latest proposal for thus operating, in the hands of my friend Professor Buttini, the accomplished professor of surgery at Pavia, I shall report the result of my observations in the following remarks. First, there is no ground for believing that any section or resection applied to cases of the enlarged prostate ordinarily met with can be resorted to with fair chances of success for restoring the lost function of micturition to the subject of it. On the other hand, any incisions or resections in a considerably hypertrophied prostate, which are adequate for the establishment of a permanently patent passage, must be regarded as extremely dangerous. Secondly, whether the obstruction be considerable, or whether it consist only of the little outgrowth which has just been described, when absolute retention has existed for several years, it is highly improbable that any operation will restore the natural power and enable the patient to dispense with the habitual use of the catheter. Thirdly, there is reason to believe that, in respect of the little outgrowth just named, should it be dealt with during the early stage of its existence, a division of the tissues may overcome the obstruction, and restore wholly or partially the function of the bladder. But Professor Buttini divides such an obstruction not with the knife, but by means of the electric cautery, considering the latter a safer and more efficient agent than the cutting instruments which he and others formerly employed for the purpose. Limited to the conditions named, I can conceive

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that the operation may be a legitimate one, but circumstances so conditioned are not of frequent occurrence, and, when compared with those which characterise the cases ordinarily met with, are very exceptional. Professor Bottini's proposal differs widely from those methods which had been previously advocated as applicable to ordinary cases of hypertrophy, without the special discrimination or qualifications made above. Now, taking into consideration the degree of uncertainty which must exist as to the exact physical condition of the neck of the bladder in these cases, it appears to me that a more certain diagnosis, and therefore a more accurate division, if ever deemed necessary, might be achieved by the small perineal opening adopted for digital exploration and described in a preceding lecture. The patient, No. 41, in the series of cases there presented, offers an example closely resembling the condition described. I incised the neck of the bladder for him on account of its extreme rigidity, the only abnormal sign I could discover, and the relief it afforded was very marked, and it has been permanent.

In relation to the second class of cases—viz., those in which impaired or lost vesical function is manifestly due to an injured or diseased nerve-centre,—there is no occasion for discussion here: they are mentioned chiefly in order to define the residue which after them will remain for consideration. The examples of this condition, which occur from sudden injury to the spine, and from advanced and obvious disease of it, are sufficiently familiar to us all. It is necessary, however, to be watchful for slight defects in the supply of nerve-power impairing the vesical function, and usually associated with other slight local signs, indicating that chronic change is taking place in some part of the nervous system. Thus, a man, at or under middle age, states that for some time past the act of relieving his bladder has gradually required greater effort for its performance than formerly, so gradually that he does not know when he first noticed any change; that the stream has become habitually small; sometimes that the frequency has increased, sometimes the reverse, for he feels no want to pass it; generally he feels no pain, the urine is healthy in appearance, and by taste. The stream, moreover, does not cease definitely and unhesitatingly as in health, for after a little waiting and repeated effort, more urine can always be expelled, and the act may be considerably prolonged before the sense of having finished arrives, which, perhaps, after all, is not experienced. The local sensibility is diminished, for the consciousness of passing a stream is slight, a situation differing greatly from that which pertains to the small stream of stricture. Examination shows a healthy urethra, and can detect no enlargement or other physical deviation from the normal state of the bladder, prostate, and rectum. There is no history of over-distension, but the catheter finds two or three ounces habitually remaining in the bladder after a prolonged attempt to empty it. No other sign of a lesion in the nervous system is discoverable. Such a condition may turn out to be the beginning of a very grave history. It is possible that it may be the first indication of that affection of the cord known as tabes dorsalis, since that malady, in a few exceptional instances, is manifested by bladder symptoms at the outset, which appear at the close of the series in the usual order of its development long after the gait and the vision have been effected. As Dr. Buzzard has pointed out, the absence of the patellar tendon-reflex in such a case would go far to indicate that it was an example of tabes, a point relative to which I am seeking clinical facts.

Having thus eliminated from the list of causes of impaired function, hypertrophy of the prostate in all its forms, and all those of impaired nervous supply, we have now to consider what are the remaining conditions which occur to render the bladder incapable of contracting sufficiently to expel all or any of its fluid contents. Certain of these conditions are perhaps less commonly recognised than those just named, and come thus to be regarded as due to an affection termed atony of the bladder. This term has, in fact, become a convenient one, rather for the purpose of indicating that any given case does not belong to either of the two chief categories already mentioned than of affirming the pathological state of the organ to be that which the word "atony" implies.

The first condition to be noticed is chronic inflammation affecting the tissues beneath or outside the mucous membrane of the bladder. And it is worthy of remark that an inflammation affecting the mucous membrane only, impairs the function of the organ in a manner exactly contrary to that which is produced by the deeper inflammation referred to. That very common affection, ordinary cystitis, diminishes greatly, as long as it is present, the capacity of the bladder as a reservoir by impairing its first function, that of extensibility. Disturbance or movement of an inflamed mucous membrane excites pain, and the unfolding and opening out of the inner coat, necessarily produced by entrance of urine into the bladder, soon causes uneasiness, and this is instinctively avoided by repeated acts of micturition which relieve the patient. Such attacks, as a rule, pass off and leave the bladder almost, if not quite, as complete in its functions as before. But when repeated attacks have taken place or when prolonged inflammation has occasioned extension of the morbid action to the submucous tissue and the muscular coat, and if this has become also somewhat hypertrophied, a thickened condition of the walls of the bladder results in which the two functions of extending and of contracting on the fluid contents are imperfectly exercised. I have verified a few examples of this conjunction of inflammation and hypertrophy affecting the walls of the bladder to such an extent as almost to destroy their mobility, and at the same time to diminish greatly the capacity of the organ. The result has been inability to pass more than a few drachms of urine naturally, while the portion retained also amounts in quantity to very little more, and seems hardly to repay the patient for using the catheter, which, nevertheless, it is highly desirable that he should do three or four times daily. In such circumstances urine is passed every half-hour or so, and the interval, after using the catheter, scarcely reaches perhaps an hour.

Another cause of impaired function of the bladder is chronic inflammation of the prostate and neck of the bladder, usually following gonorrhœa. After aggravated and long-continued inflammation of the urethra, usually due to want of ordinary care, or to repeated exposure to fresh infection with irregular habits, especially to abuse of instruments, inflammation of the prostate occurs, and gives rise to a more or less persistent induration and swelling of the organ. The nature of this enlargement is, of course, wholly unrelated to that which constitutes hypertrophy; but its effect on the function of the bladder in regard of ability to empty itself may be to some extent the same. Although the quantity of urine habitually retained in consequence of this condition is not large, the troublesome symptoms will persist, and tend to increase, if the fact of vesical incompetence is not recognised and met by an adequate use of the catheter. One of the most common forms of muco-purulent urine with unduly frequent micturition, commonly called "catarrh of the bladder," met with before and about middle age, originates in this manner; and the essential cause of the "catarrh" is very frequently overlooked.

Again, failure to empty the bladder sometimes accompanies the presence of calculus there, and may persist for a time after the calculus has been successfully removed by operation. When calculus produces much pain in micturition—and pain as a symptom of calculus varies greatly in different cases—the patient sometimes learns instinctively, and quite unconsciously, to check the act of micturition before the bladder is empty, in order to prevent the severe smarting which occurs when, all the urine having been evacuated, the calculus remains in direct contact with the sensitive lining of the bladder. A habit of never quite emptying the organ is thus acquired, and persists subsequently to the removal of the stone by lithotrity, especially if the bladder remains tender and sensitive after the operation. But when lithotomy has been resorted to, and consequently the urine issues for several days by a perineal opening, the normal function gradually returns with the healing and closing of the wound, and the habit does not recur. The circumstance in question brings us to the consideration of a more important one—namely, the effect of lithotrity itself in impairing the vesical function, the two subjects being thus somewhat allied.

[This and several other causes of inability to empty the bladder by the natural efforts were dwelt upon at length. Then the subject of atony pure and simple was considered, and its nature and causes described, with numerous illustrations by preparations from the College museum. The lecturer then continued]:—

It follows from all the preceding considerations that our chief reliance for successful treatment in all the forms of impaired vesical function which give rise to retained urine is the habitual use of the catheter. And I must add that the remedy is not only most valuable, but that it is for the most part indispensable, and the sooner it is employed in the great majority of cases the greater is the chance of ultimate recovery, in addition to the immediate relief which the

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instrument affords. It is the frequent failure to perceive this fact, especially in relation with the less obvious forms of incompetence, which has led, as I said at the outset, to my choice of the subject. The failure is due not only to the oversight of the pathological condition which demands mechanical aid, but to the strong and very natural disinclination which so widely exists to the employment of instruments. I had almost added to the prejudice which is entertained against them; and I fear that this also must be admitted. I cannot resist the temptation to cite in support of this statement an illustration which occurs while writing these very lines, and with an opportuneness which is remarkable, being in itself so completely appropriate to the subject. A gentleman from abroad, sixty-four years of age, called on me yesterday for the first time, to consult me after two years of continuous troubles from frequency of micturition, muco-purulent urine, the inevitable "catarrh," as it is termed, for which during that time he had been treated, notwithstanding which he had been steadily getting worse throughout. My first inquiry after hearing his story was, "Has a catheter ever been used?" The reply was, "No, indeed; may old friend and adviser," giving the name of a well-known foreign physician, "has always said, 'Whatever you do, never permit a catheter to be used; it is a machine which will create for you a worse malady than that which you already have.'" Such is the type of the answers I am accustomed to receive from foreign patients, and occasionally from my own countrymen.

The first sentiment which arises in my mind is astonishment that so grave a responsibility should be thus readily assumed by him who gives this counsel. Nevertheless, the frequency and the confidence with which it is tendered are very great; and I am bound to say that it has, within my personal knowledge, been the cause of many a premature and painful death. For when such advice is followed, the almost necessary, indeed the most common, result is that the patient, after much suffering and long endurance, becomes at last affected with complete retention of urine, for which a catheter *must* now be passed for the temporary mitigation of his tortures, and to prevent immediate or impending death. But the catheter is at this crisis not employed in any sense for the purpose of treating the original malady, as at first advised, and for which such relief has come too late, and ere long the patient sinks. The slender consolation at least remains, that the last few days of his life were rendered tranquil and comparatively painless by regular instrumental relief. Nevertheless, one almost invariably hears that the original adviser vaunts his foresight, and cites the catastrophe as a fresh warning against the catheter, which—as he asserts, almost, indeed, with an air of triumph—"was so soon followed by a fatal result." Well, terribly unjust as this is, and hard as it is to bear, it must be avowed that the dangerous and unwarrantable aversion to the instrument in many cases has not arisen without some sort of warrant from past experience in relation to catheterism; and this is the moral of my story, the facts of which are not exaggerated, and are such as I myself have, in varied form, but too often encountered. The surgical practice, at all events, which has preceded our time was not marked, in regard of the use of the catheter, by that gentleness and care, and by that choice of unirritating instruments, the value of which is now becoming recognised. The rigid metal catheters formerly adopted, together with the method of passing them, often studiously designed to exhibit the possession of rare dexterity, as indeed expressed by the very term 'tour de maître' used to denote it by the French — and mostly due to pretentious affectation — have in time past caused probably as much mischief as benefit to the subjects of it. These fashions have, to a great extent, passed away; but the popular traditions and the popular distrust of instruments will long remain. The rule for the student's guidance which I have long held to be imperative, and the importance of which I have reiterated, and now again repeat, may thus be stated:—The use of the catheter is in itself, to some extent, an evil; a very slight one if properly conducted, capable of becoming considerable in careless or unwise hands. A catheter is, therefore, only to be employed when the evil which is to be removed by its means may be regarded as more grave than that which is incurred by using the instrument; and such conditions as these are daily presented in practice. Let, then, every instrument employed be that which can be most easily passed, and is made of the least irritating material; always of course consistently with the efficient attainment of the object in view. Thus metallic or rigid instruments, as a rule, should only be used when those which are soft and flexible have failed; and for whatever purpose they should not be larger than the needs of each case demand. By such gentle treatment a very considerable improvement in most cases is certainly attainable; and in the course of time the greatly exaggerated antipathy which widely exists against the use of instrumental treatment in the bladder will gradually but certainly disappear.

I have one more caution to utter in regard of habitual catheterism for those elderly patients whose circumstances have been above referred to, which is of great importance. When the bladder has for a long period of time been overdistended—the patient's condition having been overlooked for months, or even for years, in consequence perhaps of catheterism having been forbidden—it is, at this advanced period of the case, a serious matter to resort to it. Rashly undertaken, great as is the relief at first experienced, symptoms of fever—"urinary fever," as it is, I think, properly termed — often appear in a few days; cystitis occurs, catheterism is required more frequently, the urine becomes highly purulent, the powers of life feeble, the tongue dry, nourishment is refused, and the patient sinks—usually in about three or four weeks from the first employment of the instrument. If an autopsy be made, almost invariably the ureters will be found dilated on one or both sides; one of the kidneys diminished in bulk and wasted, the other enlarged, inflamed, and perhaps the seat of numerous deposits of pus. It is said that such fatal histories following catheterism for long-continued distension of the bladder have occurred in individuals whose urinary organs, when examined after death, are found free from organic disease. Far be it from me to state that such a sequence of events is impossible; but it must be one of great rarity. No example has occurred within the range of my experience. When a patient whose vesical functions have been long impaired requires artificial relief, the best chance of saving him is to enjoin at once the recumbent position in a warm and equable temperature, usually in his bedroom, in order that the skin may act freely, and that no locomotion may be possible. The catheter should be used skilfully and with great gentleness; not at first emptying the bladder completely, but always removing the instrument when pain is felt, as it often is before that condition is reached; and it must be applied again as soon as relief is manifestly required. I can scarcely over-estimate the value of these precautions, nor advise too strongly the abstinence from movement and exposure of all kinds for a period of a few weeks in these particular cases. We may thus sometimes succeed in prolonging life, even at a very advanced term, and at the same time avoid the groundless but injurious opposition which is often manifested, as we have seen, to the use of the catheter; the want of which at an early period in the patient's history, and not the late recourse to it, has been the real cause of death in almost every one of the fatal cases described.

An Introductory Address

DELIVERED AT

THE CORK FEVER HOSPITAL,

At the opening of the Summer Session, May, 1884.

BY T. B. MORIARTY, A.B., M.D.,

SENIOR PHYSICIAN TO THE CORK FEVER HOSPITAL, AND PHYSICIAN TO HER MAJESTY'S PRISONS, CORK; RETIRED BRIGADE-SURGEON.

GENTLEMEN,—It will, I think, naturally occur to most of you whom I meet here for the first time that the duty of a specialist—for such we who are attached to a fever hospital must in a general way class ourselves—would be to tell you what you are to see in an institution of this kind, how you can in the quickest way learn what you will find useful in your calling, and how you will best profit by the instruction you will get here. From the outset let me impress you with the belief that if you study well, and carefully observe the outward symptoms of disease as you will see them here, you will be laying the groundwork of a good foundation, and be exercising a power of observation which is always the pass-

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port of a good physician in whatever part of the world you settle in. In the more general class of ailments, especially those of the chest, you will also derive some useful information in your study of fever here. Indeed, I do not know if a hospital of this kind would not be the best place to learn all that we can of practical medicine with the varying degrees of disease, for, as you will see by all the fever hospital reports, fever is a mixed disease, and has in its train bronchitis, pneumonia, pleuritis, renal degenerations, abdominal congestions, acute inflammation of the brain and its membranes, disease of the throat, heart complications—in a word, nearly every form of disease to which the human being is subject may be developed during a febrile attack. For all this we would require a larger hospital; but as regards fever cases themselves, you could not, when well marked, see a more helpless class than the stricken-down patient, who is wholly incapable of helping himself, and at times unconscious of what he is doing. For this reason clinical medicine cannot be as easily or as comfortably taught as it can be in a general hospital. Still, you have a right to expect to be taught a good deal of what you may not see in other places; but the amount of risk you run in contracting illness is not to be lightly overlooked, especially when we are to study a class of diseases which is universally admitted to be contagious and infectious. On entering this hospital, you will perhaps feel somewhat timid; and it is not for me to inculcate habits of carelessness, or put forward any views which would be likely to lead you to suppose that in an institution such as this there is an exemption from the danger of catching zymotic disease. This is not so; and all I can say towards encouraging you in your studies is that none of those students who have preceded you have contracted disease. The professional men around us watch us closely, but as yet it has not been proved that a single case of disease has originated from the attendance of the hospital staff.

Having come thus far, I will take you to the bedside of the patient. You will find him in bed suffering, as you may expect, from pains in the head, a general sense of malaise, thirst, a quick pulse and high temperature—at all events, a temperature of 100°, otherwise he would not be here. For convenience sake only we may as well begin to study the condition of the digestive system. You will find the tongue covered with a white thick coating, which gradually increases in thickness towards the back, and at times it will be blackish. The tongue is red at the point, and also enlarged, as you will observe by the marks left by the teeth when it rests on them. Another symptom which appears early is loss of appetite, and this is most constant in cases of typhus fever, so much so that we look upon the demand for food as the first good symptom of returning health. When sordes or incrustations appear about the mouth and teeth we know that we are in the second week of the disease. I mention this as it will indicate the stage of the fever. These sordes are an accumulation of epithelial débris, which are rendered black by desiccation, or, as some writers say, by an admixture of blood. Bilious vomiting, or vomiting merely of the contents of the stomach, is not an unusual occurrence during the first week of fever, and this condition for the most part indicates disease of an aggravated type. You will examine the abdomen to ascertain whether it is rounded or flat, and pressure may indicate the presence of meteorism, which usually points to a want of nervous tone in the coats of the intestines. The existence of meteorism should at all times be regarded as a bad symptom. Abdominal pains and tenderness will be found to accompany all cases associated with diarrhœa. Constipation is usually present at the commencement of the illness, but as a rule the stools are of a normal consistence and colour, and their alkalinity, when it does exist, is in all probability due to the presence of ammonia. Bloody stools are rare. You must not, however, overlook their significance, for they are the sign of a bad and serious complication, and not infrequently the immediate cause of death. Barallier has described some cases which were accompanied with excessive hæmorrhage, and it will be always well to bear in mind that melanotic stools are a concomitant of scurvy. Whatever is the cause, we usually find that from the first there is an increase in the quantity of the urinary secretion, the urine will be at one time clear or loaded with lithates, or thick and red from an admixture of phosphates. The urea is also increased, and Frerichs is of opinion that the head symptoms and the delirium are not so much dependent on inflammation of the brain or its membranes as on the circulation through the brain of carbonate of ammonia which has been caused by the conversion of urea. The amount of chlorides is lessened from the first, and albumen has at times been found to be present at an early stage of the disease, and Oppolzer states he has found it present in almost every case of typhus, a statement I cannot from various examinations fully coincide with, although supported by Johnson and Gull. You will also observe that there is a peculiar sickening nauseous cold smell from the bodies of almost every patient affected with fever. This too is the product of an ammoniacal secretion.

When you come to inquire into the morbid condition of the nervous and muscular system, you will find headache always complained of. It is one of the first and most constant symptoms; it is felt for the first week, and often lasts for a few days only. It usually ceases with the advent of delirium, or about the eighth day of the illness. When it disappears from the head it may be complained of in other parts of the body. I mention this as a point worthy of your consideration, for the pains are of a fugitive character, and simulate, and may readily be mistaken for, rheumatism. The forehead and temples are usually the seat of pain, which in character is described as dull, heavy, and darting. Vertigo may also exist, which will be indicated by a giddiness which increases with the progress of the disease, and is aggravated by a horizontal position.

As you walk through the wards you will see some patients lying as listless as a log of wood, with every sense blunted from the effects of the fever; others, again, will be raving from delirium, which will point to, what you will invariably find, a disordered condition of the mental faculties. The degree of delirium and mental aberration will measure the extent of the disease. In most cases towards the end of the first week, the mental faculties become blunted and confused. The patient lies senseless, or he may be very restless, and the nurse will tell you he rambles in his sleep. On the other hand, the delirium may not appear until the second week, or shortly before you would be expecting some signs of convalescence. The character of the delirium varies. Most commonly it is of a low type, indicative of nervous disturbance. The patient lies quietly in bed giving expression to incoherent remarks, such as would not be used by a man in health, or he is restless and irritable, or gives an incorrect reply to your inquiry as to how he is; when asked to protrude his tongue he may ask for a drink, or something to eat. A second form is that known as delirium tremens—the result of drink. In this case the patient is restless, and usually suffers from insomnia, or the want of sleep, or he is labouring under a delusion. The pulse is found to be quick and feeble, the action of the heart is weak, and there exists a trembling or shaking of the limbs and tongue. There is also a third form of delirium, in which there is little or no sleep at all (as you have seen in the case of that poor patient, McC——), with a constant rolling of the head from side to side, and with frequent attempts, as you have heard the nurse describe, to leave the bed. The heart's action is excited, the skin hot and dry, the conjunctivæ are congested, there is an intolerance of light, and the delirium is at times of a most violent nature. In this period attempts to commit suicide are not unfrequent, as is shown to have occurred during the history of the Black Assizes: "Some, leaving their beds in consequence of their pains, would beat their keepers or nurses, and drive them from their presence; others, like madmen, would rush through the streets and lanes, and some again would leap headlong into deep water." This delirium of fevers is a most interesting study, and unlike anything you will observe in the delirium attending other disease. You will also as you go through the wards find some patients with a slight cough, and others with a dusky countenance, without any cough at all; nay, more, when you inquire about the patient's condition, or if he is troubled with cough, you may be told he has none. The cough accompanying bronchitis is such as you will usually find, but the cough of pneumonia is by no means as symptomatic of this disease as you usually see it in congestion of the lungs; but on auscultation you will find the peculiar crepitation, probably deep seated, without the coexistence of cough. This condition is not so well understood, and some writers think that this is owing to the deep seat of the disease, which has not as yet been in communication with the larger bronchial tubes; or, again, it may be attributed to the feebleness of the respiration, which at times is of a peculiar nervous kind, and so weak as not to produce increased respiratory action. But whatever is the reason,

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you will find this condition frequently to exist, and for this reason I would advise you, whenever there is well-marked maculation, to examine for this condition. A patient has quite enough pain to contend with in fever without overlooking or disregarding serious complications, and these require to be treated as part of the disease. In consequence of increased temperature, thirst, and all the signs peculiar to febrile disease, one may easily overlook such complications; but bear in mind that you will only do your work well when you embrace every part of it as a duty. At no time should you treat lightly disease affecting the mucous surfaces, as it quickly produces embarrassed respiration, especially in diphtheria and malignant scarlatina.

The diseases we have alluded to, and their complications, which you will every day have an opportunity of seeing, must all be considered as belonging to the zymotic class. They are for the most part originated in and bred by filth and dirt, and as such with good measures of enforced sanitation should cease to contribute as largely as they do to increase our death-rate. The liability to disease exists in each of us, and only awaits until the proper time for its development has arrived. If this is so, and we doubt it not, you would be as likely to contract fever in your walks in life as you will here; nay more, if fever is an inbred poison, you will be as predisposed to contract fever in the wards of a well-ventilated hospital, as you will while sleeping in your own homes; and these remarks will apply with greater force to the home of the poor man.

The consideration of this question will lead us to a short inquiry of the germ theory of disease, which has now become a kind of household word amongst us. But it is only right that I should tell you that there are still some physicians who do not accept this theory, which has been created by the advance of sanitation. This theory assumes that many of the diseases which spread as epidemics are propagated by germs or spores, which produce disease when they meet with a suitable nidus, and soon after denote their existence by specific disturbances which characterise disease of this class. The advocates of this germ theory hold that those diseases which are known as zymotic are the result within the body of minute organisms which bear a resemblance to those which produce fermentation. These observations have been proved by facts and experiments which render them almost indisputable; and recent investigations have gone further, and shown that phthisis may be communicated by minute living organisms. In the case of two of the zymotic diseases—viz., cholera and enteric fever, and these are the most destructive of the entire class—it has been proved beyond doubt that water contaminated with sewage which has been infected by patients suffering from these diseases is capable of producing the same class of disease amongst those who drink the infected water. This is now so thoroughly recognised that the dread of epidemics is to some extent lessened by sanitary precautions; and a great deal more good would be done by introducing a pure water-supply. The one great question which will for the future engross the public mind is how infectious disease is spread. On this subject we can only remark that we must first of all look to our surroundings at home, next to what we eat and drink, and we must carefully distinguish between fancy and reality—in a word, we must go to the feeding ground of our supplies, and find out if the source is good and healthy, and then trace it to its destination. It may be well to go a little further and examine your homes, the method of cooking, and the water-supply, as well as the place in which the supply was kept before using. These remarks especially apply to one commodity—milk; for, if originally pure, it may be made infectious and the direct medium for the propagation of disease. This infection may be acquired by means of adulterations, or dirty vessels, or by being kept in a polluted atmosphere or in places where infection can be acquired. I could easily point out such sources, but my duty is to direct attention to them. When you have spent some time here you may find it really difficult to assign a reason why typhus should be the prevalent fever in this country, and more difficult still to say whether it depends on insanitary conditions or the habits and character of the people. We cannot, when everything is considered, attribute this disease to a density of population or crowded localities, for we rarely find this disease nowadays to prevail in gaols, and the dirty condition of some of those who go there is very loathsome. Whatever is the cause of fever, the best remedy to prevent its propagation will be found to exist in an early notification of its presence, and a close sanitary inspection of all dwellings and water-supply. Children in whose homes zymotic disease (by which we understand scarlet fever, small-pox, and measles) prevails should not be allowed to associate with young children in school, or the schoolroom will soon become the direct medium of infection. This is not as strictly observed as it should be, for parents, it is to be feared, are not sufficiently cautious about keeping the children at home as long as the disease exists, and such a system of carelessness will go on as long as schools are judged of by results and large attendances. By way of precaution, it would be desirable that as soon as the master notices a child with a rash on the skin, or hears that other members of the family are ill at home, he should insist on the child being examined by a medical man.

Water in an ordinary way can be purified by means of filtration, and this is within the reach of everybody. But to derive great benefit from this, the filters should be frequently cleansed and carefully washed, or they become a medium of disease, and greatly increase those organisms which produce and propagate disease. Spongy iron, or iron and charcoal, form the best kind of filter. In whatever way we may look on this theory, there is no doubt a great advantage to be derived by a knowledge of the way in which disease is produced, whence epidemics come, how they grow and spread, and how they may be prevented. It is at the same time our duty to explain to you the nature of the theory which forms the foundation of the modern treatment of infectious disease, and the means by which these disorders can be stamped out. It is no wonder that scientists should differ over this germ theory, and there are many who prefer to assume that these diseases are produced by chemical and other such allied conditions, rather than by the growth of living particles or germs. The question is therefore still to some extent an open one, but the great majority of physicians seem to accept the germ theory as the chief medium through which diseases of an infectious nature are propagated. Maclagan, in his work on the germ theory of disease, says, "This theory is that many diseases are due to the presence and propagation in the system of minute organisms—i.e., living beings having no part or share in its normal economy. This it is, and no more." It is essential to be clear on this point, for the opponents of this theory have introduced into the discussion the question of the source and origin of these organisms, when the question in reality should be whether or no germs *per se* can produce disease. Well, in what other way could we have this, or in what manner could we have disease without those germs, which lie dormant until the time for their development has come? This is not quite so new a theory; at all events, it is not the result of the labours of a few scientific men, for in 1668 Redi, physician to Ferdinand II. of Tuscany, found himself in opposition to the scientific men of his time, when he asserted that maggots in meat were produced by the eggs laid in the meat by flies, and not as the result of decomposition. This was also the belief of the ancients—viz., that living beings originated from dead matter without the existence or need of parents. Redi had to fight for his theory against the champions of spontaneous generation. To prove his facts he placed some meat in a jar which he covered with paper, and he showed that whilst the decomposition of the meat took place no maggots were produced. In another jar covered with gauze he was able to show that the flies attracted by the odour of decay came to lay their eggs in it. The gauze prevented their ingress, and the maggots were hatched on the gauze whilst the decomposition of the meat was going on beneath, and thus the question of maggots in meat was for ever settled, and the theory of spontaneous generation was finally abolished. After Redi's death the microscope was brought in to help scientific inquiry, and when animalcules were found in mud and water the question then arose how they could get there. It is now a well-known fact that heat and disinfection will destroy animalcules which are otherwise certain to appear. I will not dwell further on this topic on the present occasion, as we will have to refer to it again; but I think it right to express my adherence to this germ theory in a reserved manner only, for in our inquiries here we oftentimes find that febrile attacks are the result of cold and exposure. Even if we are to base our conclusions on our experience here, are we not always too ready, especially as regards the nature of infection and propagation of disease, to cry out when we find the members of one family or people in the same locality dropping off from illness one by one, that they have contracted typhus from one another? How is it with this theory when we go into a healthy locality

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where we may find a solitary case only, as has lately occurred in the county gaol, where a man who had been imprisoned for over a year contracted, if you will, a well-marked maculated typhus, with chest complications? During this period some three thousand persons had passed through the gaol, and for four months prior to this man's admission there was no case of fever in the prison. At no time could I assign any other than an aerial cause for this and other isolated cases. Fever always shows itself by an increased temperature, which is the result of an increased consumption of tissue. The contagium is the causation of the fever, or, in other words, the germ, and, as a *post hoc* principle, we must believe that the germ is the cause of the febrile condition. The condition which characterises each of the eruptive fevers is not so much the result of a peculiarity in the febrile symptoms as the occurrence of local lesions. In this way, as Maclagan remarks, we find the true characteristic of small-pox in the eruption, of scarlatina in the eruption and sore-throat, of measles in the eruption and irritation of the mucous membrane of the eyes and respiratory tracts, of typhoid fever in the bowel lesions, of typhus in the rash and nervous prostration, and of cerebro-spinal meningitis—a disease which belongs to this class—in the extent of meningeal affection either of brain or spinal cord. Whatever may be the nature of this febrile condition we have to deal with as physicians, we can alone nominate it by means of the rash, which we find on the dependent parts of the body. It is certain we will have scarlatina without this rash and enteric fever without those pathognomonic spots which we look for in successive crops. I have treated many a case of typhoid without them, and when death took place, even in those cases of so-called simple continued fever, I found on post-mortem examination the peculiar and ragged ulcerations of the small intestines.

I fear an opening lecture of this kind would be considered incomplete if we did not give you some advice as to how you can best avoid catching fever. We have hitherto been so far fortunate that no student contracted contagious disease during the period of his attendance; and we can for this reason say to you, as we did to them, with greater confidence: Never try to beat up against time. Get up early and come here leisurely, after a good breakfast; and do not for any reason venture into the wards with an empty stomach, or in a heated condition, or at a time when your health is lowered by severe study or over-exertion. Remain in the wards as long as your duty only will require; and be careful when you are examining a patient not to inhale his breath; and also avoid dirty smells, observe extreme cleanliness, and wash your hands frequently. You have a right to expect from us, from the accidental position we occupy as your teachers, that we should bestow such an amount of time and attention as will enable you to thoroughly understand the nature and treatment of fevers; and if you carefully study the cases you see here for a few months you will obtain a thorough knowledge of one class of disease, and this the most appalling which can afflict the human being; for the ravings of the fever-stricken cannot fail to excite your sympathies. We will have much to say at the bedside; and when we ask questions of the patient, we do so, first of all, for the sake of judging of his capacity; and, secondly, in order that you may yourselves be able to see how our inquiry is conducted as regards certain signs and symptoms of the various stages as we find them. In after-life, when you are thrown on your own resources, you will find this method useful in helping you to unfold the histories of the cases you have to treat. For this reason you will, I trust, endeavour to follow us in such inquiry, as this will form the groundwork of more certain knowledge. We have no need to proceed in haste, and least of all to try and make you believe we know more of febrile disease than anyone else. Our position here is a twofold one—viz., that of teacher and student,—but with a responsibility from which you are exempt. Let us hope that our language and our demeanour will be always as respectful to the poor patients here as it would be if they were in a position to call us in to see them in their own homes; public and private liberality, for which this city is so well known, gives them a temporary home here. Never forget that kindness and gentleness not only mark the man, but also bring their own measure of consolation to those who are ill. Success in life can alone be gained by a high sense of duty, always combined with self-regard and industry. The upright physician knows no difference in his province between the rich and the poor man. Ours is a humane and charitable work, and I am confident none of those I see before me today will ever lower this nobility of our profession, which is the hereditary right of all of us. The honour, dignity, and independence of this position are yours as much as mine, and if your conduct and respectful bearing will only equal those who have preceded you in your walks through this hospital, we can then rest in the assurance that this dignity will not be lowered by you. Let us then endeavour to rob death of its pain and give consolation to all those who are placed under our care.

ABSCESS OF LUNG CURED BY INCISION AND DRAINAGE.

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THE recent discussion at the Medical and Chirurgical Society on the incision and drainage of abscess of the lung renders the publication of the following case not only interesting, but also desirable, as a contribution to the discussion which has been raised on a very important question.

On March 1st, 1881, I was requested to visit Mr. B——, aged fifty-four, in consultation with Mr. Ireland of Tadcaster, and to tap a pleuritic effusion on the right side of the chest. The patient had been ill for three months, and had been seen occasionally by the late Dr. Shann of York, Dr. Clifford Allbutt of Leeds, and Dr. Myrtle of Harrogate. The earlier history of the case had been most obscure, commencing in December, 1880, with a cold, shivering, loss of flesh, vomiting and retching, and pain in the hepatic region, but there was no cough, nor any symptom of lung disease. Dr. Allbutt in the middle of February found the hepatic dulness increasing upwards, as if there were fluid in the lower part of the thorax, and a week later (Feb. 28th) Dr. Myrtle saw the patient, and, finding dulness occupying the lower half of the right lung, came to the conclusion that fluid was present, and advised early tapping.

On March 1st, 1881, after examining the chest, I came to the same conclusion as the other medical men—namely, that there was fluid in the pleural cavity. The right side of the thorax having been punctured low down with the small trocar of Bartleet's aspirator, a few drops of clear straw-coloured fluid escaped, and even after the addition of the suction of the aspirator only two drachms of fluid were obtained. Being still confident that fluid was present, I made a fresh puncture higher up, when very offensive, thin, greenish pus appeared, but only in drops. By applying the aspirator more pus was withdrawn, and after careful and continuous aspiration about a pint of pus was slowly obtained. My view at the time was that there were two separate collections of fluid in the pleural cavity, shut off by adhesion from one another. In consequence of the unexpected character of the case, two days later a consultation was held with Dr. Allbutt, Dr. Myrtle, and Mr. Ireland, and it was decided that as soon as the temporary relief given by the tapping had passed by, the thorax should be opened and drained.

On the 16th the patient had become more hectic, had expectorated for two days most offensive pus, and was altogether extremely ill. The following notes of Mr. B——'s condition were taken at the time by Mr. R. N. Hartley:—The chest as a whole was rather rigid, moving little during respiration, with perhaps slight inequality of movement of the two sides. The respiration was tranquil (30); the pulse 150. The left side was normal. On the right side there was continuous dulness below and over the hepatic area, extending upwards in front to about the level of the fifth rib, a little below the nipple, and laterally round the axilla, and diminishing towards the spine. In the recumbent posture there was a spot in the front of the chest having a peculiar "cracked-pot" resonance in the middle of a dull area. The area of the dulness was somewhat altered by change of position. Breathing but faintly audible over the dull area. No rales.

Operation.—An exploring trocar was introduced at a point a little below and in front of the angle of the scapula (ninth intercostal space), and a syringeful of fetid pus was withdrawn. The patient having been very cautiously put under ether by Mr. Hartley, I made, with the assistance of Mr. Ireland, an incision at the site of the puncture, and opened the pleural cavity. No pus appeared, only a small quantity

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of serum. The finger introduced into the pleural sac discovered the lung, but no large space. The adjacent pleural surfaces were rough, and numerous adhesions were broken down easily by the finger passing in all directions. The lung felt dense and boggy, not crepitant and elastic. On reintroducing the trocar and puncturing the lung pus appeared. The puncture was enlarged so as to admit the finger, and two pints of most fetid pus escaped, rendering the room almost unbearable. A large drainage-tube about six inches long having been inserted, the cavity was syringed out with a weak solution of carbolic acid, and the chest was encased in carbolised tow, &c.

The after-progress of the case was extremely tedious and critical. As far as the local condition in the chest was concerned the treatment was comparatively simple. The cavity in the lung was washed out (at first three times a day) with a weak solution of carbolic acid or Condy's fluid, by means of a small catheter introduced along the drainage-tube. For three weeks the offensive character of the discharge continued, but at the end of this time it was comparatively sweet, though still considerable in quantity. On one occasion the patient expectorated a little pus, but this ceased spontaneously, and, with the exception of an occasional "suffocating feeling" when the cavity was being syringed out, symptoms directly referable to the lung mischief were not prominent. The patient's general condition, however, was for months one of the greatest anxiety, the symptoms being mainly those of septicæmic poisoning. Persistent vomiting, hectic, profuse sweating, delirium, and obstinate hiccough (lasting at one time almost incessantly for a whole week) were the most prominent features of the illness. At the beginning of July an attempt was made to move the patient to Scarborough, but was abandoned in consequence of a prolonged faint as soon as he was placed in the carriage. Later on, after a critical and dangerous attack of diarrhœa, the tongue cleaned, and he began to improve and to be able, almost for the first time for months, to assimilate an appreciable quantity of food at a time. The discharge from the sinus in the lung had all this time been gradually lessening, and the drainage-tube, which had been shortened at the rate of about an inch per month, was expelled spontaneously about August 24th, and could not be replaced, the sinus finally healing a few days afterwards. Before Christmas—i.e., within a year of the commencement of his illness, and within nine months of the incision into the lung—the patient had resumed his active work as a solicitor.

The following record of the patient's weight is interesting. On April 28th, 1881, he weighed 8st. 6lb.; on May 16th, 8st. 10lb.; on Aug. 1st, 9st. 2lb.; on Oct 27th, 10st. 10lb.; in November, 1882, 11st.; in June, 1884, 11st. 5lb.

Mr. Hartley visited Mr. B—— on June 6th, 1884, and reports as follows:—"He is not conscious of being in other than the most perfect health, is actively at work in his profession every day, and has no discomfort or shortness of breathing during ordinary exertion. The percussion resonance is equally good on both sides, all over the front of the chest, within the normal limits, and the breathing sounds are audible. From the right axillary line backwards towards the inferior angle of the scapula there is an area over which the resonance is much diminished as compared with the opposite side, and here the breathing sounds are faint and distant. This area may be considered as having its centre in the scar of the operation wound, and shading off into the more resonant parts. The circumferential measurements of the chest show a difference of half an inch in favour of the left side."

Remarks.—1. The surgical treatment of affections of the lung being as yet in a tentative stage, I have thought it well to report this case somewhat fully, as it is instructive in many points, is complete in its result, and, considering the age of the patient, is rare, if not unique. 2. Although in commencing the operation I thought the case to be one of empyema, my course would have been the same had I believed that the pus came from a cavity in the lung. It is clear also that the fact of the offensiveness of the pus ought to have suggested to me the probability that the collection was in the lung, and not in the pleural cavity. 3. The early history of the affection was most obscure. It seems not impossible that it commenced as a diaphragmatic pleurisy with a circumscribed empyema, which made its way upwards into the pulmonary tissue. 4. Another instructive point is this, that the first puncture with a small trocar only withdrew, even when aided by the aspirator, two drachms of serum; and that the pus was discovered by a second puncture. The pus also could not be withdrawn without the aid of the aspirator. 5. The case illustrates the importance of having an aspirator at hand when tapping a chest, to be used *only* in case the fluid will not flow spontaneously through the cannula and attached indiarubber tube. Bartleet's pocket aspirator is most convenient and useful, and does not apply suction too powerfully. 6. The question whether the opposed layers of pleura are adherent hardly affects the decision of the surgeon, chiefly because in the cases calling for interference it is impossible to ascertain the point, except by operation; secondly, because in suitable cases, in which as a rule there will be a large area of dulness, it seems probable that pneumothorax is not one of the factors that will arise to impair the prospects of success. Two cases of traumatic pneumothorax — not from broken rib — with healthy lung, under my care, have made good and rapid recovery. 7. This case is an additional encouragement to attempts to relieve surgically abscess and gangrene of lung. Such attempts will probably be most successful when the abscess can be reached and drained posteriorly through the ninth or tenth intercostal space.

Leeds.

ON

SUBSTITUTION AS A MEANS OF RESTORING NERVE FUNCTION CONSIDERED WITH REFERENCE TO CEREBRAL LOCALISATION.

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SINCE in a complex piece of mechanical apparatus we find that loss of function is in proportion to the amount and seat of the injury inflicted on it, analogy will surely lead us to imagine that unless it is specially provided with a reserve of embryonic tissue in every part, the nervous system is no exception to this general rule. Although the purport of this paper is briefly to discuss the scientific value of the theory of substitution or compensation, it is impossible to go further without referring to the saving clause above mentioned—namely, the possible existence in the cerebral cortex at least, of numbers of small nerve corpuscles, connected with the veteran corpuscles of well-marked centres, but which have not yet themselves subserved psychical function. The existence of such corpuscles has been assumed by several writers at the present day, and with fair ground, seeing that in the first place the gradual accretion of knowledge by the child, and in the second place the intellectual acquirement of some new subject late in life, are both best explained theoretically on the assumption that fresh tracks are opened up with each new and complete idea. The bearing that this view has on the question of substitution is of course of fundamental importance, since supposing it to be true it is very easy to imagine that if a centre be destroyed, the elementary corpuscles in the uninjured area around having within themselves a faint echo of the nerve-disturbance which before was normally existent in their immediate neighbourhood can be educated gradually so as to replace the part injured. As yet this hypothesis has to be tested by experiments directly bearing on the point, such, for instance, as first extirpating a motor centre completely (vide *infra*), and then some weeks or months later exploring the portion of brain in the immediate neighbourhood with very weak induced currents. But even in the absence of direct experimentation, it is obvious that there are certain centres in the cortex destruction of which, or the fibres leading from them, is followed by permanent paralysis. Here, then, it is perfectly clear that even supposing the above theory to be true of a part of the cerebrum, it is not true of the whole, and therefore has no claim to be raised to the position of a working hypothesis based on broad generalisations. We will therefore leave this prefatory mode of accounting for the phenomena to which I have given the name of "substitution," implying thereby the same points as Dr. Broadbent[1] expressed under the term "compensation."

[1] Brit. Med. Jour., vol. i. pp. 333, 371, 401. 1876.

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and, taking it (the development theory) as not proved, proceed to consider what are the most likely causes of the apparent restoration of function.

The theory of compensation or substitution imagines that when a portion of the highest mechanism of the nervous system is destroyed the opposite centres in the spinal cord take up the function, and are able to do so more or less completely in proportion to the extent of commissural union that may exist between such centres. Consequently, it is assumed that a development of nerve activity occurs whenever a patient really recovers from an attack of indubitable hemiplegia, and that the flow of nerve energy passes from the ganglion cells of the anterior cornua of the uninjured tract across by the anterior commissure to the cornual corpuscles of the opposite side, and so to the whilom paralysed muscles. This theory, as originally stated, assumed that the energy which caused a voluntary movement found origin in the corpus striatum, and ran down the pyramidal tract to the anterior cornual nerve corpuscles, thence passing out along the anterior roots to the muscles. This of course necessitated the view that the pyramidal tract terminated above in the corpus striatum, and below in the anterior cornua of the spinal cord.

It is now perfectly clear, however, that so-called voluntary impulses arise from excitation of centres in the fronto-parietal region of the cortex, and descend along the direct pyramidal tract through the anterior two-thirds of the internal capsule, passing through the corpus striatum probably without the fibres forming any connexion with the ganglion cells of that body. Finally, there is reason for supposing that some fibres pass directly into the anterior root, either being connected indirectly with the cornual corpuscles, and so acting as a "side wire," while others are connected directly, as indicated in Fig. 1. Of course, the direct channels from the cortex are connected with the cornual cells, as is evidenced by the inhibitory effect which the higher centres exert on the corpusculate apices of the reflex loops, the removal of which influence from destruction of the said fibres by hæmorrhage, &c., followed by exaggeration of the reflex movements, is so striking a clinical observation. Although, from these amended considerations of the anatomical arrangement of the motor tracts in the spinal cord, it would seem that in a purely "voluntary" movement it is doubtful how much disturbance of the anterior cornual corpuscles occurs, still the mechanism for coördinated reflexes exists, and is connected with the descending tracts from the cerebrum, so that substitution is perfectly possible in the spinal cord.

FIG. 1.



T P D, Direct pyramidal tract. C A, Ganglion corpuscle in anterior cornu. *fa* and *fe*, Afferent and efferent tracks of a simple reflex loop. *fc*, Commissural fibre between opposite spinal centres. The efferent fibres are running into the anterior roots of the nerves.

But before passing on to discuss other methods by means of which the phenomena of gradual recovery of the paralysed trunk and leg in hemiplegia may be explained, it is interesting to note what movements are said to be bilaterally associated. Dr. Broadbent has pointed out that similar muscle groups are bilaterally associated in opposite limbs of opposite name—thus the left fore-limb with the right hind-limb. This relic of progression on four limbs probably is arranged in a special centre for walking, and so not necessarily in the spinal cord. Without going so far as to accept Nothnagel's *nodus cursorius*, in favour of which very little good experimental evidence has been offered, it would certainly seem very probable that the corpus striatum or some other highly coördinated ganglionic mass affords a corpuscular mechanism for progression, which in the lower animals is almost independent of impulses from the highest psychical centres in the cortex. Curiously enough, it is to be noted that a centre exists in the cortex of the monkey's brain close to the marginal convolution, following the stimulation of which there occur flexion movements of both limbs of the opposite side. But now the movements of the legs that are said to be "associated" are diametrically opposite to one another—i.e., flexion and extension; and we can see how rarely they do act in true concert from such an instance as when we try to flex both lower limbs at once, as in jumping from the standing posture. The amount of thought required to arrange the concerted effort is the best evidence of the rarity of the feat. Now, this has a very distinct bearing on substitution as it may be supposed to occur in the spinal cord, for that theory assumes that because the limbs are moved in concert in progression that therefore there is intimate commissural connexion between their respective spinal centres. But if there is any truth in cerebral localisation, then we should have a flexion and an extension movement combined, instead of both limbs moving in concert, or the formerly paralysed limb moving by itself in any given direction. To make this clearer, let us imagine that the case is one of right hemiplegia. Now, supposing recovery to be taking place, the theory of substitution would explain such by saying that the impulse which, proceeding from the right cortex, causes flexion of the left hip, travels across the cord to the opposite spinal centre, and produces flexion of the right (the formerly paralysed) hip. But since the flexion spinal centre of the left hip is associated with the extension spinal centre of the right hip, it is difficult to understand how the desired flexion occurs. In short, a fusion of function would occur; since with the same stimulus the muscles in both lower limbs would be responding to influences from spinal centres of opposite name. So that as far as the muscles surrounding the points of the segments of the opposite limbs are concerned, we can only look upon them as associated in a very definite way for a particular purpose. The muscles of the trunk walls, however, are different. Owing to the small amount of rotation permitted in the spine, these muscles do act in true association; consequently we rarely see one side act without the other, and, as far as flexion and extension go, always in the same way. This fact, however, falls more strictly under the heading of a double representation in the cortex, a subject on which a few remarks will be made in conclusion.

While still discussing the bilateral association of movements, the opportunity occurs of pointing out that there are two distinct points of view from which the action of a so-called cortical motor centre should be regarded. Thus a voluntary movement (and it may be safely assumed that cortical discharges from the fronto-parietal region form the motor side of volitional impulse) may either be (*a*) original and, in its details, novel, as far as the previous experience of the individual goes, or it may be (*b*) a complex movement greatly coördinated by hereditary influence and personal habit. The first of these is probably more frequently unilateral than the second, being usually limited to the peripheral segments of one or more of the limbs. But of course there is every degree of intermediate states between these two divisions of volition, just as the condition (*b*) passes by easy stages down to the lowest condition of a simple reflex action.

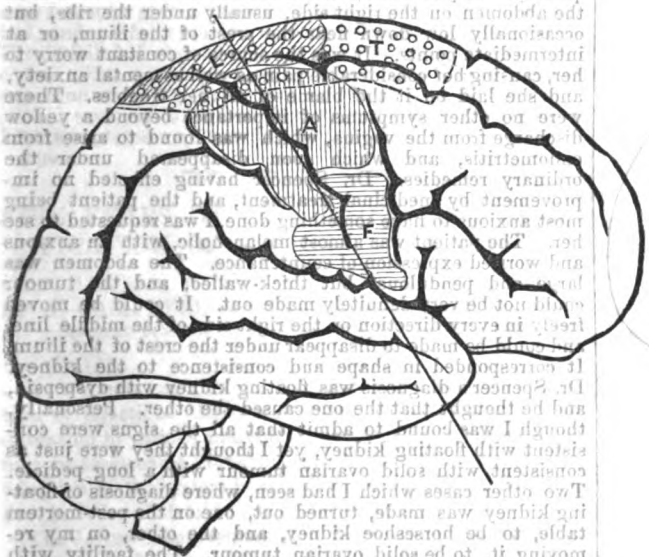
But to return to the original question—namely, as to whether the recovery of power in the trunk and lower limb in cases of hemiplegia can be accounted for other than by having recourse to hypothesis, I shall now seek to show that two further explanations of the same phenomena can be conceived to be at least possible if not probable. Since the cases which recover from an attack of internal cerebral hemiplegia show a steady improvement, after the first

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effects of shock and "inflammatory" œdema (Bergmann) surrounding the injured part have passed off, it is somewhat surprising that some amount of recovery of function is not attributed to the gradual removal of pressure by absorption of the blood-clot, &c., since this process probably proceeds with considerable rapidity, remembering as we may the wide distribution of absorbent vessels in the cerebrum. Charcot[2] indeed does hint at this being probably the case in those instances where hæmorrhage in the neighbourhood of the internal capsule produces a transitory hemiplegia, the direct pyramidal fibres being intact. That this condition of things occurs in a simple case of intracerebral hemiplegia, where after absolute paralysis of the face, limbs, and trunk there gradually returns power in the muscles of the body and of the lower limb, is, I think, borne out by the following anatomical and physiological facts.

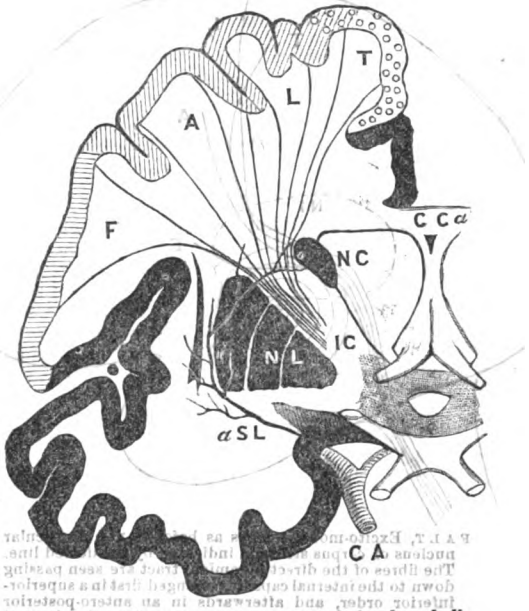
In the first place, a glance at Fig. 2 reminds us that, without going into detail, the cortical motor centres for the face and peripheral segments of the limbs lie grouped around the fissure of Rolando, as indicated in the diagram. The centre for the lower limb lies along the top of the sulcus, extending backwards into the parietal lobule and forwards into the superior frontal gyrus. The centre for the upper limb is next in order below, and occupies the middle third of the ascending frontal gyrus, and (according to Ferrier[3]) the middle three-fifths of the ascending parietal gyrus. Finally, the centres for the muscles supplied by the facial nerve are contained in the lowest third of the ascending frontal gyrus, and spreading across to the lowest fifth of the ascending parietal convolution. The researches of Prof. Schäfer and myself[4] have completed the list of cortical centres by finding that the muscles of the trunk are regulated by centres which lie in the marginal convolution on the mesial surface of the hemisphere. Moreover, we have shown that the centre for the lower limb dips largely over into the marginal convolution opposite the upper end of the fissure of Rolando. Now, if we carry a section across the brain (as described by Pitrès) nearly parallel to the fissure of Rolando, we see at once that the motor centres are arranged in the order from above downwards, of trunk and lower limb (intimately connected), upper limb, face, and that the fibres of the direct pyramidal tract which run down from these centres through the corpus striatum observe, of course, the same relative position. When opposite the centre of the lenticular nucleus the fibres become bent in entering the knee of the internal capsule, and, being twisted like the rays of a fan close to its hinge, now become arranged consequently in an antero-posterior manner, the most anterior being of course what was just now the most inferior. Consequently the fibres of the direct pyramidal tract viewed from the side are arranged as in Fig. 4, in which it is to be particularly noted that the fibres from the trunk and lower limb centres are first the highest and then the most posterior. Now, let us consider the source of hæmorrhage in a case of the kind we have imagined. This is now well known to be the lenticulo-striate artery described by Duret,[5] shown in Fig. 3, coursing round the under surface of the lenticular nucleus at the junction of the anterior and middle thirds, and then passing up through it and the internal capsule to gain the caudate nucleus. From this position it is obvious that hæmorrhage from it will destroy the pyramidal fibres in the order of, face, upper limb, lower limb, and trunk, as the focus of hæmorrhage will be below and in front of the bundles of fibres. Now, this is exactly the order observed clinically. In two cases in which I had the opportunity of watching the onset of the symptoms (one only twenty minutes after the first subjective sensation of giddiness, the other about ninety minutes after the patient first felt ill), the gradual invasion of the fibres supplying the groups of muscles was most striking, as each bundle was torn through by the advancing hæmorrhage. There ensued the customary fibrillar twitchings, and even tonic spasm, gradually passing off in a few hours into absolute paralysis, the order of the muscles involved being that stated above. Now, the converse of my proposition is equally true—viz., the recovery of the groups of muscles is in the reverse order, just as we should expect to occur, as clot and œdema fluid are slowly absorbed. If further suggestions are needed, it would seem to be in the direction of accumulating more definite records as to the degree of injury which the internal capsule suffers in such cases. It is obvious that the trunk fibres are as a rule only pressed upon, since if the hæmorrhage extended up as high as to completely divide them, it would be within a very few millimetres of the lateral ventricle, rupture into which would preclude further progress of the case.

FIG. 2.



Right hemisphere of the cerebrum, showing the centres in the excito-motor area of the cortex arranged round the fissure of Rolando in the order described in the text. F, Facial centre. A, Centre for upper limb. L, Centre for lower limb. T, Centre for trunk muscles. This centre being really on the mesial surface of the hemisphere, and so in the longitudinal fissure, is represented at its border by a dotted line. The straight line represents almost the plane of section shown in Fig. 3.

FIG. 3.



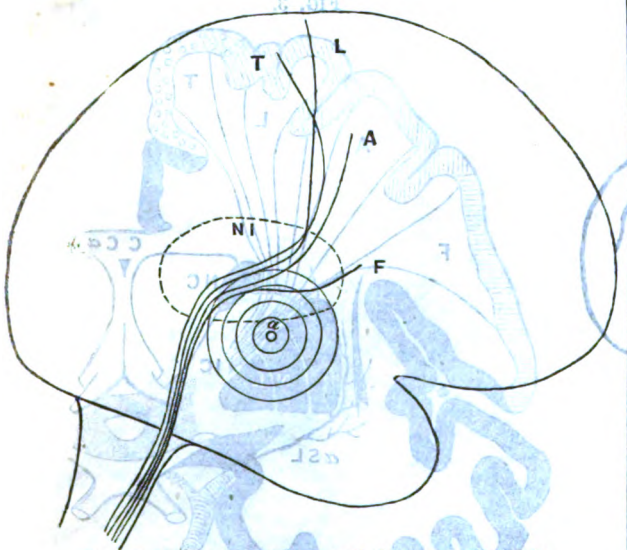
Section of hemisphere of cerebrum nearly in plane indicated in Fig. 2. It shows the relative position of the centres in the excito-motor area (lettering as in Fig. 2), the fibres running from the same into the internal capsule between the nuclei of the corpus striatum and the "artery of hæmorrhage." (DURET.) C Cα, Corpus callosum. N C, Caudate nucleus (corpus striatum). N L, Lenticular nucleus (corpus striatum). C A, Internal carotid artery. α S L, Lenticulo-striate artery. Hæmorrhage is usually most frequent in the outer zone of the lenticular nucleus, or just outside it.

[2] The Localisation of Cerebral and Spinal Diseases. Translated by Dr. Hadden. New Sydenham Society, 1883. pp. 88-90.
[3] Functions of the Brain, 1876, p. 207. [4] Proc. Royal Society, 1884.
[5] Archiv. de Physiologie. 1874.

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Reference was made in a former paragraph to bilateral representation of groups of muscles in one cerebral hemispere, and this point will now be made use of to clear up some questions obviously left open in the above remarks—viz., the recovery of power in the face; and to describe the second conceivable means by which recovery of power in hemiplegics may be attained. It has been found by all experimenters in cerebral localisation that irritation of one facial centre on the outer surface of the hemisphere will produce identical (truly associated) movements of both sides of the face; so that we have here clearly both sides of the face represented in the cortex of each hemisphere. Under these circumstances we understand at once why a hemiplegic should recover considerable movement in the face while the arm remains absolutely useless, and while no doubt the pyramidal tract of the face centres is so much, or even more damaged than the arm fibres, according to the above description. But further than this, it is exceedingly difficult to analyse completely the movements of the trunk, and yet, judging from some experiments in which we obtained slight bilateral movements, it is highly probable that in man some of the trunk muscles (the pectorals and recti abdominis, for example) are represented bilaterally in both hemispheres. This being so, we thus have the second possible means of recovery of power, and therefore to be considered equally with the foregoing explanation. This is, of course, the position put forward by Dr. Hughlings Jackson,[6] except that he goes a step further, and believes "that all parts of both sides of the body are represented in each half of the brain," but "very unequally." On this point experiment lends no support to the assumption that the left arm, for example, is represented in the left hemisphere, and the rare recovery of the arm in complete hemiplegia is surely strong confirmation of the same idea.

FIG. 4.



PALT, Excito-motor centres as before. N I, Lenticular nucleus of corpus striatum indicated by the dotted line. The fibres of the direct pyramidal tract are seen passing down to the internal capsule, arranged first in a superior-inferior order, and afterwards in an antero-posterior order. The "artery of hæmorrhage" (*a*) is situated below and in front of the knee thus formed, so that the destructive effects of spreading hæmorrhage represented by the concentric lines will affect the fibres in the order before mentioned.

To sum up. Thus far I have desired to show that the phenomena of recovery of power in hemiplegia resulting from a lesion of the internal capsule may be either due to (1) removal of pressure &c. by absorption of the extravasated blood and its secondary products, or to (2) further development of function in the bilaterally acting cortical centres, and it seems probable that in most cases both agencies are at work. The question of the further development of a particular function in centres which already slightly subserve that function is one of fundamental importance, requiring to be fully investigated before we can explain instances of recovery of special sense where the perceptive centre has been destroyed. This, however, is too wide a question to enter upon at the present moment.

Gower-street, W.C.

[6] Brit. Med. Journal, 1884. p. 593.

THE FIXATION OF MOVABLE KIDNEY BY SCRATCHING ITS CAPSULE THROUGH THE LOIN.

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AT present, when the subject of displacements of the kidney is exciting considerable interest, notes of the following case, which was operated upon about a year ago, may be acceptable.

M. W——, aged thirty-nine, a largely-developed, well-nourished married woman, was admitted to the Bristol Royal Infirmary, under Dr. Spencer, in April, 1883, complaining of pain in the bowels, want of appetite, and constant headache. Six years previously she had suffered from a severe attack of inflammation of the lungs, and a month later she was confined of twins. Up to this time she had been strong and well, and her troubles came on subsequently. A year before admission she noticed a tumour in the abdomen on the right side, usually under the ribs, but occasionally low down near the crest of the ilium, or at intermediate points. It was the source of constant worry to her, causing her considerable pain as well as mental anxiety, and she laid on it the blame of all her troubles. There were no other symptoms of importance beyond a yellow discharge from the vagina, which was found to arise from endometritis, and which soon disappeared under the ordinary remedies. Dr. Spencer having effected no improvement by medicinal treatment, and the patient being most anxious to have something done, I was requested to see her. The patient was almost melancholic, with an anxious and worried expression of countenance. The abdomen was large and pendulous, but thick-walled, and the tumour could not be very definitely made out. It could be moved freely in every direction on the right side of the middle line, and could be made to disappear under the crest of the ilium. It corresponded in shape and consistence to the kidney. Dr. Spencer's diagnosis was floating kidney with dyspepsia, and he thought that the one caused the other. Personally, though I was bound to admit that all the signs were consistent with floating kidney, yet I thought they were just as consistent with solid ovarian tumour with a long pedicle. Two other cases which I had seen, where diagnosis of floating kidney was made, turned out, one on the post-mortem table, to be horseshoe kidney, and the other, on my removing it, to be solid ovarian tumour. The facility with which this tumour could be pushed down into the pelvis suggested the possibility that it also might turn out to be ovarian, and I recommended abdominal section, to remove it if not renal, to fix it if renal. This was accordingly done, and the tumour was found to be renal. There was no mesonephron proper, and the kidney was found very freely movable partly in the midst of, partly with a sort of flaccid bag of peritoneum and fat. When replaced it could be made to bulge in the loin, where it was readily felt through the skin and muscle. I hoped to be able to stitch it subcutaneously by carrying a long, curved, handled needle through the skin and the surface of the kidney, and tying the catgut suture over the muscles after making a punctiform incision in the skin. But the surface of the kidney tore and afforded no hold to the needle; so with one hand still in the abdominal cavity pushing out the kidney and ascertaining the course of the needle, and the other holding the needle outside, I moved the kidney surface in several directions over the point of the needle and left it *in situ*. I hoped that the organised inflammatory material so produced would be strong enough to retain the kidney in position.

The case pursued the ordinary course of a successful abdominal section. The antiseptic dressings were removed in a week; the wound was found completely healed, and the stitches were removed. On the fourth day there was a small amount of blood in the urine. All pain from the tumour was gone immediately after the operation, but about six weeks afterwards she suffered from diffuse irregular attacks of abdominal pain, not in any one spot, but generally all over. At this time she had abnormally frequent calls to

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micturate, and these extended over some weeks. The tumour remained *in situ*, however, and there has been no sign of its reappearance since. I cannot say, however, that the operation has benefited the patient very much. She is nearly as low-spirited as ever, and though there is less abdominal pain than before, there is still a good deal, and the calls to micturate are still abnormally frequent. Possibly the near advent of the menopause may partially explain her symptoms.

Remarks.—I am no advocate of operative procedure in the case of either movable or floating kidney, and what was done in this case was rather as a sequel to an exploratory operation than as a deliberate attempt at fixation of the kidney. It would have been easy to stitch the kidney to the abdominal wall; but it is difficult to believe that an unprotected position close to the surface of the abdomen and in contact with its constantly moving walls can be much better than free movement inside the abdominal cavity. Again, I might have cut down on the kidney in the loin, and stitched its capsule to the tissues in the neighbourhood. This would have added to the danger of the operation, and would have rendered only the immediate result more certain, for sutures fixate only as long as they exist. When these are absorbed, the adhesions only remain to connect the united surfaces, and if the artificially inflamed capsule is kept in position while the adhesions consolidate the effect of sutures might be got. In this case, now that a year has passed, we may assume that the desired result has been attained. In another case I should give a thorough trial to treatment by rest in bed, and carefully applied padding inside an abdominal belt. If this failed, I should perform nephrorraphy by lumbar incision. But a case such as the above teaches us not be too sanguine as to the immediate good result of fixation, and should warn us to hold our hands for a long time unless the local symptoms were very urgent indeed.

Clifton.

FIVE YEARS OF THE COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES IN JARROW.

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AT a time when the question of the compulsory notification of infectious diseases is being hotly debated, and its extension to various individual towns vigorously opposed, it may be serviceable that some statement of the results of the adoption of the system in one of the towns in which it was first introduced should be laid before the profession.

The Jarrow Improvement Act, which came into operation at the end of 1878, includes the following sections, which detail the conditions of the notification system as adopted by the corporation of that borough:—

"35. In order to secure that due notice be given to the corporation of any inmate of any house who is suffering from infectious disease, the following provisions shall have effect (that is to say): (*a*) If any inmate be suffering from any such disease as aforesaid, the occupier or person having the management or control of such house shall, so soon as he becomes aware of the existence in any such inmate of any such disease, forthwith give notice thereof to the corporation. (*b*) If such inmate be not a member of the family of such occupier or person, then such inmate or the person having charge of such inmate shall, on becoming aware of the existence of such disease, forthwith give notice thereof to the corporation. (*c*) If such inmate so suffering as aforesaid is attended by a medical practitioner, such practitioner shall, on becoming aware that such inmate is suffering from any such disease as aforesaid, forthwith fill up, sign, and send to the corporation at the Town Hall a certificate or declaration stating, according to the forms prescribed and supplied to him by the corporation, the name of such inmate, the situation of such house, and the name of such occupier or person, and the nature of the disease from which inmate is suffering. (*d*) The corporation shall pay to every medical practitioner a fee of one shilling for every certificate or declaration given by him under this section. Only one such fee shall be payable in the case of one and same illness in the same house or family. (*e*) The corporation shall provide and supply gratuitously to every registered medical practitioner resident or practising in the borough forms for the certificate or declaration by such medical practitioner of the particulars herein mentioned in relation to such cases, according to the form set forth in the schedule to this Act. In this section 'house' includes any part of a house, and any building for the time being used for human habitation.

"36. Any person wilfully or without reasonable excuse offending against any provision of this part of this Act, or any order or regulation made under the provisions of this part of this Act, shall be liable on summary conviction to a penalty not exceeding five pounds, and in case of a continuing offence, to a further penalty not exceeding forty shillings for every day on which such offence continues."

Infectious disease is defined in Section 2 of the Act as meaning "small-pox, cholera, and fever." It will be seen that the duty of notification is laid both upon the householder and the medical man; practically, the notifications are received from the medical men. It happens that in the series of annual reports of successive medical officers of health for the borough, published up to the present time, the zymotic death-rates[1] of the five years preceding, and the five years succeeding the adoption of the notification system are given. Quinquennial periods are, I think, sufficient to furnish fair bases of comparison and to ensure the elimination of fallacies arising out of individual years of exceptional epidemic influences, such influences, for instance, as the prevalence of particular zymotics in adjacent districts. The following is a statement of the zymotic death-rates per 1000 of the population during the last ten years.

Pre-Notification Period.

1874.	1875.	1876.	1877.	1878.
5·7	5·1	2·9	5·1	6·9

Notification Period.

1879.	1880.	1881.	1882.	1883.
3·3	3·3	2·6	5·0	5·1

A simple calculation will show that the *mean* zymotic rate of the first or pre-notification period is 5·1, as compared with 3·8 in the period during which the notification system has been in force. The decrease—1·3 per 1000—in the *mean* zymotic rate of the second period, as compared with the first, is very gratifying. It will, however, be urged that there has been a considerable coincident decrease in zymotic rates all over the country. Such is indeed the case. I have tabulated below the zymotic rates in the fifty town districts with which Jarrow is included in the Registrar-General's returns, and with the zymotic rate of which that of Jarrow may most fairly be compared:—

Five years—1874-78.

1874.	1875.	1876.	1877.	1878.
4·4	3·5	3·3	3·1	3·3

Five years—1879-83.

1879.	1880.	1881.	1882.	1883.
2·9	3·7	2·2	2·9	2·4

The *mean* of the first quinquennial period is 3·6, of the second, 2·8; the decrease in the zymotic rate of the second period as compared with the first was 0·8. It will be seen that the decline in the zymotic rate in Jarrow is almost double that of the fifty town districts.[2] And the diminished prevalence of zymotic disease in Jarrow cannot be attributed in any degree to a proportional improvement in general sanitary conditions; the decline in the zymotic rate is not at all accompanied by a proportional decline in the general death-rate. The mean death-rate of the borough for the quinquennial period 1874-78 was 22·0 per 1000; for the period 1879-83 it was 20·5, the decrease being 1·5. Otherwise put, the proportion the decrease in the general death-rate bears to the mean death-rate of the first period is 0·068, while the decrease in the zymotic rate is in the proportion of 0·254 to the zymotic rate of the first period.

There may be towns in which in the same period a like gratifying decrease in zymotic rates has been experienced to that which has occurred in Jarrow; but I can hardly believe

[1] Death rates per 1000 of the population from the seven principal zymotic diseases.

[2] It is almost certain that the population in Jarrow has increased at a much more rapid rate in the last three years than is estimated by the Registrar-General's method; if this under-estimation of the population were discounted, the decrease in the mean zymotic rate of the second quinquennial would be fully double that of the fifty town districts.

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that such decrease could have been brought about under circumstances so adverse as those in Jarrow, had it not been for the system of compulsory notification; for, in the first place, there has been in Jarrow a very rapid increase in the surface crowding of the population in the course of the last ten years. During that period the population has increased by about one-third; and, of course, density of population is an important factor in respect of the prevalence of zymotic disease. But the most adverse circumstance has been the want of hospital accommodation for the sufficient isolation of cases of infectious disease insufficiently isolated at home. Up till the year before last, Jarrow possessed no hospital, and even now the corporation only provides hospital accommodation for the reception of cases of small-pox. The sanitary officials are thus considerably handicapped in their efforts for the prevention of the spread of infectious diseases, for Jarrow is essentially a working-class town, and the lack of proper hospital accommodation is a much more grievous matter than in the case of the average town, as proper facilities for the sufficient isolation of cases of infectious disease at home are in a large proportion of cases wanting. With the compulsory notification and with hospital accommodation for, perhaps, three several infectious diseases (the provision of which the corporation has in contemplation), I have not the least doubt that a still more decided decline in the zymotic rate will be attainable in the next quinquenniad. There are defects, too, in the notification scheme adopted in Jarrow, which have detracted from the beneficial operation of the system. Thus, measles, from which disease alone there was a death-rate of 2·9 per 1000 in Jarrow last year, is not one of the diseases compulsorily notifiable under the Act. And the feeling of the medical men that they were very insufficiently remunerated for notifying had a tendency to make them not very enthusiastic in the work. An effort has been made to amend both these matters in a local Bill at present under the consideration of Parliament.

The notification system as wrought in Jarrow implies a considerable infringement of the "privacy of the home;" but I am bound to say that the visits of the sanitary officials are invariably received at least with equanimity—usually with courtesy, and that people generally seem willing to avail themselves of the advice I proffer. Each case notified is visited on the day on which the notification is received, by the sanitary inspector, and almost every case by myself as well; a formal notice to disinfect and a paper of simple instructions for isolation and disinfection are placed in the hands of the householder, information is given as to the times at which disinfectants may be obtained gratuitously at the Health Office, and the best practicable instructions for the isolation of the case—each in its particular circumstances—are given. I do not consider myself called upon to verify the diagnosis of the medical man in attendance; in any case, however, in which I have reason to question the diagnosis, and in which a different diagnosis would involve different arrangements for isolation and disinfection, I communicate in a friendly spirit with the medical man notifying. I have in no case made the corporation a court of appeal in matters of diagnosis.

A few words in conclusion, as to the general, apart from the statistical, results of the adoption of the compulsory notification system in Jarrow. Has the working of the Act aroused the hostility of the medical men of the town to the principle of compulsory notification? A sufficient answer in the negative was afforded in an experience of a few months ago. The corporation having resolved to incorporate some amendments to the notification system at present in force in a proposed new local Act, I was desired to convene a meeting of the medical men of the town, in order to ascertain their opinion of the various sanitary clauses of the proposed Bill. For this meeting, invitations were sent out to eleven medical men practising in the town. At the meeting which took place, after five years' experience of the system, no medical man was found to oppose the principle of compulsory notification of infectious diseases; two medical men, however, a principal and his assistant, held that medical men should merely be required to notify diseases as "infectious," leaving to the medical officer of health the duty of diagnosing the specific nature of the disease in cases notified. In this connexion, too, I may be allowed to remark that in spite of (?) the compulsory notification system, I am on amicable terms with all the medical men in the town; though I would not admit it as an argument against the system, that the medical officer of health in any town which had adopted the scheme was not on amicable terms with individual medical men, for there are some men in the medical profession, as well as outside of it, who would quarrel with their own shadows, and in respect of whom the meekness of Moses and the patience of Job would not avail to avert a quarrel.

With regard to the alleged tendency of the compulsory notification system to lead to the concealment of the existence of cases of infectious disease, I can only say that so far as my experience has gone I have seen no evidence of anything of the sort.

South Shields.

THE AFTER-TREATMENT OF

LATERAL DISLOCATION OF THE PATELLA BY A NEW FORM OF KNEE-CAP,

WITH THE OBJECT OF PREVENTING RECURRENCE.

By C. YELVERTON PEARSON, M.D., M.Ch.,
LECTURER ON DESCRIPTIVE AND SURGICAL ANATOMY, QUEEN'S COLLEGE, CORK, ETC.

THE difficulty of preventing recurrence of lateral dislocation of the patella, once it has taken place, is so universally acknowledged by surgeons that I am induced to publish an account of the success which has attended the use of a knee-cap devised by me (which I shall presently describe) for the treatment of the following case.

J. S——, a lady aged twenty-six, in January, 1874, when stooping suddenly, dislocated the right patella outwards, and immediately fell; soon afterwards she got her mother to extend the leg, when the dislocation became reduced. Next day the knee, leg, and foot became greatly swollen, and were treated with chamomile and poppy fomentations, followed by inunction of camphorated oil. She was obliged to keep the limb extended for three weeks, as the knee could not be flexed; and seven weeks elapsed before she was able to walk. She says that some swelling has since constantly remained in the knee below the patella. About nine months afterwards dislocation occurred a second time, and subsequently on three different occasions, the exact dates of which were forgotten. The case was first seen by me in October, 1881. The history at that time was that dislocation had occurred for the sixth time about six weeks previously, while running on the lawn after a child, when she experienced a sudden start, dislocated the patella, and fell. This time great swelling also followed, and the leg could not be put to the ground, but she got better in a few weeks, when an elastic knee-cap was used; soon after this was applied great swelling took place in the leg. When seen by me there was great œdema of the leg; the circumference of the knee-joint below the patella was an inch greater than its fellow; this increase was due to enlargement of the bursa beneath the ligamentum patellæ.

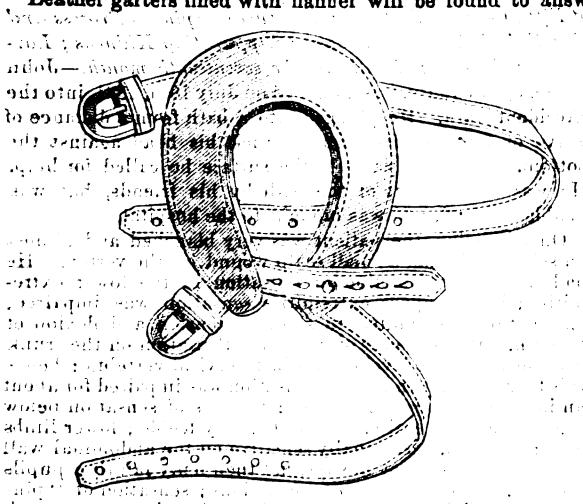
The following treatment was employed. I painted the knee with iodine liniment and applied a strapping over it, also a bandage from the toes. After a week the swelling of the leg was somewhat reduced, while that of the knee had almost disappeared. I then applied a Martin's elastic bandage to the leg, the use of which was continued till the œdema of the leg completely disappeared, which was not for some weeks. Knowing that the main point of treatment was to prevent a recurrence of the displacement, and not being acquainted with any suitable form of apparatus which could be worn constantly without inconvenience, I made a horseshoe knee-cap, which I shall now proceed to describe, and have illustrated by the accompanying sketch.

The appliance consists of a piece of dense poroplastic in the form of a horseshoe, the concave end of which is directed downwards, and embraces the patella pretty closely; this is covered on both sides by chamois leather, the posterior surface being markedly concave. The ends are connected below by a leather strap, with perforations for attaching it to a brass stud fixed in one end of the horseshoe. The presence of this strap permits a certain amount of separation and approximation of the ends to take place, with the movements of the joint, which could not occur if the knee-cap formed a complete ring, while at the same time offering sufficient resistance to prevent dislocation. By altering the connexion of the stud from one hole to another the cap can be made to fit different sized joints, though on the whole it would be more advisable to have the cap made specially for each individual. Attached to the outer border are two buckles, one near the upper, the other near the lower end; placed at corresponding

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points on the inner border are two leather straps to go round the limb. These straps and buckles should be lined with flannel or silk; when applied one of these straps passes above the flexure of the joint, the other below.

The following directions will enable anyone with ordinary care to make this appliance. Take a piece of the most dense variety of poroplastic, about five inches square; while flat and in the hard state, cut it in the form of a letter U inverted, the concavity being made larger than the patella; then heat it in the usual manner till soft enough to be moulded; place it on the limb, held in a slightly flexed position; by now approximating the ends, and pressing back the convex border, the necessary shape can be readily imparted to it. It is of great importance to have the concave border cut so as to be at right angles with the surfaces, to leave its edges square, and to have the sewing near this border placed on the anterior surface, and not on the border itself; by attending to these points the cap will have greater power of resisting the edge of the patella when it tends to slip. The covering and fixing of the straps can be done by any shoemaker. Leather garters lined with flannel will be found to answer



very well. In the original form it was gutta-percha, and not poroplastic, I employed; but I have since chosen the latter, as being not liable to crack and more easy to mould.

Since the time I first devised the knee-cap the patient has constantly used one, and has had new ones made from time to time, about four having been made altogether; and at the time of writing this paper (two and a half years since the first one was made), the patient tells me that she never goes out without wearing the cap, and would be afraid to do so; that she has frequently experienced starts, and feels sure that dislocation would have occurred very frequently since but for it.

The following are the advantages I claim for the appliance:—1. That it is simple and easily made. 2. That it is inexpensive. 3. That it is light and offers no hindrance to the movements of the joint. 4. That it may be removed at night and reapplied upon getting up. 5. That it is not liable to produce œdema of the leg, which is so objectionable a feature in elastic knee-caps. 6. That it effectually prevents lateral dislocation of the patella.

Cork.

THE SECONDARY NATURE OF BINOCULAR RELIEF.

BY BRIGADE-SURGEON T. OUGHTON, A.M.D.

STEREOSCOPY is the visual modelling of solid forms by duplicate retinal impressions, seen to be coterminous with the natural field of vision, or a comparative miniature model such as is presented by the binocular coalescence of ordinary stereoscopic slides. Dissimilarity exists between ocular pictures as between those on a stereograph, but the resultant is no hazy spectrum consisting of duplicated images as taught by Brewster and adopted by many dogmatists; no, the relief-model is a perfect and complete whole, consisting of single objective points, infinitely superior to any sculptor's art, and far transcending the limited range appertaining to tactile ideas of solidity. Such being the general consensus regarding the experiential facts of binocular relievo at the present day, I do not purpose dealing here with the arguments of those investigators holding that any attempt to adjust the two different fields of vision must be a futile project.

Le Conte has very recently accepted the binocular relievo with single points, and he has arrived at very remarkable conclusions.[1] His hypothesis is that duplicate images of an object are actually presented to the sensorium, but that the points of the objects are seen single by a process of unconscious cerebration. He concludes, further, that visual relief is dependent on these double images, being a judgment that is based on duplicate impressions which do not emerge into clear consciousness; he has not attempted to analyse the judicial process beyond stating that it is an instinctive faculty, but he has dealt with the proof of double vision. He places a book in the median plane of sight with the back nearest the observer, so that the right side and upper edge shall be seen by the right eye, and the left side and upper edge by the left eye. When the eyes converge on the back the book is seen as if opening backwards, and when on the further edge as if opening forwards. We know that such must be the case, because the object is situated in the angle of binocular convergence or its extension; also we know that the above instance does not embrace all the facts of vision. Had the book been opened so as to correspond with the angle of binocular convergence, he would have seen the back only and nothing of its sides save monocularly and with visually single points. Had the book been opened still further, there would have been dissimilar retinal images of each side (four images in all); and it seems that the author would be compelled to admit that arguments proving double vision as touching the dissimilar images of a book in the median plane do not necessarily apply to the dissimilar images of each side of the book opened to an angle greater than that of binocular convergence. Each point of the sides of the book is seen single and in natural relief in the latter position. I desire to show herein that the relievo perception is an absolute one, entirely physiological, and owing nothing whatever to the modifying agency of a mental principle.

Another startling doctrine is that of Prof. Wheawell, who contends that the filaments of the special nerve (retina visibilia) must possess a power to contract and expand themselves so as to equalise the unequal lines and surfaces of dissimilar retinal images; his mental purview did not, strange to say, include the sole cause of every secondary perception—namely, the contraction and expansion of muscular filaments. Agassiz[2] has taught that a common sense imparts its aid equally to each eye, whereby inequalities are adjusted and dissimilar perceptions of perspective are rectified; his views are more nearly parallel to mine than those of any other expositor, for I propose that the common sense in question is muscular perception. Dr. W. B. Carpenter has, I think, justly credited to Professor C. Wheatstone the demonstration that we derive our perceptions of solid form or relief from the mental combination of the dissimilar perspectives that are projected by solid objects upon our two retinæ, with the following theses:—(1) That the mental combination is a positive process of receptivity, not appreciably different from analogous manifestations of the laws of motion, and (2) that the dissimilar perspectives in Le Conte's experiments with the book (an instance of double monocular vision) must be considered exceptional. It is certain, furthermore, that Wheatstone's demonstration does not define the causative ultimatum of relievo perceptions. This has been personally acknowledged by him, and he thought it probable that some law of vision might be discovered which should include all the circumstances under which single vision by means of non-corresponding points occurs and is natural. Bonnet[3] has observed that the union of the two retinal pictures into a single picture in relief still remains one of the most wonderful phenomena of the senses. He says: "The representation of the material world in a distinctly limited extent takes place in the brain, and as such will for a long time escape scientific research. Such is briefly accompanied the various solutions and views entertained by those accepting what appeared to be the truthful experiences of vision, together

[1] Dr. W. Mackenzie on Vision, p. 366, 1841.
[2] The Five Senses, p. 149, 1876.

with a few interpolations anticipatory of the present arguments.

In seeking a clue to the mental idea of relievo, the first essential is to ascertain the nature of relief in itself; it is subversive to progress to confound cause and effect, but nothing is more common than to make an independent mental principle the scapegoat for manifestations of the senses which elude ready comprehension by the intelligent principle. With no definition at hand, I shall offer the following for the want of a better. Relief is the compression of a magnitude within a second magnitude smaller than itself; it is the two sides of a triangle confined by the third side, or the arc of a circle in relation to its chord. Perhaps the best plan of studying relief is to divide a hexagon into its six natural triangles, and with these to build up successively a triangular, a quadrangular, and a pentangular pyramid; the six triangles in apposition, being limited by their equivalent extension only, constitute a superficies. Next, regarding the definition physiologically. (*a*) In regard o touch, the solidity of a tennis-ball held in the hand is a mental combination of the perception of its superficies in relation to the perception of its diameter. (*b*) Visually, Brewster has reproduced the diagram of a sphere by Leonardo da Vinci that is placed at such distance that exactly one-half is seen by each eye, the right eye perceiving a half inclining towards the right side, and the left eye a half inclining towards the left side.[5] In this case both eyes perceive considerably more than half the sphere, and yet the increased binocular magnitude is compressed within a visible diameter that is no greater than that perceived by each eye independently; hence the sphere is seen standing out in a bold relief.

Mental ideas of proximity and remoteness appertain to every visual perception of relievo, so as to differentiate between a foreground and a background; also the former ideas (proximity) are usually associated with the contractions of flexor muscles, and the latter (remoteness) with the contractions of extensor muscles. As a second essential to the present investigation, the ocular adductors will be regarded as a flexor arrangement, and the ocular abductors as an extenser arrangement, for: 1. It is now recognised that the apparent nearness of objects is dependent on the degree of convergence of the eyes; analogously, objects are brought and felt nearer during flexion of the muscles of the upper or lower extremity, and *vice versâ*. 2. Vision grasps an object as it were at the point of binocular convergence, in like manner as a flexor adjustment superintends the manipulation of a tangible object. 3. The eyeballs are rotated inwards during sleep, analogous to the semiflexed state of the limbs. This notion of ocular adduction being a true ocular flexion is, I believe, a novelty; but in a debate before the Academy of Medicine of Paris some years ago, M. Guérin, a distinguished orthopædist, maintained that strabismus was the club-foot of the eye. It must be noted next, according to a former demonstration, that the two external retinæ are under the sensorial surveillance of the internal recti (flexion or proximity), whilst the internal retinæ are influenced by the external recti (extension or remoteness). And, lastly, it must be conceded that the apparent position (distance and direction) of an object coinciding with the intersection of the two optical axes is absolutely fixed, as admitted by Brewster and others.

(To be concluded.)

[5] The Stereoscope, fig. 2. 1856.

THE SOCIAL SCIENCE CONGRESS.—Amongst the special questions which have been arranged for discussion at the next Social Science Congress, which is to be held at Birmingham in September, are the following:—Department of Jurisprudence and the Amendment of the Law: What reforms are desirable in the law relating to the arrest and continued detention of alleged lunatics, and to the control of their property? Department of Health: 1. What is the best method of dealing with (*a*) town sewage, (*b*) the products of house and street scavenging, and (*c*) the products of combustion? 2. What are the best means, legislative or other, of securing those improvements in the dwellings of the poor which are essential to the welfare of the community? 3. How far may the average death-rate of a population be considered an efficient test of its sanitary condition? and by what means can the high death-rate of children be reduced

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nullaautem estalia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

TWO CASES OF FRACTURE AND DISLOCATION OF THE CERVICAL SPINE.

(Under the care of Mr. BRYANT.)

THE following interesting cases of fracture and dislocation of the cervical spine should be read in conjunction with the case reported below from the Halifax Infirmary.

CASE 1.—*Fractured Cervical Spine; Dislocation Backwards of Fifth Cervical Vertebra; Fracture of Spinous Process and Fourth Left Articular Process; Suppurating Kidneys; Lardaceous Disease; Death in the seventeenth month.*—John S——, aged twenty, was admitted on July 18th, 1881, into the Accident ward. He plunged into a bath from a distance of welve or fourteen feet, and struck his head against the bottom. When he came to the surface he called for help. He was assisted out of the bath by his friends, but was unable to stand, and was brought to the hospital.

On admission, the patient was very blanched and almost pulseless. He had a small scalp wound on the vertex. He had no power of motion or sensation in the lower extremities; in the upper extremities sensation was impaired, and motion was limited to slight extension and flexion of forearm, with no power of grasping. Sensation on the trunk was perfect to the level of the last cervical vertebra; below this there was a band where sensation was impaired for about an inch (in direction of nerves); the loss of sensation below this was almost entire. Pulse 62, very feeble; lower limbs cold; priapism, occasionally sensitive on the abdominal wall and genitals, but not always, and then only faintly; pupils normal; no vomiting; quite conscious; sensation of "pins and needles" down the arms; pain under the ear, cervical, and first dorsal vertebræ; temperature in mouth and axilla 97·4°; no facial paralysis or loss of sensation; no deafness; no hæmorrhage from ears or other symptoms of fractured base. The patient was unable to cough, and the attempt brought on retching and gasping.

July 19th: Unable to pass urine. Soft elastic catheter used.—25th: Priapism gone.—27th: Urine thick and ammoniacal.

Aug. 1st: Able to tell which toe is touched on left foot.—16th: There is returning sensation on left side of the abdomen, but none on the right.—20th: Breathing wholly diaphragmatic.

Oct. 12th: Urine 1020, reaction alkaline, no albumen.—17th: Legs are much wasted.—28th: Swelling and œdema of ankle and knee-joints.

Nov. 2nd: Sensation over right half of abdomen slightly improved.—19th: The patient has bedsores on his back, which has a spotted appearance all over, with a disposition to form sores.

Dec. 12th: Bladder washed out every two or three days with boracic acid lotion.

Jan. 2nd, 1882: The bedsores are healing, but fresh ones are threatening. He has severe sweatings.

Feb. 6th: The patient is able to read. Morphia is subcutaneously injected and a belladonna pill is given twice a day. His arms are flexed and supinated. He has sensation now to middle of left leg.

March 6th: Bedsores dressed with glycerine and boracic acid.

April 13th: For the last two days excessive perspiration has returned. Ordered five grains of sulphate of quinine, four minims of dilute sulphuric acid, and half a drachm of orange syrup, in an ounce of water, three times a day.

May 26th: For the last two nights the patient has wandered a good deal, and fancies that some one is poisoning him.

June 1st: Passed some blood and stained mucus this morning.

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July 24th: The patient perspires less, and seems to be gaining flesh.

Aug. 24th: Complains of pain in the hypogastric region.

Sept. 11th: Complains of headache and jumping pain in the leg.—13th: Urine alkaline, sp. gr. 1020, no sugar, no albumen, and contains ropy mucus.—14th: Ordered seven minims of solution of strychnia, seven minims of dilute nitro-hydrochloric acid, fifteen minims of syrup of orange, with an ounce of infusion of orange, three times a day.—17th: The patient lies on his back with his arms rigidly contracted, the elbows close to the side, and the foramens tightly flexed on the arms and supinated, so that the dorsal aspect of each hand is in close contact with the front of each shoulder, the palms looking forward, and the thumbs tightly drawn inwards towards the palms, and the fingers rigidly contracted.

Nov. 22nd: Complains of excessive sweating. Tongue dry and rough.

Dec. 4th: Urine alkaline, sp. gr. 1015, with a distinct albuminous cloud. His temperature is curious — viz., Dec. 2nd: morning 97·5°, evening 102°; Dec. 3rd: morning 101·5°, evening 102°; Dec. 4th: morning 97°.—7th: The patient is constantly sick.—27th: Died.

Necropsy.—The bodies of the fourth and fifth cervical vertebræ were found to be firmly anchylosed together by a new bony layer in front. The fifth vertebra was dislocated backwards, so that the posterior lower edge compressed the cord greatly at this point, where it was much atrophied. The remainder of the cord below was small, firm, and apparently a good deal atrophied. There was no myelitis. The membranes were not thickened. The bladder was in very fair condition. Cretaceous nodules existed in the left apex of the lung, and patches like tubercle here and there. Heart good, pericardium adherent. Spleen large, firm, and translucent (lardaceous). Stomach darkly stained and decomposed. Liver lardaceous. Kidneys true surgical.

CASE 2.—*Fracture and Dislocation forwards of Fifth Cervical Vertebra; Complete Paralysis; Cystitis; Bedsores; Early Broncho-pneumonia; Death on the Forty-seventh Day.* (Notes by Mr. Penfold.)—Ellen D——, aged fifty-five, was admitted into the Lydia ward on Oct. 9th, 1882. She was found at the bottom of a flight of stairs at 10 P.M. on the 8th, sensible, but unable to move. She had fallen down, but how long before she did not know. She complained of a pain in her neck, and was put to bed. Her hands were cold, and she had no use in them. She slept through the night. The next morning (9th) she stood up, but immediately fell down. She was brought to the hospital in a cart at 2 P.M.

On admission, there was found to be complete anæsthesia up to the second rib; between the region of anæsthesia and normal skin was a distinct zone of hyperæsthesia; the paralysis extended below the arms; there was diaphragmatic respiration; and the elbows were flexed across the chest. The patient could tell when the great toe was touched.

Oct. 11th: The patient makes an effort to cough but cannot; the diaphragm acts, also the muscles of the neck, but the chest and abdominal muscles are immovable; she wants to be sick and cannot; the tongue clean at sides and tip, reddish-brown, raised down the centre, and edged with slimy white fur. She has slight voluntary movement at the shoulder-joint, but cannot raise her arm more than two inches. There is marked movement in the supra-clavicular region in respiration; the region of the hyperæsthesia not definable now; urine drawn off by catheter. A soap enema was given. Breathing laboured.—13th: Urine acid, rather muddy, no albumen, sp. gr. 1023.—14th: Urine ammoniacal.—17th: Slight involuntary evacuation of fæces; cough troublesome.—18th: Urine strongly alkaline, loaded with plastic mucous, sp. gr. 1020; bladder washed out with iodine and water.—19th: Bedsore on back extending. Urine under a quarter-inch lens showed triple phosphate and some organic substances, probably bacteria and epithelium.—25th: Bedsores extending; dressed with iodoform; bladder washed with borax lotion, washings blood-stained.—27th: Passes water involuntary; is conscious of being wet.—28th: Urine ammoniacal and fetid, contains albumen, blood, pus, mucus, bacteria, and epithelial scales.

Nov. 6th: The patient passes fæces and water involuntarily; has very troublesome cough; heart-sounds feeble and normal; loud rhonchi heard all over chest; no crepitation; legs somewhat œdematous.—17th: No albumen, and no sugar in urine.—23rd: Has caught severe cold, voice almost lost.—25th: Quite unconscious. Pulse 98; respiration 43, sudden and very short.

Necropsy.—There were dislocation and fracture of the cervical spine between the fifth and sixth cervical vertebræ, with softening of the cord; also early broncho-pneumonia.

HALIFAX INFIRMARY.

FRACTURE OF THE SPINE; DEATH; NECROPSY; REMARKS.

(Under the care of Mr. J. K. WRIGHT.)

THE following notes, for which we are indebted to Mr. G. W. Crowther, senior house-surgeon, should be read in conjunction with the cases above recorded from Guy's Hospital.

J. L——, aged twenty-one, a slater, was admitted on March 25th. He stated that whilst at work on a roof he was carrying a stone slate on the top of his head, when he suddenly slipped and fell backwards, the slate falling on the back of his neck. He was not unconscious, but could not move his legs.

On admission he was considerably collapsed, the skin was cold and clammy, and the pulse at the wrist almost imperceptible; the pupils were contracted, but equal, and the expression was dull and sleepy. There was paralysis of both legs as regards motion, but tactile sensibility was perfect. The arms were unaffected. The intercostal muscles were paralysed, so that the chest wall sank in on inspiration; the breathing was entirely abdominal. There was priapism. A slight abrasion was noticed over the left frontal prominence. On the following day the temperature was 101° F. The hot bottles which had been applied to the feet and sides were taken away and the patient was ordered to be kept at perfect rest. Numbness and tingling of the lower extremities, extending upwards to the armpits, were complained of. There was also loss of tactile sensation in the right lower limb, extending upwards along the whole right half of the body as far as the second costal interspace. The patient could not distinguish between hot and cold bodies applied to either leg. There was no ankle clonus nor any plantar, patellar, cremasteric, or epigastric reflex on either side. The pupils were contracted, and reacted but slightly to light and distance. The patient complained of severe pain at the back of the neck. On examining the spine externally no inequality or irregularity in the spinous processes could be detected, but pressure caused pain about the lower cervical vertebræ. No bruising could be seen. There was constant vomiting of slightly acid, yellowish-brown fluid without effort, as well as persistent hiccough. The tongue was pale, covered with a slight brown fur; abdomen tense and tympanitic all over. The patient had passed no urine since admission, except by catheter, and there was absence of reflex of defæcation. Evening temperature 97°F., pulse 68, soft and compressible, respiration 24. Great thirst; ice given to be sucked. On the 27th the patient said he felt a little better, did not complain of pain, but had passed a sleepless night. Vomiting and thirst continued. Temperature 97·6°, pulse 76, respiration 28, urine drawn off by catheter. Very slight motion in both arms, but sensation perfect in them. At 8.30 P.M. he was found to be unconscious, breathing with great difficulty and entirely by the abdomen. The face was livid and the veins at the root of the neck were prominent. The pupils were dilated and the conjunctivæ were insensitive to the touch. On examining the chest rhonchial sounds were heard and the heart sounds were distinctly audible. Temperature 100° F., pulse 108. The patient died at 8.40 P.M.

Necropsy, forty-eight hours after death.—Body well nourished; post-mortem lividity marked; rigor mortis marked in lower extremities, slight in upper; pupils dilated and equal. There was a fracture involving both laminæ of the fourth cervical vertebra, the outer portion of the lamina overriding on the left and passing down on the left side into the lamina of the fifth. There was also fracture of the bodies of the above two vertebræ about their centres. There was a small blood-clot immediately under the seat of fracture, outside the dura mater. The spinal cord was flattened and indented posteriorly at the cervical enlargement. Rupture through the right antero-lateral column, extending slightly into the left half at the lowest part of the cervical enlargement.

Remarks by Mr. WRIGHT.—When this patient was admitted it was at once seen to be a very serious case, and from the account of the accident it seemed probable to be one of concussion of the spine. With the permanency of

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the symptoms, however, it proved to be more than simple concussion. The group of symptoms pointed to injury and interference of power about the fourth cervical vertebra, this not being so complete as to thoroughly paralyse the brachial plexus, as evidenced by the involuntary drawing up of the arms, &c. As usual in such cases, this patient gradually sank from impediment in the lungs, dying from asphyxia. In a medico-legal point of view it is an interesting case, showing by how simple an accident we may have not only fracture, but also impaction of the plates of the vertebræ. As there was no evidence of direct violence to the neck, it is just possible that the man may have fallen on his buttocks with his spine quite erect whilst walking on the roof, and the stone slate which he was carrying might have remained on his head and its weight have thrown the head violently back, and so fractured the neck at the weakest point of the arch thus formed; this is supported by the small contusion found on the forehead. If this supposition is correct, I think it is an unusual mode of accident. I do not remember another instance of such injuiry being so produced.

MEDICAL COLLEGE HOSPITAL, CALCUTTA.

CASES OF ANEURYSM.

(Under the care of Mr. O'CONNELL RAYE.)

For the following report we are indebted to Anoda Prosad Datt, house-surgeon.

CASE 1. *Traumatic Aneurysm of the Palmar Arch.*—R. G——, Hindoo male, aged twenty-nine, received a wound two years previously in the left hand. The wound healed, but a pulsating tumour soon after formed near the hypothenar eminence. On admission the swelling was as large as a half walnut, and pulsated strongly. Pressure on the ulnar artery did not reduce the pulsation, neither did pressure on the radial; but when both arteries were simultaneously compressed the pulsation ceased completely. Accordingly the radial and ulnar arteries were both ligatured just above the wrist; catgut was employed for ligature. The pulsation at once ceased. On the second day after the operation pulsation returned. It was controlled by compression of the tumour with a pad and bandage lightly applied, and after a few days ceased completely. The swelling gradually subsided, and the patient was discharged cured three weeks after operation.

CASE 2. *Axillary Aneurysm; Ligature of the Subclavian in the third part; Cure.*—A Hindoo male, aged thirty-eight, a clerk, was admitted on October 22nd, 1883. He stated that he had suffered from syphilis four years previously, but that otherwise he had been invariably healthy. No evidence of the existence of constitutional syphilis was discoverable on a careful examination at the time of admission. The man was also wholly unconscious of having received any strain or injury which could account for the occurrence of the tumour. He first noticed a hard swelling in the axilla about six weeks before admission. It was then as large as a walnut, hard, and painless, and so far as he could remember did not pulsate. It remained stationary and painless for a fortnight after it was first noticed, and then rapidly enlarged. Pain commenced with the increase of size, radiating all round the tumour, darting down the arm, and finally becoming of an intolerable gnawing character in the site of the tumour itself. On admission, a tumour the size of a large orange filled the left axilla. It pulsated visibly, a thrill was perceptible on palpation, and a loud rasping bruit on auscultation. The pulsation was distinctly distensile, and could readily be controlled by compressing the subclavian on the first rib. The anterior and posterior walls of the swelling were hard and dense, but inferiorly a sensation of fluctuation was made out. The shoulder was elevated, and the elbow could not be brought to touch the side. A careful examination failed to elicit evidence of disease in any of the organs, and, in fact, but for the presence of the aneurysm and the suffering caused by it the man was in perfect health. Two days after admission digital compression was applied to the subclavian for thirty minutes, completely controlling the pulsation in the tumour. The pain in the tumour ceased with the cessation of pulsation, but the finger compressing the subclavian caused such suffering that the treatment had to be given up for the time. A hypodermic injection of morphia was then given. On the following morning a second attempt was made to use digital pressure. The patient could not tolerate it, however, for more than a few minutes. Finding that this treatment could not be borne, and a dark blush appearing on the skin in the axilla where the tumour was most thinly covered, it was determined to tie the artery next day. Accordingly, on the morning following the subclavian was tied in its third part in the ordinary way. The artery was reached without difficulty; but when exposed its pulsation for a few seconds was so feeble as scarcely to be perceptible to the finger. Catgut carbolised ligature was used, and when the ligature was tied all pulsation at once ceased in the tumour. Five minutes after the operation the fingers had become cold, while the shoulder felt abnormally hot. Half an hour later the whole arm and fingers had regained heat, and throughout the day remained distinctly hotter than on the sound side of the body. The arm and shoulder were of course wrapped in cotton-wool and laid comfortably on a pillow. The patient recovered rapidly without a single bad symptom. The wound healed by the first intention. A catgut drain was employed. The tumour slowly became smaller and more dense. Pulsation did not reappear in it at any time. Six weeks after the operation the man was discharged at his own request. He was then in perfect health, entirely free from pain, and could use his arm. The tumour had shrunk to about half its original size and was still contracting.

Four months later he reported himself perfectly well.

Note.—It may be of interest to note the method adopted for applying digital pressure in this case. The patient was propped up with pillows and the operator standing behind him grasped the shoulder, the thumb resting on the spine of the scapula and two fingers pressing deeply behind the inner half of the clavicle.

Medical Societies.

ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Surgical Section of this Society on April 4th the following living specimens were shown:—Mr. Hayes: Case of Radical Cure of Hernia. Mr. Croly: (1) Excision of the Knee; (2) Excision of the Elbow; (3) Fracture of the Patella, treated by the expectant method. Mr. Lambert H. Ormsby: (1) Case of Diseased Cervical Vertebra in a Child, treated by spinal support and jury-mast; (2) Case of large Cervical Tumour. Dr. C. B. Ball: Patient in whom Radical Cure of Hernia had been effected by torsion of the sac. Mr. A. H. Benson: Cases showing the result of Dianoux's Operation for Entropium.

The PRESIDENT (Mr. Wheeler) read a paper upon two successful cases of Pharyngotomy. The first was that of a man aged forty-five years, who swallowed a threaded needle eye foremost. His efforts to withdraw the needle by pulling the thread only served to embed the point more deeply. He was admitted to the hospital two days after the occurrence. Various attempts at removing the needle having proved unavailing, pharyngotomy was undertaken. An incision was made on the left side of the neck from the body of the os hyoides to the superior margin of the cricoid. The parts were caused to bulge by passing a staff into the mouth and pharynx, and upon the point an incision was made, the opening being then enlarged with the fingers. The needle was found embedded in the tissues. It was exposed by scraping with the finger nail, and by slight traction of the thread and grasping the needle with forceps it was withdrawn. The patient recovered. In the second case a lady had suffered some months from what was supposed to be ordinary sore-throat. On examination, a tumour about the size of a small egg was found situated below the level of the epiglottis on the right side in the sinus pyriformis. The symptoms of obstruction becoming urgent, it was determined to remove the tumour. An incision was made in the line of the right sterno-mastoid muscle from an inch below the angle of the jaw to the level of the upper ring of the trachea. The pharynx was opened by dividing the tissues on the projecting end of a catheter introduced through the mouth, and the wound was enlarged, first by forceps, then by the fingers. The tumour, which sprang from the styloid ligament and process, was removed piecemeal, and was found to be a spindle-celled sarcoma. The patient made a good recovery, but the disease returned in a few months and she succumbed. Mr. Wheeler emphasised the necessity of a free external incision.—Mr. TUFNELL, having seen the two cases,

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concurred fully in Mr. Wheeler's suggestion as to the feasibility of a large free external incision, the advantage derived from which was most desirable. Nothing could be more satisfactory than the mode of performing the operation and the result. He referred to a case in which Liston extracted a pike-hook from the pharynx of a boy, first by freeing the hook from its attachment, and next by jerking the double ends with a sponge. A needle might be broken in the extraction. — Mr. STORY said the needle could be cut in two, and then extracted by means of magnetised forceps. He instanced a case of a boy who had swallowed a needle. The boy was, on his recommendation, kept on slops in the hope that the needle would work down with the fæces, which it did in a few days.—The PRESIDENT remarked that one case was seldom a guide to another. Early pharyngotomy ought to receive attention.—Mr. FRANKS considered the great point was whether foreign bodies in the pharynx should be removed by an internal or an external operation. Opinion justified the necessity of pharyngotomy in certain cases; but where there were two natural cavities the need of making an unnatural opening was doubtful. In England the question was discussed of opening the thyroid cartilage or the larynx to get at foreign bodies, and the consensus of opinion was against external operation until every effort by natural means had failed. The laryngoscope should be employed, and where a foreign body was seen in the pharynx it could in the majority of cases be easily got out. Laryngotomy should only be used in extreme cases. In most books pharyngotomy was not mentioned, and the reason was that as a general rule the operation was unjustifiable.—Dr. M'ARDLE would confine pharyngotomy to such tumours as Mr. Wheeler had mentioned, but he did not see how a tumour growing from the styloid process could be extracted through the mouth without injuring some of the large vessels.—Mr. THOMSON asked whether the tumour did not spring from parts external to the pharynx altogether. If that were so, there was no occasion to perform pharyngotomy, except for the convenience of putting in the finger to push the tumour upwards.—The PRESIDENT, in reply, said he had attempted to cut the needle in half with forceps, but had not succeeded, though he had the aid of Dr. Haughton and others. Of course he would not perform pharyngotomy where he could remove the tumour through the mouth. Tumours of the pharynx growing from the base of the skull could not be removed through the mouth. The laryngoscope was a great help in diagnosing the exact situation of the needle and the tumour. The wall of the pharynx was outside the tumour.

Dr. M'ARDLE brought forward a case of Stricture of the Rectum, in which linear rectotomy had injured the patient, and dilatation by bougies was ineffective. Having reviewed the various methods of treating intractable stricture, and shown that the mortality after colotomy was as great as that after excision of the rectum, he invited opinion on the method of excision by a musculo-cutaneous perineal flap and retention of the external sphincter, as advocated by Busch of Berlin.—Mr. HAMILTON regarded one operation only as absolutely radical for cancer of the rectum. Linear rectotomy was only a palliative operation, not curative. But he could hardly say the same of colotomy. It was of course palliative, and gave a great deal of comfort. The only radical cure was extirpation of the bowel; but the cases in which that operation could be performed with satisfaction were very few. Where the limit of the disease could be reached with the finger, the rectum might be removed with a fair chance of success.

The SECRETARY, for Surgeon-Major TOBIN, read the particulars of a case of Ununited Fracture of the Femur, which was under treatment in Netley Hospital in February, 1883. The injury was sustained whilst the patient was on active service in Egypt. He was in the mounted infantry, and on Aug. 6th his horse ran away and dashed him against a tree. The injury was first treated by a long Liston's splint. Whilst in hospital he had an attack of enteric fever, which lasted five weeks. About six weeks after the receipt of the injury the splint was removed, but no union was found to have taken place. A MacIntyre's splint was now substituted, and after six weeks a gypsum bandage was applied and left for several weeks. Still no union took place. On the patient's admission into Netley Hospital the shortening was two inches and three-quarters. On May 18th, 1883, the situation of the injury was exposed, and the fracture was found to be a comminuted one. The ligamentous union between the fragments having been divided, the lower fragment was made to protrude, and its upper extremity excised. The lower extremity of the upper fragment was removed by a chain saw, and the two fragments were then wired together. To counteract the tendency to tilting forwards of the upper fragment it was decided to put the leg up at nearly right angles to the body. In carrying out this plan, an ingenious apparatus devised by the author was employed, by which all the necessary requirements were fulfilled. The patient's recovery was uninterrupted, and when the apparatus was removed firm osseous union was found to have taken place. The shortening was two inches and three-quarters. When this shortening was compensated for by a suitable boot, the patient soon learned to walk about with freedom.

Reviews and Notices of Books.

Clinical Lectures on Mental Diseases. By T. S. CLOUSTON, M.D. 8vo, pp. 624. London: J. and A. Churchill. 1883.

Influence of the Mind upon the Body. By Dr. HACK TUKE. Second Edition. Two vols., pp. 335 and 309. London: J. and A. Churchill. 1884.

Insanity considered in its Medico-Legal Relations. By T. R. BUCKHAM, A.M., M.D. 8vo, pp. 250. Philadelphia: Lippincott and Co.

DR. CLOUSTON'S work is without doubt the best clinical book on insanity yet published, and should be of great use to the general practitioner in dealing with insane cases. The author has clearly and interestingly described a large number of varieties of insanity, especially from the point of view of "progress" rather than from that of "state"; and although these varieties have not been exhaustively treated, the consideration of them has been carried far enough for practical purposes; the practical character of the book, indeed, is evidenced in every page. Regret must be expressed, however, that the author should have still further burdened a subject already overloaded with terms. Psychalgia, psychlampica, psychocoma, &c., give rise to a mental feeling which can best be described by the first of the terms quoted. Dr. Clouston follows the rule of writers on mental diseases by inaugurating a new classification. This is founded on symptoms and is divided into states of mental depression, exaltation, regular alternation, fixed delusion, enfeeblement, stupor, defective inhibition, and, lastly, the insane diathesis. He also treats of some nineteen major and fourteen minor varieties of insanity, these varying in value from general paralysis to post-connubial insanity. The relative importance of each of these varieties would probably vary with the experience and attention of each writer; but Dr. Clouston certainly seems to have treated some of these cursorily, as the traumatic, syphilitic, and gouty forms. In a work of so much clinical detail there is difficulty in criticising the special divisions of the subject, but the concluding lecture on medico-legal and medico-social duties calls for especial commendation for clearness, conciseness, and systematic arrangement. The book is embellished by eight plates, of which several are coloured. One of these represents a section of brain in a state of acute mania, showing a degree of irregular vascularity which Dr. Clouston appears to think is more common than the majority of his contemporaries will admit. A second represents the vertex of the brain in general paralysis, and is too pretty to be satisfactorily pathological. That the book is well written is guaranteed by the name of the author, who in furnishing so useful a work to the profession has added to his well-deserved reputation.

Dr. Tuke, in the preface to the first edition, states the object of his work to have been the collecting together and arranging in physiological order the authentic illustrations of the influence of the mind upon the body. In his second preface he further aspires "to lay down and illustrate certain

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psycho-physical principles which appear clearly recognisable in the light of modern physiology." A careful perusal of this most interesting work will lead to the conviction that the author has very fully carried out his intentions. The facts collected are evidence of extreme care and extensive research, and their arrangement manifests a clear and systematic appreciation of the whole field of psychic phenomena. Exception can rarely be taken to the conclusions drawn, and the author is certainly modest in regarding his work as one merely of collecting and illustrating, for he makes many obscure points plainer and is eminently suggestive on others. The first three parts of the work are respectively devoted to the influence of the intellect, emotions, and will on sensation, the voluntary and involuntary muscles, and the organic functions. The author concludes that the sensorium *may* be placed in exactly the same condition by a vivid idea as by a sensible object; and that an *emotion*, which by its character or suddenness depresses the activity of the controlling power of the cerebrum, may allow of irregular or excessive action of the encephalic, spinal, or sympathetic nerve-centres. The fourth part is devoted to the influence of the mind on the body in the cure of disease; and Dr. Tuke maintains that there is ample evidence, from the examples quoted, of the therapeutic influences, of expectation, faith, and the concentration of the attention on the seat of the disease. Although the work is so extensively a compilation of facts as to render topical criticism difficult, it is interesting throughout, and will form a valuable and useful book of reference on the subjects treated for many years to come.

Dr. Buckham claims to have written his book with the view of helping to remove the uncertainty of verdicts in insanity trials, but doubt must be expressed in regard to the amount of success which will attend his effort. The introductory chapter gives a useful summary of the various "Judges' opinions" that have been delivered in this country and America; these are of the most contradictory character, and serve only to prove how far are the best legal minds from grasping the subject. The author arrives at the following definition of insanity—viz, "A diseased or disordered condition, or malformation, of the physical organs through which the mind receives impressions, or manifests its operations, by which the will and judgment are impaired and the conduct rendered irrational." Hence the conclusion is deduced that "insanity being the result of physical disease, *it is a matter of fact*, to be determined by medical experts; not a matter of law, to be decided by legal tests and maxims." A lengthy chapter is devoted to the definition of what qualifications should be possessed by an expert, and in deprecating the system by which practitioners who have but little experience of insanity are often called on to discharge the function of experts. The book is well written, and deserves commendation for the clearness with which the author's views are expressed.

A Text-Book of Pathological Anatomy and Pathogenesis. By ERNST ZIEGLER, Professor of Pathology and Anatomy in the University of Tübingen. Translated and edited by DONALD MACALISTER, M.A., M.B. Part II.: Special Pathological Anatomy. Sections 1 to 8. London: Macmillan and Co. 1884.

Manual of Pathological Histology. By CORNIL and RANVIER. Second Edition, re-edited and enlarged. Translated by A. M. HART. Vol. II.: Special Pathological Histology. Part I. London: Smith, Elder, and Co. 1884.

WE are glad to welcome further instalments of the English editions of two well known and much esteemed foreign works,—works which differ somewhat in their scope and in their manner of treatment, but which, dealing with the same subject, may appropriately be considered together. We think that the respective editors have done wisely in not waiting until the original text of the book is completed before submitting their excellent translations to the notice of English students. In the case of Professor Ziegler's work the delay in its completion is really due to the remarkable popularity it has attained, for the author has had to prepare new editions of the first portions before he has had time to publish the final sections; whilst to the painstaking care with which MM. Cornil and Ranvier are revising their "Pathological Histology" may doubtless be ascribed the non-completion of the book.

Each of these books has its distinctive characters. That of Ziegler aims at presenting a complete but concise survey of pathological science in its most recent developments; that of MM. Cornil and Ranvier penetrates more deeply into the subject, and bears on every page the stamp of practical personal investigation. Each has its place; for although the first-named is perhaps more particularly suited for class purposes, yet the advanced student will find in both ample material for guidance and instruction. The subjects dealt with in the eight sections of Ziegler's work include (1) the blood and lymph, (2) the vascular mechanism, (3) the spleen and lymphatic glands, (4) serous membranes, (5) the skin, (6) mucous membranes, (7) alimentary tract, and (8) liver and pancreas. The chapters in Cornil and Ranvier's volume are confined to the respiratory organs and the alimentary tract.

If we were to direct attention to any part of the first-named volume as more to be commended than the rest, it would be the pages devoted to the pathological anatomy of the skin, which strike us as conveying in a clearer manner than usual the essential nature of its various lesions. But where all is so good it is invidious to select a part, and we must be contented with recommending the work as in every respect well suited to its purpose. The illustrations, be it added, are of the same high order and finish as those of the former volume. Turning to the French work, the chapters which will engage most attention are undoubtedly those dealing with the anatomy of phthisis. The position assumed by the authors is that of the "unity" of phthisis—i.e., its general underlying tubercular character; but it would seem that they regard more strictly than many who now adopt this, the original view of Laennec, the secondary character of the concomitant inflammatory lesions. Tuberculosis is indeed the great battle-ground of pathologists; and the present volume contains many facts worthy of remembrance with respect to it.

Rupture of the Urinary Bladder. Based on the Records of more than 300 Cases of the Affection. By WALTER RIVINGTON, F.R.C.S., B.A., M.B. and M.S., President of the Hunterian Society, Surgeon to the London Hospital, &c. London: J. and A. Churchill. 1884.

THIS brochure of some 160 closely printed large octavo pages embodies the results of considerable research, and is a really valuable addition to surgical literature. Mr. Rivington has expressed his views on rupture of the bladder in our columns, and this book is indeed but an expansion of those articles. It is a careful and close criticism of all the published cases the author has been able to meet with, and contains most valuable information on the etiology, symptomatology, and diagnosis of this accident. The author does not believe that the evidence in support of the supposed cases of recovery from intraperitoneal rupture of the bladder is sufficient in any one of the cases. So far as regards treatment, he advocates an early resort to bold measures, laparotomy with thorough cleansing of the peritoneal cavity, and then drainage of the bladder through a perineal incision, with or without suture of the original wound of the bladder. While we can only praise the author's work, we must speak otherwise of the publisher's. The book is so closely printed and a large part of it is in such small type, that to read it

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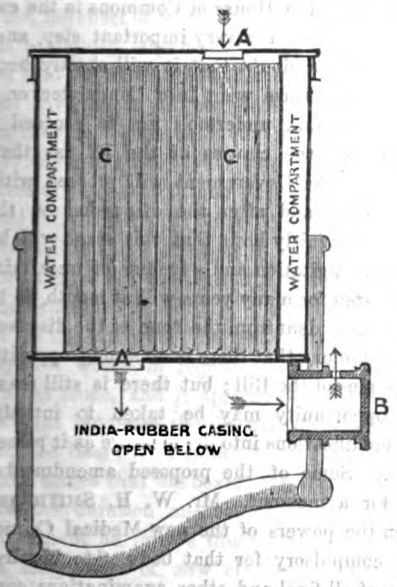
becomes a most unwelcome labour; while in the copy sent to us a list of the author's published writings is bound up between the text and the index—a most inconvenient and improper place for such an advertisement. We trust that no one will follow the example set either by the form or the position of this remarkable intercalation.

New Invention.

A NEW INHALER FOR THE ADMINISTRATION OF ETHER.

Of the two anæsthetics, chloroform and ether, the former is the one which in Scotland is almost universally preferred. By its use anæsthesia is easily produced, and that with no more apparatus than is afforded by a tolerably thick towel. Ether, on the other hand, is associated in men's minds with difficulty of administration, and with the employment of a more or less complicated and expensive apparatus, requiring the skill of a professed anæsthetist, and it is accordingly shunned by all except a few, who, like myself, thoroughly believe in its superior safety over its younger rival. With the view of facilitating and rendering more general the administration of ether, I have for the past two years been endeavouring to devise an effective apparatus which should be not only safe in use and simple in action, but also economical of the anæsthesia, and I have at last succeeded in the construction of an inhaler possessing these qualifications, and, in addition, capable of producing anæsthesia in a short space of time.

A reference to the accompanying woodcut will show that the inhaler is composed of two parts: the upper designed



Vertical Section of Inhaler.
A, Respiratory valves. B, Expiratory valve. C, Convolutions of bandage.

for the admission of air and for the reception and evaporation of ether, and the lower for application to the face of the patient. The upper or ether division is constructed of nickel-plated metal, and consists (1) of a double-walled compartment adapted for containing a quantity of hot water to aid in the evaporation of ether; (2) a central space (surrounded by the preceding water-jacket) completely filled by a metal frame, on which are stretched convolutions of bandage, for the absorption of the anæsthetic; (3) a movable lid, fitted with an inspiratory valve; and (4) an immovable floor similarly provided. The lower or respiratory division of the inhaler is made of red rubber. Above, it is in close contact with, and encircles, the lower part of the ether division, while below, it is shaped for adaptation to the face. It is furnished with an expiratory valve. From the above description, it will be gathered that inspiration opens the inspiratory valves, whereby the patient is made to breathe air heavily charged in its passage through the ether chamber with the vapour of ether, while expiration closes them, the expired air escaping through the valve constructed for that purpose. It has always been my practice, previous to administering ether, to dull the sensibility of the respiratory mucous membrane by allowing the patient to inhale for about two minutes a few minims of chloroform dropped on a single fold of towel, and then to supply the ether by the apparatus in the following manner. The water-jacket having been filled with tolerably hot water, the lid of the inhaler is removed, and about two drachms of ether sprinkled on the bandage. The lid is then replaced, and the apparatus closely fitted to the patient's face, great care being taken to apply it so exactly that on inspiration all air passes through the ether chamber before reaching the patient's lungs. In about half a minute a larger quantity of ether (half an ounce) is added, and similar quantities repeated, if necessary, until the patient is in a fit state for operation. Generally in from three to five minutes from the commencement of the inhalation of ether, anæsthesia is complete, and it can then be easily maintained by much smaller doses of the anæsthetic. I have used the inhaler in this way in many operations varying greatly in severity and duration, and it has always acted to my satisfaction. Certainly some patients were more difficult to manage than others; but on the whole I have had little trouble from what have been termed the inconveniences of ether, and none at all from the anxious symptoms so commonly observed during the administration of chloroform. In a few patients the ordinary face piece will prove somewhat large; and to obviate this inconvenience each inhaler will be provided with an additional face-piece rather smaller than that which is generally required. Towards the end of long operations the water in the jacket gets nearly, if not quite, cold; but this loss of temperature I have not found to be of any practical moment, the warmth being chiefly necessary at the commencement of anæsthesia, not after its establishment. Indeed, in very hot weather in this country, or in warm climates, I believe that hot water might be dispensed with altogether.

In bringing my inhaler before the notice of the profession, I wish to direct attention to the following advantages which it possesses:—1. Safety: The patient is made to breathe pure air mixed with the vapour of ether, and he never again inspires his own expired air. 2. Economy: He does not waste the anæsthetic by expiring through the bandage. Dissipation of ether is also controlled by the use of the lid, which acts in addition as a protection to the bandage from the wetting effects of antiseptic spray. 3. Simplicity: The inhaler is simple and self-acting, and the ether may be supplied without removing the apparatus from the patient's face. 4. Efficiency: Anæsthesia is easily and quickly induced, often before the surgeon has completed his preliminary antiseptic precautions, and it is effectually maintained. The inhaler has been constructed by Messrs. Krohne and Sesemann, London, to whom my thanks are due for various suggestions and for assistance in points of practical detail.

P. BLAIKIE SMITH, M.D.,
Anæsthetist Royal Infirmary, Aberdeen.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

To the Editor of THE LANCET.

SIR,—Will you permit me through your columns to announce that a general meeting of this Association will be held in Belfast during the meeting of the British Medical Association in that city, at a place and date hereafter to be decided on; and as it is my intention to comment on the deficiencies of Poor-law medical relief in the three kingdoms with the view to their mitigation or removal, I shall be obliged if Poor-law medical officers in England, dispensary officers in Ireland, and parochial medical officers in Scotland will forward to me a statement as to the grievances of which they have reason to complain, so that I might bring them before the meeting, especially instances where extra fees or superannuation allowances have been refused.

I am, Sir, yours obediently,

JOS. ROGERS,
Chairman of the Poor-law Medical Officers' Association.

33, Soho-square, July 2nd, 1884.

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THE LANCET.

LONDON: SATURDAY, JULY 5, 1884.

WHATEVER may have been the personal predilections of individual voters, the general result of the election of members of Council of the Royal College of Surgeons of England held last Thursday, cannot fail to give satisfaction. Though the test question put before the candidates was that of Collegiate reform, the election itself did not provoke so much excitement as some of its predecessors intrinsically less important. The principles for which a large number of the more active and spirited Fellows and Members have so long contended were practically accepted by every one of the nine candidates; hence the interest lay chiefly in the selection of the five candidates who would be most likely to give these principles effect within the Council. The choice has fallen on Mr. THOMAS SMITH, who has been re-elected, Mr. GEORGE LAWSON, Mr. A. E. DURHAM, Mr. BERKELEY HILL and Mr. WILLIAM ALLINGHAM. Every one of these gentlemen, either by his conduct in public affairs or by tacit understanding or explicit promise, is pledged to advocate a readjustment of the relations between the Council and the members of the body corporate, whereby the latter shall acquire a larger share in the management of the College. This readjustment a majority of the old Council lately refused even to consider. With the infusion of fresh blood it may be expected a juster and more sagacious view of the situation may be taken. The new members of the Council may be depended upon, as intelligent and honourable men, to join the liberal party within the Council, and to co-operate heartily with its members not only to remedy existing grievances, but also to conciliate the Fellows and Members, and enlist their active sympathy and participation in everything that concerns the welfare of the College. It may be hoped, too, that the obstructives themselves may accept this opportunity to retrace their steps and amend their ways. Only in this manner can they save their reputation for political capacity. We do not expect unanimity. The subject of reform is large enough to permit of many differences of opinion. Even those who are agreed that some changes are needed to put the College in harmony with the demands and requirements of the time are not on all points unanimous as to the nature or precise directions in which these changes should be made. But obstinately to deny the necessity for any change whatever, or wilfully to refuse it, denotes a singular inaptitude for political problems or an inexcusable ignorance of the teachings of constitutional history. Continuity of reforms is an indispensable condition of every active and healthy community. Increase of intelligence and education necessitates extension of political power. If this is true of the general community, how much more applicable is it to a constituency composed exclusively of members of a learned profession.

The Council cannot any longer plead ignorance of the opinions of the Fellows and Members of the College respecting this subject of reform. Two Associations, one of Fellows the other of Members, are engaged in preparing schemes of reform. These schemes will doubtless soon be ready for presentation to the Council. Whatever may be their details, it may be taken for granted that their general tenour will be the reaffirmation of the principles expressed in the recommendations adopted at the general meeting of Fellows and Members held in the College on March 24th last. When the wishes of the Fellows and Members are formally brought to the notice of the Council, the old tactics of unreasoned and unreasoning resistance will have to be abandoned. Writing more than a century ago on a question of Parliamentary reform, EDMUND BURKE said, "I most heartily wish that the deliberate sense of the kingdom on this great subject should be known. When it is known, it *must* be prevalent. It would be dreadful indeed if there was any power in the nation capable of resisting its unanimous desire, or even the desire of any very great and decided majority of the people. The people may be deceived in their choice of an object. But I can scarcely conceive any choice they can make to be so very mischievous as the existence of any human force capable of resisting it." The same arguments may be used with respect to the relations of the Fellows and Members of the College of Surgeons to the Council. The desideratum just now is a majority within the Council amenable to such arguments.

WE were able to announce in our second edition last week that the Medical Act Amendment Bill had passed its second reading in the House of Commons in the early hours of Friday last. This is a very important step, and there is now no reasonable doubt that it will shortly become law. On Monday the House went into Committee on the Bill, but Mr. MUNDELLA undertook not to proceed with the consideration of the clauses of the Bill at that sitting. We trust that the Government will proceed with it on a very early day, and after the discussion on the second reading we may fairly hope that this stage will be quickly passed, and an agitation and a feeling of uncertainty which have now lasted for many years will at length be brought to a close. It is evident from the tone of the discussion in the House of Commons that there is no strong opposition to the main principles of the Bill; but there is still reason to fear lest the opportunity may be taken to introduce some injurious modifications into the measure as it passes through Committee. Some of the proposed amendments we may consider for a moment. Mr. W. H. SMITH proposes to strengthen the powers of the new Medical Council, and to make it compulsory for that body "to inquire into the sufficiency of all final and other examinations conducted or recognised for the purpose of this Act." This is a proposal with which in principle we are in full sympathy, for we are convinced that a system of thorough inspection of all medical examinations by the stronger Council this Bill creates cannot but be good, although the details of the procedure may require fuller consideration. Colonel KING-HARMAN, by two amendments, seeks to introduce compulsory affiliation with "the medical authorities," for he proposes to compel a student to be "attached from the commencement of his professional studies to one or more of the medical authorities," and to pass "therein the esting or sessional examinations required by the Act"; and he further suggests that before being allowed

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to offer himself for final examination, and after having been admitted as a medical student, he must "thereupon have attached himself to one or more of the medical authorities represented on a medical board." This we trust will not be carried. It is opposed to the principle of liberty. Students should be free to obtain their education where it is best provided without any unnecessary restrictions, the State ensuring that there is a reasonable guarantee of their proficiency to practise before they are allowed to register as qualified practitioners. To seek to bolster up or support existing "medical authorities" by compelling students to connect themselves with them will not secure either that these "authorities" shall fulfil their responsibilities or that the students shall be better educated. If the legal restraint is found to be irksome, it will be thrown off; while if the connexion is of real value, students will not be slow to avail themselves of it. Then we have a series of amendments standing in the names of Mr. WEBSTER and Mr. JAMES CAMPBELL, to add a nineteenth member to the Medical Council by giving the Medical Board of Scotland power to elect three instead of two members, and at the same time to add to that Board two more members, by giving the Universities of Glasgow and Aberdeen one additional representative to be elected alternately by either, and to give the College of Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow two representatives each in place of three between them, the effect of which would be to give the Scotch corporations a slightly larger proportion of representation as compared with the universities than they have at present. We hope the Government will not yield on this point, for in our opinion they have gone quite far enough in this direction already, although there would be no serious dislocation of the balance of power were these suggestions to be carried out. Colonel KING-HARMAN, however, proposes to add to each Divisional Board the members of the Medical Council "elected for such part of the United Kingdom by the registered medical practitioners therein." This is quite a different matter, and we think it would be well to try how the representative system works in regard to the Council before giving it a wider scope, and it appears to be unnecessary in view of the great influence the Council will have over the operations of the Boards. Colonel KING-HARMAN further seeks to add a clause that the boards shall fix a "minimum standard for the duration and course of study"; but by another amendment he throws this duty upon the Council. By a long series of new clauses the hon. member proposes that upon the Medical Council instead of upon the Boards shall devolve the duty of framing all the rules and regulations for the conduct of the examinations to be held in each division of the kingdom, as well as the conditions of admission as medical students. This would be a very serious alteration in the principle of the measure, which we trust the Government will resist; it would deprive the boards of their chief duties, and would throw upon the Council a large amount of arrangement of details which would be far better managed by local bodies. The only other amendment that we need now mention is one by which Colonel KING-HARMAN seeks to apportion the surplus funds to be expended upon the maintenance of libraries and museums "in proportion to the number of persons who have, during the preceding year, passed the final examination of the Divisional Board therein." This introduces a mischievous spirit of rivalry between the boards of the three divisions of the kingdom, and in its most potent form. We would urge the Government to resist this proposal, and to leave in the hands of the Council, subject to the control of the Privy Council, the apportioning of the surplus funds at its disposal. It is with great pleasure that we are able to write of this measure having reached so advanced a stage; and we trust that, while all reasonable suggestions will be generously considered by the Government, they will steadfastly resist all proposals which would tend to interfere with its efficient working.

THE misleading and delusive endorsement afforded by the Patent Medicines Stamp to nostrums and "specifics" is a subject at the present moment exciting much interest. The Stamp Act was passed in the year 1812, when pharmacy occupied a position far different from that which it has since assumed. Many of our most active drugs—quinine, atropine, and morphia, for example—had not been discovered, and of others very little was known. A perusal of the Act and of the accompanying schedule of the nostrums then in vogue will show what great changes have taken place, and that the Act does not comprehend in any way the present state of medicine and pharmacy. While the Government stamp is understood by the public to convey authoritative endorsement of patent medicines, the law is so loosely worded as to class in the same category with quack medicines legitimate chemical and pharmaceutical preparations, which are only used by medical men, for whom alone they are specially prepared. One of the clauses of this peculiar and incomprehensible Act is that all medicines manufactured out of the country are liable to stamp duty, except only crude drugs. Any alkaloid, extract, syrup, tincture, or any prepared or manufactured medicine, in whatever form, not made in this country, is claimed to be liable. The practical result of this, if interpreted literally, will be not only to put a stop to all original pharmacological research, but to close half the dispensing establishments in the country. Many of our most valued alkaloids and active principles are obtained from abroad, and if these are to come under the ban we are practically precluded from using them, and they will be forced into the category of patent medicines. Every practical medical man knows that many preparations are inert unless manufactured from fresh drugs, and as many of these are plants of tropical origin, which cannot be cultivated in our changeable climate, they will have to be expunged from our list of remedial agents.

There is at the present moment a wide and deep-rooted feeling of dissatisfaction amongst members of the medical profession at the action of the Board of Inland Revenue in endeavouring to enforce in a harsh and arbitrary manner what they conceive to be the provisions of the Patent Medicines Stamp Act. This is no new law; it has been in existence for more than half a century, and it might reasonably be supposed that sufficient time had elapsed to enable the legal advisers of the Crown to come to some definite conclusion as to the nature of its enactments and stipulations. This, however, appears not to be the case, and we learn that

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it has been officially intimated that the clauses of the Act are in future to be literally interpreted, and that they will be strictly enforced. To this no reasonable objection could be entertained if the Act had only been so worded as to afford some indication of the intentions of the original proposer; but, unfortunately, it is so vaguely drafted and badly drawn, and displays such ignorance of technical details, that it may be interpreted to mean almost anything. Probably it was designed to check or suppress the ever-increasing sale of quack medicines; but if such were the intention, it must be admitted that it has signally failed. The patent medicine proprietor, so far from objecting to the Act or wishing it repealed, is decidedly anxious for its retention, for it serves him as an excellent advertisement. It is a well-known fact that many people believe that the presence of the stamp is an indication that the medicine has been examined and found pure, whilst others consider that it has received a Government endorsement of its curative properties. This idea is encouraged in every way, in proof of which we have only to refer to the handbills and wrappers which accompany most of these medicines. For example, it is stated that, "to guard against fraud, the Commissioners of Inland Revenue have caused the name of the proprietor to be engraved on the Government stamp affixed to the bottle," whilst in some cases it is asserted that Her Majesty's Commissioners of Stamps have permitted the name to be engraved on the stamp "*to protect the public from imitations of this medicine.*" Another reason why the maintenance of the Stamp Act is favoured by the patent medicine proprietors is that they make as large a profit on the stamp as they do on the medicine. In estimating the original cost of the nostrum the price of the stamp is always included, the calculation of profit being based not only on the materials, bottles, labels, and labour, but also on the cost of the Government stamp itself. A profit on the stamp is again added by each vendor through whose hands the nostrum passes until it reaches the consumer. The result of these accumulating profits is that instead of the consumer paying simply the amount fixed by Government for the stamp, which is supposed to be based on the retail selling price and to amount on an average to 17½ per cent., he pays its cost several times over. For example, in the case of a bottle of medicine selling at 4*s.* 6*d*, the original cost of the material, bottle, label, and labour would certainly not exceed 1*s.*, or, adding the value of the stamp, 1*s.* 6*d.* The manufacturer would get for this not less than 2*s.* 10*d.*, for patent medicine manufacturers expect usually to clear not less than 100 per cent. profit; the wholesale dealer, with the usual wholesale profit of 10 per cent., would get 3*s.* 2*d.*; and the retailer, with the usual retailer's profit of 30 per cent., would get 4*s.* 6*d.* This 6*d.* added to the 4*s.* is generally supposed by the public to cover the cost of the stamp to them, but if this stamp were not reckoned as part of the outlay the original cost to the manufacturer would be 1*s.* instead of 1*s.* 6*d.*, a difference of 50 per cent.; the same percentage of profit being added, the wholesale dealer would pay 1*s.* 7*d.*, the retailer 1*s.* 9*d.*, and the consumer 2*s.* 6*d.* It will be seen that the manufacturer not only in no way suffers, but, on the contrary, makes a handsome profit on the stamp, in addition to securing a Government endorsement, which is of the utmost value to him; whilst the consumer is not only enticed into purchasing a possibly worthless nostrum at an enormous profit to the vendor, but is mulcted several times the cost of the stamp. The injurious effect on the national health of taking these medicines is incalculable.

It cannot be the wish of the Administration to give the endorsement the stamp affords to patent medicines. If the Government feel the need of this source of revenue—which amounts to £150,000 per annum,—it can be very little satisfaction to them to know that, while pretending to tax the manufacturer of patent medicines, they are really putting a profit in his pocket and heavily taxing the sick, who are thus liable to be deluded into confiding in quack remedies by the apparent endorsement of Her Majesty's Government. The existence of such an anomalous state of affairs is no longer possible. It is a matter of vital importance, and affects so critically the health and well-being of the nation that not a moment should be lost in agitating for the immediate repeal of the Act.

SINCE our last issue all doubt as to the true character of the cholera outbreak in the south of France must be regarded as having passed away, and this notwithstanding Dr. FAUVEL'S characteristic persistence in viewing cholera in his own country as a very different thing from the same disease in India, Egypt, and elsewhere. True cholera has prevailed in Toulon; it has spread to Marseilles and to several other places; and the countries which with France advocate stringent quarantine measures have, to the great annoyance of many eminent Frenchmen, put France in quarantine. So far no satisfactory history of the origin of the epidemic has been forthcoming, and the efforts which were made to keep the whole thing secret, do not augur well for procuring precise information on the point. But, so far as we can judge, the case seems to be one of cholera first appearing on board ship in the Eastern seas, of the poison being retained in and about the vessel notwithstanding certain measures of disinfection, and ultimately of the importation of the infection on land by means either of the crew, or of the soldiers, or of the persons appointed to cleanse the vessel, and who were probably suffering from an infectious form of diarrhœa, which either escaped notice altogether, or was not regarded as of sufficient gravity to warrant the publicity which adequate measures of precaution would have involved. This may have been regarded as good policy, but it is not quarantine. Fortunately the disease is not making headway by means of those sudden and alarming bursts which so frequently characterise the course of cholera; but too much trust must not be placed on this aspect of the outbreak, for even if Toulon and Marseilles find themselves able successfully to combat the disease, there is no knowing to what other places it may be, or has already been, imported, nor how far such localities may be able to withstand its epidemic spread.

It therefore becomes important for us in this country to take stock of the measures of prevention which we possess. Under the Order of the Local Government Board, July 12th, 1883, all vessel arriving within the districts of port sani-

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tary authorities will be visited by an officer of customs; and if the report given to him is such as to afford grounds for suspicion, he has power to detain the vessel and all on board for a period of twelve hours, in order that he may communicate with the medical officer of health of the port. The vessel having been moored or anchored at a suitable place will be inspected by the latter officer, who will satisfy himself as to the health of crew and passengers, and no person may leave the ship until the necessary examination has been made. If all be well, the vessel will be no longer detained. If, on the contrary, any cases of cholera or of choleraic diarrhœa be found, then the medical officer of health will certify accordingly; all the sick may be removed to such hospital as has been appointed for the purpose, or the ship itself may remain subject to the control of the medical officer of health. Persons whose cases are suspicious only may be detained on board for a period not exceeding two days, to be dealt with according to the result at the expiration of that time. At the earliest stage, and at all subsequent stages, of the examination, all persons who are certified to be in health will be allowed to land immediately on giving their names and the places of their destination. The dead are to be buried at sea, or in certain instances, and then subject to the regulations laid down by the medical officer of health, on land. The ship, and all articles of clothing or of other personal use which are likely to retain infection, must be disinfected either by the master of the vessel or, failing him, by the sanitary authority.

Under these circumstances, the arrangements for ascertaining whether any dangerous disease is on board a ship may be regarded as sufficient, and the measures of inspection and isolation which will be carried out should afford a very considerable amount of security. But with the short sea-passage between England and France, it is impossible to say that we run no risk, and hence we may have to trust as fully to our land organisation as to the port sanitary system. But here, again, it is on inspection and isolation that we must rely, and having regard to the comparatively few channels by which the infection of cholera tends to spread, we believe that we may do so far more effectively than by trusting to any such system as quarantine and sanitary cordons. In the metropolis the Diseases Prevention (Metropolis) Act of 1883 provides us at once with a large amount of hospital provision, and throughout the kingdom sanitary authorities have been empowered ever since 1866 to protect their districts by the erection of isolation hospitals for infectious diseases. If they have failed to do so, and cholera comes upon them unexpectedly, it is they who will be to blame, and not the system on which England has decided to trust ever since the Vienna Conference some twenty years ago. The operation of that system was [illegible] a few months back when H.M.S. *Crocodile* [illegible] history of cholera. She was detained by the [illegible], the medical authorities inspected the troops and crew she carried, the healthy were allowed to land, and [illegible] convalescents were detained in one or other of the [illegible] which had been held in readiness to receive such [illegible]. On this system, coupled with [illegible] or [illegible], streets, sewers, and water-supplies, we shall have to trust whether [illegible] of cholera comes to us from France, Egypt, or India, and with the genuine co-operation of port, urban, and rural sanitary authorities we may expect to occupy a fairly strong position of defence.

Annotations.

"Ne quid nimis."

THE COLLEGE ELECTION.

ON Thursday last the election of members of Council of the Royal College of Surgeons was held in the Library of the College. The result was as follows:—

Mr. LAWSON	158,	including	2	plumpers.
Mr. DURHAM	154	,,	8	,,
Mr. T. SMITH	152	,,	6	,,
Mr. BERKELEY HILL	127	,,	3	,,
Mr. ALLINGHAM	108	,,	8	,,
Mr. Pemberton	103	,,	6	,,
Mr. Gant	77	,,	2	,,
Mr. Cowell	55	,,	5	,,
Mr. Barwell	51	,,	1	,,

Mr. T. Smith was therefore re-elected, and Messrs. Lawson, Durham, Berkeley Hill, and Allingham were elected members of the Council. Two hundred and seventy-seven Fellows voted, but five voting papers were invalidated through informality.

VACCINATION IN THE METROPOLIS.

DR. CAMERON'S proposal, if we understand him correctly, to transfer from the boards of guardians to the thirty-nine metropolitan sanitary authorities the administration of the Vaccination Acts would not, we fear, be of any material assistance in preventing the spread of small-pox. We can fully sympathise with his desire to have so important a means of preventing disease entirely separated from the administration of relief to the poor; but as at present constituted, the metropolitan sanitary authorities could hardly be entrusted with this duty. It must be remembered moreover that arrangements of a very complete character can now be made in all parts of London for ensuring the vaccination and revaccination of all persons applying at the vaccination stations as well as for the performance of this operation in houses in which a case of small-pox occurs. The removal of the sick to the hospitals of the Metropolitan Asylums Board is always preceded by the visit of the district medical officer, who is permitted to charge for the vaccination, and, with certain age limitations, for the revaccination of all persons who are insufficiently protected against small-pox; or arrangements may be made with the public vaccinator for this purpose. In practice the restrictions with regard to age would not be too closely adhered to for those persons who are absolutely exposed to small-pox infection. For all other persons than those who are resident in a house with a person suffering from small-pox, it is far better that they should attend at the public vaccination station, where the operation can be more effectually performed without resort being had to stored lymph. Dr. Cameron's demand for a more general use of lymph from the calf would only have weight if arm-to-arm vaccination were not a satisfactory method of affording protection against small-pox. It should be understood that arm-to-arm vaccination is far more protective than the use of stored lymph, whether it be human or animal. Although, therefore, there is room for the use of animal lymph in giving opportunity to public vaccinators to begin their operations, it is impossible that it should entirely replace the proper use of humanised lymph, upon which the protection of the community must depend.

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SCIENTIFIC ASPECTS OF THE HEALTH EXHIBITION.

THE two scientific laboratories which have just been opened under the superintendence of Mr. Watson Cheyne and Professor Corfield must prove highly attractive to the medical profession and men of science generally. The biological laboratory, which has been arranged by Mr. Watson Cheyne, is on the top floor at the southern end of the City and Guilds Central Institute in the Exhibition-road. This institute is now part of the Exhibition, and can be entered either from the Exhibition-road or from the eastern corridor of the Exhibition itself. In his laboratory Mr. Cheyne has arranged a number of preparations intended to show the methods and the results of the work which is mainly associated with the names of Pasteur and Koch. The methods of preparing cultivating media, and the results of cultivations, are here shown, and many a visitor will be surprised to find that although micrococci and bacilli are amongst the most minute of microscopic objects, their mode of growth in cultivating media is often characteristic and easily recognisable to the naked eye. The organisms associated with typhoid, glanders, pneumonia, erysipelas, osteo-myelitis, anthrax, chicken cholera, and other zymotic diseases may all be seen in process of growth, as well as many other organisms which are not pathologic, and others which are pathologic to animals rather than to man. The diseases of the vegetable as well as of the animal kingdom will form the subject of demonstration in this room, and we may add that Mr. Cheyne purposes giving demonstrations, especially intended for members of the medical profession, on Thursday afternoons at 4 P.M. Professor Corfield's laboratory is on the ground floor, in a special building situate at the rear of the City and Guilds Institute. This laboratory will prove attractive to public analysts, medical officers of health, and chemists generally. The laboratory has been fitted with great completeness, and is furnished with all that is necessary for the most searching analytical processes. Assistants will always be on duty in these laboratories, and will be glad to offer any explanation; but we may add that Prof. Corfield has arranged for a series of special demonstrations on Friday afternoons at 4 P.M. Those who are interested in questions of pure science should not fail to visit the French Court and inspect the material which has been sent from M. Pasteur's laboratory, and the various articles from the observatory of Mont Souris which have been contributed by M. Miquel. In Pasteur's exhibit is shown, by means of drawings, &c., the work which this extraordinary man has done in connexion with silkworm disease, anthrax, chicken cholera, and acetous fermentation. The mode of sterilising flasks and of conducting other processes connected with the investigation of organic germs is here objectively and instructively displayed. No one who is at all competent to observe can fail to be deeply impressed by the exhibit of M. Pasteur and with the work which is going on in Mr. Cheyne's laboratory. Many a disbeliever in "germs" will have his scepticism either lessened or removed.

THE LEGALITY OF CREMATION.

ON June 19th, in the Queen's Bench Division, the court for the consideration of Crown cases reserved had before it an important case for decision. The appeal was against a ruling of Mr. Justice Hawkins at the Leeds assizes, that it was illegal to cremate a body when the coroner had determined to hold an inquest upon it. The contention on the part of the Crown was that to prevent a coroner from carrying out a judicial act was an indictable misdemeanor. This was disputed by the defendant's counsel, who argued that the alleged offence was not specified in the statute, that in fact it was unknown to the common law; and further, that in order to constitute an inquest a judicial act it must be shown that the death was due to violence. We are glad to find that the judges were unanimous in confirming the conviction. It would be a most unfortunate thing if the dictates of common sense were overruled by some legal technicality. The functions of a coroner are clearly to find out whether a death was violent or not. The only preliminary condition he has to comply with is that from information supplied to him he shall see reasonable cause for instituting an inquiry, the very object of which is to establish the facts of the case. In the present instance two women, mother and daughter, burnt the body of the illegitimate child of the latter, in the full knowledge that it was intended to hold an inquest upon it. It was not charged against them that the death was caused by violence, but it was proved in evidence that it occurred somewhat suddenly. As Mr. Justice Grove remarked: "If persons having possession of a dead body upon which there were reasonable grounds for the coroner to hold an inquest were to be at liberty to destroy it, and so prevent the inquest, the consequences would be most formidable, and it might tend to give impunity to murder." The point has yet to be determined whether the burning of a body on which the coroner decided to hold an inquest subsequent to the cremation having taken place is illegal or not. Cremation in itself is not an offence in the eyes of the law, but it must not be practised so as to constitute a nuisance, nor in order to interfere with the course of justice. The present case gives emphasis to what we have frequently expressed as a fatal objection to the proposed institution of cremation as a regular and recognised form of the disposal of the dead—viz., that it would put a premium on crime by destroying the evidence on which alone, perhaps, a conviction could be obtained.

CHOLERA AND COWARDICE.

IT is a most deplorable proof of the weakness of human nature that it is at all times prone to fall into a state of panic when brought face to face with the inevitable. We must all die, and we are not ignorant of this our destiny, nevertheless, the instant a danger to life is recognised, we fly from the peril with the impetuous haste of crazy and cowardly creatures, forgetful alike of duty and decency. It is vain to argue in favour of self-possession. Philosophy has no charm for, or power over, the man who impulsively turns his back to the enemy. Nothing we could urge would have the slightest weight with the multitude bent on escaping from the ports and cities which are just now supposed to be rife with the infection of cholera. These flying crowds, on safety all intent, must be left to their own devices. It is manifest that they will spread the malady, and it is scarcely less certain that they will, many at least, lose their lives in trying to save them. With regard to these matters, however, it is useless to speak. Suffice it to point out that, although in the presence of an epidemic of cholera there is always and unquestionably some personal peril of contracting the disease, it is by no means certain that this is increased by remaining in association with the sick, or that the danger is to be avoided by running away! During severe epidemics it has been noticeable that the mortality has not been, by any means, greatest in the very *centre*, so to say, of the disease. In the hospitals and among the cholera patients scattered throughout the population, medical officers and nurses have gone about doing their duty with no greater mortality than that of those who have kept aloof. Indeed, it is probable that a certain amount of immunity from disease has been enjoyed by those who have not feared the danger of infection. The great secret of success in warding off disease is the preservation of health. We mean that if, heedless of danger, men and women do their duty to them-

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abound them—keeping up a cheerful temper and a trusty spirit, neither abusing the good things of life nor avoiding them; in short, living as all should live, whether in the midst of a healthy population or in the presence of an epidemic—they have a far better chance of escaping disease than by falling into a state of panic and "hastening to leave." The true policy is to kill the germs of disease on the spot, whether they be in the water or in the air. Every particle of the *dejecta* should be destroyed—not simply deodorised, but destroyed by a powerful agent capable of burning up organic material. This should be done at once and instantly on the spot, not merely with the choleraic, but with every patient who may have diarrhœa, whether specific or simple. If this be done, and the general sanitary conditions, and the average health of the community be looked to, there is no peril that need scare anyone out of his or her sober senses in an epidemic of cholera either on the Continent or at home.

THE HEALTH EXHIBITION AND THE HOSPITALS.

It has been rumoured that a grand *fête* is to be given at the Health Exhibition shortly in aid of the London hospitals. We trust that this is a fact, and, if so, congratulate the authorities on their excellent purpose. But visiting the Exhibition the other day, and noticing the vast number of people of all sorts and conditions drawn together by the attractions of "health" and its surroundings, we had it in our mind to go further and to appeal to those who have control of the financial arrangements of the undertaking to employ some of their surplus funds in aid of the battle waged by the hospitals against its terrible, but, alas, inevitable antithesis—"disease." We thought that this might be accomplished either by devoting a week's, or better still a fortnight's, receipts to such a purpose; or that the precedent set by the Fisheries Exhibition—when a large sum from the profits was awarded at its close by the Council for the benefit of the fishing industries—should be followed, and that some of the money so pleasantly and profitably earned and spent respectively in the reception and diffusion of knowledge as to the constitution, conditions, and maintenance of health should be voted to those excellent but, sad to say, necessitous institutions where disease is studied, grappled with, and, happily, oftentimes conquered.

THE ACTION OF DIGITALINE.

M. KAUFFMANN, of Lyons, working in M. Chauveau's laboratory, has studied experimentally the physiological action of digitaline (amorphous), and embodied his results in an interesting paper contributed to the *Revue de Médecine* of May 10th. His experiments are all the more valuable in that they were made upon the higher animals (dog, ass, and horse). He finds that locally digitaline acts as a powerful irritant, which renders it unsuitable for administration by the skin, whether intact or denuded of epidermis, the inflammation excited by the substance preventing absorption. It has similar irritant action on mucous membranes, and the stomach can only tolerate minute quantities. For the same reason, only very dilute solutions (1 in 500 or 1 in 1000) are available for subcutaneous injection. He found that absorption took place most readily by the respiratory mucous membrane, next by the gastro-intestinal, next by connective tissue, and least by muscle—the febrile reaction ensuing on injections into the last two named tissues masking the specific effects of the drug. The results of all his experiments as to the general action of digitaline are partly at variance with accepted teaching, particularly as to its effect on the renal secretion; for he finds that in healthy animals digitaline, whether given in large or small doses, does not produce diuresis. Administered hypodermically or in the form of powder in the stomach, it causes a diminution in the quantity of urine excreted, and an increase in the amount of urea. Given by the stomach in the liquid form and in small doses, it diminishes both the quantity of urine and of urea. It only produces diuresis in dropsies due to disorders of the circulation. Of its physiological action on the circulatory organs he declares that in small doses digitaline slows the pulse, but in larger doses accelerates it; and he attributes the former effect to stimulation of the medullary and intra-cardiac centres of the moderating system, the latter—i.e., acceleration—to central and peripheral paralysis of the same system. The intra-cardiac pressure, both diastolic and systolic, is increased, and also the energy of the cardiac contraction. The action of the heart is more regular when accelerated than when slowed by digitaline, whilst the pulse is stronger with small doses of the drug than with large. Small doses slightly raise arterial tension by central and peripheral stimulation of the vaso-motor nerves; stronger doses at first increase then diminish the tension. The rate of arterial blood-flow is diminished, and the rectal temperature is lowered.

CHILD MORTALITY IN NEW YORK.

THERE are reasons for believing that the mortality statistics for New York are more trustworthy than are those of the majority of American cities, in which the defective system of death registration precludes almost the possibility of accurate or complete statistics. It appears from an official return recently issued that the estimated population of New York in the middle of last year was 1,317,691 persons, and that the deaths recorded during the year were equal to a rate of 25·8 per 1000, while in London the rate did not exceed 20·4. Thus the mortality last year in New York exceeded that in London by more than 26 per cent. Zymotic fatality was nearly twice as great in New York as in London, and the excess in the mortality from diseases of the respiratory organs and phthisis was very marked. It is, however, to the death-rate of children that we would now more especially call attention. Based upon the age proportion of the population of New York at the last census in 1880, it may be estimated that 156,379, or 11·6 per cent., of the population in the middle of last year were children under five years of age; the recorded deaths at those ages were 13,856, and equal to a rate of 90·3 per 1000 living. In London the death-rate last year among children under five years of age did not exceed 65·1 per 1000; the rate of mortality at those ages, therefore, exceeded the rate in London by nearly 39 per cent. The registration of births in New York is confessedly incomplete, and it is therefore impossible to estimate the rate of infant mortality—that is of children under one year of age. The recorded birth-rate in New York in 1883 was only 23 per 1000, and was smaller than the death-rate. The true birth-rate in New York is probably considerably lower than that which prevails in London, but it is undoubtedly higher than the death-rate. It may be noted, moreover, that whereas 13 per cent. of the London population consists of children under five years of age, the proportion of the New York population at these ages does not exceed 11·6 per cent. This deficiency of children in New York was partly due to the low birth-rate, and partly to the high rate of child-mortality. With regard to this excessive rate of mortality among children under five years of age in New York, it appears to be mainly due to the fatality of diarrhœal diseases, from which resulted 2897 of the 13,856 deaths at these ages in 1883, being equal to a rate of 18·9 per 1000 living under five years of age, whereas the mortality from diarrhœal diseases among London children under five years

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of age did not exceed 4·6 per 1000. After due allowance, however, for this excess of diarrhœal mortality among children, in great measure the result of climatic differences, there still remains a striking excess of child-mortality in New York, most of which may be safely attributed to defective sanitary arrangements.

COVENT GARDEN AGAIN.

THE Duke of Bedford not having been able to dispose of Covent Garden Market to the Corporation of the City of London or any other responsible body, ought clearly to discharge the public duties of ownership, and enforce such regulations as shall convert the place from a nuisance to a convenience. A vegetable, fruit, and flower market should certainly be a pleasant place, not an abomination in the land. The traffic arrangements are scandalously bad, but the police must be left to grapple with that difficulty until the roadway can be opened. It would not be difficult to relieve the neighbourhood of much of the traffic if men were placed at the distant ends of the outlying streets; for example, no cab or carriage ought to be permitted to enter from Long Acre. It is the *cross* traffic that causes the block. Meanwhile, His Grace must be held accountable, by his agent, for the systematic neglect of ordinary cleansing and the prompt removal of offal. We are glad to see that our useful contemporary, *Punch*, has this week returned to the charge against the owner of Mud-Salad Market.

REGULATION OF FEMALE LABOUR.

MANY indications tend to show that the Factory and Workshops Act, never a complete measure, is becoming yearly less capable of compassing its allotted ends. It requires extension in many directions. The pressure of labour on men is sufficiently great, and unchecked by opposing interests, to call for official regulation, which as yet it has not received. The occupations of women were more considerately dealt with when the Act was drawn up. In regard to them, however, there is much to be desired, and it is very evident that in many cases existing means of inspection have been unable to prevent evasion of the statute by employers. Whatever may be said of the equality of the sexes, it must be conceded that such equality, if it exists, is general and not particular. There is marked disparity, for instance, in favour of the male, in physical endurance, and this is not a mere matter of education. Health is a word of different meaning for the two sexes. It is a part of the health of women to suffer pain, and even illness, and suffering more they necessarily work less, or should. Special legislation, then, in the limitation of work, may be claimed for women, seeing that the variable code of business custom takes little heed of physiology. The duration of actual working time allowed by the Act—a maximum of fifty-six hours a week—might well be lessened without unfairness to employers, and with much-needed benefit to their female workers. Even more imperative is it that sanitary principles should be rigidly enforced in business houses. This can only be done by the extension to shops of supervision such as now prevails in factories. There can hardly be any reasonable objection to such a course. Factory inspection has been found to work, on the whole, not less to the satisfaction of master than to the advantage of men. Why should not tact and candour be equally successful in the visitation of shops and warehouses? Here is an opening for the employment of women. If appointed to be inspectors of the condition of their working sisters, they would doubtless bring to bear sufficient skill and knowledge of their duties, with a more penetrating insight into various important details, than a man could be expected to show. One important provision should not be lost sight of. It is that suggested by Dr. J. H. Bridges in an able paper read at the Health Exhibition on June 26th—viz., that women should not be allowed to resume work in cases of confinement until six weeks after that event. This is not too long a period of rest. Perhaps, however, it would be better to make the return to business dependent on a medical certificate of perfect fitness for it. The question of female labour is a very large one. Women themselves have much in their power with regard to it. Let them not forget that united feeling and action among themselves will help to persuade public opinion of their just requirements.

OXYGEN IN CHOLERA.

THE news telegraphed to *The Times* from Toulon on Wednesday last that Dr. Troncin was successfully employing inhalation of oxygen in cases of cholera reminds us of the very various methods which an epidemic brings to light, and of the numerous infallible remedies that are invariably introduced. It is perhaps unfortunate that wider experience is not awaited before a new measure is thus vaunted, for too often the result issues in a disappointment as keen as the hopes raised have been high. From the details as yet to hand, it would appear that the oxygen is employed in the collapse stage, and its alleged good effects may be ascribed to stimulation of the respiratory and cardiac centres. Any therapeutic measure which can avert impending death from collapse is to be welcomed, and doubtless this method will be fairly and fully tried, with, we hope, the success that is anticipated. But any measure in this stage must be regarded as a *dernier ressort*, and the therapeutics of cholera rest mainly in the direction of prophylaxis, careful selection of food, and the treatment of the premonitory diarrhœa.

SANITARY CONDITION OF CALCUTTA.

WE regret to learn by the Indian papers that the measures which were proposed to be carried out immediately for the improvement of the sanitary condition of Calcutta have, by an ill-judged vote of the municipality, been arrested for apparently an indefinite period. It appears that the Government made an offer to reduce the annual contribution of the municipality towards the police tax by a sum of about one and a quarter lakhs of rupees on the condition that for the future one lakh should be spent on "bustee" reclamation and similar sanitary work, in addition to the one and a half already devoted to that purpose. It was ascertained by the Chairman of the Commission that this arrangement could be easily carried out without any increase in the house tax, which had at one time been suggested as necessary, and he accordingly moved that the offer of the Government be at once accepted. The native element in the Commission, however, objected to this, and carried an amendment refusing to accept the proposal of the Government until further representations had been made in the matter. As the *Pioneer* remarks, "This means more delay, more talk, more waste of time, longer postponement of improvements, which are by universal admission becoming every month of more imperative necessity." It is very unsatisfactory to find that one of the results of the introduction of municipal Government into Calcutta is the obstruction, on the false plea of economy, of measures having a most important bearing on public health, more especially of the poor, in that great city. Such short-sighted policy cannot fail to recoil upon the heads of its promoters. We trust that the Lieutenant-Governor, who has shown himself alive to the sanitary requirements of Calcutta, may be able to press on the urgent improvements necessary for the prevention of disease, and that he will withhold the boon he has offered of a reduction in the police tax till he has a guarantee that the saving will not go into the pockets

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of a few greedy houseowners, but be appropriated in a manner which will benefit the poorer inhabitants, by removing permanent sources of disease from the localities in which they are compelled by circumstances to reside. The mortality of Calcutta during the present year has risen to 40·4 per 1000, in a great measure owing to the prevalence of cholera, "a perfectly legitimate consequence of filth unremoved, and accumulating among the dwellings of the people." The blame of this lies clearly with the municipality, and they seem disposed—or at least a majority of them—to continue such a disgraceful condition of affairs until they are satisfied that their own pecuniary interests shall not be affected by a possible increase of the house-duty. We trust that effectual means may be found to compel the Commissioners to carry out the necessary sanitary works.

CANAL BOAT REGISTRATION.

IN our time and country travelling and traffic are chiefly by road and rail. Older systems have become comparatively unused. Among these the canal-boat still holds its own and works its way from one river and one populous district to another. The boatmen and their families do not form a numerous class, though it is one which is increasing in numbers. It is, moreover, recruited from the poorest of the people. The homes of these persons are necessarily not commodious, and they depend for wholesomeness much more upon their surrounding atmosphere than on their internal arrangements. It is obvious that the public would profit in more ways than one if the law for registration of these craft, which is at present ineffective for want of executive machinery, were put in force. Here and there desultory attempts at notification have done some good. The School Board officers have taken measures to secure the attendance of the boat children, but the canal population, as a whole, have usually been out of sight and out of mind. When we consider the results in propagation of disease, and in hidden development of crime and immorality which may arise from this neglect, we can but hope that it will soon terminate. It cannot be said that the privileges of owners are infringed by the application to their inland barges of conditions to which even the mercantile marine is subject.

IODIDE OF POTASSIUM IN PNEUMONIA.

AGREEING with Schwarz that this disease may be considered not as a "local disease with general symptoms," but as a "general disease with local effects," Dr. Luigi Gualdi of Rome gives the iodide in forty-centigramme doses every two hours, at the same time applying the ice-bag over the seat of pulmonary inflammation (*focolaio pulmonitico*). In thirty-nine cases in which he practised this treatment he had excellent results. In all, without distinction, he observed that the sputum, from being viscid and tenacious, became, before the second day, fluid, resembling bloody serum; that with the cessation of the fever the exhaustion also ceased, although the physical state of the lung was not improved—nay, in some cases aggravated; and, finally, that in all the convalescents the appetite was so sharpened that the ordinary diet had to be considerably increased. The mortality was 6 per cent., while of the two who died one could not be included in the calculation, because, being affected with pneumonia of the apex with furious delirium, he took only two grammes of the iodide of potassium. It is worth remarking, continues Dr. Gualdi, that the fever and the exhaustion ceased, although the physical condition of the lung remained unchanged, thereby confirming Schwarz's position, that the fever is independent of local alterations; also Jürgensen's contention that the cause of the exhaustion resides not in the change in the lung, but in the fever, seems to be similarly confirmed. Dr. Gualdi concludes that from his experience the treatment by the iodide succeeds better with the youth of either sex than with adults; that the iodide should be exhibited at the beginning of the disease, to ensure an immediate and perfect result; that the iodide is efficacious over the fever and the exhaustion, but not over the localisation, which latter indeed may even be extended under the treatment; that the iodide and potassium combined separate in the organism, so that each has its special virtue; and, finally, that the action of the ice is secondary, inasmuch as it operates on the effects, and not on the cause of the disease. It is useful in the congestive stage; hurtful when the contents of the air-cells are already solidified and the lung indurated.

THE CONDITION OF THE BLIND.

THE prevention of blindness and the amelioration of the condition of the blind have respectively been the subject of discussion by the Ophthalmological Society and an influential meeting, with the Duke of Westminster and Mr. Fawcett at its head. With such powerful agencies at work there can be little doubt that the proportion of blind persons will diminish and their state will be rendered less irksome. Mr. Fawcett strongly advocated the retention of the adult blind in the midst of the community from which they derived all the indescribable joys and pleasures of home life. No greater mistake could be made than to group them in large masses. A fundamental distinction ought to be drawn between the young blind and the adult blind. The young blind must, for purposes of education, be drawn together in order that they might have placed at their disposal the special appliances which the education of the blind required. Mr. Fawcett does not seem to have heard of the careful inquiry made by the committee of the Ophthalmological Society. It transpired from this investigation that about 30 per cent. of persons in blind asylums both in England and Germany owe their blindness to preventable causes—i.e., ophthalmia neonatorum.

"LICENSED MANSLAUGHTERERS."

UNDER the above sensational heading "A Country Parson" writes to one of our daily contemporaries making complaint of the alleged inadequacy of the existing authorities to deal with cases of what may collectively be termed professional malpractice. The writer speaks of the creation of a tribunal who might safely be entrusted with a jurisdiction similar to that exercised by the Incorporated Law Society in the case of peccant solicitors. We are not amongst those who believe that the existing machinery for the guidance of the medical profession is the best possible which could be had. But it is not with this aspect of a country parson's letter that we would at present deal. He has dubbed one of his townsmen an "ignorant young fellow," and, what is worse, accused him of manslaughter on grounds the adequacy of which does not commend itself to the impartial mind. We must speak cautiously because the facts of the case have been so briefly set forth. A certificate was given by the medical attendant that a child had died of typhoid fever, with perforation of the bowel. "Only the other day a child in my schools died somewhat suddenly in convulsions, after four days' illness," writes the country parson. Notwithstanding that so little is said of the nature of the child's disease, yet, to our minds, there is no inherent improbability in the cause of death assigned by the "ignorant young fellow." It is stock-knowledge with every medical man that a patient may be the subject of typhoid fever without experiencing enough sense of illness or other symptoms of the malady to lay him up. Again, it is well known that perforation of the intestines and death may come on in the course of what Murchison has called the "ambulatory"

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form of pythogenic fever. "A Country Parson" probably owes his knowledge of medicine or, let us say, typhoid fever to some domestic guide. It is more than likely that he is unaware of that form of typhoid fever which has constipation as a leading feature. That "the child's death, which was due to an affection of the nervous centres, might have been retarded or prevented by judicious treatment" is a statement such as might indeed be made by an individual who had "a mere smattering of the elements of medicine." But we do not feel competent to adjudicate this case without being in possession of full particulars. There is certainly nothing improbable in the diagnosis of the "ignorant young fellow," so far as the facts which have come to hand are concerned. From what we know of medical men we should, indeed, have thought the practitioner possessed of considerable skill in diagnosis for the reason that, unless the nature of the illness and attendant circumstances were such as to have set the medical man on the scent, we cannot understand why he should have gone, so to speak, out of his way to fill up the certificate. Most practitioners who had doubts of such a case as the one so imperfectly portrayed by "A Country Parson" would have written "convulsions," or some equally equivocal term on the death certificate.

THE CHOLERA.

OUR Paris correspondent writes:—The cholera at Toulon, whatever its nature, is still hovering about that town, though the fresh cases and the deaths are daily decreasing to a notable degree. A few cases occurred at Marseilles, but the malady seems localised at Toulon. The medical men in those towns are now almost unanimous as to the disease being the true Asiatic cholera, and even Drs. Brouardel and Proust, who have just returned from their tour of inspection at Toulon, have, at a meeting of the Superior Council of Hygiene, given it as their opinion that the disease in question is of that type, although of a very benign character. They have founded their opinion on two circumstances—viz., that the disease was imported and that it is distinctly contagious. Dr. Fauvel, however, who is looked upon as the highest authority in France on the subject of cholera, still adheres to the opinion expressed by him from the commencement of the epidemic, that the disease is sporadic cholera. The same opinions were expressed yesterday by the two adverse parties at the Academy of Medicine. A case was reported two days ago in Paris, but on inquiry it turned out to be an attack of simple diarrhœa, from which the patient recovered in twenty-four hours. Three other cases have since been reported, though the report is discredited. The health of Paris is at present stated to be very good. Dr. Koch, of Berlin, is now at Toulon on the same mission that took him to Egypt and subsequently to India.

ANTISEPTIC AGENTS IN SURGERY.

AT the meeting of the Académie des Sciences held on June 23rd, M. Pasteur presented a communication by M. Ratimoff dealing with antiseptic substances. The bacteria chosen for the experiments were principally the pathogenic micro-organisms of charbon and acute septicæmia of animals. In the first series of experiments a number of sterilised flasks plugged with cotton-wool were taken; in some 10 grammes of fresh muscle in divided portions were placed; in others, 10 cc. of ox blood was used; in the last series, a similar quantity of sterilised veal broth was employed. Each flask was treated with two drops of water diluted with earth, and then 10 cc. of the antiseptic solution of different strengths were poured in. All the vessels were then placed in a stove kept at a constant temperature of 33° to 34° C. It was found that the addition of carbolic acid in the strength of 1 in 400 to the veal broth prevented the development of all forms of bacteria, but in order to get the same result with the blood, the strength had to be increased to 1 in 250, and for the muscle-juice to 1 in 160. This difference in strength was still more striking when corrosive sublimate, nitrate of silver, and iodine were employed. The communication of M. Ratimoff is so lengthy, and deals with so many details, that we have here contented ourselves with indicating the principles and method of procedure. We must refer those to whom the technicalities are of special interest to the report in the *Union Médicale* of June 28th.

"SISTER GRACE."

SUCH is the title of a new comedy-drama produced at the Avenue Theatre on the afternoon of the 26th ult., in aid of the funds of the East London Hospital for Children. The author is an active member of the medical profession, and the play itself is stated to be "founded upon incidents of hospital life." This description is, we think, hardly warranted, and, without any disparagement to the author, we are glad to say so; for if such incidents as those introduced into the play were of ordinary occurrence in our general hospitals, the usefulness and good work of these institutions would be most seriously impaired. We sympathise with the author's loyal endeavours to excite public interest in professional work, but must confess that, in our opinion, features of hospital life, terribly dramatic as they are at times, and incidents supposed to occur in the lives of medical men and nurses while employed in attending to and nursing the sick and injured, are singularly unfitted for stage representation. A similar remark applies to the selection of "the accident room" of a hospital as the scene of action in the first two acts. The play, which was well received, was on the whole promising, some of the situations being most effective, and, so far as we know, original. The dialogue contained one or two somewhat cynical remarks on "doctors"; possibly the author considered that a medical play, written by a medical man, and first performed on behalf of a medical charity, might, without some such depreciatory element, appear too professionally obtrusive to the general public. One remark of the hero in reference to a new matron and her attempted "reorganisation" we cordially endorse: "There is not one woman in a thousand fit to manage the affairs of a hospital." Miss Winifred Emery, as the heroine, "Sister Grace," was charming. We may mention that the binaural stethoscope made what was probably its first appearance at any theatre other than that of a hospital. The house was well filled, and we hope a substantial sum will be added to the funds of the East London Hospital for Children.

CISTERNS.

A *Bonâ-fide* Traveller" is indignant because the cisterns of a row of small houses to which his attention has been particularly drawn are not covered, and the water is green. In the interests of health we are, of course, indignant too, but the immensity of the evil somewhat enfeebles our regret. Not only in one row of houses, but in whole districts, this neglect of obvious precaution prevails, and the houses thus neglected are large as well as small. Cisterns in London are, as a rule, either imperfectly protected or so placed as to receive dirt and the foul vapours pervading the neighbourhood. There has been a great outcry for constant service; but, like other demands equally reasonable and urgent, it has been to a large extent disregarded. Now that the cholera scare is upon us, it may be hoped that some of the worst of our remediable nuisances may be removed. A general house-to-house visitation, such as is now being car-

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ried out in St. Pancras, would result in the unearthing of some strange and startling facts about sanitation. Good sometimes comes out of evil, and when public attention is forcibly, though painfully, directed to long-existing and known, but disregarded, evils, good is done, even though it be evil that does it.

TUBERCLE BACILLUS AND PNEUMONIA MICROCOCCUS.

THE use to which the presence of micro-organisms in the sputa of tubercular and pneumonic patients may be practically put is illustrated by a paper by Dr. J. Samter, of Posen (*Berl. Klin. Woch.*, No. 25, 1884). A debilitated man, sixty-five years of age, suffering from diarrhœa and cough, with scanty expectoration, but without any physical signs beyond those assignable to senile bronchial catarrh, complained one day of great sense of weakness and increased cough. Examination of the sputa by the Ehrlich-Weigert method now revealed, in addition to the bacteria, &c., from the oral cavity, a large number of tubercle bacilli and some diplococci, which resembled those detected by Friedländer in the sputa and inflamed tissues of cases of acute pneumonia. The physical signs continued negative, although the patient became rapidly prostrate, collapsed, and died two days after the detection of the micro-organisms. The necropsy revealed the existence of a walnut-sized cavity at the left apex, and two cheesy foci, with bronchial dilatation; the right lung was in the "first stage of pneumonia," and beset with miliary tubercles; there was also ulceration of the intestines. Here, it was thought, was a case in which there had been an infection by the tubercular and pneumonic virus, the invasion of the pneumonia-micrococcus exciting the tubercular bacilli to greater activity; and it is stated as of etiological interest that a case of typical pneumonia had been admitted into the same ward before the patient in question developed the serious symptoms. Much, however, depends, it appears to us, upon the correctness of the post-mortem diagnosis of the pneumonia in this case; the supervention of acute miliary tuberculosis being *per se* sufficient to induce the hyperæmia, which alone was present. Another case is given where pneumonia complicated phthisis. In this case the sputum contained micrococci but no bacilli, which were, however, found in abundance in a cavity in the lung. Here also miliary tubercle supervened, and the writer evidently is of opinion that infection by the "pneumonia-coccus" is liable to produce a condition favourable to the more rapid growth of the tubercle bacillus in cases where the latter is not making much progress.

THE CASE OF MESSRS. BOWER AND KEATES.

IN the Queen's Bench Division on the 2nd inst., arguments were adduced in favour of a new trial being granted in the action brought against Messrs. Bower and Keates by Mr. Wood, for negligence in not warning him of the danger he was subjecting himself to in sucking a tube which was inserted in his child's throat whilst it was suffering from diphtheria. After consultation, Mr. Justice Field said that the Court came with great regret to the conclusion that the case must be sent to a third trial. The case for the plaintiff was that the medical men should have told him it was diphtheria, so that he might know the risk he incurred, and might, if he incurred it, take precautions to avert the disease, or lessen its severity if contracted. It appeared clearly that no warning of any kind had been given to him. In this case there were several questions to be left to the jury, which he had left to the jury in the case he had tried; but the case at the last trial had not really been put to the jury, and the Lord Chief Justice seemed to have thought the case concluded by the view the jury took, that even if the father had known it was diphtheria he would nevertheless have done the act. It was not a case to be left at large to the jury; it was a peculiar case, and required careful direction to the jury. He regretted that the action should have been brought, no doubt under the influence of mistaken feeling; but he could not, as a judge, be influenced by that view, or against a legal right of action. It was true that one of the medical men had said that a man would naturally wash his mouth in such a case, but then they had said that they would not have let the man do it without warning him. But the plaintiff had no warning at all, and surely there was a case to be put to the jury. It had not, however, been properly put to them, and the verdict was not satisfactory, and therefore the case must go to a new trial.

MICROCOCCUS XANTHOGENICUS.

FRESH experiments made by Messrs. Mozly and Harrison have served to throw discredit on the conclusions of Dr. Freire. Investigations were made with soil taken from the graves of persons who died of yellow fever in the epidemic of 1881, and also with material from the graves of those dead of other diseases, as well as from open fields on which no manure had been used. Previously sterilised chicken soup impregnated with any of these moulds and kept at the ordinary temperature usually became turbid in a few hours, and by the second day assumed a bright-yellow colour, especially on the surface, the colour being most evident in the case of a soil from a yellow fever grave and one from an open field. These appearances were not met with when the soil used had been taken from yellow fever graves where a layer of lime had been placed above the coffin. The coloured liquids, although swarming with bacteria, were injected into guinea-pigs without producing any symptoms as a rule, and certainly none which could be referred to yellow fever. Similar negative results were obtained when decomposing matter was used from the coffin of a person who had died of the disease, the guinea-pigs in such cases apparently dying of simple septicæmia, no bacteria being detected in the blood, the corpuscles of which were considerably disintegrated, and there was no albuminuria. When the "moulds" were cultivated at 98·5° F. the liquid acted much more virulently; but the symptoms were still those of blood-poisoning and not of yellow fever, the absence of micro-organisms in the bodies examined immediately after death being certified.

ANOTHER SPECIAL HOSPITAL.

WE regret to observe that yet another special hospital has been started in London, and that appeals for its support are being circulated at the instance of one of its medical officers among the subscribers to a West-end dispensary to which he is surgeon. It is not, however, of this mode of inviting support that we desire to speak, but of the very specious and misleading character of the circular of this new "Western Hospital for Fistula, Piles, and other Diseases of the Rectum." This document is embellished with the names of a large committee, treasurer, solicitor, architect, and secretary, an honorary consulting physician and two honorary surgeons. We say advisedly that this circular is misleading, as the statement that in the "great metropolitan hospitals but little attention has been given to fistula and piles and other painful diseases of the rectum" declares on its very face. A stronger expression than the one we have used might justly be applied to such a statement as this, which is put forward as the *raison d'être* of this institution. The general hospitals of London are amply sufficient for the purposes for which these "special" institutions are founded, but the former are suffered to languish for want of funds, whilst the public ear is tickled by erroneous statements as to the

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work of the latter. We have protested before, and we protest again with indignation, against this ever-growing plague of "special hospitals," for which there is absolutely no need, either on the ground of charity or on that of medical science.

EMBOLIC INFARCTION OF MUSCLES.

THAT the muscles, like other organs, are liable to be the seat of embolic infarctions is a subject which is discussed by M. Girandeau in a recent article (*Revue de Médecine*, June, 1884), and he thinks that the rarity of this event is attributable partly to the fact that the muscles are seldom examined post mortem, and partly (probably mainly) to the readiness with which collateral circulation is established in cases of blockage of a muscular artery. It is different in the case of pyæmia, where muscular metastatic abscesses are frequent; but in ordinary cases of cardiac disease, where the viscera show ample evidence of embolism, there are very few records of muscular infarction. Cornil and Ranvier, admitting this rarity, state that they have met with two instances, and that they were characterised by absence of hæmorrhage. Girandeau supplies notes of three cases. The first was a case of chronic mitral disease, with general atheroma. The right sartorius muscle was found to be ruptured, the broken ends embedded in hæmorrhagic effusion, and their muscular fibres granular. The spleen contained two old infarctions. The second case, of long-standing mitral and aortic disease, with arterial atheroma, exhibited a firm, yellow-coloured mass in the substance of the pectoralis major muscle, sharply marked off from the healthy tissue, and resembling a visceral infarct. The spleen, kidneys, and brain were also the seat of embolism. A third case, quoted from Lefevre's thesis (1867), was of the same class, and was further complicated with dry gangrene of the left foot and leg. In this case a yellowish-grey mass of degenerated muscular tissue occurred in the substance of the vastus externus muscle. These three cases were, it will be seen, of chronic heart disease, and Girandeau asks whether these muscular infarctions could not also occur in the course of acute endocarditis in young subjects. *A priori*, such an event is not impossible; but some experiments made by him at Alfort were wholly negative in their result. He concludes that many conditions may be necessary to the production of the event, among which he enumerates degeneration, roughening, and inelasticity of the arteries; an enfeebled heart; and a more or less marked asphyxial condition, impairing the nutrition of the muscle.

THE EDUCATION OF DEAF CHILDREN.

AT the International Health Exhibition, on June 30th, Mr. Dalby, F.R.C.S., read a paper on "The Education of Incurably Deaf Children." He explained the process by which children in early life, who had become incurably deaf through disease, lost the power of speech, by comparing with them the instances where hearing children, having been removed from one country to another, lost their first language whilst acquiring a second; and he selected three classes of cases to illustrate the method which should be employed to prevent dumbness. 1. A child who has entirely lost hearing and can read should be made to read several times during the day, and be taught lip-reading. The constant repetition of the words which it has already used will cause them to be retained by reading, and an increased vocabulary will be acquired by the lip-reading. 2. If a totally deaf child cannot read, it should be at once taught on the pure oral system, and words which it cannot pronounce will by constant repetition be retained. 3. If a child can understand words pronounced in its ear, still better if it can hear a raised voice, it can be taught to articulate new words by making use of the hearing; its articulation whilst becoming deficient can be corrected, and efforts in this direction, added to lip-reading, will enable it to retain speech. Mr. Dalby said it could not be too urgently insisted on that the educational treatment of this character must be commenced immediately after the occurrence of the deafness, or speech would be lost. By processes carried out on the above-mentioned plans, and varied according to the circumstances of the case (of which skilled teachers must be the best judges) great numbers of children may be saved from dumbness.

CRUELTIES TO TORTOISES.

MOST individuals are aware of the difficulties which surround the practice of scientific vivisection, but no such hindrances stand in the way of wholesale slaughter of tortoises for objects quite the reverse of scientific. Your tortoise merchant may import 5000 of his living merchandise in nineteen tightly-closed casks, to the imminent peril of the seething contents, without even the Society for the Prevention of Cruelty to Animals getting scent of the occurrence. The Rev. H. Wilson, Vicar of St. Augustine's, Stepney, has written to the *Standard*, complaining of the insufferable nuisance arising from casks containing full numbers of tortoises in all stages of chemical existence, from the living to the putrefying dead. We are glad that the reverend gentleman has communicated with the medical officer of health, and we think the authorities ought to provide some means of removing, or at least of mitigating, the evil.

DEATH OF DR. MOREAU.

DR. MOREAU, the celebrated alienist, and who was always known by the name of Moreau de Tours, died in Paris on June 26th, in the eighty-first year of his age. He took his degree in 1830, on which occasion he wrote a thesis, "On the Influence of the Physique with reference to the Disorders of the Intellectual Faculties." He had been trained for this specialty at the Charenton Asylum, under the celebrated Esquirol. In 1840 he was appointed physician to the Bicêtre Asylum, and eventually to the Salpétrière, to which he was attached to the day of his death, but latterly only as honorary physician.

NORTH-WEST LONDON HOSPITAL.

IN reference to the resignation of the medical staff of the North-West London Hospital, which we announced last week, and which has excited some comment, we learn that the Committee of Management has deputed four of its members to confer with three representative members of the profession for the purpose of reviewing and, if necessary, altering the rules and arrangements of the hospital, so as to bring them into harmony with those of similar institutions commanding the confidence of the public and the profession.

YELLOW FEVER.

A CORRESPONDENT at La Libertad del Salvador, Central America, in a communication dated May 29th, states that a most fatal form of yellow fever has been raging in that port for some time, where thousands of bags of coffee are stored and are being shipped to England and the continents of Europe and America, but principally to England, and will undoubtedly remain stored there during the hot summer weather.

THE Cavendish Lecture will be delivered by Mr. Timothy Holmes, before the West London Medico-Chirurgical Society, on Friday evening, the 11th inst., at 8 P.M., at the West London Hospital. Mr. Holmes has chosen as his subject the Medical Treatment of the Poor of London.

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IN the Queen's Bench Division of the High Court of Justice a new trial was on the 30th ult. refused in the case of Johnson *v.* Mudford—the action brought by the coroner for Canterbury and deputy coroner for Kent to recover damages from Mr. Frederick Mudford, proprietor of the *Kentish Observer*, for alleged libel contained in articles which appeared in that newspaper commenting on the plaintiff's conduct at inquests, and which resulted in a verdict for the plaintiff, with damages to the amount of £100.

A PETITION from the Foreign Graduates' Association of Great Britain, signed by Dr. H. J. Hardwicke, president, has been presented to the House of Commons by the Right Hon. A. J. Mundella, in favour of admitting to the Register all foreign degrees obtained after examination and before the passing of the new Medical Bill, by duly registered practitioners; and also protesting against any attempt being made to modify Clause 69, in any sense prejudicial to holders of foreign degrees.

THE epidemic of small-pox which has for some time been prevalent at Liverpool has now attained alarming dimensions. Traffic, except for residents, is in certain streets suspended, and the public institutions for the reception of small-pox patients are full to overflowing. It is stated that the Local Government Board have severely censured the local authorities, and have called upon them to immediately provide suitable hospital accommodation for infectious cases.

SIR WILLIAM HARCOURT stated in the House of Commons on the 26th ult. that he had been informed that the Metropolitan Board intended to appeal against the decision of the magistrates in the case of the Peel-grove Burial Ground, Bethnal-green, by which the bye-laws of the Metropolitan Board of Works were unable to prevent the erection of houses on a burial ground in which 20,000 bodies were buried between 1844 and 1855.

A COMMISSION to inquire into the condition of asylums for the insane and inebriates in Victoria, which has been long called for, has at last been appointed. Curious to state, the commission does not include a single medical man, or, according to the *Australian Medical Journal*, even one member who is known to have any special acquaintance with the matters to be inquired into and reported upon.

THE printing offices of G. Reimer, the well-known medical publisher in the Anhaltische-strasse, Berlin, were seriously damaged by fire on the night of the 24th—25th ult., and the new founts of type introduced this year for special use in the printing of the *Deutsche Med. Wochenschrift* were destroyed.

HIS Excellency the Administrator of Trinidad, has been pleased to appoint E. A. Gaynes Doyle, Esq., M.R.C.S., L.R.C.P. Lond., as Supernumerary Surgeon. The appointment is to date from the 1st instant.

MR. JONATHAN HUTCHINSON'S work on Diseases of the Ear and Eye due to Hereditary Syphilis has been translated into French by P. Hermet and published by Adrian Delahaye, Paris.

WE are asked to state that the hour for the distribution of prizes at St. Thomas's Hospital has been changed from 3 P.M. to 1 P.M. on Wednesday, July 9th.

M. JUNGFLEISH exhibited a specimen of crystallised colchicine at the Académie de Médecine on June 24th.

Pharmacology and Therapeutics.

CHLORIDE OF METHYLENE.

IN a memoir published a few months since Messrs. Regnauld and Villejean gave their reasons, based upon chemical analysis, for believing that the product at that time supplied to surgeons under the name of chloride of methylene was often, if not always, a simple mixture of chloroform and methylic alcohol. Subsequently, with a view of studying the subject physiologically, they prepared what they claim to have been pure chloride of methylene, the action of which was tested on dogs and other animals, comparative experiments being also carried out with chloroform. They report (*Pharmaceutical Journal*) that the results strengthen their previous belief and that the misnamed mixtures owe their properties to chloroform only. The physiological action of chloride of methylene was found to differ entirely from that of chloroform, with the exception that both compounds produce unconsciousness. The symptoms resulting from the inhalation of chloride of methylene were so constant and of such an alarming character that the authors think its employment as an anæsthetic agent during surgical operations is out of the question, and they doubt whether it has ever been so employed. Clonic contractions of muscles of epileptiform and choreiform kind were the alarming symptoms observed, but such movements are by no means confined to one member of the chlorine series of anæsthetics.

MUSK.

Although musk has been long well known in the West, yet, says Dr. Macgowan in his report on the health of Wenchow (Imperial Maritime Customs), it seems worth while to translate what Chinese writers have to say about it. The musk-deer is found throughout the mountains of Yünnan, Szechwan, and Thibet; it is a timid little animal, and often dies of fright. It feeds on juniper leaves and reptiles; snake-bones are found in its stomach. In spring its glandular pouch is greatly swollen and inflamed. The secretion is discharged with the urine. Musk-deer always resort to the same place for micturition, and cover their urine with earth. In such places deposits of a superior quality are found, amounting sometimes to 15 catties (a catty is a Chinese weight of about 1⅓lb.) The article which is most prized is that which falls from the musk-deer on to the ground, and is gathered in grains that are as precious as pearls. These deposits are so pungent that, if carried through a garden or woods, it prevents fructification. The poisonous effect of fresh musk on vegetation is shown also by the blighted appearance of places which the musk-deer selects for its convenience. For some distance around these places there is an absence of plants, and farther off the leaves exhibit a yellow tinge. This valuable substance no sooner leaves the hunter's hands than skilful manipulators adulterate the article for wholesale dealers, who further adulterate it for the trade, by which time it contains only about 10 per cent. of genuine musk. Musk is said to be an anthelmintic, and to cure the bites of venomous serpents.

CHLORAL-QUININE.

A compound of quinine with chloral hydrate has been made by Dr. Mazzara by adding the chloral to an equivalent quantity of quinine dissolved in chloroform. By evaporating the solution and redissolving the residue in ether, the new compound may be obtained in warty crystals, which are said to be volatile at 149° C. and to make fluorescent solutions with acids.

KOUSSINATE OF SODA.

One of the most efficient combinations of koussin is that with soda, which is effected as follows. Any desirable quantity of koussin is dissolved in hot water, to which enough bicarbonate of soda is added to dissolve the koussin entirely; boil this solution with a little animal charcoal for a few seconds and then filter. The solution thus obtained, and which though slightly coloured is clear, is now slowly evaporated in a porcelain dish until dry. The koussinate of soda is an amorphous powder-like mass, of intensely bitter

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taste and a yellowish-white colour, somewhat hygroscopic, soluble in cold, but more so in hot, water. It is equally soluble in alcohol, excepting the slight excess of carbonate of soda. On account of this great solubility it can be dispensed in all forms, and it is said to have done good service in the treatment of tinea and thread worms.

LOGANIN.

In a preliminary note to the *Pharmaceutical Journal* it has been shown by Messrs. Dunstan and Short that the pulp of the fruit of strychnos nux vomica contains to the extent of 4 or 5 per cent. a new glucoside, which they have named loganin. It has also been shown that loganin is contained in small quantity in the seeds of strychnos nux vomica, and in the pharmaceutical preparations made from them. In the future they hope to investigate the relations of this new body with strychnine and brucine, and also to determine its special physiological action.

ADULTERATION OF CODEINE.

A note in the *Répertoire de Pharmacie* mentions the occurrence of a quantity of tartrate of ammonium (probably the acid tartrate) in a sample of codeine. The tartrate resembled the codeine in its external appearance; it was crystallised in hard rhomboidal prisms, slightly soluble in cold water, but dissolving readily in boiling water, yielding a solution with an acid reaction. The salt is insoluble in alcohol, which property first led to the detection of the admixture and facilitated its separation from the codeine. The want of therapeutical effect which has been observed after the use of codeia might be explained by the presence of adulteration.

ANTIPYRIN.

The introduction of the antipyretic kairin has hardly been twelve months before the world when a new chinolin compound has been described by Knorr of Erlangen, and termed by Filehne "antipyrin" (*Zeitsch. für Klin. Med.*, Band vii., Heft 6). Already records are being published descriptive of the effects of this latest of antipyretic agents. Guttmann of Berlin (*Berl. Klin. Woch.*, No. 20, 1884) gives his experience of it in twenty-seven cases, including pneumonia, typhoid fever, scarlet fever, relapsing fever, facial erysipelas, phthisis, &c. The drug was given in doses of from four to six grammes, generally in two or three portions of two grammes at an hour's interval, in solution or powder; and the general effect was a depression of temperature for at least five hours, often longer. The temperature fell gradually and continuously to the extent of from 1° or 2° Celsius (i.e., from 2·2° to 4·5° F.) or even more, the fall in temperature being accompanied by a fall in pulse rate, and in cases of great depression with profuse sweating. In only one case were any unpleasant symptoms produced, such as vomiting; in all others the drug was well borne. The subsequent rise of temperature was unaccompanied by any rigor, as appears to happen sometimes after kairin. Guttmann observes that quinine in half the dose of antipyrin produces the same effect, but that the cost of the former is much greater than that of the latter. Ranke of Stuttgart (*Deutsch. Med. Woch.*, No. 24, 1884) has prescribed it in thirty-five cases, including pleurisy, pneumonia, typhoid fever, acute rheumatism, tuberculosis, erysipelas, and pericarditis, and confirms the above statements as to its certain and rapid action, with freedom from toxic effects. Injected subcutaneously, antipyrin has a more powerful and rapid influence than when administered by the mouth, a dose of two grammes of a concentrated solution in the former method being equivalent to one of from four to six grammes in the latter. Ranke also thinks it, in general, an excellent substitute for quinine. Lastly, F. May, assistant at the Burgh Hospital of Cologne, gives full details of cases, with charts, &c., in which this drug was employed, in the same journal (Nos. 24, 25, and 26).

KAIRIN.

Some experiments, made by Dr. Quseiralo with kairin in the medical clinic at Genoa, are reported to have shown that when this antipyretic is administered subcutaneously a greater fall of temperature is produced, which commences more rapidly and lasts longer than that following its administration by the mouth, whilst these effects are obtained with smaller and less frequent doses. The hypodermic injection of kairin is said not to produce any general disturbance or local mischief, apart from a slight smarting at the point of puncture, which soon passes away. Injections were used containing from ten to fifty centigrammes of kairin to each gramme of distilled water, brought to a clear solution by the aid of heat, and used while still at a temperature between 30° and 35° C.

ABRUS PRECATORIUS.

M. Patein gives an account of an examination of the external coat of the seeds of jequirity (*Journal de Pharmacie*). A large proportion of carbonate of lime and rather more than the proportion of iron in hæmoglobin has been found in the testa. The colouring matter is soluble in alcohol, and seems to contain a salt of iron. It is precipitated by subacetate of lead as a greenish substance, is turned green by alkalies and reddened again by acids. In a paper read before the Pennsylvania Medical Society (*Pharmaceutical Journal*) Dr. Shoemaker reports the results of some trials with an infusion of jequirity seeds on various affections of the skin. The method was employed on the principle that "granular lids" are cured by the induction of an ophthalmia of croupous nature. Lupoid conditions, epithelioma, and sloughy ulcers were found to be but little influenced by a weak infusion, though when a stronger "emulsio-infusion" was employed a specific inflammation was set up which occasionally, when applied over extensive surfaces on sensitive patients, assumed alarming proportions. The products of the inflammation, however, formed an immense crust, under the protection of which the healing process rapidly went on, leaving a new and healthier ulcer when the scab was removed, so that by repetition of the application cures were speedily effected. Dr. Shoemaker thinks jequirity will prove to be a most powerful agent in certain affections of the skin, though it ought to be used with due caution.

HYDROBROMATE OF CONIA.

Hydrobromate of conia is recommended for epilepsy by Dr. R. N. Wolfenden. The dose given is from a quarter of a grain to a grain and a half, according to age.

VESICARIA GRACILIS.

A new diuretic is mentioned in the *Therapeutic Gazette* for May by Dr. U. S. Newlon of Oswego, who has made some experiments with a cruciferous plant, Vesicaria gracilis, which grows west of the Mississippi, and finds that it is a stimulating diuretic of some power. Its virtues are best extracted by alcohol or acetic acid.

LYTHRUM SALICARIA.

This remedy is highly spoken of by Dr. Campardon (*Bull. Gén. de Thérapeutique*) in cases of acute or chronic inflammations of the gastro-intestinal mucous membrane. Its properties appear to be due to tannin and mucilage. An excessive dose, such as ten to twelve grammes per day, produces gastric disturbance. The application of the powder and infusion has been found of service in the treatment of varicose ulcers. The infusion is made of the strength of thirty parts of the leaves and stalks to 1000 of water. Of the powder the dose is one gramme in a wafer three times a day.

THE INTERNATIONAL HEALTH EXHIBITION.

Group 2.—Dress.

To be healthy a man or woman or child must be properly clothed and fed. This sentence sufficiently indicates the *raison d'être* of the dress department in the present Exhibition. There is much to be said of this portion of the Exhibition. First of all, it is no secret that Mr. Frederick Treves and the Hon. Lewis Wingfield have practically done all the work. Thanks no doubt are due to others, amongst whom we may name General Erskine, Lady Brassey, the Marquis of Lorne, the Indian Government, and that of the United States of America, but the onus of regulating, arranging, and distributing the exhibits has been chiefly on the shoulders of the gentlemen named. The share of the Hon. Lewis Wingfield consisted in the preparations of designs for costumes illustrative of the history of British dress from William I. to George IV. This series of wax figures dressed from contemporary authorities—missals, tombs, statues, and portraits in oil—representing the civil costume of the middle and lower classes from A.D. 1066 to

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1820, forms one of the most attractive features of the Exhibition. Situated in the West Quadrant, it has frequently been so closely inspected that here, at all events in the evening, free locomotion is not possible. We have also seen the photographers frequently at work on this excellent display. Messrs. Auguste and Co., of Wellington-street, Strand, have executed the costumes; Mr. C. F. Fox, of Russell-street, Covent-garden, have made the wigs; and the wax figures have been done by Mr. Edwards, of Waterloo-road. Reigns during which no important changes in civil costume were made have been omitted. It will be seen that in some instances changes followed each other rapidly, each succeeding reign being marked by a strong individuality (from Elizabeth to Charles II., for example), while in other instances the dress of the lower orders remained much the same for generations. Nearly every case contains a lady and gentleman of the esquire class and also a peasant woman and artisan of the same period. We are informed that this group cost over £1000. From a hygienic point of view it will be seen that many of the costumes and headgears are simply of outrageous characters. Tight-lacing, however, does not, on the whole, seem to have reached so alarming a degree as in the dress of the period. We have not the space for detailed criticism, but those visitors who bear in mind the main hygienic reasons for clothing—viz., to cover the body and maintain all parts at an equable temperature—will have no compunction in condemning most heartily those garments which most loudly call for deprecation.

In cases facing those just commented on there are exhibits of military costume illustrative of the mode in which the British Army was dressed at various periods of its history from the earliest times to the present day, to which are added, for the purpose of comparison, specimens of uniform now worn by the armies of some foreign nations. General Erskine has superintended the arrangements of this exhibit. In an adjacent case the uniform of a hospital sister and hospital nurse, sent by the House Committee of the London Hospital, are shown. Close by these uniforms Messrs. John Richardson and Co., manufacturing chemists, Leicester, have exhibited a complete series of the most inflammable fabrics, rendered entirely and perfectly secure from fire. Here there are different materials largely used for dress purposes, as also examples of ball and evening costumes rendered non-inflammable by chemical processes; these fabrics, it must be confessed, have rather a lacklustre look. Chemically prepared starches and various chemicals, such as tungstate of soda, employed in the manufacture of fire-proof materials, are shown in suitable glass vessels. The action of poisonous dyes in fabrics on the economy remains to be illustrated. Before we proceed with our detailed report of this interesting series of exhibits, we must say something of its general aspect. It is understood that firms and other business men have applied for spaces to exhibit certain processes or articles which bear upon the subject of health. The judgment and allotment of such demands have fallen on the executive of this department, whose head and chief is Mr. Frederick Treves. Now, although much care and pains seem to have been taken to permit only exhibits of decided relation to health, still some exhibitors have been unscrupulous enough to introduce specialities having nothing to do with the subject in question. Visitors will easily pick out the sinners. With regard to the incompleteness of the dress show, it may be said that want of funds is the chief reason for this shortcoming. In some instances, as for example in the making of crape, the application of jute to the manufacture of dress fabrics and the preparation of imitation fabrics, the trades are worked under great secrecy, and so nothing but refusal to exhibit the processes was met with at the hands of those engaged in these manufactures. The manufacture of waterproof fabrics also requires such a high temperature, so much space, and is attended with so much discomfiture, that it had to be left out of the finished exhibition. It was also found impossible to illustrate machine *versus* handweaving. Funds would not permit of the Brussels lace workers coming over, so the lace making is illustrated by operatives from Honiton and Nottingham only. Spinal and thoracic deformities ascribed to tight-lacing, and models to show the position of the viscera displayed by such practices and the like, have not been exhibited. The same must be said of the dress of female operatives engaged among machinery, as also special dresses recommended or in use in factories and occupations of special character, e.g., dresses for lead and other factories, life-saving dresses and firemen's dresses. Dresses of nurses and sisters have been shown, however, as above mentioned. Moreover, in the subject of underclothing the subcommittee suggested that a series of models displaying the first clothing of infants as adopted in the various countries of the world should be shown, but unfortunately this interesting scheme has had to be abandoned. In the Dress Group the number of exhibits is about 120. Here, as elsewhere, we shall only draw attention to articles noteworthy either from their excellence or novelty. In the East Quadrant various sorts of boots and shoes are shown. The exhibits of Messrs. Dowie and Marshall; Messrs. Waterman and Co., Rupert-street, Bristol; Messrs. Lilley and Skinner, Paddington-green; Messrs. Pocock Brothers, 235, Southwark-bridge-road, S.E.; Mr. Henry Bletchley, of Gloucester; Mr. John Wise, 29, Craven-terrace, Lancaster-gate; Mr. Francis Lanagan, 9, Brownlow-street, Bedford-row; and Mr. William Hall, 39, Edgware-road—are all worth inspection, and demonstrate what is wanted in the covering of the feet. An exhibit of a very interesting nature is that known as Barrett's patent, which is an indestructible boot and shoe sole. Into the composition of this sole much of a metallic nature finds its way; the sole is thereby rendered a powerful conducter of heat, and, owing to its unyielding nature, is hardly to be recommended for walking purposes. However, for the poor, with whom boot-leather is such an important item, the attempt to provide indestructible materials must be regarded as one in the right direction. No. 265 is an exhibit of some attraction from the actual presence of Irish peasants knitting jerseys and other articles. This has been done by the aid of Miss Frances FitzGerald, of Valentia Island. A hygienic dress, with divided skirt, is exhibited (No. 271) by Miss Louisa Beck, of 24, Connaught-street, Hyde-park, which, in our opinion, is most becoming. Messrs. Hamilton and Co., 326, Regent-street, exhibit artistic costumes, designed with reference to comfort in wear and adapted to modern requirements; also a divided dress for athletics or ordinary wear, indistinguishable from ordinary skirts. Some excellent things in clothing are exhibited by the Sanitary Woollen System Co. (Dr. Jaeger's). Attention should also be given to the case of the Rational Dress Society (President, Viscountess Harberton), 23, Mortimer-street. The Grey Wool and Spun Silk Underclothing of Mr. William Lewis, 13, Cheapside, seem well adapted to their purposes. Some specimens of silk hose designed for His Majesty George IV. are also to be seen.

In Class XIV. we may notice some exhibits of indiarubber clothing and invalid appliances by George Cording, 125, Regent-street, and also the good gossamer waterproof clothing of the well-known firm of Swan and Edgar. "Warnerising" is a secret process for preparing clothing to resist moths and mildew. Some articles which have been "warnerised" are shown in exhibit, 301. Every description of waterproof garments may be seen in Messrs. Anderson, Abbott, and Anderson's case. Messrs. Ellwood and Sons, of 24, Great Charlotte-street, Blackfriars-road, have on view various forms of head dress made on the air-chamber principle, as recommended for tropical climates; these are good. Worthy of mention is the India gauze underclothing exhibited by Messrs. Thresher and Glenny. Messrs. Howell and James have a good show in the shape of hygienic and hygroscopic dress materials, giving the necessary warmth with the least weight. An interesting and curious exhibit is that of Mr. John Bell's asbestos fireproof dress. The Fleuss diving dress and breathing dress for working in noxious gases are also represented.

The Donegal Industrial Committee have a large exhibit of knitting, spinning, weaving, and embroidery by hand. This is situated in the East Quadrant, and not in the West, as given in the catalogue. The process of glove-making is illustrated in the West Quadrant by Messrs. Dent, Allcroft, and Co. In the Annexe Albert Hall several exhibits are placed worthy of special mention. These are: A model baby dressed in hygienic clothing, shown by Miss Loader; a complete set of underclothing by Misses Benthall, one figure of which, however good from a hygienic point of view, does not strike the eye as a thing of beauty; the Lairitz Pine-wood fabrics; hygienic porous elastic corsets and supporting belts, by Mr. Thomas Steele, of 24, Margaret-street, Regent-street; ladies' elastic anatomical chest expanding corsets, patent abdominal supporters, gestation, nursing, and riding corsets, by Mrs. Ann Wise, of 15, High-street, Manchester-square, W.; crape underclothing, by Mr. Oscar R. Schmitter; combination garments of silk and mixed silk and wool, by Mrs. Bauer, of

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134, Oxford-street; and last, but not least, Lewis and Allenby's silk long-cloth underclothing, the only possible objection to which seems to be its darkish tint. In the Western Arcade much machinery in motion may be seen, chiefly made up of knitting and sewing machines. The self-acting sewing machine is well worthy of inspection; it takes but two minutes to wind up the clockwork, and this supply of force lasts for one hour; the speed of working can be moderated to any degree desired. A few other matters in this department remain for consideration. The warmth of different sorts of clothing is illustrated by "dummy" thermometers in the West Quadrant. The thermometers indicate the results of experiments made for the Committee by Mr. Whitley Williams. Pure silk and llama wool are seen to be amongst the coolest garments. The heat-absorbing property of various colours and materials is also to be a subject of exhibition. Cloaks made of very hygroscopic material are shown, and the quantity of water which each holds—(*a*) when dry, (*b*) after a little rain, (*c*) when saturated—has been collected and placed in flasks by the side of each cloak. The costumes worn by the Greely expedition, to be lent by the United States Government, do not seem yet to have arrived. In a separate case Mr. Frederick Treves has supplied: (1) plaster cast of normal liver; (2) plaster cast of liver presumably deformed by tight-lacing; (3) plaster casts of normal feet in a child and woman; (4) plaster casts of feet deformed by improperly shaped boots.

PARASITES OF MEAT AND PREPARED FLESH-FOOD.

IN his second lecture at the International Health Exhibition, Dr. Cobbold treated of the cestoid parasites and their larvæ—that is to say, of the tapeworms and bladder-worms, such as hydatids, measles, &c. Meat sent to the markets was liable to contain these entozoa; neither beef, veal, pork, nor even mutton and venison being altogether free. On seven separate occasions he had noticed cysticerci in joints of mutton brought to his own table, and he had described similar parasites from the flesh of a giraffe, as well as from commoner animals. As an argument in favour of hippophagy, it should be stated that horse-flesh was singularly free from parasites of this class, although other tissues, as well as the viscera of equine animals generally, were apt to contain bladder-worms. None of these equine parasites, however, was injurious to man. Having (by means of Sheet No. 3 of the illustrations displayed in the South Gallery) explained the general structure and development of the beef tapeworm, the lecturer dwelt at some length upon the dangers arising from dispersion of ova by the employment of fresh sewage, and upon the inestimable value of experimental research in determining the mode of origin of the different species of tæniæ that attack man and beast. He referred to the labours of Leuckart, Mosler, and various other Continental helminthologists; but he stated that in this particular matter he had conducted more experiments than any one of his foreign co-workers. Reverting to the prevalence of measly beef, it was shown that out of 13,818 beasts slaughtered in the Punjab in the year 1869, as many as 768 animals were infested with cysticerci. This would be at the rate of about 5½ per cent. (5·55). The percentage of the previous year was higher. Passing to the ravages of the pork tapeworm, its comparatively dangerous character was noticed, not a few instances having come under Dr. Cobbold's observation where the cysticerci were lodged in the human brain. Allusion was made to the Mosaic inhibition of swine's flesh, and to the extraordinary prevalence of measly meat throughout the East. In reference to the little tapeworm which proved to be the sexually mature state of ordinary hydatids, he referred to the experimental labours of Von Siebold, Naunyn, Nettleship, and others. Reverting to hydatids, a singular experience was related in connexion with a plate of meat that had been brought to him at a public restaurant. The relative prevalence of the echinococcus veterinorum in England, India, Australia, and Iceland was next referred to, special stress being laid upon the investigations of Dr. J. D. Thomas of Adelaide. As regards India, it was stated on the authority of Dr. James Cleghorn, that of 2109 beasts slaughtered at Mooltan 899 were diseased, and in most cases both the lungs and liver were affected. This was equivalent to 42 per cent. If asked how this was to be accounted for, the reply was that the cattle in India had ready access to tanks containing foul water, and they had frequently been seen to swallow refuse and garbage, in which tapeworm eggs abounded. The ova of the tænia echinococcus, expelled by dogs, must be very thickly dispersed throughout the low grounds of India. As regards preventive measures, Dr. Cobbold insisted upon a more thorough meat-market inspection by competent persons—that is to say, by inspectors who had familiarised themselves with the phenomena of parasitic disease. It was useless to say that officials in general were already well informed on this subject, inasmuch as he had been supplied with abundant proofs to the contrary. During the last thirty years he had received several hundred private communications on the subject of parasites, many of the applicants for information being officers of health. In one instance the cut ends of the intercostal nerves had been mistaken for parasites, and thus meat had been condemned without good cause. In connexion with the temperature necessary to destroy the measles of beef and pork, Dr. Cobbold again emphasised the labours of Professor Perroncito, showing that none of these creatures could survive a heat of 50° C. or 122° F. prolonged for a single minute. At this point of the lecture Mr. Birkbeck, M.P., handed to the chairman a paper requesting information respecting the so-called "mackerel scare," in reply to which it was affirmed that the entozoa of this fish were perfectly innocuous to mankind, whether they were swallowed alive or dead. The parasite most commonly encountered was the Filaria piscium; but there were eleven other internal guests of the mackerel, besides two which fastened themselves on to the gills. Addressing himself in a very pointed manner to those who eschewed flesh food altogether, the lecturer remarked that the vegetarians flattered themselves that by abstention from meat they escaped many of the parasitic ills to which flesh is heir. So they did; but, speaking figuratively, they "jumped out of the frying-pan into the fire." At all events, the most common parasite known in England was almost entirely nourished by the cellulose and protoplasm of vegetables, and it was by means of a vegetable diet, and by the careless use of unfiltered water employed in the washing of salads and other herbs, that certain parasites were introduced into the human frame. Some parasites might be starved by a milk diet, but he feared the same could not be said in favour of an exclusively vegetable diet. Be that as it might, instances had come within his knowledge where the employment of open running waters for domestic purposes had led to local endemic outbreaks of parasitism. He instanced the case of a Yorkshire village, and explained its nature, the passage of entozoal germs from neighbouring piggeries into a little brook being the immediate cause of infection.

At the close of the lecture Sir Lyon Playfair remarked that before he had taken the chair he had been inclined to think that as regards entozoa it was perhaps better to remain in blissful ignorance than to be made acquainted with the disagreeable but highly important facts that had been detailed. He had, however, changed his mind, and now thought that we all owed much to Dr. Cobbold and other workers in this branch of science. It was a pleasure to himself to have presided at a lecture given by an alumnus of the University which he represented in Parliament.

THE NEW WING OF ST. MARY'S HOSPITAL.

ON Wednesday last the Princess Louise (Marchioness of Lorne) opened a new wing which has recently been added to St. Mary's Hospital. Her Royal Highness arrived shortly after three o'clock, when the band of the 18th Middlesex Rifle Volunteers struck up the National Anthem.

Lord Carlingford, K.P., President of the Hospital, received the Royal party, who then proceeded to visit some of the wards. After this the Princess was conducted to a dais

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erected in the spacious accident ward of the new wing. An address was then presented to her Royal Highness by the President, after which the chaplain offered up prayer, and dedicated the new wing "to the service of Almighty God in the relief of His suffering poor." At the conclusion of the service, which was very impressive, her Royal Highness declared the new wing open, and received a number of purses in aid of the charity.

The Dean of the Medical School then read his report, and presented the students who had been successful in gaining honorary distinction to Her Royal Highness, from whose hands they received their prize certificates.

Dr. MEADOWS, chairman of the Reception Committee, then proposed the thanks of the staff of the hospital and medical school, to which the Marquis of Lorne responded on behalf of the Princess.

As the Royal party passed to the new wing the nurses of the hospital sang a processional hymn. The ceremony was brought to a close by the singing of the National Anthem.

The wards and corridors of the hospital were profusely decorated with flowers and flags, and the whole proceedings passed off with the greatest *éclat*. The approaches of the hospital were densely thronged with spectators, whilst a large and fashionable audience assembled within its walls.

We learn from Mr. Pietro Michelli, the energetic secretary of the institution, that "the building was commenced in June, 1845, the first stone being laid by H.R.H. Prince Albert. It was opened for fifty beds on the 13th June, 1851, and for 150 in June, 1852. On the 23rd May, 1865, H.R.H. the Prince of Wales laid the first stone of a wing to the hospital, which was opened in May, 1867, the hospital being thereby enabled to receive from 180 to 200 in-patients. From 1867 to the present time, or for sixteen years, the accommodation afforded by the hospital has remained the same. Recently, however, another wing to contain seventy beds has been built out of a legacy left to the hospital by the late Mr. J. F. Stanford. The cost of keeping up the new wing will add upwards of £3000 to the yearly expenditure, which the hospital will be unable to meet until further funds are forthcoming."

THE ROYAL BOTANIC GARDEN, GLASGOW.

A MEMORIAL has been addressed to the Lord Advocate by the Senate of the University of Glasgow in relation to the present state of the Royal Botanic Institution of Glasgow, and the interests of the chair of Botany in the university as connected with that institution. After alluding to the position occupied by Glasgow in the medical education of Scotland, and to the importance of botany in the medical curriculum, the memorial states that all authorities agree that the command of a botanic garden, furnished with the proper appliances, is a *sine quâ non* for the right discharge of the duties of the Botanic Chair. The history of the Botanic Garden at Glasgow is as follows:—In the year 1816 a botanic garden was formed in Glasgow by the voluntary contributions of the citizens; and in 1817 the university entered into a contract with the directors of that undertaking, by which, in consideration of a contribution from the university funds to the amount of £2000, certain privileges were secured for the teaching of botany to the students of the university. In the following year, 1818, the Professorship of Botany was founded by the Crown. About the same time a Royal Charter was granted to the proprietors of the garden under the title of the "Royal Botanic Institution of Glasgow;" and shortly afterwards a grant of the same amount as that contributed by the university—viz., £2000—was made by Parliament to the institution. The conditions on which the subscription of the university was given were: (1) That the university "shall have a patrimonial right in the institution, along with the present and future proprietors, to the extent of £2000"; (2) that the said university "shall yearly appoint three of their number to be joint directors of the institution along with the other directors, eight in number . . . in terms of the rules and regulations of the institution"; (3) that "the Professor of Botany shall have the exclusive right of delivering lectures in the public room to be erected in the said Botanic Garden"; and (4) that "the gardener shall . . . supply whatever specimens and plants may be required by the said professor, and shall afford every facility to him during the course of his lectures. These provisions, however, are at this moment, by the serious pecuniary embarrassments into which the Royal Botanic Institution has fallen, threatened with extinction; and an offer made within the last few months on behalf of the Royal Botanic Institution to hand over the whole property to the City Corporation on certain terms, including a stipulation that the corporation should implement the conditions expressed in the contract between the institute and the university as to the privileges to be granted to the university in regard to the teaching of botany, has been declined. The Senate, therefore, having been informed that an application has been made by the Glasgow corporation for the appointment of a Royal Commission to consider the whole subject of the relations of the city corporations to the police burghs, submit the desirability of obtaining the appointment of such a commission, and express the hope that in the event of its being appointed there may be included within its scope the important question relating to the future maintenance of the Royal Botanic Garden of Glasgow, in which the university is so deeply concerned.

WILLS OF MEDICAL MEN.

THE will of Andrew Whyte Barclay, M.D., F.R.C.P., Consulting Physician to St. George's Hospital, formerly of 23a, Bruton-street, Berkeley-square, and late of Whitney Wood, Stevenage, Herts, who died on April 28th last, has been proved by John Barclay, M.D., the brother, Mr. Joseph Noble Beasley, and Mr. John Noble, the executors, the value of the personal estate exceeding £13,800. The testator bequeaths £1000 to his wife, and legacies to nieces and to his executors. The residue of his real and personal estate is to be held upon trust for his wife for life and then for his children or issue as she shall by deed or will appoint.

The Scotch Confirmation under seal of office of the Commissariot of the county of Edinburgh of the trust, disposition, and settlement, dated May 4th, 1877, of William Carmichael, M.D., formerly of the Royal Navy, late of 24, Buckingham-terrace, Edinburgh, who died at Mentone, on Feb. 17th last, granted to Mr. Andrew Thomas Carmichael, the brother and the surviving executor nominate, has just been sealed in London, the value of the personal estate in England and Scotland amounting to over £13,400.

The will of James Smith Ayerst, M.D., late of Stanbury, Lower Warberry-road, Torquay, who died on March 15th last, has been proved by Mrs. Mary Ayerst, the widow and sole executrix, the value of the personal estate exceeding £1900. The testator gives, devises, and bequeaths all his estate both real and personal to his wife absolutely.

The will of John Mure, M.D., Deputy Inspector-General of Hospitals, late of 40, Tedworth-square, who died on May 16th last, has been proved by Mr. Edward Madge Hore and Mr. Frederick Willoughby Ranken Hore, the executors. The testator makes specific bequests to his nephew John Saunders Mure, and to his niece Katherine Mure, and leaves the residue of his property upon trust for his son John.

The following legacies have recently been left to hospitals and other medical charities:—Mr. William John Campbell Allen, of Fannoran, Carrickfergus, £100 to the Royal Hospital, Belfast.—The Earl of Sandwich, of Hinchingbrook, Huntingdonshire, and 46, Grosvenor-square, £1000 each to the Huntingdonshire County Hospital and the Dorset County Hospital.—The Hon. Mrs. Mary Stapleton-Brethertton, of the Hall, Rainhill, Lancashire, and of Lackham, Wilts, £100 to the Royal Infirmary, Brownlow-street, Liverpool.—Mr. John Lancaster, of Bilton Grange, Warwickshire, and Frankfort House, Fitzjohn's-avenue, Hampstead, mining engineer and coal and iron master, £500 to the Royal Albert Edward Infirmary and Dispensary for Wigan.—Major-General Thomas Craufurd Longcroft, of 13, Upper Wimpole-street, the residue of his property, the gross amount of which is over £72,000, to his executor, Mr. Henry Percival Hart, in full confidence that he will carry out the instructions given him, which he intimates are for dispensing comfort and relief to thousands and thousands of his poor and distressed fellow creatures.—Miss Ann Ball, late of 16, St. Paul's-place, Ball's-pond, £200 to the Hospital for Worn-out Mariners in the Merchant Service; £100 each to

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the dispensary formerly called Aldersgate-street Dispensary which was held in Shaftesbury House, the Ball's-pond Dispensary, the Hospital for Sick Children, Great Ormond-street, the Sea-bathing Infirmary, Margate, the Royal Bethlem Hospital for Lunatics, St. George's Hospital, the Royal Free Hospital, Gray's-inn-road, the Children's Hospital, Shadwell, the Crèche Hospital, Stepney-causeway, the Earlswood Asylum for Idiots, and the Hospital for Children and Adults, Tottenham-green; and £200 capital stock of the East Indian Peninsular Railway Company each to St. Bartholomew's Hospital, Smithfield, St. Thomas's Hospital, Stangate-creek, Guy's Hospital, Southwark, the Metropolitan Hospital, Bishopsgate, the London Hospital, Mile-end, and the German Hospital, Dalston. All the residue and surplus arising from lapsed legacies the testatrix directs her executors to divide between the several hospitals and dispensaries named in her will and codicils.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Sanitary State of Ormskirk Rural District, by Dr. PARSONS. This report was mainly prepared in order to enable the Local Government Board to judge how far the existing arrangements for the discharge of the duties of medical officer of health for the district justified the Board's consent to their continuance. The district is for this purpose cut up into five portions; three of the medical officers of health are Poor-law medical officers, the remaining two do not now hold that office. With one single exception the annual reports of the five officers are stated to have been of a meagre and unsatisfactory character, and, in addition to this, it is evident that some of the officers have, both on account of the demands of private practice and otherwise, not been able to perform their duties either with complete satisfaction to themselves or in such a way as to fulfil the requirements of the orders relating to their offices. Quite apart from the efficiency of the several officers, it seems to us that it is very undesirable that one sanitary authority should have multiple medical advisers as to the sanitary state of their district. Where, as here, the officers are five in number, it is next to impossible for the authority to hold the relation to them that is needed to secure frequent consultation and uniform advice as to matters affecting health; and, though in the matter of pauper sickness there may be some advantage in securing officers who are in constant relation with the poor, yet the advantages to be gained from one single officer who can advise as to the whole of the district, and on whose counsel the authority may at any moment be able to rely, must be regarded as outweighing other considerations. The renewed experience gained by Dr. Parsons as to this rural district goes to confirm this view.

Large Infant Mortality and Prevalence of Fever at Spennymoor, by Dr. PARSONS.—Spennymoor is a colliery town in Durham. It suffers much from overcrowding, for even during a period of commercial depression not a house could be found that was to let; the ordinary death-rate is excessive, and the rates from measles, scarlet fever, enteric and typhus fevers, and diarrhœa are largely in excess of those prevailing in England and Wales generally. The death-rate under one year of age for England is about 14 per cent. of the registered births; in the small town of Spennymoor, with its 5700 inhabitants, the rate reaches 19·6 per cent., and to this high infant mortality, which came under notice during the inquiry, a large portion of the report is devoted. Information being obtained as to the probable causes of this large amount of infant death, the following reasons are assigned for it. The use of artificial food instead of breast-milk; the neglect and exposure of infants by their mothers, who spend much of their time in the public-houses, and who at night time, when their husbands are at work in the pits, relieve their solitude by drinking laudanum or eating opium powder; the consequent abandonment of children to nurse girls, often of eleven and twelve years of age only; and the absence of any proper recreation ground, a circumstance which keeps the children in backyards amidst privies, middens, and offensive drain effluvia. In addition to these evils, it seems evident that the practice of insuring the lives of infants is calculated to become a great temptation to those who are needy by reason of their squanderings, and Dr. Parsons reports that of 58 children under five years of age dying in 1883, in 40 cases the parents received insurance money varying from 15*s.* to £6. Indeed, the children may be actually insured before they are born, and baptism is sufficient to secure the same being paid. One child only three weeks old turned out to be insured in three clubs. Unqualified practitioners attend a large number of the sick, and during four years only ten coroner's inquests were held. This state of affairs is one that in the interests of child life certainly calls for some legislative interference.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Blackpool (Urban).—The death-rate for this borough was 19·5 per 1000 in the estimated population, but deducting the deaths amongst temporary visitors, who were not included in the census returns, the rate is reduced to 16·6. The cases of infectious diseases notified to the sanitary authority included 3 of small-pox, 44 of scarlet fever, 8 of diphtheria, and 23 of enteric fever. The small-pox was prevented from spreading, and the use of the sanatorium materially aided in this. But only 8 of the 44 scarlet fever patients, 2 of the 8 diphtheria patients, and none of the enteric fever patients were isolated in the sanatorium. This experience is so entirely opposed to that obtained in places where proper infectious hospitals have been erected that the authority should take note of it. The present building can only safely receive one disease at a time, and it is hardly to be expected that, under these circumstances, either the medical profession or the public will consent to use it except under pressure of the greatest emergency. There seems to be a want of local spirit as to this matter, as is shown, indeed, by the fact now recorded, that the ambulance available is nothing better than an old dilapidated cab. The authority of this pleasure resort would do well to note what such a place as Bournemouth is doing in this matter. In connexion with the existence of typhoid fever, we observe the need for further action in respect of the safe removal of the excreta of the population. This is especially so as regards the sewer outfall, where the sewage is impounded by the tide, thus occasioning an oscillation to and fro in the main sewers, and so unsealing the traps and driving offensive sewer air into streets and houses. Wherever such defective arrangements are in force, charcoal is placed in the sewer ventilators, and this, which can hardly be regarded as even a palliative, is also carried out in Blackpool. The charcoal apparently goes largely to block the ventilators, and, as elsewhere, it must interfere with the free entrance of fresh air into the sewers. Dr. Welch, whose advice is sound throughout, refers to these "charcoaled ventilating grates" as inadequate to relieve pressure, and advocates a free sewer outfall at all costs.

Northampton (Urban).—This town is now very free from enteric fever; thus, last year only three deaths from this cause occurred amongst a population of nearly 55,000, and in 1880 no such death was recorded. The phthisis mortality is referred to by Mr. Cogan as heavy, and he attributes this largely to the staple trade of shoemaking. This trade is by no means all carried out in well-regulated factories, but mostly at the houses of the working classes, where they toil for many hours in badly ventilated, badly heated, and often damp and overcrowded rooms. In addition, the posture of the body is a very constrained one, and such as to interfere with freedom of respiration. The need for hospital accommodation is referred to in connexion with scarlet fever. We therefore presume that the temporary building which the Corporation possesses is not sufficiently attractive for any but small-pox patients, whose isolation is easier than that of any other cases. A good deal of sanitary work, including the disinfection of houses and infected articles, is in progress. The birth-rate was 35·6, and, with the needed deductions, the death-rate was 16·9 per 1000 living.

THE sum of £235 has been collected by the members of the United Friendly Societies of the north-western district of London for the benefit of the funds of University College and North-West London Hospitals.

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VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5968 births and 3230 deaths were registered during the week ending the 28th ult. The annual death-rate in these towns, which had been equal to 19·8 and 18·7 per 1000 in the two preceding weeks, rose again last week to 19·2. During the thirteen weeks ending last Saturday the death-rate in these towns averaged 20·8 per 1000, against 20·9 and 21·5 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 11·5 both in Brighton and in Norwich, 13·3 in Wolverhampton, and 14·0 in Bristol. The rates in the other towns ranged upwards to 23·0 in Bolton, 23·3 in Sunderland, 23·6 in Blackburn, and 26·1 in Liverpool. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 514, showing an increase upon recent weekly numbers; they included 144 from measles, 122 from whooping-cough, 90 from diarrhœa, 50 from scarlet fever, 42 from "fever" (principally enteric), 39 from small-pox, and 27 from diphtheria. No death from any of these diseases was registered last week either in Brighton or in Norwich, while they caused the highest death-rates in Wolverhampton, Blackburn, and Cardiff. The greatest mortality from measles occurred in Wolverhampton and in Halifax; from whooping-cough in Huddersfield and in Liverpool; from "fever" in Portsmouth and in Cardiff; and from scarlet fever in Cardiff. The 27 deaths from diphtheria in the twenty-eight towns last week included 20 in London, 3 in Portsmouth, and 2 in Cardiff. Small-pox caused 29 deaths in London, exclusive of 20 London cases registered in the metropolitan asylum hospitals situated outside Registration London; also 5 in Liverpool, 2 in Sunderland, and 1 each in Manchester, Sheffield, and Cardiff. The number of small-pox patients in the metropolitan asylum hospitals, situated in and around London, which had increased in the fourteen preceding weeks from 148 to 1316, had declined on Saturday last to 1290; the number of new cases admitted to these hospitals, which had been 155, 332, and 354 in the three previous weeks, declined again to 260 last week. The Highgate Small-pox Hospital contained 83 patients on Saturday last, fewer by 7 than the number in the previous week; 11 new cases were admitted during the week, being but half the number in the previous week. The deaths referred to diseases of the respiratory organs in London, which had declined in the eight preceding weeks from 360 to 227, further fell last week to 218, but exceeded the corrected average by 4. The causes of 81, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Newcastle-upon-Tyne, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Norwich, Nottingham, Salford, Oldham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which in the three preceding weeks had declined from 23·3 to 21·1 per 1000, further declined to 20·6 during the week ending the 28th ult., but exceeded by 1·4 per 1000 the mean rate during the same week in the twenty-eight large English towns. The rates last week in the Scotch towns ranged from 10·1 and 15·6 in Perth and Greenock, to 25·0 in Leith and 26·8 in Paisley. The 590 deaths in the eight towns included 86 which resulted from the principal zymotic diseases, against 88 and 83 in the two preceding weeks; 32 were referred to whooping-cough, 15 to measles, 13 to diarrhœal diseases, 10 to "fever," 8 to scarlet fever, 7 to diphtheria, and 1 to small-pox. The annual death-rate from these diseases averaged 3·6 per 1000 in the eight towns last week, and exceeded by 0·5 the mean rate from the same diseases in the twenty-eight English towns. The 32 fatal cases of whooping-cough showed a decline of 6 from the high number in the previous week, and included 22 in Glasgow and 4 in Edinburgh. The 15 deaths from measles exceeded by 1 the number in the preceding week, 8 occurred in Glasgow and 5 in Dundee. The 13 deaths from diarrhœal diseases slightly exceeded the number in the corresponding week of last year. The fatal cases of "fever," which had declined from 13 to 2 in the five preceding weeks, rose to 10 last week, of which 3 were returned in Glasgow, 3 in Edinburgh, and 2 in Paisley. All the 8 deaths from scarlet fever occurred in Glasgow. The 7 fatal cases of diphtheria were 2 less than in the previous week, and included 3 in Aberdeen and 3 in Glasgow. A death from chicken-pox (classed in Scotland as small-pox) was recorded in Dundee. The deaths referred to acute diseases of the respiratory organs in the eight towns, which in the three preceding weeks had been 101, 90, and 74, rose again last week to 85, but were slightly below the number returned in the corresponding week of last year. The causes of 72, or 14·4 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 21·7 and 27·1 per 1000 in the two preceding weeks, further rose to 28·2 in the week ending the 28th ult. During the thirteen weeks ending last Saturday the death-rate in the city averaged 26·5 per 1000, whereas the rate during the same period did not exceed 19·9 in London and 21·6 in Edinburgh. The 190 deaths in Dublin last week showed a further increase of 8 upon the numbers returned in the two previous weeks, and included 14 that were referred to the principal zymotic diseases, against 10 and 15 in the two preceding weeks; 5 resulted from "fever" (typhus, enteric, or simple), 4 from whooping-cough, 3 from diarrhœa or dysentery, 2 from scarlet fever, and not one either from small-pox, measles, or diphtheria. These 14 deaths were equal to an annual rate of 2·1 per 1000, the rate from the same diseases being 3·8 in London and 2·3 in Edinburgh. The 5 deaths from "fever" in Dublin last week showed a decline of 2 from the number in the previous week, and the fatal cases of scarlet fever also showed a further decline from recent weekly numbers. The 4 deaths from whooping-cough, however, were more numerous than in any recent week. Three inquest cases were registered, and two deaths resulted from violence; 67 deaths were recorded in public institutions. The deaths of infants had declined, while those of elderly persons showed a considerable increase. The causes of 44, or nearly 22 per cent., of the deaths registered during the week were not certified.

POPULATION ESTIMATES.

The interest that now attaches to the vital and mortal statistics of our large towns invests with considerable importance the method adopted for estimating the population of such towns in the several years of an intercensal period. Population being the necessary basis of all the more important vital statistics, it is essential that due care should be taken to use the most trustworthy methods for the calculation of population estimates. It is evident, however, that very grave misconception still prevails in many quarters as to the method of calculation that should be adopted. Many medical officers of health omit to state in their reports how their estimates of population have been framed, while others have evidently employed false methods. Let us take the report of the medical officer of health for Cardiff in 1883 as a case in point. He states in his report that in framing his estimate he has "adopted the formula used by the Registrar-General, in order that his returns should approximate with that authority." He then proceeds to explain that he has added to the enumerated population of Cardiff in 1881 two and a quarter times the recorded yearly increase of population during the ten years 1871–81. This is incorrectly assumed by the medical officer of health for Cardiff to be the Registrar-General's method. It is true that, failing any more satisfactory basis for such an estimate, the Registrar-General bases his estimate on the hypothesis that the rate of increase of population between the last two census enumerations will be maintained during the current intercensal period. This, however, is very different from assuming that the actual increase will be the same in the current as it was in the last decade, since population increases at a geometrical and not simply at an arithmetical rate of increase. The population of Cardiff increased from 57,363 in 1871 to 82,761 in 1881. The actual increase in the ten years was 24,398, and by Dr. Paine's method the same increase would occur in the present decade; whereas, by the Registrar-General's method, which assumes that the rate of increase, and not the actual increase, will be maintained, the increase of population during this decade will be 36,643, instead of 24,398, as in the last decade. So much for the false method adopted by Dr. Paine under the impression

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that it was the Registrar-General's method. The result of this method would be to considerably under-estimate the population of Cardiff in each year up to the next census in 1891. Notwithstanding this false method it was somewhat surprising to find that Dr. Paine's estimate for Cardiff in the middle of 1883 was 91,201, and higher by 1168 than the Registrar-General's estimate. This is, however, accounted for by the fact that Dr. Paine gives 85,378 as the estimated population of the borough of Cardiff in 1881, whereas the census report gives only 82,761. In this case the error of facts somewhat balances the falsity of method adopted for the calculation. If both the errors had been in the same direction the result would have caused greater inaccuracy. It is, of course, very desirable that all medical officers of health should clearly apprehend the method adopted by the Registrar-General for framing estimates of population, and we have, therefore, called attention to this instance among many which prove that the official method is very imperfectly understood. This being the case, we are inclined to think that the Census Department of the General Register Office, if such a department exist, should officially calculate all estimates of population required for the purpose of vital and sanitary statistics, in order, as far as possible, to secure uniformity in the method of calculation, and an entirely disinterested consideration of the probabilities of each case. In order to facilitate the calculation of these official estimates, it would be necessary for local sanitary authorities to furnish the Registrar-General with such information as might be judged necessary for securing the probable accuracy of such estimates of population; notably with an annual return of inhabited houses on the rate-book within the sanitary district.

Correspondence.

"Audi alteram partem."

INVESTIGATIONS INTO THE NATURE OF CHOLERA.

To the Editor of THE LANCET.

SIR,—In 1854 I was appointed by the Board of Health of that time a member of a committee for scientific inquiries in relation to the cholera epidemic which broke out in that year in London so suddenly and with such virulence, especially in the Golden-square district. That committee consisted of Mr. Glaisher, F.R.S., Dr. Dundas Thomson, F.R.S., and myself. The reports of that committee were published in due course in a special Blue Book. My portion of the inquiry embraced, amongst other things, the microscopical examination of the blood, urine, and rice-water evacuations of cholera patients. From the appendix to the report on the latter subject, published in 1855, some extracts, in view of more recent investigations, will, I am sure, be read with interest at the present time.

I remain, Sir, yours faithfully,

ARTHUR HILL HASSALL, M.D.Lond.

San Remo, June 15th, 1884.

Extracts from Dr. Hassall's Report on the Microscopical Examination of the Blood and Excretions of Cholera Patients.

"The outward and physical characters of the rice-water evacuations of cholera vary considerably in different samples and in different cases. ..... When submitted to examination with the microscope there are detected in most samples molecules and aggregations of molecules, innumerable mucous corpuscles, single and aggregated, of irregular size and form, and which are frequently imbedded in a mucous base, presenting sometimes a fibrous structure, and molecules and globules of oil. ..... In addition to the above, myriads of vibriones were detected in every drop of every sample of rice-water discharge hitherto subjected to examination. Of these vibriones many formed threads more or less twisted, while others were aggregated into masses, which under the microscope presented a dotted appearance. ..... In none of the samples were sporules or threads of any species of fungus present, or a peculiar body of any kind noticed other than the vibriones mentioned. ..... The presence of vibriones in the rice-water discharge being, so far as my experience goes, constant, it became of importance to determine the circumstances under which they make their appearance, and especially to ascertain whether they were present in the evacuations when first passed. In order to determine this point I made arrangements to obtain specimens as quickly as possible after being voided. I had a microscope ready for use placed in the Abernethy ward of St. Bartholomew's Hospital, London, so that the discharge might be examined immediately that it was passed. In this way I succeeded in examining several samples within two hours of their being voided, and two others from separate cases immediately they were evacuated. In all of these the vibriones were present in large numbers. In one case I examined, in conjunction with Mr. Rainey, some of the rice-water discharge taken direct from the small intestines about twelve hours after death, and in this case also the vibriones equally abounded. In all cases the species was the same. It thus appears that vibriones are constantly present in the rice-water discharge of cholera, and that they are developed in it during life, and while still retained in the small intestines. From observations which have been elsewhere recorded it appears that two of the circumstances necessary to the development of vibriones are a feebly acid, or more usually an alkaline, fluid and organic matter, especially animal, in a state of decomposition more or less advanced. Now, in the rice-water discharge of cholera, both of these conditions are fulfilled. In the first place, it is always offensive, sometimes exceedingly so, resulting from decomposition; and in the second, it is always, so far as my observations extend, highly alkaline. We have next to inquire what is the origin or source of these vibriones, and what their relation to cholera. With respect to the first point, there is no doubt but that there is more than one source for them, setting aside the idea of their spontaneous generation in decomposing organic fluids. It is possible that they may obtain entrance into the stomach and bowels by means of the atmosphere, and it is perfectly certain that they do frequently gain admission through some of the impure waters consumed, in which I have not infrequently detected the presence of vibriones, sometimes in considerable numbers. Once introduced into the alimentary canal, they are brought into relation with conditions highly favourable to their development and propagation, both of which take place with almost inconceivable rapidity; thus they are brought into contact with abundance of organic matter, mostly in a fluid or greatly divided state, and more or less altered by decomposition, and the fluid in which this animal matter is contained is highly alkaline, and its temperature being raised many degrees above that of the external air also promotes greatly the development of the vibriones. Once admitted into the alimentary canal, it is not therefore surprising that they should be developed in inconceivable numbers and with amazing rapidity. I have made two or three examinations of healthy and natural fæcal evacuations at the time of their being passed, and in these I have detected the presence of comparatively a very small number of vibriones. It is most probable that the development of these in such cases takes place in the lower part of the intestinal canal, as it is there that in healthy digestion incipient decomposition first takes place; but further observations on this point, especially in cases of ordinary diarrhœa, are still required. That they should not be present, or if present, only in small numbers, in healthy intestinal evacuations, is satisfactorily explained by the fact that the circumstances favourable to their development do not exist in the same degree as in cholera. The disposition to decomposition does not exist to the same extent, neither are the matters discharged equally alkaline. Without, however, at all supposing that there is any essential or primary connexion between these vibriones and cholera, their occurrence in such vast numbers in the rice-water discharges of that disease is not without interest, and possibly is of importance; thus, their presence seems to indicate that the fluid thrown out into the intestinal canal in cholera, and especially into the small intestines, is in a state more than ordinarily prone to pass into decomposition, and that the fluid itself is more than usually alkaline. A condition of the intestinal discharges more than usually alkaline would assuredly act as a source of irritation to the mucous membrane of the intestines, as alkaline urine does to that of the bladder. The existence of these vibriones in the evacuations may also possibly explain in some degree the success of sulphuric acid in checking the diarrhœa. Thus, that acid when freely administered destroys the con-

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[redacted] essential to the development of the vibriones and so destroys the vibriones themselves. Thus, it checks the tendency to decomposition, and lessens or neutralises the alkalinity of the fluid poured out by the intestines. The mere presence of such a large amount of decomposing organic matter in the alimentary canal so high up as the small intestines, the principal seat of absorption of the chyle, must exert a seriously depressing influence upon the [redacted]

COLOTOMY AND OSTEOTOMY.

To the Editor of THE LANCET.

[redacted] the introducer of the inguinal operation into this country, and as having performed considerably the largest number of operations, will you permit me in justice a few remarks on colotomy and on another operation, osteotomy, which is just now again occupying the surgical mind.

In your annotation on "Lumbar *v.* Inguinal Colotomy," it appears as if M. Verneuil were the reviver of inguinal colotomy, the fact being that though the operation is in its origin French (Littré's), it has never found favour in France. In Germany the lumbar operation had, till the publication of my cases, entire sway, but since I showed that the intra-peritoneal plan was on every surgical ground the better one, I hear that inguinal colotomy is rapidly gaining ground on the Continent. I have now done fourteen inguinal colotomies, and excluding three on infants with imperforate rectum and one performed on an old patient, and as a last resort, at Dorking, all the cases did perfectly well and lived for some time after the operation. Two recent cases, of course, do not come within the scope of the last clause.

Until the publication of your note I was under the belief that I came fourth or fifth on the list as regards the number of colotomies performed by any surgeon, but, until corrected, it seems that I am second, having now operated on fifty-three cases—thirty-nine lumbar and fourteen inguinal. With the exception of the inguinal colotomies for imperforate rectum (which are always more or less rapidly fatal, and this from the nature of the cases and from delay of early operation), and the Dorking cases, and two of the lumbar cases, all my patients have lived for many months, and in several cases years, after the operation. Fuller details will shortly be published in a clinical lecture which I have recently given at the London Hospital on the subject.

Two cases of Macewen's osteotomy for genu valgum have recently been published in your columns, in one of which the popliteal vessels were divided, and amputation became necessary, and was followed by death. In the other the popliteal artery was divided, and subsequently ligatured with a satisfactory result. Some years ago I pointed out the anatomical dangers of this operation, and recommended diaphysial osteotomy, and now that such grave accidents have occurred [redacted] in the hands of able, skilled, and experienced surgeons—it will, perhaps, be deemed justifiable for one who comes second to Mr. Macewen in the number of osteotomies performed to ask surgeons to adopt the plan which is at once thoroughly efficacious in correcting the deformity, as well as perfectly safe to the patient. In the rarer cases, where the internal condyle is much elongated, I still adhere to my plan of internal condylotomy, but in the large majority of cases I do the femoral (about the junction of the middle and lower thirds) and diaphysial operation. I may add that I never adopt Listerian precautions, and that I have never had a death, whereas several cases have been reported in which, with strict antisepticism, death from some cause or other has occurred.—I am, Sir, yours obediently,

[redacted] W., June, 1884. H. A. REEVES.

[redacted]CE OF KAIRIN ON THE TEMPERATURE IN ENTERIC FEVER.

[redacted]*o the Editor of* THE LANCET.

[redacted] a list of temperatures taken from a patient [redacted] enteric fever, hoping that its publication may be a further inducement to some to try kairin for the [redacted] temperature in some cases of this [redacted]

[redacted] a girl aged fourteen, who had been [redacted] days in the fever before coming into our sanatorium on the 20th of April last. Fresh crops of spots kept coming out for the next twenty-one days, after which they gradually disappeared. The patient was quite unconscious for the first ten days after admission, sometimes comatose and at others wildly delirious. Diarrhœa was throughout a constant and very severe symptom, and was kept in check by creasote and opium; the latter served to relieve the severe pain, referred chiefly to the right iliac fossa, but sometimes diffused over the whole abdomen. There was some hæmorrhage from the bowels about the twentieth day of the fever. The spleen was much enlarged, projecting about three fingers' breadth below the ribs, hard and tender to the touch. The tongue was perfectly dry, brown, and cracked, and there were sordes on the teeth and lips during the whole of the first thirty days in the sanatorium. The urine assumed the dirty brownish-green colour peculiar, I believe, to the exhibition of kairin, while its odour at the same time was fetid; but both these peculiarities disappeared after the drug had been discontinued for two days. The times for taking the temperature were necessarily sometimes irregular, owing to the full state of the institution, and the many duties consequently falling on the matron, to whom this duty was entrusted, and whose accuracy I have myself frequently verified.

I believe that kairin has been the means of saving the girl's life, and shall be glad to see reports of similar cases in which it has been used. At present, however, there seems to be a prejudice against the drug; for having proposed its use to several gentlemen, I have been met by "I am quite satisfied with quinine," or "I don't fancy trying things so much advertised," the latter certainly a curious reason, and one which if consistently followed would prevent one using almost any of the drugs which have been introduced during the last ten years.

Date.	Time.	Deg. F.	Date.	Time.	Deg. F.
April 20	1.15 P.M.	102·2	April 27	3.30 A.M.	102·2*
	9.15 ,,	102·8		5.30 ,,	98·0
,, 21	8.30 A.M.	102·2		10.40 P.M.	103·0*
	8.30 P.M.	104·0		12.0 ,,	99·0
,, 22	7.30 A.M.	102·0	,, 28	3.0 A.M.	102·2*
	4.0 P.M.	103·2*		5.0 ,,	101·6
	6.0 ,,	100·4		9.0 ,,	102·6*
	8.0 ,,	102·4		11.30 ,,	99·0
	12.0 ,,	102·0*		4.0 P.M.	102·8*
,, 23	2.0 A.M.	100·6		6.0 ,,	100·8
	4.0 ,,	100·4		9.30 ,,	102·4*
	6.0 ,,	102·2*		11.30 ,,	98·4
	8.0 ,,	100·4	,, 29	8.30 A.M.	103·0*
	10.0 ,,	101·0		10.30 ,,	101·6
	12.0 noon	102·0*		6.0 P.M.	103·2*
	2.0 P.M.	102·0		8.30 ,,	100·0
	4.0 ,,	102·4	,, 30	8.0 A.M.	100·0
	6.0 ,,	103·0*		5.30 P.M.	102·4*
	8.0 ,,	101·4		7.30 ,,	101·0
	10.0 ,,	101·2	May 1	2.30 A.M.	102·8*
,, 24	6.0 A.M.	101·2		5.0 P.M.	100·0
	8.0 ,,	101·4*		9.0 ,,	99·0
	10.30 ,,	99·8	,, 2	9·0 A.M.	102·0*
	12.30 P.M.	101·6		11.0 ,,	99·0
	6.30 ,,	100·2		8.40 P.M.	102·2*
,, 25	1.30 A.M.	103·0*	,, 3	8.0 A.M.	100·4
	3.30 ,,	100·6		9.0 P.M.	101·0
	5.30 ,,	100·2	,, 4	9.30 A.M.	99·4
	7.30 ,,	102·0*		2.30 P.M.	102·2*
	9.30 ,,	98·0		4.30 ,,	99·2
	3.30 P.M.	102·2*	,, 5	9·0 A.M.	99·4
	5.30 ,,	100·4		9·0 P.M.	102·0
	9.30 ,,	102·0*	,, 6	8.30 A.M.	101·0
	11.30 ,,	101·8		8.30 P.M.	101·8
,, 26	2.0 A.M.	102·6*	,, 7	9.30 A.M.	100·0
	4.0 ,,	101·2		9.30 P.M.	101·6
	6.0 ,,	102·2*	,, 8	9.0 A.M.	99·0
	8.20 ,,	101·6		9.30 P.M.	101·8
	10.30 ,,	102·2*	,, 9	9.30 A.M.	99·8
	11.30 ,,	100·8		5.30 P.M.	102·6*
	2.30 P.M.	101·2		7.30 ,,	99·0
	9.30 ,,	103·0*	,, 10	9.0 A.M.	99·6
	11.30 ,,	101·8			

* Seven grains and a half of kairin administered.

The temperatures were taken every two or three hours, and the kairin given whenever it was found to be 102° or over. I have omitted many of the observations when below

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102° for brevity, as they do not affect the evidence of the action of kairin on the temperature. Twenty days only are recorded above, but the next twelve showed temperatures very similar.

I am, Sir, yours faithfully,

Kendal, June 21st, 1884. T. B. GREEN.

"PHYSIOLOGY OF THE FEET."

To the Editor of THE LANCET.

SIR,—While reading with great interest Mr. Ellis's article on the above subject (THE LANCET, June 21st, 1884), I was surprised to find that so careful an observer had fallen into the common error of supposing that, in walking, the toe or anterior part of the foot touches the ground first. The error seems to be widespread, and is taught by some very good physiologists. Text-books on medicine also state that a peculiarity of the gait in locomotor ataxy is that the heel touches the ground first. It is quite true that it does so, because it would be difficult to place the foot otherwise; the peculiarity is in the clumsiness with which it is done. Our plantigrade relatives among the carnivora walk chiefly on the anterior part of the foot, using the heel rather during rest; but the upright attitude of man, with the straight position of the knees, throws the weight largely on the heels in walking. When the foot is put forward the heel is the part nearest the ground, and touches it first; the ball of the toes touches immediately after, and the toes themselves last of all, the action of the foot somewhat resembling that of a rocker. Should anyone have any doubt on the matter, let him watch the passers-by in a public thoroughfare. He will there see walkers, good and bad, of all ages; but they will invariably place the heel first on the ground; a man who did otherwise would be supposed to be practising a burlesque step for the stage. The form of the ankle-joint is suitable to this action, the articular surface of the astragalus being wider in front than behind. Through this arrangement the impact of the heel on the ground, by driving the astragalus forward, slightly separates the articular surfaces, and friction is thus reduced. Here I would make a conjecture as to the origin of raised heels to our boots. Most persons acknowledge the comfort of shoes "with no heels"; and for this reason, presumably, slippers are made without them. Why, then, do we ever wear raised heels? May it not be because the impact of the heel wears out the posterior part of the shoe-leather before the anterior, so that it has been found economical for outdoor walking to have a thick piece over the heel? For the same reason, apparently, the skin over the back of the heel is the thickest on the foot. Of course this does not explain the fancy of women for extremely high heels, which is as unphysiological in its origin as the fancy for "dress-improvers."

I am, Sir, yours faithfully,

F. J. ALLEN, M.A.Cantab.

Royal Southern Hospital, Liverpool, June 28th, 1884.

THE BROMPTON CEMETERY.

To the Editor of THE LANCET.

SIR,—"How long will a man lie i' the earth ere he rot?" is the question asked of the gravedigger by Hamlet, and we all know the facetious reply given. Walking through the Brompton Cemetery, I passed by the grave of one who was for many years the best impersonator of the First Gravedigger upon the English stage, and I thought of the well-remembered scene in the churchyard at Elsinore. There was no earth here, however; but only flint stones, sand, and gravel. In this necropolis thousands of bodies are lying, some of them actually resting upon shelves placed in buildings erected above the ground. The emanations arising from these decomposing bodies poison the air, and the soluble parts, washed out by the rain, must be disseminated under the houses and streets, which are now built close to the burying-place. Day after day processions of hearses and mourning coaches ("a ghastly band") arrive at this cemetery; and the enormity is perpetuated of burying under gravel, sand, and flint stones a mass of human remains in the midst of their living fellows. The gates of this cemetery ought to be closed at once and for ever, and the office at No. 12, Haymarket, appropriated to some less horrible purpose than the one it is now used for.

I am, Sir, your obedient servant,

July 2nd, 1884. JOHN TOPHAM, M.D., F.R.C.P. Lond.

LIVERPOOL.

(From our own Correspondent.)

CITY HOSPITAL FOR INFECTIOUS DISEASES.

AT the monthly meeting of the City Council a letter from the Local Government Board to the Mayor was read. In this it was stated that the Board were clearly of opinion that the Mill-road Workhouse should cease to be used as a small-pox hospital as soon as the City Council made the necessary arrangements for the accommodation of patients. It was resolved to provide temporary hospitals on a site either at the southern or eastern extremity of the borough. It will be remembered that it was stated in THE LANCET some months ago that the use of workhouse hospitals for other than pauper patients could not be justified.

THE CASE OF POISONING YEAST.

At the city sessions, held last week, two men named Gilder, father and son, yeast-dealers, were convicted of maliciously damaging five baskets of yeast belonging to a firm of flour-dealers by poisoning it with carbolic acid. The Recorder, in sentencing the elder prisoner to six months' and the younger to three months' imprisonment, characterised the offence as a very serious one.

THE MEDICAL OFFICER OF HEALTH'S ANNUAL REPORT.

Dr. Stopford Taylor's annual report has just been issued, and contains many interesting details. The total population of Liverpool is estimated at 566,753; the births were 19,207, a decrease of 591; while the deaths were 15,074, an increase of 256 over the previous year. Small-pox is rarely absent, owing to its frequent importation by visitors, emigrants, and others. Scarlatina caused 388 deaths, and measles 618. The deaths of infants below one year amounted to 3686.

THE LIVERPOOL PARISH INFIRMARY.

The parish of Liverpool is one of the largest and most densely populated in the kingdom. Some idea of this is shown in the numbers of inmates in the workhouse and its branches. These are in all 2648, including 1325 sick and infirm. These, again, include 732 persons under medical treatment, 51 being infectious cases.

THE WEATHER.

The weather for the last few weeks has been remarkably fine, and the heat almost tropical in its intensity. It has, however, been tempered to a considerable extent by the sea breezes, of which Liverpool has the benefit, except in unusually calm weather, and so far there have been no cases of sunstroke.

DISCOVERY OF A BODY IN AN EMPTY HOUSE.

While a corporation official was engaged on Tuesday last in an inspection of a house which has been empty for more than a year, he found in a closet in the yard the body of a woman reduced almost to a skeleton. The discovery in the hand of the deceased of a newspaper dated 6th July, 1883, limits the death to within that period. The body was found doubled up, and has not yet been identified. An inquest will be held in due course.

IRELAND.

(From our own Correspondent.)

QUEEN'S COLLEGES COMMISSION.

THE Commissioners, after visiting the three Queen's College, proceeded to hold an inquiry in Dublin, and to receive evidence in respect of various matters bearing on the subjects to be investigated. Among those who gave evidence was the Rev. Dr. Walsh, President of St. Patrick's College, Maynooth, who thought that inconvenience arose from the fact that examiners of the Royal University were professors in colleges, so that students not taught by them did not stand on equal terms with those who were. Dr. Curtis, who had been Professor of Natural Philosophy in Galway College, was of opinion that the matriculation examination fulfilled the purposes for which it was intended; while Mr. Brougham Leech, who was Secretary to a Treasury Commission which

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inquired into the working of the Queen's Colleges in 1876, said that he was greatly impressed with the high value and excellence of the work done by them. Various medical gentlemen, including Drs. Knight, Macnaughton Jones, Thomson, Roche, and Smith, also gave evidence, and stated generally that opportunities for learning in Cork College were remarkably good, particularly in histology, anatomy, and practical physiology; but hospital practice was not so good as in Dublin, and opportunities of studying morbid anatomy and pathology were defective. The weak point in the Galway College was the clinical material, and the fees for the medical curriculum were too low in the colleges. Several witnesses thought it desirable that a student of the colleges should come to Dublin for his last year. The Commissioners have adjourned their inquiry until further notice.

ROYAL COLLEGE OF SURGEONS.

The vacant Professorship of Surgery will be filled up by the Council of the College on the 24th inst. Although three names have been mentioned as candidates for the post, I am still of opinion that Mr. Edward Hamilton, ex-President of the Council, has the best chance of success.

ADELAIDE HOSPITAL, DUBLIN.

The Hudson Scholarship and Prizes obtained at the recent examinations were conferred last Saturday on the successful competitors. Mr. Bewley, who obtained the scholarships—a gold medal and £30—this year has been awarded in the University of Dublin first class honours, a classical scholarship, first senior moderatorship, first medical scholarship, and other distinctions. He answered 90 per cent. of the questions in ophthalmology, gynæcology, medicine, surgery, and pathology. Mr. Day was awarded the Hudson Prize, consisting of a silver medal and £10; while Mr. Wynne received the medical, and Mr. Healy the surgical prizes respectively. It is to be hoped that next year some better arrangements may be made as regards examining for the surgical prize. One or two days at the furthest, instead of nearly three weeks, ought to afford ample time, and all the candidates ought to be examined together, and, save in the clinical part of it, in the theatre of the hospital openly before the other students.

The Provost and Senior Fellows have awarded the Surgical Travelling Prize, value £100, to Charles R. Kilkelly; and a prize of £25 to Henry J. Bewley.

At the last meeting of the Board of Trinity College, Dr. Charles B. Ball, surgeon to Sir Patrick Dun's Hospital, was appointed an examiner in the place of Mr. R. G. Butcher, who had resigned.

The proposed amalgamation of the Carmichael College with the College of Surgeons Medical School is still talked of, but the difficulties to be overcome appear to me to be insurmountable.

Mr. Keenan, F.R.C.S.I., has been presented with an address accompanied by a purse of sovereigns, on the occasion of his retirement from the post of resident surgeon to Mercer's Hospital, Dublin.

Dr. Cruise has been appointed Physician in Ordinary to the Viceregal household.

Dublin, July 1st, 1884.

LOWER THAMES VALLEY MAIN SEWERAGE SCHEME.

On the 3rd inst., the Select Committee, presided over by Mr. Giles, resumed the hearing of the scheme for dealing with the sewage of the Lower Thames Valley at Mortlake. The Chairman remarked that they did not want any engineering evidence. Mr. Melliss, an engineer, was cross-examined by Mr. Stephens, Q.C., as to the reasons which had induced him to adopt the intermittent treatment instead of the continuous, which latter he had recommended generally as against the intermittent process. Mr. Mellis explained that the engineering exigencies of the site of the proposed works at Mortlake, there being but a small quantity of land, had decided him in favour of intermittent treatment. When asked whether he had any plan giving the details of the scheme, he said that he had nothing but a pencilled plan, and that the whole matter would have to be gone into after the Committee had decided whether the lands ought to be taken. The Chairman did not think it necessary to go into further details of the scheme, for it would not matter to them whether it was the continuous or the intermittent process. The details would be gone into by the Local Government Board.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General William George Nicholas Manley, V.C., is granted retired pay, with the honorary rank of Surgeon-General; Surgeon-Major Robert Alexander Peter Grant is granted retired pay, with the honorary rank of Brigade-Surgeon; Surgeon-Major James Saltus Conyers, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon; Surgeon-Major Thomas Kingston, M.D., from half-pay, to be Surgeon-Major, vice H. H. Burford, placed on retired pay.

ADMIRALTY.—Fleet Surgeon Edward Townsend Mortimer has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet. Surgeon Henry Beale Collins and Staff-Surgeon Thomas Travers Riordon have each been placed on the retired list of his rank.

The following appointments have been made:—Fleet Surgeon Thomas E. H. Williams, to Chatham Division Royal Marines (for Walmer depôt); Fleet Surgeon Archibald G. Colquhoun, to the *Trincomalee*. Surgeon James O'B. Williams, to Plymouth Division Royal Marines; Surgeon Edward H. Williams, to the *Imogene*.

MEDICAL NOTES IN PARLIAMENT.

The Cholera.

IN the House of Lords on Friday, Lord Carrington stated that it was intended to ask Parliament to renew the Cholera Act which was passed last session, and which expires in September next. The noble lord described the precautions now in force against the importation of cholera, and intimated that it was not intended to send a medical commissioner to Toulon, as the report of the French commissioners would supply the necessary information. Lord Carnarvon expressed his disappointment at the determination of the Government to save expense in so serious a matter.

Over-pressure in Schools.

Earl De la Warr raised a debate on school pressure; and Lord Carlingford, in defence of his department, declared that the new code mitigated the strain on children, and the cry of over-pressure was a huge spectre. He admitted, however, that there was "some small residue of fact" behind it.

The Medical Bill.

As announced in our second edition last week, the Bill was read a second time on Thursday evening, an opportunity for it having unexpectedly arisen through the collapse of the debate on the third reading of the Franchise Bill.

On Monday night, at a late hour, the Committee stage of the Bill was reached, after two divisions, and the consideration of amendments was postponed to Monday next. Amongst those upon the paper is one by Mr. Solator Booth, proposing the appointment of a Pharmacopœia Committee, consisting of six medical practitioners and five pharmaceutical chemists. Several petitions in favour of the Bill have been presented during the week, and five from London against it.

Criminal Lunatics Bill.

On the motion of Mr. Hibbert this Bill was read a second time on Thursday night, and on Friday it was referred to the Grand Committee on Law.

Market Refuse.

On Monday, in the course of an answer as to cholera regulations, Mr. G. Russell assured Lord Claud Hamilton that the Local Government Board would consider the alleged insanitary state of the streets surrounding Covent-garden and other markets in London.

The Small-pox Epidemic.

On Monday, Mr. Russell informed Dr. Cameron that during this year 2628 cases of small-pox had been admitted to the Asylums Board hospitals, and 282 had proved fatal. Outside these hospitals there had been 107 deaths.

On Tuesday, Dr. Cameron called attention to the small-pox epidemic in London, and moved a resolution calling

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upon the Government to apply to the metropolis "those rational principles of prompt and direct preventive administration, the efficacy of which in circumscribing small-pox epidemics has been demonstrated by the experience of Glasgow and other large towns." In a lengthy and comprehensive speech, the hon. member for Glasgow described the system pursued in Glasgow, which he claimed to be much more successful in securing isolation, notification, and re-vaccination than the fussy and expensive policy of the London authorities.—Dr. Farquharson seconded the motion, and suggested that the Local Government Board should inquire into the causes of these recurring epidemics.—Sir C. Dilke answered the statements of Dr. Cameron in detail, and declined to entertain a change of system while the epidemic was running its course.—After some remarks by Messrs. Anderson and Hopwood, the debate was summarily closed by the House being counted out.

Dr. Crichton Browne's Report.

On Tuesday, Mr. Sydney Buxton obtained an unopposed order for the return of a copy of Dr. Crichton Browne's treatise on "Education and the Nervous System," together with his letter to Mr. Mundella.

On Thursday, Mr. Raikes called attention to the fact that to reprint the treatise was an infringement of Dr. Browne's copyright, and this view being taken by the Speaker, the order was cancelled, on the motion of Mr. Mundella and by the consent of Mr. Buxton.

Volunteer Surgeons.

In reply to Dr. Farquharson, Sir Arthur Hayter said the Secretary of State for War had already under his consideration various schemes for improving the Volunteer Medical Service by instructing the surgeons in field work.

Obituary.

THOMAS BISHOP, M D. ABER., F.R.C.P.L.

THE death of Dr. Thomas Bishop, which took place suddenly and unexpectedly on the 23rd ult., deprives the English medical profession in Paris of one of its leading members. Dr. Bishop received his medical education at the Middlesex Hospital, became a Member of the College of Surgeons in 1842, graduated as Doctor of Medicine at Aberdeen in 1851, and passed the examination for the Membership of the London College of Physicians the same year. He was elected a Fellow of the College in 1871. For many years he practised at Naples, and was physician to the Embassy and British hospital. During the different disturbances and revolutions of which the Neapolitan capital was the theatre, he remained with his wife (a sister of Sir Stafford Northcote) and infant daughter at a post of no little danger, rendering such services as lay in his power. On one occasion, when passing a barricade, he was taken prisoner, and would, without the intervention of an officer, have been summarily shot. Dr. Bishop was a great admirer of art, and whilst residing in Italy he gathered a small but important collection of pictures, sculptures, and antiques, which formed one of the chief ornaments of his Paris residence. For the last twenty years Dr. Bishop had been practising in Paris, his private patients being chiefly amongst the best families. For some years his health had been declining. He suffered from asthma and valvular trouble of the heart, accompanied by a loud musical murmur. He also had an affection of the eyes, of which he was disinclined to talk, which had necessitated an operation that had only been partially successful. These maladies did not, however, interfere with his usual occupations, and in other respects his health was good. Indeed, on the 19th ult. he testified the active interest he felt in the well-being of the profession by giving a dinner at his house to a number of English and American practitioners who form a medical Society of which he was a member. On the 23rd ult. he had risen, as was his habit when unable to sleep, to write and read, and was found dead shortly after in his arm-chair. The loss of Dr. Bishop will be felt deeply by all classes of the English colony in Paris. His personal friends and private patients will deplore the loss of their kind and upright adviser, whilst the poorer members of the community will remember his devotion to them, both as a member of the British Charitable Society and Mission Home, and in countless acts of spontaneous benevolence.

WILLIAM WOOLDRIDGE, M.R.C.S., L.S.A.

MR. WOOLDRIDGE, whose death we announced in our last issue as having occurred at his residence, Withdeane, Brighton, on the 24th ult., was born at Chichester in 1803. He received his medical education at St. Bartholomew's and Aldersgate-street. In 1826 he obtained the licence of the Society of Apothecaries, and in 1827 the diploma of membership of the Royal College of Surgeons. Mr. Wooldridge formerly practised with much success in the Haymarket, but had for some time previous to his death ceased to perform the active duties of his profession. He was a man of spotless integrity, and highly esteemed by all with whom he came in contact.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on Monday, Tuesday, and Wednesday last:—

Robert H. W. Johnston, John W. Pare, Alfred W. Hughes, Edwin Morton, Edmund Antrobus, Walter M. Eaton and Edwin L. Lees, Edinburgh; Samuel P. Alexander, Glasgow; Charles Whisken, Henry C. Sugden, J. R. S. Park, John P. J. Gornall, Frank C. Andrews, William H. Haslop, J. R. M. Brennan, William Armstrong, and James Elias, Manchester; C. G. May, Cambridge; Reginald E. Johnson, James W. Holmes, and William Dunbar, Sheffield; John P. Cavenagh, Dublin; John Bailey, Edward M. Quinby, C. L. Warke, and Randle Leigh, Liverpool; Frank W. Ramsay, Newcastle-on-Tyne; T. H. Godfrey, St Thomas's Hospital; Cyril G. Hutchinson, W. J. C. B. Pitt, W. H. Date, Birmingham; Julius Coronel, Amsterdam; William Hartford, Dublin; H. H. Sales, Leeds; Charles E. Gooding, Jonathan B. Loring, and George B. Rowell, McGill College, Montreal.

UNIVERSITY OF DURHAM.—At the recent examinations for degrees in Medicine and Surgery the following candidates satisfied the Examiners:—

DOCTOR IN MEDICINE FOR PRACTITIONERS OF FIFTEEN YEARS' STANDING.

Cant, William Edmund, F.R.C.S., L.R.C.P.
Dawson, William Henry, M.R.C.S., L.S.A.
Walford, Edward, M.R.C.S., L.S.A.
Woodcock, John Rostron, F.R.C.S.
Woodman, Samuel, F.R.C.S., L.S.A., L.R.C.P.

Seven candidates entered for this examination.

DOCTOR IN MEDICINE.

Beatley, William Crump, M.B., M.R.C.S., L.S.A.
Vise, Christopher, M.B., M.R.C.S.

Two candidates entered.

MASTER IN SURGERY.

Cock, Frederick William, M.R.C.S.
Hutchinson, Joseph Armstrong, M.B., M.R.C.S.
Jennings, Charles Egerton, F.R.C.S., L.S.A.
Rayner, Hugh, M.R.C.S.
Rowe, Arthur Walton, M.R.C.S.
Salvage, John Valentine, M.R.C.S.

Eight candidates entered.

BACHELOR IN MEDICINE.

Bryan, Frederick, St. Thomas's Hospital.
Caleb, Clement Cornelius, King's College.
*Cock, Frederick William, M.R.C.S., University College.
Dawson, Arthur Willan, Liverpool Royal Infirmary and King's College.
Dixon, Henry William, Durham College of Medicine.
†Edwards, William Rice, M.R.C.S., London Hospital.
Hare, Francis Washington Everard, M.R.C.S., St. Thomas's and St. Mary's Hospitals.
†Hendriks, Cecil Morgan, M.R.C.S., University College.
Jennings, Charles Egerton, F.R.C.S., L.S.A., London Hospital.
†Rayner, Hugh, M.R.C.S., St. Bartholomew's Hospital.
Revely, Joseph Smith, Durham College of Medicine.
*Rowe, Arthur Walton, M.R.C.S., St. Mary's Hospital.
Rumboll, Charles Frederick, M.R.C.S., St. Bartholomew's and Durham College of Medicine.
Salvage, John Valentine, M.R.C.S., Guy's Hospital.

Twenty-six candidates entered.

*First Class Honours. †Second Class Honours.

UNIVERSITY OF DUBLIN.—At the Midsummer session the following degrees were conferred last week:—

BACHELOR IN SURGERY.—Henry Theodore Bewley, William Bullen Day, John Samuel Fenton, Nicholas Charles Ferguson, William Maxwell Hewson, Samuel Hickson, Hugh Nugent Kenny, Robert Morrow, Thomas Parr, George William Powell, William T. Swan, Ludovic Werner, Reginald Joscelyn Windle.

BACHELOR IN MEDICINE.—Henry Theodore Bewley, William Bullen Day, Henry A. Ellis, Samuel John Fenton, Nicholas Charles

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Ferguson, William Grandy, William Maxwell Hewson, William Lacy Hickey, Samuel Hickson, Hugh Nugent Kenny, Joseph Vincent Manning, Robert Morrow, Daniel R. O'Sullivan, Thomas Parr, George William Powell, William Robert Roper, George Scarr, Henry Shackleton, Telford Smith, W. T. Swan, Ladovic Werner.

DOCTOR IN MEDICINE.—William Thomas Briscoe, James Chute, John Loftus Cuppaidge, Frederick Conway Dwyer, Thomas Carson Fisher, Thomas Charles Moore, Charles Thomas Poland, William Robert Roper, Henry Shackleton.

APOTHECARIES' HALL. — The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on June 26th:—

Beaumont, Edgar, Gipsy-hill.
Hinds, Frank, Gondhurst, Kent.
Lawson, Robert, Nuthank, St. Andrew's, Fife, N.B.
Lewis, Jenkyn, Llanon, Cardiganshire.
Rees, William Thomas, Llanboidy, Carmarthenshire.
Steinthal, Walter Oliver, John-street, Hampstead.

At the recent examination for the prizes in Botany given annually to medical students by the Society of Apothecaries, the successful candidates were adjudged as follows:—

1st.—Ernest Henry Starling, Guy's Hospital. A Gold Medal.
2nd.—Wm. Beecroft Bottomley, St. Mary's Hospital. A Silver Medal and Books.

AT the Worship-street Police-court on the 1st inst., a woman was fined twenty shillings for having wilfully exposed herself in a public place while suffering from small-pox.

A THREE days' fête and fair, for the benefit of the Surgical Appliance Society for the Relief of the Crippled Poor, was opened on the 1st inst., in the Duke of Wellington's Riding School at Knightsbridge.

AT an inquest on the 1st inst. on the body of a boy aged ten years, the jury, in accordance with medical evidence, returned a verdict that death was due to cerebral hæmorrhage accelerated by over-application at the Board School.

IT has been decided to enlarge the Aberdeen Hospital for Sick Children, and ground has been procured for the purpose. The hospital at present contains thirty beds, but when the additions are completed the building will afford accommodation for fifty-four beds, exclusive of an infectious ward, which will contain twelve beds. The estimated cost of the extension is £6700.

CRUELTY TO A FOWL.—On the 1st inst., at Maidstone, a man was fined £5 and costs for inserting a needle into the comb of a cock in order to make the comb stand upright whilst (the bird was being exhibited. The bird had previously taken a prize with a needle in the comb, and the defendant was possessed of a stock of needles for the purpose.

A WANT SUPPLIED.—On the 1st inst, a garden which has been formed out of an old cemetery of St. George's, Bloomsbury, was opened to the public. The ground, which is about two and a half acres in extent, lies at the back of the area occupied by the Foundling Hospital and Brunswick-square, and will be maintained by the authorities of St. Pancras, the cost of laying it out having been defrayed by the Kyrle Society.

FATAL ACCIDENT TO A SURGEON.—The local papers announce the death of Mr. Woods, L.R.C.P.Ed., L.R.C.S.I., of North-lane, near Brough, East Yorkshire. Mr. Woods was thrown from a young horse on Sunday morning, and was found lying on the high road about ten o'clock in an unconscious state. He was conveyed to his residence and attended by Dr. Daley of Hull; but he never rallied, and died on Sunday night.

THE INSTITUTE OF CHEMISTRY.—A petition has been presented to Her Majesty in Council by Mr. William Odling, M.A., F.R.S., and others, praying for the grant of a charter of incorporation, under the title of the Institute of Chemistry of Great Britain and Ireland. The petition has been referred to a Committee of the Privy Council, by whom it will be considered on the 13th inst.

THE CONDITION OF THE POOR IN DURHAM.—The Bishop of Durham presided over a conference of magistrates, religious representatives, medical men, heads of trades unions, &c., on the 28th ult., at Durham, to consider the moral and sanitary welfare of the poor in the county. After addresses had been delivered by the Dean of Durham, Mr. Isaac Lowthian Bell, and other speakers, a sanitary aid committee was formed.

VACCINATION GRANT.—Dr. Hopper of Felling-on-Tyne has received the Government grant for efficient vaccination.

MORLEY HOUSE.—This convalescent home, at St. Margaret's Bay, near Dover, recently established by London working men in connexion with the Hospital Saturday Fund, has received several donations towards a fund of £2000 required for completing the purchase of the freehold house and extensive grounds. Twenty-three beds have been occupied since last July and throughout the winter by London workmen recovering from accident or disease, and three hundred patients have up to the present time received benefit.

SANITARY INSTITUTE OF GREAT BRITAIN.—The anniversary meeting of the institute will be held in the theatre of the Royal Institution, Albemarle-street, on Thursday, July 10th, at 3 P.M. The chair will be taken by the Right Hon. Earl Fortescue. An address will be delivered by H. C. Bartlett, Ph.D., F.C.S., on "Some of the Present Aspects of Practical Sanitation," and the medals and certificates awarded to the successful exhibitors at the Exhibition at Glasgow in 1883 will be presented. The anniversary dinner of the institute is to take place in the evening of the same day at the Holborn Restaurant, under the presidency of Dr. Alfred Carpenter.

THE Cambridge Medical Graduates' Club held its annual dinner on Tuesday, July 1st, at the Marlborough Rooms, under the presidency of Professor Humphry, of Cambridge, who was supported by Dr. Henry Thompson, of St. John's College, Dr. C. J. Hare, of Caius College, Professor Michael Foster, of Trinity College, the Downing Professor of Medicine, and about fifty other medical graduates. The great advance made by Cambridge as a centre for teaching the more scientific branches of medicine was a subject commented on as one for congratulation. During the evening it was mentioned that there are now in Cambridge 300 undergraduates studying medicine.

VICTORIA PARK CHEST HOSPITAL.—In accordance with the custom which has long prevailed at Brompton, the medical staff of the City of London Hospital for Diseases of the Chest a few years ago inaugurated a series of lectures, open to all members of the profession and medical students. On Wednesday week last Dr. Milner Fothergill delivered a lecture on Valvular Disease of the Heart, which was fairly attended. On Wednesday last Dr. Heron lectured on the Treatment of Lung Tubercle. On Tuesday next Dr. Thorowgood will take up the subject of Remedies for Asthma; and Dr. Bedford Fenwick has announced the subject of Cardiac Degeneration from Intra-abdominal Tumours for July 14th.

OVERHEAD WIRES.—On the 1st inst., the case of the Corporation of Bristol *v.* the United Telephone Company was decided. The plaintiffs claimed the right to have control over the erection of telegraph wires within their city, where wires were carried over land which was vested in them in fee; and where wires being carried over streets might be a source of danger to the public. After some discussion, it was admitted that the plaintiffs had absolute right of control where wires passed over their freehold land; and it was agreed that as to any other wire, which was supposed to be a source of danger, that question should be decided out of court. In the end the case was adjourned *sine die*, to allow time for this arrangement to be carried out.

SANITARY CONGRESS AND EXHIBITION, DUBLIN, 1884.—The Sanitary Institute of Great Britain will hold the Annual Sanitary Congress and Exhibition in Dublin this year. The Congress meetings will be held in Trinity College, and the extensive buildings of the Royal Dublin Society at Ball's Bridge have been obtained for the Exhibition. Sir Robt. Rawlinson, C.B., President of the Congress, will deliver the inaugural address on Tuesday, Sept. 30th; and on the same day the Exhibition of Sanitary Appliances will be formally opened to the public. On the second, third, and fourth days of the Congress the meetings of sections will take place, when addresses will be given by the presidents of the sections, and papers will be read, followed by discussions thereon. Prizes, medals, and certificates of merit will be awarded for improved appliances, after being examined by judges appointed by the Council of the Sanitary Institute. The Saturday of the Congress week is reserved for the various excursions which are arranged to take place.

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AT the annual meeting of the Northern Counties Branch of the British Medical Association, which is to be held this month at Elgin, it is intended to entertain at a jubilee dinner Drs. Cooper, Grigor, and Robb, the first of whom commenced practice fifty-two years ago, and the two latter exactly fifty years since.

TRAINED NURSES' ANNUITY FUND.—The general meeting of the supporters of this fund was held on the 27th ult. The object of the fund is to give a good service pension of £15 per annum to superannuated or broken-down trained nurses who have served three years in a hospital and at least fifteen years as private nurses. Up to the present only eleven annuities have been founded. It was resolved that an annuity costing £400 should be founded to the memory of the late Duke of Albany.

SOCIETY FOR THE STUDY AND CURE OF INEBRIETY. The adjourned discussion on Inebriety was opened on Tuesday last by Mr. Jabez Hogg; the president, Dr. Norman Kerr, in the chair; and was continued by Dr. George Harley, Dr. H. Rayner, Dr. C. R. Francis, Dr. Hart Vinen, Surgeon-Major Poole, and Mr. Jas. Stewart. The following were elected honorary members: Dr. Magnus Huss, Sweden; Professor Eugene Carpentier, Brussels; Dr. Binz, Bonn; and M. Magnan, Paris. The following resolution was agreed to: "That this meeting, while recognising in the success so far of the experiment at the Dalrymple Home proof of the value of the Habitual Drunkards Act, regrets its temporary and defective character, and urges the Legislature to pass a permanent measure dispensing with the attendance of the applicant for admission to a retreat before two magistrates, giving magistrates power of committal in certain cases, and enforcing guardians to detain pauper habitual drunkards in workhouses or in homes for inebriates for a time for treatment and cure."

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.
The Brain and the Nerves. By Thomas Stretch Dowse, M.D. pp. 136.

BERTHIER, C., Paris.
Le Choléra dans la Basse-Egypte en 1883. Par le Dr. Dutrieux-Bey. pp. 280.

BLACKWOOD, W., & SONS, Edinburgh & London.
A Short Account of the Tercentenary Festival of the University of Edinburgh. Edited by R. Sydney Marsden, B.Sc., F.R.S., &c. pp. 216.

CASSELL & COMPANY, London.
A Synopsis of the Bacteria of Yeast Fungi and Allied Species. By W. B. Grove, B.A. pp. 112. With 87 Illustrations.

CHURCHILL, J. & A., London.
Hospital Construction and Management. By F. J. Mouat, M.D., F.R.C.S., and H. Saxon Snell, F.R.I.B.A. &c. Part 2.
Sleep-walking and Hypnotism. By D. Hack Tuke, M.D., LL.D. pp. 119.
Recent Materia Medica: Notes on their Origin and Therapeutics. By F. H. Lescher, F.C.S. pp. 65.
On Visceral Neuroses. The Gulstonian Lectures delivered at the Royal College of Physicians by T. Clifford Allbutt, M.D., F.R.S. pp. 103.
Syphilis and Pseudo-Syphilis. By Alfred Cooper, F.R.C.S.Eng. pp. 329.

CLARK & MAYNARD, New York.
The Laws of Health. By J. C. Hutchison, M.D. pp. 282. Copiously Illustrated.

GILL, G. & SONS, London.
Hygiene; a Manual of Personal and Public Health. By A. Newsholme, M.D. pp. 408. Illustrated.

HIRSCHWALD, A., Berlin.
Topographische Anatomie des Menschen in Abbildung und Beschreibung. Von Prof. W. Henke. Lehrbuch, mit fortlaufenden Verweisungen auf den Atlas und des Holzschnitten.

KAY & BROTHER, Philadelphia.
Wharton and Stille's Medical Jurisprudence. Fourth Edition. Edited by R. Amory, A.B., M.D., and E. S. Wood, A.M., M.D. Vol. II. pp. 669.

KEGAN PAUL, TRENCH, & Co., London.
Lectures on General Nursing. By Eva C. E. Luckes. pp. 229.

LEWIS, H. K., London.
A New Method of Treating Chronic Glaucoma, based on Recent Researches into its Pathology. By Geo. L. Johnson, M.A., M.B. pp. 48. With Illustrations.

LONGMANS, GREEN, & CO., London.
A Treatise on the Continued Fevers of Great Britain. By Charles Murchison, M.D. Third Edition, edited by W. Cayley, M.D., F.R.C.P. pp. 780. With Illustrations.

MACMILLAN & Co., London.
Dickens's Dictionary of London, 1884.
Dickens's Dictionary of the Thames, 1884.

PENTLAND, Y. J., Edinburgh.
Diseases of the Heart and Thoracic Aorta. By Byrom Bramwell, M.D., F.R.C.P.E. pp. 781. With 217 Illustrations.

SAMPSON LOW, MARSTON, & Co., London.
The Pathology, Diagnosis, and Treatment of Diseases of the Rectum and Anus. By C. B. Kelsey, M.D. pp. 416. With Chromo-lithographs and nearly 100 Engravings.
The Medical Student's Manual of Chemistry. By R. A. Witthaus, A.M., M.D. pp. 370. With Illustrations.
Diet Rolls for Special Diseases: Diabetes, Gout, Dyspepsia. By H. J. Philpot, L.R.C.P.

SMITH, ELDER, & Co., London.
A Handbook of Ophthalmic Science and Practice. By Henry E. Juler, F.R.C.S. pp. 416. With Illustrations.

STANFORD, EDWARD, London.
West African Hygiene. By C. S. Grant, M.D. Second Edition. pp. 57.

WYMAN & SONS, London.
The "J. E. M." Guide to Switzerland. Edited by J. E. Muddock. pp. 416. With Maps.
The "J. E. M." Guide to Davos Platz. Edited by J. E. Muddock. Third Edition, brought up to date.

Water, Preventable Disease, and Filtration; by P. A. Maignen.—Considerations of the Structure and Acquisitional Elements in Dextral Pre-eminence; by G. Sigerson, M.D.—Clinical Illustrations of Puerperal Insanity; by A. Campbell Clark, M.B.Ed.—Hypersemia of the Vesico-Urethral Membrane; by Dr. W. H. Baker.—On Morbid Drowsiness and Somnolence; by C. L. Dana, M.D.—Homburg as a Health Resort; by Dr. Heyd.—The Duration of the Latent Period, the Fever, and the Infectiveness of the Exanthemata; by F. Vacher.—Notes on the Treatment of Typhoid Fever; by Duncan Turnbull, L.R.C.P.L., Melbourne.—Untersuchungen u. die Semiologie des Harns; von Dr. W. Zuelzer.—Vorschläge zur Beseitigung der Drainage f. alle Freschen Wunden; von Dr. G. Neuber.—Die Methode des Unterrichts an der Chirurgischen Klinik der Universität Kiel; von Prof. Esmarch. (V. Lipsius & Tischer, Kiel.)—Health Assurance; by W. F. Phillips.—Treatise on Consumption, with Remarks on Infection, Heredity, Causes, &c.; by W. Dale, M.D. (Hodgson, London.)—Index Medicus. Vol. VI. No. 5.—Longman's Magazine, July.—Paroxysmal Fever, not Malarial; by J. H. Musser, M.D.—The Motives, Methods, and Results of Physiological Research on Living Animals; by Ernest Bell, M.A.—The Hot Springs at the Cape of Good Hope.—The Eastern Pioneer of Western Civilisation; by C. S. Eby, B.A.—Fining Down without Banting; by J. Millington. (Field & Tuer.)—Abstracts of Medical and Surgical Cases Treated at the General Hospital for Sick Children, Pendlebury.—On Evolution; by A. Dickson, M.D. (Oliver & Boyd.)—Scientific Basis of Eclecticism in Medicine; by C. A. F. Lindarme, Ph.D., M.D.—Leisure Hour, Boy's Own Paper, Girl's Own Paper, July.—Good Words, Sunday Magazine, July.—Criticisms on the Specific Theory of Hydrophobia; by C. W. Dulles, M.D.—The Direct Influence of Gradual Variation of Temperature on the Rate of Beat of the Dog's Heart; by H. N. Martin, M.D.—Report of the Dublin Medical Students' Club.—Minutes of the Ninth Annual Session of the Arkansas State Medical Society.—Female Education from a Physiological Point of View; by John Thorburn, M.D. (Cornish, Manchester.)—Leamington as a Health Resort.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BECKETT, FRANCIS MEARS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Workhouse of the Ely Union.

BOURNS, NEWCOME WHITELAW, M.D.Brussels, L.R.C.P.Ed., M.R.C.S., has been appointed Anæsthetist to St. John's Hospital for Diseases of the Skin.

BRUNTON, JOHN, M.A., M.D., has been reappointed, for a further term of four years, Examiner for Pass Degrees in Midwifery and Forensic Medicine, at the Glasgow University.

BUTLER, WILLIAM JOHN, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Castle Donington District of the Shardlow Union, vice Sellow, resigned.

CALLENDER, JAMES, M.B., C.M.Glas., has been appointed Medical Officer for the Parish of Dunscore, Dumfries, vice A. Lorimer, M.D. St. And., deceased.

CARTER, D'ARCY B., L.R.C.P., M.R.C.S., has been appointed Assistant-Surgeon to Sir Titus Salt's Hospital, Shipley.

CASE, F. W. PERKINS, M.B., C.M.Ed., has been appointed Medical Officer for the Fourth District of the Croydon Union.

CLARKSON, JAMES BOOTH, L.R.C.P.Ed., L.R.C.S.Ed. (late Medical Officer British Ship Owners' Company's Service), has been appointed Surgeon-Superintendent, Coolie Service, under the Crown Agents for the Colonies.

COLLINS, WILLIAM JOB, M.D., B.Sc.Lond., F.R.C.S.Eng., has been appointed Assistant Demonstrator of Anatomy at St. Bartholomew's Hospital.

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DUTTON, WILLIAM HENRY, M.B., C.M.Ed., has been appointed Resident Medical Officer to the Castlemaine Hospital, Victoria.

FREEMAN, G. D., M.R.C.S., has been appointed Assistant House-Surgeon to the Royal Berkshire Hospital, Reading.

GRENSILL, JAMES HEYNES, M.R.C.S., L.S.A.Lond., has been appointed Resident Medical Officer to the Guest Hospital, Dudley, vice Muriel, resigned.

HALPIN, RICHARD F., M.R.C.S., has been appointed House-Physician to the Royal Hospital for Diseases of the Chest, City-road, vice Mr. Waller, whose term of office has expired.

HOLLIS, ELPHINSTONE, M.D., C.M.Ed., has been appointed Medical Officer for the Third District of the Woodbridge Union.

HUGHES, Mr. THOMAS, has been appointed Public Analyst for the Borough of Newport, Monmouthshire.

MCDERMOTT, WILLIAM, M.D.Q.U.I., M.R.C.S., has been appointed Medical Officer for the Sixth District of the Sudbury Union.

MOORE, JOSEPH, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Middlewich District of the Northwich Union, vice Hughes, deceased.

PEARSON, ALFRED W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Kingswinford District of the Stourbridge Union, vice Parrish, deceased.

RAY, W. J. R., M.R.C.S., L.S.A.Lond., has been appointed Health Officer for the Shire of Seymour, Victoria.

SEATON, EDWARD, M.D.Lond., M.R.C.P., has been appointed Medical Officer of Health for Chelsea, vice Barclay, deceased.

WHITE, W. HENRY, M.R.C.P., has been appointed Pathologist to the Royal Hospital for Diseases of the Chest, City-road, vice Dr. Gabbett, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BURN.—On the 25th ult., at Richmond, Surrey, the wife of Stacey S. Burn, M.A., M.B.Oxon., of a son.

BYLES.—On the 27th ult., at Denton House, Hoolehill, the wife of Henry Byles, M.B.Edin., of a son.

GREATHEAD.—On the 23rd May, at Graham's Town, South Africa, the wife of J. B. Greathead, M.B.Edin., M.R.C.S., of a daughter.

JONES.—On the 1st inst., at Southgate, Eckington, Chesterfield, the wife of G. H. West Jones, M.R.C.S.Eng. & L.S.A.Lond., of a daughter.

LIDDERDALE.—On the 28th ult., at East Hayes, Cheltenham, the wife of Robert Lidderdale, M.D., Deputy Surgeon-General, Bengal, of a son.

MACKINNON.—On the 27th ult., at Millbrook Lawn, Regent's-park, Millbrook, near Southampton, the wife of Brigade-Surgeon C. Mackinnon, Army Medical Department, Retired, of a son.

SMITH.—On the 28th ult., at Fairholme, Twickenham, the wife of Ernest Barrett Smith, M.B., of twin daughters.

SWEETING.—On the 30th ult., at 5, Edith Villas, West Kensington, the wife of R. D. R. Sweeting, Medical Superintendent of the Western Fever and Small-pox Hospital, of a daughter.

WRIGHT.—On the 25th ult., the wife of Dr. C. St. John Wright, Medical Superintendent, St. Mary's, Islington, Infirmary, of a daughter.

MARRIAGES.

BOURKE—BURKE.—On the 1st inst, at the Pro-Cathedral, Kensington, Surgeon Major J. Bourke, Army Medical Department, Woolwich, son of the late John Bourke, C.B., to Angela Mary, eldest daughter of the late John F. Burke, Esq., of Kensington and Clonmel.

DREW—FULLARD.—On the 30th ult., at St. John's, Richmond, by the Vicar, H. Walker Miller, M.A., Joseph Bowerman, L.R.C.P., L.R.C.S., and L.M.Edin., sixth son of the late James Drew, Surgeon, of Stow-on-the-Wold, Gloucestershire, to Florence, younger and only surviving daughter of the late Ed. Fullard, Esq., and step-daughter of the late Wm. N. Symonds, Surgeon, of Priory House, Crowland, Lincolnshire.

GRÜN—BENN.—On the 24th ult., at St. Mary's Church, Putney, by the Rev. Sir John Molyneux, Bart., cousin to the bride, assisted by the Rev. J. Lowndes, M.A., Edward Ferdinand Grün, M.R.C.S., of Putney, to Sidney Veriana Benn, eldest daughter of Edward Chawner, Esq., late Captain 77th Regiment, of Newton Valence, Hants, widow of the late St. John Benn, Esq.

HARGRAVE—MACLEOD.—On the 24th ult., at St. Mary's Parish Church, West Derby, Liverpool, by the Rev. Canon Stewart, John William, son of John Hargrave, of St. Ann's Lodge, Burley, Leeds, to Constance Helen, youngest daughter of the late William Macleod, M.D., of Ben Rhydding, Yorkshire.

MCALDOWIE—BIRD.—On the 2nd inst., at Stoke-on-Trent Parish Church, by the Ven. Sir Lovelace T. Stamer, Bart., Archdeacon of Stoke-on-Trent, Alexander M. McAldowie, M.D., to Katie, only child of Thomas W. Bird, of Boothenwood.

SIMMONS—HICKS.—On the 25th ult., at Holy Trinity Church, Wallington, E. Walpole Simmons, M.B., M.R.C.S., L.S.A.Lond., of Fairbridge House, Upper Holloway, to Amy Louisa Ida, daughter of R. Hicks, Esq., of Wallington, Surrey.

TULLOCH—CUTHBERT.—On the 4th ult., at St. Andrew's, Tobago, West Indies, by the Rev. Dr. Engledow, John Patrick Tulloch, M.A., M.B., C.M.Edin., to Isabella Emily, elder daughter of the late Robt. Cuthbert, of Dublin.

DEATHS.

PARSONS.—On the 30th ult., at Meadow Dowlish, Arthur Daniell Parsons, L.R.C.P. and M.R.C.S., aged 26.

WOODS.—On the 29th ult., at Brough, East Yorkshire, John Woods, L.R.C.P.Ed., L.R.C.S.I.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 3rd, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
June 27	30·16	N.W.	69	62	113	88	50	..	Overcast.
,, 28	30·23	E.	69	62	116	80	57	..	Hazy
,, 29	30·02	S.W.	66	63	111	76	57	·13	Raining
,, 30	30·11	W.	62	57	116	77	54	..	Hazy
July 1	30·19	W.	65	60	116	78	57	..	Hazy
,, 2	30·20	S.W.	66	59	105	81	55	..	Hazy
,, 3	30·02	W.	69	63	109	80	61	..	

Medical Diary for the ensuing Week.

Monday, July 7.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M., each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M., each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

Tuesday, July 8.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, July 9.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Annual General Meeting.

Thursday, July 10.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, July 11.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, July 12.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

EDUCATIONAL MUSEUMS.

MR. THOMAS LAURIE, of Paternoster-row, has issued in pamphlet form some "suggestions for establishing cheap popular and educational museums of scientific and art collections, and industrial productions and inventions, in all towns, villages, and districts; also for their classification, arrangement, and exposition on a new plan, making them available for pupils in lower and middle-class schools and colleges, mechanics' institutes, science and art classes, and for the instruction and recreation of the general public." Mr. Laurie considers the present time favourable for the establishment of such museums, which the peasant, artisan, and youth could frequently visit, to obtain practical information suited to their respective requirements, as well as refreshment of mind.

H. H. is referred to a general notice at the head of this column.

Mr. J. R. Lunn.—THE LANCET, March 1st, 1884.

"BURIED ALIVE."

To the Editor of THE LANCET.

SIR,—Canon Williams's letter has given rise to so much correspondence, and a great part of it so wide of the mark, that I may be pardoned for supplying you with further details, as one of the medical men at Llanelly, and one to whom the family of the poor woman is well known.

In the first place, I have to find fault with Canon Williams's letter. He described the condition of the remains as if he had seen them, thus lending to the description the weight of his authority, whereas the anomaly was seen by the sexton only, who described it to the Canon. I have no desire to impugn the sexton's veracity, though his statement is not so weighty as the Canon's. The deceased, aged seventy-three, died on Easter Monday, 1873, at 8 A.M., and was buried about mid-day the following Friday. She had been suffering from very extensive varicose ulcers for twenty years, was asthmatic, and died dropsical. For a long time before her death she had been unable to move without help. The body was placed in a strong, well-made, oak coffin. On the Thursday night before the burial there was frothy mucus oozing from the mouth and nostrils, and the body was so swollen that the coffin lid had to be forced to enable its being secured by screws. These facts I have from two sons-in-law (one of whom is a carpenter) and a daughter, all of whom witnessed what I have described, and they are, I think, sufficient to destroy the notion of a live burial; and it had been well had our vicar taken counsel and inquired carefully into these matters before rushing into print and giving rise to such false and disquieting alarms. Again, the soil in that part of the country in which the deceased was buried is exceedingly wet at certain seasons of the year. New graves in wet seasons occasionally have to be bailed out to effect decent burial, and it is probable that bricked graves may become so filled with water as to float the coffins.

Assuming the description given by the Canon to be correct (and for reasons stated I think it should be taken with caution), have we not factors adequate to account for the anomalous position of the remains without attributing it to live burial? I think decidedly yes. The well-seasoned wood of the coffin becomes swollen by the moisture within and around, and is thus almost "hermetically sealed." Decomposition proceeds within, gas is generated to any extent, the coffin may be afloat, and tension within increased until (probably at the stage of colliquative degeneration) the lid is burst open and the remains thrown into the position they were stated to be found in. An old sexton tells me he has found three or four bodies presenting similar appearances after being buried for a number of years. The idea of an old woman of seventy-three, who died (*sic*) in a state of extreme asthenia, after giving no evidence of life for over four days, suddenly waking up and bursting open a strong oak coffin lid firmly secured by four screws, seems to me the height of absurdity.

I am, Sir, yours truly,

June 26th, 1884. [illegible] WILLIAMS.

A TAILED CHILD.

WE extract the following paragraph from *Nature*:—"Mr. H. W. Eaton of Louisville, Kentucky, writes to *Science* that the *Commercial* of that city for May 17th and 18th gave accounts of a tailed child recently born there. As such cases are of scientific interest, and are very rare, a party of four, including a prominent doctor and Mr. Eaton, concluded to investigate the case:—'We found a female negro child, eight weeks old, normally formed in all respects, except that slightly to the left of the median line, and about an inch above the lower end of the spinal column, is a fleshy pedunculated protuberance about two and a half inches long. At the base it measures an inch and a quarter in circumference. A quarter of an inch from the base it is somewhat larger, and from that it tapers gradually to a small blunt point. It closely resembles a pig's tail in shape, but shows no sign of bone or cartilage. There seems to be a slight mole-like protuberance at the point of attachment. The appendage has grown in length about a quarter of an inch since the birth of the child. The mother, Lucy Clark, is a quadroon, seventeen years old, and the father a negro of twenty, both normally formed.' In Darwin's 'Descent of Man,' vol. i., p. 28, he speaks of a similar case, and refers to an article in the *Revue des Cours Scientifiques*, 1867–68, p. 625. A more complete article is that by Dr. Max Bartels, in *Archiv für Anthropologie* for 1880. He describes twenty-one cases of persons born with tails, most of them being fleshy protuberances like the one just described."

An American Graduate.—Such advertisements would be regarded in the mother country as disgraceful; but medical ethics in the colonies can, perhaps, hardly be judged by the same standard as that acknowledged at home.

Anxious Inquirer should consult his medical adviser.

Dr. H. B. Trytton.—Very soon.

SCARLATINAL URÆMIA.

To the Editor of THE LANCET.

SIR,—In cases of uræmic poisoning following scarlatina we are assured that pilocarpine, brisk purgatives, hot baths, and the application of leeches are potent remedies, while bloodletting is lauded by many as preferable to them all in urgent cases. As illustrating the beneficial effects of the latter mode of treatment, I desire a portion of your valuable space to record some particulars regarding a case recently under my care, and that they may stand as a contrast to the line of treatment recommended by a correspondent in your issue of Feb. 9th, 1884—the latest communication to THE LANCET on this subject. In his letter of that date Dr. Wm. V. Lyle expresses the opinion that appropriate general treatment, with the local application of leeches, were the means absolutely necessary in most cases. My patient, a boy twelve years of age, after suffering from scarlatina, became dropsical. The swelling of the face was thought to be the result of toothache, and little attention was paid to it, so that, as sometimes happens, professional aid was not asked until convulsions had set in. I at once ordered a dozen leeches to the head, bitartrate of potash as a purge, and sinapisms over the kidneys. Only two of the leech-bites continued to bleed copiously, and notwithstanding free purgation and profuse sweating, I could notice no improvement. So violent were the convulsions that the parents, witnessing one of them, supposed the child *in articulo mortis*, and requested me to let him alone. I allowed twenty ounces of blood to flow from the elbow, thus relieving the much congested head and chest, and putting a stop to the alarming symptoms. The general treatment was meanwhile persevered with; but within twenty-four hours the dreaded convulsions recommenced. I at once undid the bandage, and took away five ounces more blood, with marked advantage to the little fellow. One would have imagined that morphia and bromide of potassium would now prove adequate aids for the successful completion of the case; but all my efforts seemed for a moment doomed to end in failure. A careful note of all the symptoms, which were chiefly great difficulty of breathing without any inflammatory mischief in the chest—very different, indeed, from the panting respiration consequent upon loss of blood—laboured action of the heart, dilated pupils, with a degree of coma and slight convulsions, forced upon me the conviction that a further loss of blood would do good, and accordingly I bled afresh to six ounces. Thus, altogether, in three days, I took away thirty-one ounces of blood. The urine was loaded with albumen, and, although this fact indicated a condition of kidney forbidding the use of cantharides, I was compelled to fly-blister the occiput for the relief of basilar trouble, doubtless of uræmic origin. Iron and quinine mixture in the course of a day caused the albumen to all but disappear, while the blister cleared up the head symptoms, and my patient was convalescent on the fifth day of my attendance.

I am, Sir, yours truly,

June 13th, 1884. R. McK.

An Old Subscriber.—1. We do not think lunatics enjoy any immunity from ordinary disease, except such as may be incompatible with, or unlikely to occur to them in, their special mode of life.—2 and 3. The proper way to put the facts would be that scientific research tends to show that the so-called senses are only modified or specialised manifestations of the faculty or power of receiving impressions from external objects by direct physical influence.—4. We believe not.

Mr. H. St. G. Stewart.—It is very much a matter of opinion.

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THE LALANDE BATTERY.

THE Lalande battery is said to yield residual products of more value than that of the original materials used—in fact, the electric current may be regarded as a kind of bye-product. It is evident, however, that the introduction of this battery to any considerable extent for electric purposes would tend to lower the value of the residual products. The battery is composed of a series of cells, each consisting of an iron tray containing oxide of copper, over, but not in contact with, which is a zinc plate; the remainder of the tray is filled with a solution of caustic soda. When the battery is in action, oxide of zinc and metallic copper are produced. The oxide of zinc can be recovered from the solution of soda, and is estimated to be worth 25 per cent. more than the metallic zinc.

Mr. Albert E. Hamilton.—"Brown bread" is too indefinite a term to admit of replies being made to the questions asked.

Mr. Thomas P. Smith, M.B.—Centralblatt für Klinische Medizin, vol. II., 1882.

THE BROMIDES.

To the Editor of THE LANCET.

SIR,—About two years ago I suffered from intense headache, having a sensation as if my head were ready to burst, which was accompanied by noises in the ears. I put myself under a course of bromide of potassium, but finding little or no improvement, I resorted to my friend Dr. Oscar Jennings for advice. Dr. Jennings finding me rather depressed, which condition he thought was attributable to the prolonged use of the above salt, prescribed the following mixture:—Bromide of potassium four drachms, bromide of sodium two drachms, bromide of ammonia two drachms, distilled water twelve ounces; a tablespoonful of this solution was to be taken every two, three, or four hours, according to the urgency of the symptoms. After the first day I felt considerable relief, and after having taken the mixture for about a week I went back to Dr. Jennings, who, finding a feeble action of the heart, recommended me to take five drops of the tincture of digitalis with each dose every four hours. In another week I was completely cured of my headache, which, however, left me rather weak. He then put me under a course of chloride of gold and sodium, which entirely set me up, and I have since had no return of the symptoms. I must also mention that as an amazed eruption broke out on my body, Dr. Jennings prescribed the addition of five drops of Fowler's solution to each dose of the mixture, which I was to take only morning and evening. I have related this case as a hint to your correspondent "Bromide," whose letter was published in THE LANCET of last week. I have since tried the above treatment with my patients in similar circumstances, and always with the best results. I may also mention for his information that the method adopted by Professor Charcot in the treatment of epilepsy is the administration of the three bromides in much the same doses as given above, which he goes on increasing for three or four weeks, then coming back to the original dose and continuing the mixture as before for an indefinite period. By this method Professor Charcot proposes to prevent the accumulation of the salts in the system.

With respect to disguising the briny flavour of the bromide salts, I would recommend your correspondent to mix them with the syrup of glycyrrhiza, as is proposed by M. Gérard Leguë, a pharmacien, by which their acrid taste is completely covered.

I am, Sir, yours obediently,

Paris, June 24th, 1884. ALEX. BOGGS, M.D.

Dr. K Kirk (Partick).—The paper would be acceptable. Engraved blocks only can be used by the printer. Bourdeville's cases were published in the *Progrès Médical* for 1880, p. 709.

Mr. R. de Tomasini's letter arrived too late for notice this week.

RABIES CANINA.

To the Editor of THE LANCET.

SIR,—In sequence to your just observations on the annoyance caused by the barking and howling of dogs (in the last issue of THE LANCET), allow me to make some remarks on the creation of rabies in dogs. You must justly assert that it is neglect and misery which are the origin of the cries which make "night hideous." Such, also, is the fact relative to canine madness. Neglect, misery, unwholesome food, unnatural confinement, are often the root from which that dire disease springs. When a mad dog bites many people he sometimes quits scores for a long series of brutalities, insults, and oppression inflicted upon him by the [illegible] more ignorant portion of the human race. The hard blow, the [illegible], the loud curse, the vile annoyance, the insulting word, the [illegible], the carrion food, the shortened chain, the rotten straw, the dirty kennel (appropriate name!), the bitter winter's night, the [illegible] of summer, the dull and dreary years of hopeless imprisonment—ultimate there; and the cup man has poisoned man is forced to drink. In addition to the above, the confining of dogs, and thereby preventing them from having access to their natural medicine, and also their natural intercourse, is certainly calculated to seriously derange their health. Professor David Low, F.R.S.E., in his able work on "The Domesticated Animals of the British Isles," makes some sagacious observations on unnatural and ignorant treatment of the canine race.

[illegible] of preventing rabies by tying together the jaws of dogs, or by [illegible] or incarcerating the animals, is as senseless as issuing a "bull" against a comet. I am, Sir, your obedient servant,

Macclesfield, Cheshire, July 1st, 1881. GEORGE R. JESSE.

VIVISECTION.

AT the annual meeting of the Pennsylvania State Medical Society, recently held at Philadelphia under the presidency of Dr. Henry H. Smith, a report upon a communication from the Anti-vivisection Association was read by Dr. Weir Mitchell, chairman of the committee appointed to consider the subject. The attempts to control vivisection by law were deprecated, in view of the restrictive effect of the licensing system in force in England. Dr. Mitchell is about to institute experiments on snake-poison which cannot be carried out in England on account of the law. The Society passed the following resolution, recommended by the committee:—"That in view of the attempts which have been, or are to be, made to obstruct by restrictive legislation the progress of experimental medicine, this Society desires to express its earnest conviction that experimentation on animals is a most useful source of knowledge in medical sciences; that it is the means by which many important discoveries, both practical and scientific, have been accomplished; that its direction and supervision can be properly entrusted only to members of the medical profession; and that its restriction or prohibition by law would inevitably retard the acquisition of knowledge in respect to healthy and morbid actions, the cause and prevention of disease, and the improvement of the medical art." On motion, the report was accepted, the resolution adopted, and the committee continued.

"SHOULD ENTERIC FEVER CASES BE ISOLATED?"

To the Editor of THE LANCET.

SIR,—I shall be glad if you can find space to allow me to give the history of a case, or rather series of cases, of enteric fever bearing strongly on the information required by "Dilemma" in your issue of the 28th ult. A lady living in the vicinity of East India-road contracted typhoid fever, complicated towards the last with severe diarrhœa, and from which at about the end of three weeks she succumbed. During the latter part of her illness her sister, a patient of mine, living in Dalston, had been in almost constant attendance upon her, in addition to the regular nurse. On her return home, and a few days after her sister's decease, I was sent for, and found her suffering from fever, which soon proved to be enteric, and gradually became very aggravated, and she also died of exhaustion from the severe purging, which increased towards the last. On this patient another sister, a married lady residing in Islington, was most assiduous in her daily attentions. She also sickened soon after returning home, and succumbed to the disease. These three ladies were each attended by their respective medical advisers. The late Dr. Tanner, who was intimately acquainted with them all, saw the three cases almost daily throughout the greater part of their illness, and in my case showed great interest. In recommending his favourite remedy for exhaustion—the cold infusion of beef with brandy—he expressed to me that he only wished he could be the nurse as well as the physician, so anxious was he to save the life of this, the second, patient.

Although I have seen a good deal of typhoid fever, these are the only cases I have ever seen assuming a contagious form. Every precaution was taken to disinfect the secretions in my own and the preceding case, and no doubt in the third. Neither the nurses nor domestics who were brought most in contact with the secretions seem to have suffered. The sisters were most affectionate towards one another, and when ill they tended each other, and thus were brought in contact with the patient's breath, the exhalation of which towards the last, although exceptional, may have undergone some change, and so become infectious.

I have not seen Dr. Tanner's last work; it was not then compiled. I should think he must have alluded to these three cases, which, I think, are somewhat unique in their history, and I have no doubt he must have left full notes in reference to them.

I am, Sir, yours truly,

Kingston-on-Thames, June 30th, 1884. GEORGE MUNDIE.

Perplexed.—It would be correct to put "Physician and Accoucheur" after the name. The word "Surgery" must be regarded as technical.

RUPTURE OF THE UTERUS.

To the Editor of THE LANCET.

SIR,—I have read with interest the case of rupture of the uterus narrated by Mr. J. McKenzie Booth in THE LANCET of June 21st. But in remarking on the case Mr. Booth seems to me to have lost sight of one important element in the cause of the rupture. Though amongst the most frequent causes of rupture of the uterus, as given by Traak, is mentioned ergot, Mr. Booth appears to lay no stress on the action of this drug. Now, when one considers that ergot induces powerful and continuous contractions of the uterus, one can hardly see the benefit to be derived from administering the drug towards the end of the first stage of labour, more especially in a case where the operation of turning has to be undertaken afterwards. In the second stage of labour doubtless ergot is sometimes beneficial, but here we have a safer and more effective agent in the forceps. In the third stage of labour I have been struck with the much greater ease with which the placenta can be expressed when no ergot is given. And when we have to deal with a case of adherent placenta the ergot can only prove an obstacle to the operation of peeling off the placenta. The routine practice of giving ergot in every case of labour, as recommended by some authorities, seems to me an unscientific proceeding.

I am, Sir, yours truly,

Scalloway, N.B., June 27th, 1884. A. WATTIE, M.B. Edin.

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"HOUSING OF THE POOR IN NEW YORK."

In our annotation last week on the above subject the name given as "D. Willis" should have been D. Willis James. We understand that Mr. James Gallatin, president of the New York Sanitary Reform Society, spent a great part of two winters at Albany to secure the legislation referred to, and his name also should have been mentioned in connexion with the matter.

WASHING OUT THE BLADDER.

To the Editor of THE LANCET.

SIR,—*A propos* of Sir Henry Thompson's lecture on the desirability of making a perineal opening and washing out the bladder through a tube, which must be retained for some time, a practical difficulty occurs, and is of considerable inconvenience, in the tube, however carefully tied in, often slipping out, owing to the restlessness of the patient, and sometimes to the fact that he pulls it out himself. A catheter is too rigid; the tube must be soft and pliable, and only just kept in the bladder, and to retain it in that position is no easy matter. In a case at present under treatment I found the tube out several times during the day, and the patient suffering much discomfort from the consequent wetting of the bed and the irritation caused by the reintroduction of the tube. To obviate this, I passed the piece of tubing, a large-sized drainage-tube with bevelled end, through the hole in the little shield supplied with the ordinary Higginson's syringe, passed a safety-pin through the tube, and secured with a thin strip of plaster to the shield. A piece of protective silk was placed over the wound, a hole being cut in the centre for the tube, and the shield kept in position by tapes passed through holes at the ends, and fastened to an abdominal bandage in the usual way. By this simple contrivance the tube is kept accurately in position, and the urine passes only through it, instead of dribbling past it into the bed. The other end is carried into a convenient vessel, and the washing-out process is easily performed. Attention to such little matters of detail seems greatly to influence the success of an operation.—I am, Sir, yours truly,

J. G. MARSHALL, M.B.Cantab., M.R.C.S.,
June 24th, 1884. House-Surgeon, Doncaster General Infirmary.

Mr. F. Berry.—Probably there is some truth in the assumption that the individuals comprised in a triple birth have, *ceteris paribus*, less than the average amount of vitality.

DENTAL REGISTRATION.

To the Editor of THE LANCET.

SIR,—Will you allow me to explain to your correspondent who was answered on page 1183 of THE LANCET for June 28th that dentists can now only be registered after having passed the same preliminary examination in Arts as for the M.R.C.S., after having fulfilled a four years' curriculum (three-fifths general medicine and surgery, and two-fifths specially dental), and after a qualifying examination at the College of Surgeons for the L.D.S. diploma.—I am, Sir, yours truly,

Brook-street, W., July 1st, 1884. S. J. HUTCHINSON.

An Enquirer.—Our correspondent should have insisted upon the signing of the bond. As to the second part of the question, we think a man of fine feeling would be hardly likely to take advantage of the omission.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—In my paper on Perineal Lacerations, which appeared in your last issue, I am made to say, when speaking of the influence of these accidents in the production of puerperal septicæmia, that the latter is "a blood dyscrasia, having for its exciting cause an autogenetic and heterogenetic source," instead of an autogenetic *or* heterogenetic, &c. The insertion of this correction in your next issue will oblige, yours truly,

Nottingham, July 1st, 1884. GEORGE ELDER.

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LETTERS, *each with enclosure*, are also acknowledged from—Dr. Eberle, Thirsk; Mr. Williams, Port Isaac; Mr. M'Cal Dowie, Stoke-on-Trent; Dr. Norman Kerr, London; Dr. Gordon, Walsall; Dr. Jefferson, Lisbon; Mr. Hodgson, London; Mr. Grün, Reading; Mr. Cameron, Glasgow; Mr. O'Brien, Snenton; Mr. Holden, Preston; Mr. Garner, Birmingham; Miss MacVicar, Manchester; Mr. Somerville, Edinburgh; Dr. Macaskly; Mr. Griffiths, Bristol; Mr. Andrew, Stockport; Mr. Livingstone, Jarrow-on-Tyne; Dr. Duggan; Mr. Moore, Halifax; Dr. Fulcher, Bombay; Mr. Grant, Kirkmichael; Mr. Pierce, Treorchy; Mr. Joshua, Cirencester; Mr. Hamilton, Dromahair; Mr. Magner, Ebbw Vale; Mr. White, Bayswater; Messrs. Paternoster and Co., Hitchin; Messrs. Byles and Son, Bradford; Mr. Greenwood, Evershot; Messrs. Reynolds and Co., Leeds; Mr. Daunt, Lindfield; Mr. Gibson, Bromley; Mr. Ellis, Gloucester; Mrs. Stellfoss, Middleton; Messrs. Mandleberg and Co., Manchester; Miss Hunter; Mr. Jennings, Deptford; Mr. Tulloch, Perth; Dr. A. B. Squire, London; Mr. Brown, Tredegar; Mr. Stevenson, Rudesley; Mr. Jones, Southgate; Mr. Unsworth, Liverpool; Dr. Alderson, Hammersmith; Mr. Norton, Tunstall; Physician, Holloway; Probe; Chairman, Hastings; Medicus, Normanton; Medicus, Southport; Theta, Pontypridd; Medicus, South Shields; Premium; J. D., West Leigh; Medicus, Minchinhampton; X. Y. Z., Notts; J. F. W.; A. B. C., Oldham; C. S. S. A., Ashton; Medicus; A., Sheffield; M.; H.; Omega, Cannock; Medicus, York; R., St. Helen's.

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Lectures

ON SOME

IMPORTANT POINTS IN CONNEXION WITH THE

SURGERY OF THE URINARY ORGANS.

Delivered at the Royal College of Surgeons,

BY SIR HENRY THOMPSON, F.R.C.S.,

SURGEON EXTRAORDINARY TO HIS MAJESTY THE KING OF THE BELGIANS, PROFESSOR OF SURGERY AND PATHOLOGY TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL, EMERITUS PROFESSOR OF CLINICAL SURGERY, ETC.

LECTURE V.

The Progress of Operative Surgery for Stone during the Present Century, with the most Recent Improvements in Lithotrity.

[THE lecturer commenced by remarking that amidst the progress made in art and science during the present century surgery was not less distinguished than other branches, of which the recent history of operation for stone afforded a complete illustration. A minute historical outline, commencing with the lithotomy practice, provincial and metropolitan, at the end of the eighteen century, described the advent of crushing, and the various improvements as they arose both in the cutting and the crushing methods as they competed with each other in the middle of the present century, until the lithotrite began gradually to supersede the use of the knife. It was interesting to observe how the idea of rendering lithotrity complete at a single operation had slowly been developed even from the time of Heurteloup, who had laboured hard to realise it, until its recent accomplishment in modern times. The lecturer continued]:—

Thus far it has been my object to make a rapid sketch of the general practice in relation to the surgical treatment of calculus in the chief capitals of Europe up to within about the last five years. But in 1878 Professor Bigelow of Harvard, U.S., proposed a further and a considerable advance in regard to the amount of crushing and aspiration which might be employed at a single sitting. Whatever the size or the nature of the stone, provided only that it was deemed to be within the compass of our power to crush, he advocated, on principle, that the whole should be removed at once, and no portion be permitted to remain, so far as the operator knew, for a second attempt. The principle enunciated was, that broken fragments remaining in the bladder were more injurious to it and more dangerous to the patient, by causing cystitis &c., than a prolonged sitting and a very considerable amount of mechanical interference expended on the task. This apparently bold proposal took many by surprise. It was not that the removal of a calculus at a single sitting was by any means a novelty in itself; small ones had been often thus disposed of. It was the proposal to deal with stones of very considerable size, and the prolongation of the sitting from a short term of minutes to one which might, according to the Professor's experience, occupy two hours, or even more, which naturally aroused much question. Nevertheless, I must avow that my experience of the value of removing all the fragments from a bladder when acute cystitis was set up had disposed me to receive the new doctrine with favour. Hence I at once put it to the test, and, without any change of instruments, proved its value in the first twenty cases which I treated by this method. Professor Bigelow had, however, made a further proposal—namely, that much larger and more powerful instruments, both lithotrites and evacuating tubes, should be employed than heretofore. These proved to be, for the most part, not only unnecessary, but to be sources of danger, especially in unpractised hands. The American surgeons had long been accustomed to use instruments in the treatment of stricture larger than those generally employed on this side of the Atlantic; and this fact has had the advantage of facilitating the production of Professor Bigelow's proposal. No doubt heavy and powerful crushing machines become absolutely essential to success in dealing with those exceptionally large calculi which have hitherto been relegated to the cutting operation, but to such rare examples only should they be applied.

A minor but not altogether unimportant proposal of Professor Bigelow was to change the name of the operation in future from lithotrity to "litholapaxy." His procedure, however, introduces no mode of action not employed before. Bigelow's achievement has been to demonstrate that crushing a stone, even if large, and removing all the fragments from the bladder at one sitting, is a safer proceeding than dividing the work between two, three, or more sittings. The value of this principle was perceived and insisted on, as we have seen, by Heurteloup thirty years ago, but he failed for want of anæsthesia. And it is a curious fact, too, as an illustration, if one were necessary, that the principle of evacuating the stone largely, as a part of the operation of lithotrity, is in no respect a novel one, that Heurteloup himself endeavoured, at the close of his career, to change the name of the proceeding on this very ground—viz., that he not merely crushed the stone, but that he also evacuated the débris artificially as completely as possible. The term which he desired to substitute to denote his method of crushing and evacuating the bladder, was "lithocénose," from λίθος, a stone, and κένωσις, extraction. Nevertheless he signally failed to do so, although the proceeding was really then, to some extent, a new one, and the original term, lithotrity, still remained as it does to this day. For there is an equal disinclination among many surgeons, foreign and English, to admit a similar change now, it being evident to everyone who knows anything of the history of lithotrity that evacuation by artificial means has been an essential part of the procedure for at least fifty-five years, and that this part has steadily grown in importance in a direct ratio with an increasing ability and determination to crush more largely than before. Five years of experience of lithotrity completed at a single sitting enables me to testify as fully concerning its capabilities perhaps as any other operator. It has been only partially tested at present on the Continent; entertained very cautiously at Paris; but received with gradually increasing favour at Vienna, where it is now the rule; but it is not in either place accepted for the largest calculi, and a cutting operation is preferred for those hard stones which weigh one ounce and a half and upwards in size. To this fact I shall hereafter refer, in presenting an analysis of my own experience of the one-sitting operation, which I have adopted in the last two hundred cases, to use round numbers, consecutively treated by myself. I propose first briefly to describe that proceeding which has appeared to me the most desirable in order to achieve successful lithotrity at a single sitting. We will commence by examining the instruments necessary for the operation, and then consider the method of employing them best adapted to effect our purpose.

In the first place, in respect of all instruments, we must recognise the importance of not inflicting any needless injury on the urethra and bladder, and should, therefore, always select the smallest lithotrites and evacuators which possess strength and capability adequate to crush and remove the individual calculus to be dealt with. And inasmuch as the great majority of calculi are small when first found by the surgeon, undue stretching of the natural calibre of the urethra is unnecessary for their removal, since no instrument need be used which exceeds the limit of that calibre. It is only when dealing with calculi of exceptional size, that instruments which distend the urethra to a considerable degree are to be employed.

Secondly, in dealing with a calculus of any size, but especially when large, it is important to employ instruments which are simple in construction and not easily liable to be deranged in action when employed in the bladder. The presence of débris in quantity, mixed with viscid mucus, perhaps with some coagulating blood, has to be reckoned on in circumstances which demand prolonged manipulation; and mechanical arrangements which work admirably in experiment with limpid fluids outside the bladder are not unlikely to fail when brought to the test of actual service. Simplicity in the construction of instruments is, therefore, to be attained if possible.

Let me suppose that the presence of a calculus has been determined by sounding in the bladder of an elderly male. It is almost certain that the note obtained and the resistance felt in making contact generally suffice also to convey an idea, approximately accurate, regarding the size and nature of the stone. As a rule, it is not so necessary now as it formerly was to make an exact diagnosis in rela-

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tion to those particulars. When it was desirable to limit the application of lithotrity to calculi of, say, one inch and a half diameter, it was important to ascertain, by some easily managed method of measuring, what were their dimensions in every case. But now that the scope of lithotrity is considerably increased, all that is requisite to be learned is, whether the stone is an exceptionally large and hard one, and whether any unnatural narrowing of the canal is present; and both these points are almost sufficiently determined by an ordinary sounding in practised hands. At all events it is unnecessary to make any further examination for the purpose of diagnosis until the patient has been placed under the influence of an anæsthetic upon the operating table, the surgeon having full liberty to exercise his judgment and act as circumstances demand.

Invariably, as soon as the patient is thus prepared for operation, I pass a full-sized conical steel-plated sound—say about No. 15 (English), in order to determine that most important point of urethral calibre before touching the stone. If the urethra is healthy, and of course in the very great majority of cases it is so, the instrument has passed with perfect ease, and may probably be followed by No. 16 or 17 in an elderly adult, by which term I mean a man of sixty years and upwards. I am sure the urethra is more capacious in such patients than in those whose age is between thirty and fifty years. In these latter the urethra often resents any active distension, and the bladder also more readily becomes inflamed than in older patients. With a urethra admitting the easy passing of No. 16 almost anything is possible, and suffices for almost any calculus; but if I am dealing with one which weighs, in my judgment, about two ounces and more, I am glad to use larger sizes, and No. 18 I have never found it necessary to exceed. But if the stone is known to be small, No. 14 amply suffices, and there can be no reason for going beyond it. This is the size which was mostly used with the original instrument of Clover in 1866, and for all ordinary purposes answers admirably.

The lithotrite is next introduced. With small and medium-sized stones, a light instrument of the half-fenestrated pattern—that is, the lower portion of the male blade penetrating the female blade, which prevents the possibility of blocking by débris, while the upper portion is flat and crushes the stone into small fragments—is, I think, the best. This mode of construction is applicable for a wide range of size in calculus, answering for any one of uric acid below about an inch and a half in length. To accomplish the first fracture of such a one, or to crush into fragments a larger calculus, a fully fenestrated lithotrite is better. There are some old forms of blade which have been in use for fifty years, which cannot, I think, be excelled; so numerous are the patterns which have been employed, that it is difficult now to imagine a new design.

To proceed, supposing that a considerable quantity of débris has been made, the calculus being large, it is advisable to withdraw the lithotrite, to introduce an evacuating-sound and attach the aspirator, so as to withdraw the débris already made before crushing more. When this is removed, the same or a lighter instrument may crush the fragments into débris, before again using the evacuator. By this time, probably, the remaining portion is not considerable, and another introduction of the lithotrite, followed by another aspiration, very likely empties the bladder. If, however, a fragment or two are heard and felt to strike the end of the evacuator, yet do not pass through it, they are probably just too large to issue, and require another crushing before the task is completed. There is certainly now no difficulty in removing any last fragment from the bladder, the more powerful aspirators emptying the cavity so efficiently that no other instrument is necessary for the purpose; while by no sound is the last fragment found so well as by the evacuating catheter, against which contact of the fragment is certain to be felt or heard, through the action of the outrushing current of water.

In regard to aspirators, the original instrument of Clover, simple in the extreme, is a very good instrument, and requires only some modification to be as efficient as most of the modern ones. For my own aspirator I have provided a tap with funnel-shaped opening to the upper part of the india-rubber ball, by which to fill it, and to remove air accidentally introduced, which offers a decided advantage. Last year I attached to the end of the evacuator in the interior of the glass receiver a light wire valve, which while it admits any fragments to enter, renders their escape impossible; its action meantime being always visible to the operator.

After the operation the patient remains in bed, and rarely requires any special management, except sometimes that which a simple traumatic cystitis demands—namely, absolute rest in bed; occasionally the urine neutralised by potash; hot hip baths; mild diet; and watchful care that chronic retention of urine does not occur, or is not permitted to continue unrelieved; avoiding on the other hand undue or unnecessary interference by means of catheters. But of all the agents for rapidly removing subacute or chronic cystitis after lithotrity, nothing equals mild injections of nitrate of silver, the effect of which is sometimes almost instantaneous. I use only half a grain of the salt in four ounces of warm water at first, gradually increasing to a solution three times that strength, beyond which it is rarely necessary to go. Usually one application a day, sometimes two, will, in the course of three or four days, remove the painful symptom and produce clear and healthy urine.

My own experience of the system of treating all calculi but the very largest, by a single sitting of lithotrity, dates from shortly before Christmas, 1878; the first example being a case which I saw with Sir Spencer Wells, who was present at the operation. Since that time I have adopted the system of completing the operation at a single sitting for every case in which lithotrity appeared to be possible, with two exceptions only, to be described immediately. The total number of adult male patients on whom I have operated during the period referred to, a term of rather more than five years, is 211. Of these, fifteen have been by lithotomy, and of course forming the largest and worst cases, with seven deaths. There remain, therefore, 196 cases treated by lithotrity. One of these was a Portuguese gentleman, No. 535, in my collection before you, to whom Mr. Clover thought it prudent to administer chloroform only for a very limited time. He had five sittings to remove a stone weighing no less than 787 grains, and made a good recovery. The other exception was that of a large oxalate of lime calculus, No. 538, which at that time I preferred to crush in four sittings. The débris weighs 640 grains; he is now perfectly well. Every one of the remaining cases, 194 in number, has been treated at a single sitting, making a total of 196 cases of lithotrity at a single sitting, with 10 deaths, or just 5 per cent. Total of 211 cases of adults by the two operations, with 17 deaths, or 8 per cent. The mean age of these patients was over sixty years. And this is a result which hitherto has, I need hardly say, not been approached by any other mode of treating calculus in the adult. This subject, however, will be illustrated more fully in the succeeding lecture, when I shall present the results of my entire series, embracing upwards of 800 cases by the two operations.

I have crushed several stones of uric acid, and one of oxalate of lime, considerably upwards of an ounce in weight. The largest uric acid calculus I removed at a single sitting weighed two ounces and three-quarters, and occupied me seventy minutes. The patient was seventy years of age, and made a capital recovery. I cannot speak too highly of the results thus attained. Indeed, nothing need be added to the figures I have adduced above, which exceeded any expectation I could have previously formed as to the success of operating on men upwards of sixty years of age, with stones of all sizes. In conclusion, I think we must admit that the operation of lithotrity at a single sitting bids fair to supersede lithotomy for the adult calculous patient in all cases except those in which the stone is of rare and exceptional size.

ON CHARCOT'S JOINT DISEASE.

By W. HALE WHITE, M.D., M.R.C.P.,
SENIOR DEMONSTRATOR OF ANATOMY AT GUY'S HOSPITAL.

DURING the last few months the subject of Charcot's joint disease in association with locomotor ataxy has come before the Pathological and Clinical Societies three times, and on each occasion observers of great note have been found to state their scepticism as to the existence of any definite arthropathy such as Charcot describes. Thus, when Mr. Arbuthnot Lane brought his paper on Mollities Ossium, Rheumatoid Arthritis, and Charcot's Disease before the Pathological Society,[1] both Mr. Hulke and Dr. Goodhart seemed to consider that all the cases which had from time to

[1] THE LANCET, Jan. 19th, 1884, p. 106.

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time been shown them as examples of Charcot's disease were really rheumatoid arthritis; and when Mr. Clement Lucas read his paper before the Clinical Society,[2] Dr. Moxon stated his belief that Charcot's joint disease was only rheumatic arthritis occurring in patients affected with locomotor ataxy. If no others than the three gentlemen just mentioned were doubtful of the entity of the disease, the fact of their hesitation to accept it would make it worth while to inquire into the exact position of the question as to whether or not it is a distinct malady. It seems to me that three views may be held with regard to it. In the first place, there is that of Charcot and his followers, who state that the joint disease is a distinct specific arthropathy peculiar to locomotor ataxy. Secondly, there is the view that it is an ordinary arthritis, somewhat modified by the conditions of the patient, but dependent upon nerve lesion, as are the arthropathies found after injuries to nerves. Thirdly, there is the view that it is merely a rheumatic or some other form of arthritis which has occurred in an ataxic patient, the coincidence of their occurrence being pure chance.

To take Charcot's view first. We are here dependent entirely upon the clinical and post-mortem characteristics, because up to the present time no one has been able to state in what part of the nervous system the joint centre, if there be such a spot, exists. Charcot was at first inclined to place it in the anterior cornua, but this theory has been abandoned because post-mortem experience has shown that the disease may be present without any change in the anterior cornua being demonstrable. Then the hypothesis has been put forward by Buzzard that there is in the medulla an arthritic centre which becomes affected in locomotor ataxy. He urges in favour of this view the frequent association of gastric crises with joint trouble; but although this is an ingenious hypothesis, it is as yet hardly certain enough to allow us to argue that because there is a joint centre in the medulla, therefore we may look for joint lesions of a specific nature in locomotor ataxy. It has also been urged that the lesions of the peripheral nerves discovered by Pitres and Vaillard are the cause of the arthritis; but against this is the fact that in some cases in which the joint trouble has been present there has been no peripheral nerve change. Thus we see, as we are unable to argue *a priori* from the fact of a nervous cause for the joint troubles in locomotor ataxy being constantly present that therefore they are probably peculiar to that malady, the view we are now considering depends entirely upon the clinical and post-mortem characteristics of the disease. The clinical symptoms are, according to Charcot,[3] briefly these:—Without appreciable external cause in the slightly advanced period of the locomotor ataxy this arthropathy is developed; the first phenomenon discernible is extreme tumefaction, which is formed by a considerable hydarthrosis, and an engorgement presenting a hard consistence; usually there is no fever, pain, or cracking sound. At the end of some months the swelling disappears and all returns to the normal state, or in other cases serious disorder, such as crackings, dislocations, &c., remain in the joints; the order of frequency is knee, shoulder, elbow, hip, wrist. At the meetings of the Pathological and Clinical Societies just referred to neither Mr. Hulke, Dr. Moxon, nor Dr. Goodhart—all distinguished clinicists with a large field of observation—knew anything of this train of symptoms. In thirty cases of locomotor ataxy which he had most carefully observed, Dr. Moxon had not detected any specific arthritic changes. Charcot, however, found five patients presenting such changes among fifty examined. The following quotation from Senator[4] will, I think, show that he is not certain that the arthropathy of locomotor ataxy is a distinct disease:—"Charcot and his pupils subsequently drew attention to the occurrence of peculiar articular swellings in locomotor ataxy and other forms of paralysis ..... It is quite true these articular swellings did not invariably present the characters of arthritis deformans; they often set in with abundant effusion into the joint, a symptom quite foreign to the latter disease; in other cases, however, the characteristic morbid changes developed themselves either at once or after a time." Further on he says: "To distinguish arthritis deformans at this early stage from the articular neuroses there are hardly any criteria." Ball[5] is very emphatic in pointing out the distinctions between the two maladies, but the impression one gets from reading his article is that there are many similarities. Thus he records two cases in which are presented heat and redness of the joint, and other connecting links might be found in his descriptions.

We have heard a good deal about the frequency with which these cases have been overlooked by surgeons, and there is the story told of a patient who, although suffering from Charcot's joint disease, was shown to the candidates at one of the examining boards as a case of rheumatoid arthritis; but surely all this tells strongly in favour of the view that there are no distinct clinical characteristics of Charcot's disease, for those surgeons who are accused of having made such errors, seeing, as they do, a large number of cases of rheumatoid arthritis, would have been the first to set aside these cases as peculiar had they really been so. The case that was used for examination purposes cannot have been so very out of the common if it passed through several surgeons' hands as a case sufficiently typical to show to candidates.

Turning again to Charcot's own account of the disease, we find that he admits "the analogy existing as regards cracking sounds, the osseous tumefactions, &c." It is perhaps difficult to determine exactly how much is included under that "&c.," for a reference to his list of points of distinction between the two diseases will show that there is hardly a single symptom which is not in some measure common to his disease and an ordinary arthritis; thus pain, thickening of the synovial membrane, and hydarthrosis may be present in both. I have seen lately six cases of joint disease in locomotor ataxy, all of which were considered to be examples of Charcot's disease by some of those who had seen them, although not one of them was universally allowed to be an example of that malady; but I have never seen a case of joint disease in association with locomotor ataxy which was universally allowed not to be Charcot's disease. This is, of course, not logically conclusive, but still it is some evidence that whenever a patient is discovered with locomotor ataxy and a joint lesion somebody will be found who thinks it is a peculiar arthropathy. Although one or even two of the six cases above-mentioned were not typical instances of ordinary arthritis, there was not a single one that I should like to say could not be regarded as some form of that disease.

When we come to consider the pathological aspect of the joint lesion, it is evident at once that the peculiarities of Charcot's disease are not very striking; in fact, he himself says, "On the whole, anatomically speaking, our arthropathy is included in the group of dry arthritis," and certainly this is true of the specimen he presented to St. Thomas's Hospital Museum. I do not think that anybody on being shown that would say, without knowing the history of the case, that there was anything about the bone to distinguish it from a specimen of rheumatoid arthritis. The piece of the top of the humerus he presented to the Museum of the College of Surgeons (No. 1921), shows that the head of the bone has entirely disappeared. A smooth and partly eburnated surface is left, surrounded by bony outgrowths. It will be noted that these last two points are most characteristic of rheumatoid arthritis. This specimen is in a case with many other dried ones of joint mischief, and thus there is an excellent opportunity of noting the points in which it resembles them. The only other example I am acquainted with is the pelvis, which I exhibited to the Pathological Society, and which Prof. Charcot was kind enough to examine for me. He pronounced it to be a rare form of the arthropathy he associates with locomotor ataxy. Now, this specimen undoubtedly presents a very unusual condition of things; the slight formation of new bone, the rarefaction of the normal bone, and the great deepening of the acetabula as a result of this, and the pressure inwards of the heads of the femora, go to build up a pelvis quite unlike anything which any Englishman to whom I have shown the specimen has seen. It was taken from a dissecting-room female subject; there is therefore a strong probability that it came from some infirmary bedridden subject. One thing is quite certain—namely, that she was in some public institution with a resident medical officer. Now, surely, considering how everyone is on the alert to find a case of Charcot's joint disease, had this patient presented symptoms of locomotor ataxy, she would have been recorded in one of the journals, or we should have heard of it in some way or another. It should also be noticed that there was some slight evidence of formation of new bone, although the chief characteristics were undoubtedly the absence of stalactites and the predominance of the wearing away process; but

[2] Ibid., March 1st, 1884, p. 414.

[3] Diseases of the Nervous System, Second Series, Sydenham Society's Transactions, p. 54.

[4] Ziemssen's Cyclopædia, English Trans., vol. xvi., pp. 162 and 160.

[5] Gazette des Hôpitaux, 1869, p. 224.

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considering that we have no evidence of locomotor ataxy, that both hips (which in Charcot's disease are but rarely affected) were here diseased, that there is some evidence of new bone formation, that the bones in old people are very liable to become light and thin, and, lastly, that in old people morbus coxæ senilis, which assumes divers forms, is common, is it not perhaps better to postpone definitely calling this specimen one of locomotor arthropathy, as our knowledge of this disease is still in its infancy?

Specimens 1922 and 1922A in the Royal College of Surgeons Museum show how extremely difficult it is to be sure of any distinct characters in the joints said to be affected with Charcot's disease. No. 1922 consists of the bones of the right upper extremity; they are all very wasted and much thinned, the shoulder-joint is destroyed, the head of the humerus gone, and the wrist bones are much atrophied, but the bones are no smaller than I have seen in an upper extremity which has been spastically contracted and disused for some years. The left knee-joint shows no production of stalactites, but the bones are so thinned that the first thing that suggested itself was that, whatever disease the patient suffered from, she must have been unable to use her leg for some time. In the catalogue is the following: "Joint changes symmetrical; those most like locomotor ataxy occur in the shoulders." The writer then goes on to say that the joint changes present "just the features of Charcot's joint disease. It may be that the woman is ataxic, and in a poor bedridden cripple it is not easy to decide this point; if, however, it be thought probable that ataxia is present, the case still remains chiefly one of general rheumatism, for the joints are or have been almost all affected, and with remarkable symmetry, whilst none are positively dislocated." Surely if a case presents just the features of Charcot's joint disease but still remains chiefly one of general rheumatism, there cannot be much distinction between the two diseases.

One need not proceed in showing that it is doubtful whether this disease is a pathological entity, because Charcot himself allows that it is not, the only points he urges are that in it the productions of new bone are slight, whilst the wearing away is excessive. I have tried to show that these two points in the three specimens I have seen are not so characteristic as to be very distinctive, and I hope to show that they may be accounted for in a simple way. I would refer the reader who is interested in the subject to the descriptions[6] by Féré, and Charcot and Féré, of the specimens in Paris. Here the majority of the cases undoubtedly show the two points just mentioned; nevertheless, there are some which are not much worn away and some with new stalactites. Mr. Arbuthnot Lane has already shown in the paper referred to that in a patient with most of the joints affected with rheumatoid arthritis the jaw may present such characters as to make it indistinguishable from Charcot's arthropathy. This speaks for itself.

Let us consider next the hypothesis that this arthritis occurring with locomotor ataxy is really the same as is produced in joints after injuries to nerves. Weir Mitchell[7] says it is quite evident that injuries of the spine, diseases of the spinal cord and of the brain, and wounds or any form of lesions of nerves, are capable of developing in the joints inflammatory conditions, usually subacute, and which precisely resemble rheumatic arthritis in their symptoms and results, so that no clinical skill can discriminate between the two. The same author again[8] says that the arthropathies due to nervous disease are so difficult to tell from rheumatism that they lend support to the theory that it is primarily a nervous disease. J. K. Mitchell, nearly fifty years ago, in the *American Journal of Medical Science*, also pointed out that obvious spinal cause may produce rheumatism characterised by heat, pain, redness, and tumefaction. It has also been shown by Gull that diseases of the cord will produce joint mischief. Ziemssen allows that injuries of the nervous system may be the cause of joint lesions. Charcot[9] himself gives several cases, such as one of a tumour of the right hemisphere, in which the joints of the opposite side were affected; he also shows that this cannot be due to a descending lesion, because it comes on too early, and for the same reason it cannot be due to functional inertia. Thus it appears there is no doubt that nerve lesions will produce joint disease indistinguishable from other well-known forms of arthritis. All authors who have written upon these arthropathies are of opinion that they are produced by inhibition of the trophic influence of certain nerves. There are perhaps some who still do not recognise the existence of trophic nerves, but at present the evidence is in support of their existence. Foster, who is always very cautious, considers that facts turn the balance in favour of trophic nerves. We must therefore allow the possibility of joint changes due to nervous lesion in a malady presenting such widespread alterations in the nervous system as does locomotor ataxy, but it is difficult to see the advantage of surrounding them with a halo of mystery; they may not be perhaps so acute as some nervous arthropathies, but still if they are due to a nervous change they must belong to that class, and t can only result in confusion to separate them from it. They must also be inflammatory; it is always allowed that the destruction of trophic influence results in inflammation of a part; true it is that it may be modified by various circumstances. Thus in the case of a joint inflammation not much new bone may be thrown out, but still it will belong to the same group. There can, it seems to me, be little doubt that not nearly all the cases that are described as Charcot's disease are really examples of an affection of the joints due to the destruction of some nervous influence; nevertheless, as I have just stated, we must allow that such is possible, although the admission lands us in considerable difficulties. Thus, if we allow that there is a trophic centre somewhere in the central nervous system which presides over the joints, some affection ought to supervene in them whenever the path from the centre to them is interrupted; for example, if the centre be in the medulla, as Buzzard supposes, whenever the nervous tract going from the medulla to the knee is injured we ought to get changes in the knee-joint, but we do not. The subjects of fractured spines may live for months without joint changes; severance of the cords in animals leads to no such result. Undoubtedly sometimes destruction of the cord will lead to joint mischief; but if the theory be true, it ought always to do so; just as section of the vagus always makes the heart go faster. The only way out of the difficulty is to imagine that the trophic influences descend in the sympathetic cord; this may be so, but at present we have no evidence of it.

The last of the three possible views is that the cases under consideration are ordinary rheumatic or other forms of arthritis occurring in ataxic patients, independently of their nervous disease, although sometimes modified by the conditions enforced by it. This view will, I imagine, be found to satisfactorily explain a very large number of cases called Charcot's joint disease, whilst for the remainder we may invoke the aid of the theory which refers them to some tropic nerve lesion. We are in fact driven to it by exclusion, and it is supported by the numerous resemblances to chronic rheumatic arthritis which have already been shown to exist in many cases of so-called Charcot's joint disease. When it comes on late in the ataxic it may be, as Volkmann has suggested, a traumatic arthritis, for this condition must be prone to occur in patients always flinging their legs about, and, once set up, it is very unlikely to have much chance of getting well. In the bedridden cases there are all the conditions requisite for the production of this arthropathy. It is well known that joints but little subject to use are very liable to disease. Thus I know of a gentleman who was confined to his bed for some weeks on account of a severe strain of the hip. He first got up for a short time one evening, and on waking the next morning his knee-joint presented exactly the characters ascribed to Charcot's locomotor arthropathy, but this change was obviously merely due to the slight use to which he had put a joint which had been for a long time disused. Then, again, with regard to the thinning of bones and fractures. One has only to spend a week in a large dissecting-room to see that old bedridden people are peculiarly liable to have their bones very thin, and hence also very liable to fracture of them. The supporters of the view of the specific entity of the locomotor arthropathy admit that it is very rare; thus, Charcot himself puts it at one in every ten cases of ataxy, and this is a high proportion. We have just shown that the examples which occur late in the malady may be easily explained, without necessarily supposing them to be peculiar to ataxy; so that we have only those few left which come on in the early period of the disease, and when we remember that in these cases sometimes the joint may be red, sometimes there may be fever, sometimes there may be much pain, and sometimes effusion into the joint, it does seem, considering

[6] Archives de Neurologie, Nos. 10, 11, and 18.
[7] Injuries to Nerves, p. 170.
[8] Spinal Arthropathies, Amer. Journal Med. Sciences, 1875, p. 389.
[9] Arch. de Physiologie, 1868, p. 172.

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the avowedly few number of cases and the numerous connecting links, somewhat rash to maintain that these are examples of an arthritis peculiar to locomotor ataxy. Then, again, in order to prove the case for a peculiar arthropathy, it must be shown that ataxics are more liable to joint trouble than other people, for unless they are less liable to rheumatic arthritis and common joint diseases than the rest of mankind, they will have these troubles together with their special ones, so that a larger percentage of ataxics than of ordinary people will have joint disease. But this has never been shown to be so, and my impression is that ataxics would not be found to be more liable to joint disease than any other class of people. But we are told post mortem the difference is to be seen, inasmuch as the wearing away process predominates over the production of stalacutes. The conditions under which ataxics are placed will, it seems to me, account for this, which, as shown above, is not always very marked; their whole vital power is lowered by the restraint imposed upon them by their malady. Thus they are often confined to bed, and various depressing complications are liable to supervene. Is it, then, strange that the new bone should not be thrown out very abundantly? The excessive wearing away can easily be accounted for when we remember the extreme thinness of the bones. If we look to other diseases, we see how the general condition of the patient modifies their course; for example, if a patient be in a very low condition, the granulations on an ulcerating surface will be small and grow slowly, whilst if he be in robust health they will be abundant and grow quickly. If in this case, why in that of the joint mischief may not the condition of the patient be used to explain a seeming peculiarity?

Further observation may show that Charcot's disease is a condition specially associated with locomotor ataxy. My object has merely been to point out that this has not been yet completely proved, and to present the arguments against it; also to suggest that whilst some cases of Charcot's disease may, like other nervous arthropathies, be due to the alteration of some trophic influence, a large number of cases that have been brought forward as a special disease are ordinary and well-known forms of arthritis, possibly somewhat modified by the condition of the patient.

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CHARCOT'S JOINT DISEASE

(ATAXIC ARTHROPATHY; TABETIC ARTHRITIS).

By PHILIP H. KIDD, M.B. EDIN.,

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THE comparative rarity of this disease, its recent discovery, and the obscurity that still hangs over many points alike in its pathology and its clinical picture, justify, I think, the somewhat detailed description I have given of the following case:—

Mr. ——, between forty-two and forty-three years of age, a small shopkeeper, began about a year and a half ago to complain of pains in his thighs and the lower part of his abdomen, which he compares to being slit with a knife, and for the relief of which he used to curl up his left leg, so that his heel touched the trunk on the same side, and take long walks. Shortly afterwards he noticed a crackling sound in his left thigh whenever he moved it, and this was succeeded by swelling over the region of the hip-joint, which seems to have reached as far as half-way down the thigh on the outside, and was accompanied by a more circumscribed swelling in front of the joint, thus showing, I take it, that it was a true effusion into the cavity of the articulation. He then called in the medical officers of the Association, who prescribed for him, and painted his hip with iodine. Treatment was followed by subsidence of the swelling, but the crackling sound remained, and the pains descended into his leg, and about that time he also noticed wasting of the leg. He was able soon afterwards to get about by means of a stick, and attendance on him ceased for some months. On March 8th last, he first noticed the crackling in the right hip, unaccompanied this time by any swelling, and as this increased, and the corresponding leg and thigh began also to waste, he asked for further attendance.

On April 4th I saw the patient, and elicited the following facts. He has always lived a steady, quiet life, and has a comfortable home; has had no form of venereal disease, nor suffered from nocturnal emissions; has always been a healthy, active man, and the only point in his history is that about seven years ago he was knocked down by a frightened cow in the street, and was brought home looking, his wife says, "just like a corpse." She avers that he has never been the same man since. He has been married fifteen years and had nine children, of whom five are alive and all healthy. He has never indulged in spirituous liquors, though his father is a heavy drinker. His family history is good.

The patient when I saw him was a good deal emaciated, had an anxious expression, and a dusky, unhealthy complexion. There was no evidence of any pulmonary or cardiac disease. On moving either hip loud crackling sounds were produced, which were propagated down the thigh. He complained of pains like being slit with a knife down the legs and in the lower part of the abdomen; sometimes these pains passed up into the epigastric region, and then he lost his appetite for a day, but there was never any vomiting or other gastric disturbance of any kind. There was no girdle pain. The patellar tendon-reflex was entirely absent in both limbs; in sitting on the bedside to have this tested his right foot swung at a normal angle to the leg, while in the left limb the dorsum of the foot and of the leg were in the same straight line, and the great toe curved downwards to the ground; the cutaneous veins were noticed to be engorged in both lower extremities, especially so in the left. Tactile sensation was fairly correct in both soles, though it was delayed; but there was well-marked analgesia except in one spot in the waist of the foot. The character of the gait was too much masked by the double hip-joint disease to be trustworthy; but he did not seem to have the usual feeling of padding in the soles of his feet; he had never noticed any difficulty about walking in the dark, but soon began to totter when standing with his eyes shut. The glutei muscles were not atrophied, and when standing they were in a condition of spasm, which was probably due to the great laxity of the ligaments. He had now no skin disease, but last summer while under treatment he said he had an eruption on his chest, which seemed to have been a diffused redness not marked by wheals, vesicles, or papules, and which came and went. When it was fully out it was accompanied by intense itching and burning, but did not seem to have had any relation to, or connexion with, the slitting pains. The gastric, intestinal, and laryngeal functions were normal. For three weeks previously his urine had passed away from him while sitting or lying down; the first thing he knew about it was the wetness of his shirt. The vision of his right eye was about normal, but with his left he could not make out No. 20 Snellen's types at any distance. The pupils were both a good deal contracted, but retained a feeble amount of accommodation to both light and convergence. They responded less readily to light than to convergence, so that the Argyll-Robertson phenomenon might be said to have been partially developed. With the ophthalmoscope the fundus of the right eye appeared to be normal; the fundus of the left was pale, the vessels were small and tortuous, and the optic disc was atrophied.

There could, I think, be no doubt that this was a true case of locomotor ataxia, and of the joint disease which sometimes accompanies it. The salient points seemed to me to be the particular joints affected; the appearance of the grating prior to any effusion; the great laxity of the ligaments in the ataxic limbs and the early date in the history at which this would seem to have existed; the absence of *crises gastriques;* the position of the left foot when pendulous, as somewhat complicating the diagnosis; and the differential diagnosis from chronic osteo-arthritis in such a case as this where the locomotor ataxia was not previously known to exist. As regards the question of diagnosis, Dr. Byrom Bramwell[1] gives three criteria—(1) that this disease is more acute; (2) that in chronic rheumatic arthritis the smaller joints and the hip are most frequently affected, whereas in locomotor ataxia the knee and shoulder are most often involved; (3) the presence of liquid effusion and dislocations. I have not found any of these criteria of very much help, for my case has lasted very nearly a year, probably quite, and, beyond the fact of another joint having become involved, not much progress seems to have been made. As to the joints affected, besides this one, I have access to the records of only eight cases. In the case shown by Mr. Page to the Medical

[1] Diseases of the Spinal Cord, p. 221.

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Congress of London[3] the tarso-metatarsal joints were the seat; in both Mr. Macnamara's two cases,[4] shown at the same time, the right hip was affected; at the same time Professor Charcot demonstrated two cases; in Berthelot the left knee was first attacked, though the right hip eventually did not escape; in Cressy there was disease of both hips. Dr. Hale White's[4] post-mortem case was of both hips; Mr. Lucas's case[5] showed the right elbow and foot affected; in Mr. Raven's[6] the knee-joints were the first attacked. With such a record Dr. Bramwell's view can scarcely be accepted; indeed it would seem that the hip is rather a favourite seat of the disease. In both Mr. Macnamara's cases, as in mine, the effusion was but a fugitive phenomenon, and dislocations are not always seen apparently till a later period. The most trustworthy criteria seem to me to be the absence of pain in the joint itself, which must be carefully distinguished from the lightning pain in the limb, which may easily be mistaken for rheumatic; the laxity of the ligaments; and any evidence of disease of the nervous system. A careful inquiry will then probably set the matter at rest by showing the existence of ataxia.

With reference to the true nature of the disease and its etiology, I would for the present be content to look on it as depending on want of nutrition, and referable to the same predisposing causes, at least, as the laxity of the ligaments and as the perforating ulcers occasionally seen in ataxic limbs. The cause of this want of nutrition I am inclined to agree with Dr. Althaus in ascribing to peripheral neuritis; Dr. Charcot's theory of affection of the anterior cornua would seem to be upset by more recent cases, and for Dr. Buzzard's bulbar theory, I know of no evidence; besides, a spinal lesion does not seem to be a necessary factor of locomotor ataxia itself.[7] As to whether the disease is a true atrophy or a low and modified form of inflammation, I must leave to pathologists to discuss; my point of view is from the bedside, not the post-mortem room.

I cannot conclude this report without thanking my late senior colleague, Dr. Johnstone Weir, both for giving the case over to me to study directly he knew my diagnosis, and also for kindly furnishing me with the report on the eyes; his experience gained while resident at the Glasgow Eye Infirmary renders his report accurate and trustworthy.

West Hartlepool.

ON CYSTS AND CYSTIC TUMOURS OF THE BREAST.

By HENRY T. BUTLIN, F.R.C.S.,

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No. III.—CYSTIC TUMOURS.

THE two preceding papers have been devoted to the consideration of those diseases of the breast in which the formation of cysts played the chief or, in some instances, the only part, and in which there was no real tumour external to the cyst, although some of them, the glandular cysts especially, contained intra-cystic growths. In this, the last paper of the series, I propose to speak of the tumours which contain cysts, and particularly of those tumours to which the name of sero-cystic has been given.

I have recently described in the System of Surgery and in the fourth volume of the American Encyclopædia of Surgery the general relations between cysts and solid tumours, and I need only point out now that cysts may form in tumours of the breast just as they form in the natural tissues of the breast; they may be glandular or connective tissue (lymphatic). They are far more common in the connective tissue tumours, fibromas, and sarcomas than in the carcinomas; and, contrary to what might be expected, cysts of glandular origin are far more common than those of connective tissue origin. When, however, the frequency, nay, the almost invariable occurrence, of glandular structures in the connective tissue tumours is remembered, this fact will not appear so singular. The manner of the formation of the glandular cysts in the connective tissue tumours is precisely similar to the manner of their formation in the normal breast. Fluid is secreted into the interior of the acini and small ducts which form so striking a part of the structure of the tumours. The fluid cannot escape because there is no apparatus provided for its escape, the ducts which connect the secreting structures of the tumour with the main ducts of the gland, if they still exist, are obstructed, and consequently worthless; the fluid, therefore, must either be absorbed or must distend the cavities into which it has been poured. When a connective tissue tumour, of whatever kind, contains cysts, the cysts are much more prone to become the seat of intra-cystic growths than are the cysts which develop in the normal breast; for, in addition to the growths which spring from the wall of the cysts into their interior, the tumour, constantly increasing, tends to increase in the directions of least resistance, and thrusts its new growths into the cavities of the cysts, pushing the wall before them, distorting the shape of the cysts, and leading by pressure to absorption of part or of the whole of the fluid. In many such tumours there is thus a continual struggle for place between the solid and fluid constituents. The glandular apparatus pours out fluid, the fluid widens a cavity for itself, the solid puts forth new solid, the new solid is projected into the interior of the cavity, and the cavity is often scarcely formed before it is filled up and obliterated by solid growths. In the carcinomas the manner of development of cysts is probably not always that which has been described. The impulse to the development of new cells in the interior of the glandular acini and ducts is so strong that it is more than probable that new cell formation precedes the development of cysts, and that the cysts are, in many instances, due to the degeneration of the central cells of a cell mass (in the manner described by Mr. Eve).

I have in my possession notes of sixty-six cases of cystic tumour of the breast, many of which were examined by myself, and all of which were examined microscopically. In all these cases the cysts were of more or less considerable size, so as to form a striking feature of the disease. Fifty-six were connective tissue tumours, nine were carcinomas. One was an adenoma. The connective tissue tumours were thus divided: twenty-five sarcomas, eighteen fibromas, six adeno-fibromas, seven mixed connective tissue tumours. For all practical purposes the fibromas and adeno-fibromas may be included under one heading, for there is almost never a fibroma which does not contain glandular structures, and the rather larger proportion of glandular structures which the adeno-fibromas contain does not in any respect affect the course which they pursue. The mixed connective tissue tumours were composed of fibrous, mucous, and sarcomatous tissues in varying proportions, so that some of them might be regarded as fibrifying sarcomas; others as fibromas which had not completed their development. They invariably contained glandular structures, sometimes in considerable quantity. Anatomically, it appears from these sixty-six cases that almost every kind of tumour which attacks the breast may be cystic, and that there is not any one variety of tumour which especially deserves the name of cystic. Nor, on the other hand, are there any of these tumours which occur in the breast only in association with cysts—in other words, only in a cystic form. Clinically, the facts in my possession are defective, for few of the cases have been followed long after operation. Still, the facts which have been observed all tend so show that the life history of these tumours is dependent on the nature of their solid constituents, not on the size or number of the cysts which they contain. Thus, the further history of seven cases of sarcoma is recorded. In four of these very considerable operations were practised, the entire breast having been removed freely at the first operation; no recurrence took place in any of them, although one of the patients died between two and three years later of cancer of the other breast. In the other three cases recurrence took place in two of them after removal of the tumour; in the third after amputation of the breast. The last was evidently a very bad case; the tumour had only been noticed a few months, it had grown quickly, and the recurrence took place almost before the wound of the operation was healed; no further attempt to remove it appears to have been made. The recurrences in the first and second cases were numerous, continuing till one patient died from the effects of the fourth operation, and until the last report in the other case, full fourteen years after the first tumour was removed. It is interesting to note in confirmation of Dr. Gross's statement, that sarcomas of the breast do not affect the lymphatic glands, that the only instance in which there was enlarge-

[3] Transactions, vol. i. p. 124. [4] Ibid., pp. 125, 128.
[4] THE LANCET, Nov. 24th, 1883. [5] Ibid., March 1st, 1884.
[6] British Medical Journal, Feb. 23rd, 1884.
[7] THE LANCET, Nov. 3rd, 1883.

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ment of the axillary glands in connexion with a cystic sarcoma was one of these seven; the glands were not removed, and when the patient was seen four years later the enlargement had subsided completely. Of the twenty-four cases made up by grouping together the fibromas and adeno-fibromas the further history of six is recorded. In five of these there was no recurrence, whether the operation had been merely a removal of the tumour or amputation of the breast. In the sixth a second tumour appeared near the site of that which had been removed about six months previously, grew for a few months, then ceased to enlarge. It does not appear to have caused any trouble, and was therefore not removed. Three of the patients with mixed connective tissue tumours were heard of long after they had been operated on. The results of the operations were, as might have been expected, somewhat different. In two of them there had been no recurrence; in the third the breast had been removed completely by a second operation, and when the patient wrote in reply to an inquiry from myself she was again suffering from recurrence. Where the tumours are of so mixed a structure, containing various modifications of fibrous and mucous tissue and a larger or less amount of embryonic tissue, it is absolutely impossible to offer a certain prognosis. The cystic carcinomas presented no other unusual characters except the cysts; their course was precisely similar in all respects to that of an equal number of carcinomas without cysts.

From a study of the various cystic tumours of the breast I cannot but come to the conclusion that the cysts, although they produce a marked alteration in the physical characters and are associated with rapid growth of the tumours, are of absolutely no importance so far as the life-history of the tumours is concerned. The cysts, however large and numerous they be, neither diminish nor increase the capacity of the tumour for evil. A cystic fibroma is not more formidable to life, except in so far as it is generally larger, than is a fibroma without cysts; a cystic carcinoma or sarcoma is not less likely to recur than is a carcinoma or sarcoma without cysts. The cysts may almost be regarded as an accident in the development of a tumour of the breast, and, seeing that almost every variety of tumour of the breast may contain them, it might further seem that any and every tumour of the breast might, at any period of its development, become cystic. Such, however, is not the case; the same rule with regard to age prevails for cystic tumours as for simple (glandular and connective tissue) cysts; they are a disease of women over forty years of age. Only two of the sixty-six patients of whom I have spoken were under thirty years, and in both these cases the cysts were what are termed soap-cysts, a modification of milk-cysts, and therefore essentially cysts of the breasts of young women. Fifty-six patients were over forty years of age, and of the remaining eight who were between thirty and forty years, four were between thirty-seven and forty years. The relation of cystic tumours to age is much more difficult to explain than was the relation of simple cysts to age.[1] Fibromas, adeno-fibromas, and sarcomas occur in the breasts of women of all ages, and the fibromas containing glandular structures are more common in the breasts of women under than over forty. Nay more, tiny cysts are common in these fibromas or adeno-fibromas of young women. I have several examples of tumours containing such tiny cysts, some of them scarcely visible to the naked eye, yet most of them containing intra-cystic growths. Microscopically, neither the cysts nor the intra-cystic growths differed from the cysts and intra-cystic growths in the larger and decidedly cystic tumours. Surely it is a marvellous circumstance that only women of a certain age appear to be capable of developing those large and numerous cysts which make so striking a part of many tumours of the breast.

The foregoing remarks are entirely opposed to the teaching of the principal text-books of surgery at present employed in our schools, in which the classification and description of most of the tumours of the breast are those used fifty or more years ago. The books have been compelled to adopt largely the anatomical classification of tumours in the chapters which are devoted to the general account of these diseases; but they have not yet carried this classification into the chapter devoted to tumours of the breast. This is much to be deplored: first, because the student is perplexed by being obliged to apply a quite different classification to tumours of the breast to that which he has used elsewhere; second, because the descriptions of the tumours and the very terms which are applied to them draw his attention from the most important features of the diseases and fix it on those characters which are indeed most striking but are comparatively unimportant. As a teacher of surgery in a large school I constantly feel this difficulty in regard to tumours of the breast. I would fain teach as I believe and make my teaching harmonise with that of the best modern works on pathology of the last twenty years; but the fear lest such teaching should clash with the opinions of the examining boards has hitherto prevented me from doing so.

Queen Anne-street, W.

[1] Vide THE LANCET, vol. i., p. 742.

ON

THE DIAGNOSTIC VALUE OF WESTPHAL'S SYMPTOM IN SOME UNUSUAL FORMS OF SPINAL DISEASE.

BY JULIUS ALTHAUS, M.D., M.R.C.P.,
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Loss of the knee-jerk is found in all cases of uncomplicated tabes in which we have to do with sclerosis of the posterior columns in the lumbar portion of the cord; and this symptom is of the greatest diagnostic value, more especially in those by no means unfrequent cases where the other symptoms of spinal disease are somewhat indistinct, and it may be overshadowed by signs which are apt to be referred to stomach and liver derangement, or are believed to be owing to gout, hypochondriasis, and other diseases. In the following case the diagnosis of gout had been made by several experienced practitioners, and it was chiefly the presence of Westphal's symptom which enabled me to recognise the existence of tabes.

A stockbroker, aged fifty-nine, married, but childless, consulted me in October, 1881. He complained of being eaten up with the gout, and of having the most fearful gouty pains in his head, chest, back, loins, stomach, and, worst of all, in the bladder. He had had syphilis fifteen years ago, but had not shown any symptoms of it during the last twelve years. He had lately been treated with citrate of potash, lithia, and colchicum, but without relief. The peculiar description which he gave of the pains to which he was the subject made me suspect tabes; and on examining his legs, I found the knee-jerk absent, which threw at once a flood of light on the nature of his malady. I then examined him for other symptoms of tabes, and found that he had Argyll-Robertson's symptom of reflectory rigidity of the pupils, staggered on standing with his eyes closed, had lost the sexual power some years ago, and suffered frequently from incontinence of the bladder and bowels. He had regular *vesical crises* from time to time, when he would be seized with severe pain in the bladder, chiefly at night, and constant desire to pass urine. On some occasions he had been called out of bed more than sixty times in the course of a single night, and would each time pass only a few drops of urine, in great agony. He had similar *rectal crises*, and would soil himself five or six times in the course of a night. The upper extremities were not affected, with the exception of an area of numbness in the right ulnar nerve.

In July, 1882, Dr. Philpot, of Croydon, asked me to see a patient with him, whose case had been diagnosed as "hypochondriasis with loss of nerve power" by several physicians; and although I was led to look for tabes by a different symptom, yet loss of the knee-jerk alone enabled me to speak with certainty as to the nature of the disease. The patient was fifty-six years of age, married, and father of two children, and had been actively engaged in business; his chief complaint was of great depression of spirits, indigestion, and tightness round the chest, which he had had for about two years. A feeling of constriction of the chest being a common symptom of tabes, I examined the patellar tendon-reflexes, and, finding them completely absent, had no difficulty in eliciting the history and presence of numerous other symptoms of that disease. It appeared that the patient had had syphilis ten years ago. Eight years afterwards he began to complain of numbness in the third and fourth fingers of both hands, of dull pain in the back and legs, of incontinence

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of urine, constipation of the bowels, and loss of sexual desire and power. In addition to these symptoms, there was now reflectory rigidity of the pupil's, Romberg's sign, difficulty in going downstairs, a sensation as if there were a pad of india-rubber under the soles of the feet, and slight ataxy in walking.

In December, 1881, I was consulted by an officer, aged thirty-seven, who had served fourteen years in India, and had suffered there during the whole of that time, more or less, from congestion of the liver and diarrhœa. He contracted syphilis in 1872, and had afterwards specific eruptions, chiefly on the legs, sore-throat, and persistent soreness of the tongue. His chief complaint, however, was of sleeplessness, which had come on sixteen months ago, and proved most obstinate, as it resisted all the remedies usually given for that condition. A feeling of general prostration, which he had had since that time, was by the patient attributed to the loss of sleep. Another symptom he mentioned was a feeling of "fierce compression" round the chest, and this led me particularly to examine the patellar reflexes. Finding them lost, I looked for other symptoms of tabes, and found great flabbiness and emaciation of the muscles of the legs, motor debility, numbness in all four extremities, and great diminution of sexual desire and power.

There is reason to believe that loss of the knee-jerk is in some cases the first, and in the majority of cases one of the first, symptoms of tabes spinalis. The diagnostic importance of this phenomenon, and of the modifications which it undergoes in certain cerebral and spinal diseases, is now almost universally acknowledged; and it is not too much to say that we owe a debt of gratitude to the distinguished physician and teacher who first drew our attention to it, for the new light which the study of this symptom and its modifications has thrown upon many obscure conditions of the nervous system. It seems singular that even now this symptom is very little thought of in France. Vulpian, in his otherwise very able lectures on diseases of the nervous system, makes a sneering remark about the discovery "which Westphal thinks he has made;" and Fournier laments the uncertainty which attaches to the diagnosis of the early stages of tabes, when such a symptom as this is within his reach.

It is not necessary for me to allude in this place to the different theories which have been started concerning the causation of the knee-jerk, nor to the diseases of the motor sphere in which it may be lost, such as infantile paralysis, pseudo-hypertrophy of the muscles, and atrophy from neuritis, such as occurs after diphtheria, &c. I will only add that in order to be pathognomonic for tabes, Westphal's symptoms must be combined with good voluntary power, a proper faradaic response, and idio-muscular contraction of the quadriceps femoris in response to direct percussion.

While, therefore, *loss* of the knee-jerk habitually indicates tabes spinalis, even where other symptoms seem to point in a different direction, its *presence* or *exaggeration* will show us that, although many symptoms of tabes may be present, yet the case is not one of locomotor ataxy or sclerosis of the posterior columns of the cord, as generally understood. In such cases, which are far from uncommon, we have rather to do with a combined system—disease of the posterior and lateral columns, or with insular disseminated sclerosis, than with tabes spinalis. The exaggeration of the knee-jerk is then to be explained by the sclerotic irritation of the lateral columns, which is too powerful in its effects to be neutralised by the disease of the posterior columns. Lightning pains are mostly absent, and the difficulty in walking is rather owing to paresis than to ataxy, or to a combination of these two conditions.

In February, 1883, a miller, aged thirty-one, married, and father of two children, was admitted into the hospital under my care. He denied any syphilitic infection, and attributed his illness to the severe chills which he had habitually experienced in his business. Twelve years ago he had broken his right leg, and there was now a large exostosis on the tibia, which but for this history might have been looked upon as one of a syphilitic character. His present illness commenced three years ago, when he lost his taste and had double vision. At the same time he found that he could not walk so well as before, more especially in the dark. After a time the sense of taste gradually came back, and he saw things single again; and two months after having first been taken ill the power in the legs improved so much that he thought he walked as well as ever. Twelve months ago, however, he began to get worse again, and the disease has since then gradually gained upon him. On examination the brain and cranial nerves appeared to be healthy. The patient complained of a sensation as if he had a tight rope round his chest, of difficulty in retaining the urine, obstinate constipation, and complete loss of sexual power. He felt numbness in the hands, and had some degree of ataxy in the upper extremities, more especially when he attempted to write. His gait appeared to be a mixture of ataxy and paresis, as there was decided loss of muscular force together with jerkiness; the patient had to manœuvre with his arms while walking, as otherwise he felt too unsteady to go on; and on shutting his eyes he staggered to such an extent that he would have fallen unless supported. He also complained of numbness in the soles of his feet; but he had never had lightning pains or any other kind of pain. On testing the deep reflexes, I found them all very much exaggerated, and I therefore concluded that the case was not one of tabes spinalis, but one of an unusual form of insular sclerosis of the spinal cord, which had affected several strands of fibres in that organ, but had spared those which are more particularly concerned with the sensation of pain, and deep reflex action in the posterior columns. The absence of lightning pains is, however, not invariable in such cases, as shown by the instance of an Irish farmer, aged fifty-one, married, and father of two children, who consulted me in October, 1882. He complained of incontinence of urine, loss of sexual power, obstinate constipation of the bowels, inability to walk in the dark, numbness, and occasional attacks of lightning pains in the legs, the muscles of which were thin and flabby, and several other symptoms. He had had syphilis badly ten years ago. The patellar reflexes were greatly exaggerated, and I therefore concluded the case to be one of a combined system-disease of the lateral and posterior columns.

A case in which there was a very marked combination of paresis and ataxy was that of an accountant, aged thirty-two, single, who was sent to me by Dr. Hausemann of Wildbad, in October, 1879. This patient had knocked about town a good deal ten years ago, and had then had a chancre which was followed by a large crop of secondaries, chiefly on the skin and in the throat. Two years afterwards he had repeated attacks of neuralgia and aphasia, and was inefficiently treated in Java, the Cape, St. Helena, and various other places. He was better and worse off and on, but about three years ago began to suffer from more definite symptoms of spinal disease. He had now the greatest difficulty in getting up from a chair, in standing and walking. There was great loss of muscular force, more particularly in the right leg. The bladder was so irritable that he had constant desire to micturate, and there was incontinence during sleep. The bowels were obstinately constipated; the sexual power almost entirely gone. The knee-jerk was greatly exaggerated on both sides, and it was therefore evident that the case was one of combined system-disease of the cord. In this case likewise no lightning pains had occurred at any time.

Harley-street.

SOME OBSERVATIONS ON THE

SPINAL CORD IN HEALTH AND DISEASE AT THE REGION OF THE FOURTH AND FIFTH DORSAL VERTEBRÆ.

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IT may be safely affirmed that in these days of progressive medicine and scientific investigation the department of neurology is the most advanced and the most prolific in results, and that through the labours of its votaries in this country, on the Continent, and in America, our knowledge of the causes, the nature, and treatment of nervous disorders is being enriched by an almost daily increment of valuable discovery. Much, however, as neurological science owes to the specialist and to experimental research, it should not be forgotten that to clinical observation and correct symptomatology many important discoveries must be accredited. Marshall Hall in our own country, and Duchenne of Boulogne, whose original researches have made their names immortal, were not specialists in any sense of the

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term; they were great clinical teachers and voluminous writers, who, whilst labouring in the wide field of general medicine, allowed no limits to be put to their thirst for scientific inquiry. The spinal cord and its envelopments have engaged the special attention of neurologists, and their diseases, whether functional or organic, have also supplied material for the gravest consideration; our knowledge of their intimate nature and causation has thus been commensurately advanced; and we may reasonably hope, through the classification and subdivisions of the spinal axis recently proposed by French and German *savants*, to attain to greater accuracy in the treatment and prognosis of this interesting class of disorders. Up till the time of Budge and Waller no attempt had been made to subdivide the spinal cord into pathological regions; these eminent physiologists, indeed, only mapped off the cervical and upper portions of the dorsal vertebræ, under the name of the centrum cilio-spinale, because they found that irritation of this region produced dilatation of the pupil, through the action of the cervical sympathetic upon the iris. It is, however, with a region of much smaller dimensions, but possibly of even greater importance, that we have to concern ourselves at present—viz., that portion of the dorsal cord covered and limited by the fourth and fifth dorsal vertebræ. For many years, and soon after my introduction into practice, I had invariably observed in every case of hysteria, chorea, neuralgia, facial paralysis, and other neuroses in females, the co-existence of pronounced spinal tenderness on pressure over the fourth or fifth, more frequently the fourth and fifth dorsal vertebræ; with this practical result, the almost invariable and rapid cure of those maladies by remedies applied over these vertebræ alone. At first I regarded these manifestations as attributable to the peculiarity of the female constitution, its sensitive nervous system, its proclivity to emotional influences, and its general structural excitability; but, soon after recognising a similar condition of the spinal column in males so affected, I perceived that it was not referable to the female habit of body alone, but to localised lesions of distinctive character common to either sex, which in the absence of a more technical nomenclature might be considered as a form of so-called "spinal irritation." Still further observation elicited the extraordinary fact that this local spinal peculiarity, which at first I had looked upon as a morbid symptom, and the heritage of enfeebled constitutions, was in reality the normal condition of every healthy individual as well, of every age and class.

For statistical purposes some years since I instituted a special examination of healthy persons of various ages and positions in groups, such as inmates of industrial schools, reformatories, &c., and men in the public service, with the following result:—1. Of 131 female children and girls, from six to sixteen years of age, inmates of the Female Industrial School, Crumlin-road, Belfast, whose spinal columns I examined separately, and in the presence of the matron on May 16th, 1881, everyone complained of acute pain when tapped with the knuckles over the fourth or fifth dorsal spines, and a large number on the fourth and fifth; no pain being spoken of when the remaining twenty-two spinous processes were similarly treated. 2. Of thirty-five women of various ages confined in the penitentiary at Ballynafeigh, near Belfast, whose vertebral prominences I examined along with a medical friend on May 24th of the same year, whilst the greater number complained loudly when percussed over the fourth or fifth dorsal, a number resented the examination, were sulky, and gave indefinite answers. 3. Of thirty-one lads committed for crime to the Malone Reformatory, Belfast, whom I similarly examined on May 28th, 1881, separately and in the presence of their medical attendant, and whose ages ranged from eleven to nineteen years, each one yielded with a cry of pain when tested similarly over one or other of these processes; about one-half over the fourth, four over the fourth and fifth, and the remainder over the fifth alone. 4. Of 300 men between twenty-one and sixty-five years of age, members of the Royal Irish Constabulary, equal in physical development to any men in a regiment of the line, and under my professional care, whose vertebral columns I examined at various times, every man shrank with an expression of pain when similarly tapped over the fourth or fifth dorsal, the great majority over the fifth, some on the fourth and fifth, the remainder on the fourth only, and, like the other classes examined, exhibited no signs of pain or inconvenience when the remainder of the spinal column was similarly examined. Of the existence of this limited zone of spinal hyperæsthesia in the healthy subject, anyone may satisfy himself by tapping sharply over the dorsal spines of a friend, when the phenomena I have noted will at once become evident; or, if still doubtful, he can experience in his own person its reality, through the instrumentality of another; but the knuckles or the percussion hammer must be made to strike the spinous processes vertically and not at an obtuse angle, or in a careless or perfunctory manner, as otherwise disappointment is likely to result. The pain experienced over these sensitive points is peculiar; some compare it to an electric shock diffused over the chest and arms, others liken it to the tingling sensation caused by a knock upon the ulnar nerve at the bend of the elbow, and all declare that it is of a most disagreeable nature. It is evident that the constant presence in the healthy and the delicate constitution of this latent form of spinal hyperæsthesia must, to a great extent, affect the teaching of those writers upon spinal pathology who regard tenderness on pressure upon the vertebral column between the shoulders as a pathognomonic sign of spinal disorder. It had been for many years regarded as such by myself; but the fact of so many painful affections having been thoroughly cured by counter-irritation over this spot made the conclusion appear to me as absolutely certain; yet I was mistaken, for, paradoxical as it may appear, although counter-irritation in this place rapidly removed the complaint, yet when the raw surface healed up and the cure was complete, the original spinal tenderness remained as pronounced as at first.

Among the ailments which yielded so rapidly to the counter-irritant treatment were trigeminal neuralgia, facial paralysis (Bell's), acute hysteria, dysmenorrhœa, the reflex vomiting, the neuralgic toothache and the pruritus pudendi of pregnancy, gastralgia and other neuroses; and when vesication was the method adopted, I was generally able to assure the invalid that in five hours, coincident with the formation of the blister, all painful symptoms would permanently take their departure. By neuralgia I mean the typical disease of remittent character generally, but not always departing at night, to recur at the same hour every morning, or *vice versâ*, and not that hybrid ailment, principally rheumatic, so often miscalled; chorea has almost always yielded to this plan of treatment, with some important exceptions, including the chorea of pregnancy, and that form depending on organic cardiac disease. The dysmenorrhœa of neuralgic type yields readily, and I have not once failed for many years by a single vesication over these vertebræ to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache, and the pruritus pudendi of the puerperal condition, yield as readily, and to one application.

In our present imperfect knowledge of spinal pathology, it is not easy to explain how it is that remedies applied solely to this limited area of the spinal column can control and cure disease located in the periphery and in distant organs. I have failed to obtain any proof that any fibrillary connexion can subsist between the dorsal cord or nerves and those conducting motor or sensory power to the organs under consideration. There is nothing peculiar in the structure or dimensions of the cord at the mid-dorsal region save that it is narrower and more compact than in other parts of the neural axis. The fourth dorsal spine, according to Gowers, corresponds to the origin of the sixth dorsal nerves, and the fifth to that of the seventh pair, and those are the nerves which might naturally suffer from the pain due to percussion on the corresponding spinous processes. But this, if true, would not remove the difficulty. While we are still unacquainted with many of the causes which excite or depress the sympathetic and its spinal centre, the controlling influence of this plan of treatment appears to confirm, to a certain extent, the teaching of Mr. Pridgin Teale, who believes that there exists an etiological relation between an irritable state of the spinal cord and sympathetic ganglia and neuralgic troubles in remote organs. Mr. Teale's propositions, however, only cover a portion of the subject, as, in his own words, "they refer chiefly to phenomena exhibited in those remote parts to which the nerves from the diseased portion (cord or sympathetic ganglia) are distributed." It does not explain the difficulty that counter-irritation of an area *unconnected* by nervous filaments with the seat of pain or paralysis will also as rapidly stifle the disorder. Being desirous of obtaining from a high authority a scientific explanation of the coexistence of this limited area of latent hyperæsthesia with neurotic disorder in distant organs, I wrote to Dr. Brown-Séquard in the summer of 1870,

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requesting the favour of his opinion on the subject. I received a polite reply in August of the same year from Paris, just before the Prussians had closed in upon the doomed city. In that letter he says: "Why it is that some parts are more particularly attacked with vaso-motor spasm and others with vaso-motor paralysis we do not know, and therefore I cannot answer your question; but I can say that the morbid sensibility of the spine at the level of the fourth dorsal and of the seventh cervical is a sign of anæmia and hysteria, and that persons in health are free from it." At that time I was not myself cognisant of the fact that "persons in health" were as obnoxious to this "morbid sensibility of the spine at the level of the fourth dorsal" as the most neurotic sufferer. Why it is so I think it is needless to speculate. I fear it must be regarded as one of those conditions inherent in the human constitution which is beyond our power of elucidation; not so, however, when we inquire why counter-irritation upon a specified area of the human integument relieves pain or restores motor power in a distant part of the body. There is every reason to believe that, with due observation and well-directed experiment, a clear solution will be found, and already we may perhaps claim to have obtained an approximative explanation of the phenomenon. Treating on the subject of mechanical vibration for the relief of pain, Dr. W. J. Morton of New York says: "The general law which governs the relief of pain by counter-irritation has been recently formulated by Brown-Séquard, who, after careful experimentation, announced the general principle that general and local anæsthesia could be produced in the lower animals by applying to their peripheral nerve distribution a strong counter-irritant, like a few drops of chloroform, and that the anæsthesia was explicable on the theory of inhibitory action. A drop of chloroform on a guinea-pig's neck produced general anæsthesia. Here was an explanation of counter-irritant procedure in medicine. It requires little imagination to figure the time when a certain localised and known peripheral area of the human skin may be counter-irritated in order to produce an inhibition of pain in some spot far distant. At present the counter-irritation is applied as near as possible to the seat of pain. Undoubtedly many of the cures or reliefs of pain that are effected by general peripheral treatment, like slapping, rubbing, stroking with the hand, general applications of electricity, &c., are due to impressions on the fine peripheral network of the sensitive nerves, and conveyed to centres which set up inhibitory or relief responses, in their turn curative."[1] These suggestive words give perhaps the best available explanation of the pathological condition I have endeavoured to describe, and why "a certain localised and known peripheral area" of the human skin may be counter-irritated in order to produce an inhibition of pain in some spot far distant.

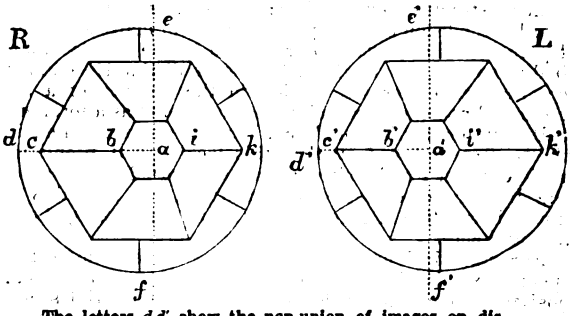
THE SECONDARY NATURE OF BINOCULAR RELIEF.

BY BRIGADE-SURGEON T. OUGHTON, A.M.D.

(*Concluded from page 14.*)

WITH a clear conception of the foregoing premises, the present hypothesis will be understood without much difficulty, and stands thus: Binocular relief is intrinsically the computation of a greater retinal image with a lesser correspondent retinal image, of a greater visual angle and its objective magnitude with a lesser visual angle and its objective magnitude; herein is comprised that compression which is essential to all relievo perceptions, whether tactile or visual. When the retinal images are precisely similar, we shall find that the image in one eye is under an extensor influence providing the image in the other eye is under a flexor influence, and these two influences will be of equal intensity; as a consequence, the object will be seen flat and without relief, being either coincident with the plane of the horopter (a plane at right angles to the median line of sight at the intersection of the optical axes), or with a plane that is parallel thereto. When the retinal image is greater than its fellow, the object will be seen in a concave relief relatively to the fixed binocular centre or horopter, providing the greater image is under an extensor influence; further, it will be seen as a convex relief relatively to the binocular centre when the larger image is under a flexor or approximating influence. In viewing the figures of the annexed diagram (the outlines of a direct bird's-eye view of a hexagonal monument standing on a circular pediment, drawn from two points of sight corresponding to the interocular distance), either in a stereoscope or by converging the eyes beyond the paper on which they are described, *R* will represent the delineation on the right retina and *L* that on the left. The most noteworthy facts are: First, that the pair of smaller hexagons are precisely similar, and the corresponding objective hexagon is a superficies that is coincident with the plane of the horopter; secondly, that the pediments are alike, and their corresponding objective is situated in a superficies beyond and parallel to the superficial hexagon; thirdly, that the pyramidal delineations are dissimilar, and are visible in an alto-relievo. In the stereoscope the delineations will be magnified, thereby proving that the extent of retinal area that is impressed does not affect the argument, which is as follows.

Converging the eyes on the points aa', so that the dotted lines ef and $e'f'$ shall indicate meridional lines of the retinæ, the larger segment, edf, of the right internal retina has to be accommodated to the smaller segment, $e'd'f'$, of the left external retina; hence the proximate causation of apparent relief. Every point in the segment edf is under an extensor influence, and every point in the segment $e'd'f'$ under a flexor influence. These opposite influences are equal in respect of the equal dotted lines ab and $a'b'$, and also of the equal dotted lines dc and $d'c'$; wherefore, extending a similar argument to both sides, the smaller hexagon and the pediment will be superficial extensions in the binocular resultant. The magnitude cb is greater than the magnitude $c'b'$—that is, the extensor traction on the right retinal delineation pre-



The letters dd' show the non-union of images on dissimilar lines of retinal latitude, and ee' the non-union of images to right and left of the retinal meridians.

ponderates over the flexor or approximating traction on the left retinal delineation; wherefore, the binocular resultant of the unequal and opposite magnitudes, $cb + c'b'$, will be a linear relievo, whose points, $c + c'$, will occupy a plane more remote than that of the fixed point, $a + a'$. A similar train of argument will, of course, be applicable to the right side of the apparent pyramid—namely, the extensor influence is to the flexor influence as the magnitude $i'k'$ is to the magnitude ik. If, in the next place, the diagram *R* represents the delineation on the left retina, and diagram *L* that on the right, the preponderating influence of magnitude cb over magnitude $c'b'$ will now be of a flexor nature; consequently, the points cc' will be approximated so as to occupy a plane nearer than that of the fixed points aa', and the pyramid will appear in sub-relief with the pediment in the foreground. This result may be effected either by transposing the above diagrams for the stereoscope, or by coalescing them by a process of strabismus; the latter is found to be a painful and impracticable procedure by many, but long-sighted persons usually adopt it. It is said that the binocular resultant is a beautiful miniature relief posed in mid-air between the observer and the plane of the paper—that is, at the site of binocular convergence. Brewster's theory of visual relief, it may be noted, explains the apparent position of the points on which the optical axes converge in this case, but it fails to account either for the apparent position of the entire miniature relievo or for the miniature creation.

It must be clearly defined what is meant by the term "retinal delineation" in the above argument; certainly it cannot mean the actual images on the retinæ, because the centre of the retinal curvature is acknowledged to be non-

[1] Transactions of the American Neurological Association, July, 1882, p. 57.

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coincident with the centre of visible direction. The complications which have resulted from the want of coincidence between these centres in all diagrammatic attempts to explain the facts of binocular relief have been very perplexing; but the doctrine of secondary perception, as I have attempted to elucidate it, does not regard the actual perspective portrayed on the retina in any material degree whatever. The delineations really referred to are such as would be represented on an imaginary retina that is described about the centre of visible direction; they are supposed to be depicted on sensorial retinæ marking the path which any minimum visibile would traverse during rotations of the eyeball, by which the present subject is considerably simplified. Further, by no other means can the magnitude of a given visual angle be adequately expressed by the equivalent magnitude of a retinal delineation. It will be good practice, on the above principles, to solve the monumental relievo appearance on the datum that the eyes are converging on the remote points, *d d'*, of the diagram.

One prominent fact touching binocular reliefvo is that it rapidly diminishes with the distance of the object; thus a sphere will be perceived as a disc at the distance of forty or fifty feet. The present hypothesis covers it in this manner: as the object recedes to a greater distance, its delineations become more similar, the forces of flexion and extension become more equalised, until a disc is ultimately perceived with two precisely similar perspective impressions—for example, in the diagram, let the objective outlines of the pyramid be rendered more similar by increasing the interval between the smaller hexagons, stereoscopy will present a pyramid with diminished relief; so, an actual objective pyramid is seen with diminished relief at a distance, and for a like reason—namely, as it recedes the extensor influence, *c b*, of the right retinal delineation becomes lessened, whilst the flexor influence, *c' b'*, is augmented in an equal ratio; in other words, the balance of muscular influences operating on the resultant point, *c+c'*, is in favour of approximation. Conversely, let the outlines of the pyramid be rendered more dissimilar by approximating the smaller hexagons, *c b* (extensor force) will be greater, and *c' b'* (flexor force) less than formerly; but such outlines are the perspectives of an actual pyramid at a nearer distance, and seen with a more pronounced relievo. It will be unnecessary to deal with concave reliefs at a greater and less distance, since a like line of reasoning will be obviously applicable to their treatment.

Two or three exceptional facts cannot be disregarded with due justice to this subject. If, in the first place, the stereoscopic perspectives of a human face be transposed, the features will be found to retain their natural positions, as viewed in a stereoscope, instead of appearing as a concave mask. This is one of those stunning perversions of sense which occasionally baffle the ingenuity of mental physicists, and suggest unsatisfactory explanations, relegating such phenomena to the instigation and unintelligible vagaries of a dominant *mens conscia*. But the contradiction is an apparent one, merely evidencing that the factors of binocular relievo are eclipsed by another force of positional proximity—viz., the visual angle. Perceptions of visual angles are a monocular faculty; visual angles are the basis of perspectives and monocular relief, and different perspective magnitudes are the bases of the binocular reliefs under consideration; if, therefore, any relief that might have been forecast by the mind (the hollow mask in the present instance) be found to deceive the natural expectation, the only warrantable conclusion will be that some irregularity exists in connexion with the perspective arrangement or foundational visual angle. Granting that the hollow mask be visible in the binocular resultant, the nose with a greater visual angle than the more distant ears would be actually perceived further away, and it would intervene between and occlude objective points which an actual hollow mask would present to view. The entire circumstances of this exceptional fact are unnatural, since no binocular camera could produce a pair of facial representations transposed as above; hence I feel justified in regarding it as an instance of monocular relief, inasmuch as binocular coalescence cannot be maintained here any more than in the attempt to unite diagonal lines crossed in different directions on each half of a stereoscopic slide (experiment of Helmholtz).

Next, objective magnitudes in the plane of the horopter do not subtend angles to both eyes sufficiently equal for plane vision, or effect sufficiently similar retinal delineations within a less distance than eighteen inches from the observer.[1] Let two semicircles be described, with an interval of 2·5 in. (interocular distance), representing the sensorial retinæ above defined; then, subdividing them into an equal number of arcs (so-called corresponding points), let lines be drawn through the centres of visible direction. It will be found that corresponding pairs of lines intersect each other about Müller's horopteric circle when the point of optical convergence is three or more inches distant, the circles enlarging with increase of distance. Why are visible points stationed in such horopteric circles seen in their true positions, and not in the plane of the horopter? Again, if a magnitude in the plane of the horopter, distant about eight or ten inches, be divided into a right and left half, it will be found that each half subtends a larger visual angle to the eye on the same side than to the opposite one—clearly a result of foreshortening; in other words, the extensor influence on such a magnitude will preponderate over the flexor influence, so that it should be seen binocularly as a sphere with a convex relief. This fact seems to have reference to an interesting experiment recently published by Le Conte Stevens of New York. He constructs a pair of perfectly similar figures, each consisting of a series of concentric circles, and combines their images by crossing the optical axes; the result is said to be the appearance of a miniature buckler convex towards the observer.[2] But, whether there be a relation or no, an analogous foreshortening exists in a picture at a distance of ten inches. How is it that the objects of the picture are not perceived about a curved plane having its convexity towards the observer? Both the above questions are related to the same causative fact, and clearly demonstrate that the principles enunciated herein do not apply to objects within a distance of at least a dozen inches. The discrepancy is resolved by regarding the visual positions of such very near objects as equalling tactile position in definition, and as coinciding mathematically with the intersection of their lines of visible direction—that is, the forces influencing relievo are in abeyance to positional forces determining a directive composition, as in the case of an object at the binocular centre.

Lastly, the remarkable panoramic painting of "Tel-el-Kebir" by M. Philippoteaux *fils* (now exhibited at the Crystal Palace at Sydenham) presents reliefs of objects near and far, of horizon and sky, that are facsimiles of nature, notwithstanding the delineation is limited to a plane canvas that is only forty-five feet equidistant on all sides from the spectator. This variety of binocular relief forms part of another subject, which cannot be discussed at present; however, it is inconsistent both with the present hypothesis and with the law of visual position coinciding with the intersection of corresponding lines of visible direction. It must be understood that the present remarks are limited to relief within a distance of some fourteen or fifteen yards only—that is, the area of most useful vision.

Forest-hill, S.E.

TWO INSTANCES OF REMARKABLE ELEVATION OF TEMPERATURE.

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The remarkable case of elevation of temperature recorded by Mr. Teale, of Scarborough, in the Transactions of the Clinical Society is almost paralleled by the instances which I desire now to put on record.

The first case was one of removal of both ovaries for very rapidly growing cystoma, in the treatment of which I was associated with Mr. Chavasse of Wylde-green, and Dr. Thomson of Kingswinford. The operation was performed on Dec. 23rd, 1879, and presented no special difficulty, save that the tumours were of large size and practically solid. The following are the records of interest, and I may say that they were made by a competent nurse, verified by myself,

1. The images of said magnitudes will be mathematically dissimilar at a greater distance than that stated, but such dissimilarity is too fine for visual recognition. Strict mathematical rules are, in fact, inapplicable to the phenomena of apparent relief as well as to other visual conditions. For example, were vision controlled by the mechanics of rigid mathematics, one would be able to halve a given straight line definitely at a single glance without resort to artificial admeasurement. And, further, a given relievo object would present an unmodified appearance of relief at any and every distance.

2. Philosophical Magazine, vol. xiii., p. 313 (1882).

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and that three different thermometers were used, so that no mistake might be made by error of the instrument:—

Date.	Hour.	Temp	Pulse.
Dec. 24th	7.45 P.M.	102·2	140
,, 25th	5.0 A.M.	103·3	120
,, ,, ...	10.15 A.M.	105·3	130
,, ,, ...	2.55 P.M.	105·3	128
,, ,, ...	8.5 P.M.	111·0	120
,, 26th	9.50 A.M.	101·4	100
,, ,, ...	9.15 A.M.	101·2	99

During the night of the 25th no observations were made, as the patient was in a deep sleep, and it was not deemed advisable to wake her. Throughout the twelve hours during which the extreme rise of temperature lasted the patient experienced no uneasiness, and nothing was done specially for her condition—that is, no ice-collar or ice-cap was used. She made an excellent recovery, and has since married. She has had perfect health since her convalescence.

The second case was sent to me from South Africa, clearly suffering from chronic ovaritis. She was a hospital nurse during the Basuto war, and is a well-educated and intelligent woman, who can give an extremely clear account of her own case. Whilst lifting a heavy wounded soldier she hurt herself internally, and was immediately taken ill, the symptoms following being those of pelvic peritonitis. She was acutely ill from May 20th, 1882, till June 5th. The record of temperature observations was made by Dr. Jameson of Kimberley and Dr. Harrhy of Barkly, and four different thermometers were used. These statements are made by the patient. I have written to the gentlemen named, but have had one letter returned through the dead-letter office, and have got no reply to the other. The patient came to me in August last with enlarged and excessively tender masses on each side of the uterus. Perfect rest and treatment by counter-irritation and bromide have relieved her symptoms completely so far, and she is about to return to her duties.

Date.	Hour.	Deg. F.	Date.	Hour.	Deg. F.
May 20	8.0 A.M.	101·0	May 29	9.0 A.M.	100·0
,, 21	9.0 ,,	106·0*		Noon.	111·0
	P.M.	101·0		3.30 P.M.	101·0
,, 22	A.M.	106·0		7.0 P.M.	101·2
	7.30 P.M.	103·0	,, 30	8.0 A.M.	101·0
	P.M.	110·0		P.M.	106·0
,, 23	1.30 A.M.	103·0	,, 31	9.0 A.M.	109·0
	4.30 P.M.	110·2		10.0 ,,	100·0
,, 24	9.30 A.M.	109·0		4.0 P.M.	99·0
	Noon.	110·0		8.0 ,,	110·0
	2.30 P.M.	111·0	June 1	9.0 A.M.	109·0
	P.M.	102·0		10.0 ,,	110·0
,, 25	A.M.	102·0		12.0 ,,	110·0
	Noon.	102·0		1.15 P.M.	111·0
	P.M.	101·5		3.15 ,,	101·0
	,,	107·0		4.30 ,,	110·0
,, 26	4.0 A.M.	99·0		5.30 ,,	101·0
	9.0 ,,	99·5		7.30 ,,	100·0
	P.M.	108·0		9.0 ,,	100·0
,, 27	10.30 A.M.	102·5	,, 2	9.0 A.M.	99·0
	9.0 P.M.	102·0		Noon.	106·0
,, 28	A.M.	102·0		8.0 P.M.	100·0
	8.0 P.M.	103·2		9.0 ,,	100·0

* Cold pack.

From June 3rd the temperature rose from 99° in the morning to 100° in the evening, and in that condition I found it. This extraordinary record, of course, suggests, first of all, that it has been manufactured by a hysterical person possessed of sufficient education to enable her to forge. But the patient is not hysterical, and had abundant physical evidence of serious pelvic mischief when I first saw her. I admitted her to a private home, and had her carefully watched, and found no reason whatever to believe that she was endeavouring to deceive by presenting a manufactured register. My chief aim is that by its publication it may reach the notice either of Dr. Jameson or Dr. Harrhy, who may be able to throw some light upon it.

Postscript.—Since the above was written the patient has had relapses, and is now not so well. She has not yet gone back to her work, and I fear removal of the uterine appendages is looming for her in the future.

Birmingham.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nullaautem estalia pro certo nosse adivia, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI, *De Sed. et Caus. Morb.*, lib. iv. Procemium.

GENERAL LYING-IN HOSPITAL, YORK ROAD.

GESTATION; ACCIDENTAL HÆMORRHAGE; DEATH OF FŒTUS IN UTERO; ARRESTED LABOUR FROM RIGOR MORTIS OF FŒTUS.

FOR the following notes we are indebted to Dr. Robert Boxall, house physician:—

The following case of accidental hæmorrhage, resulting in the death of the fœtus in utero, presents the somewhat novel feature of arrested labour from rigor mortis of the child, and consequent inability of the head to undergo its normal movements in the pelvis.

Mrs. S——, aged twenty-nine, a fairly-nourished, healthy woman, of medium complexion and rather short stature, was admitted to the hospital at the full time of her sixth pregnancy, on Oct. 17th, 1883, at 8 A.M. She had always enjoyed excellent health. Her previous labours had been natural and easy. The external pelvic measurements were: Interspinous, 10 in.; intercristal, 11¼ in.; conjugate, 7¼ in. The patient had been under observation twice before, the first occasion being on Oct. 4th, when she complained of abdominal pains. The os was very patulous, and it was thought possible that labour was commencing; she returned home the same evening. The second occasion was three days later, when pain in the back was complained of. The condition of the cervix was unaltered; she stayed in the hospital some hours. At that time the fœtal heart sounds were distinctly audible. (It afterwards transpired that on each occasion, having had a "difference" with her husband, she sought the hospital as a harbour of refuge.) On reaching home on the evening of the 7th she noticed "a show," and from this time till admission suffered much from "whites," and experienced a sense of weight in the abdomen. She felt the child's movements up till the 15th, on which date they were stronger than usual, and "something seemed to go pop inside the womb." She remarked on this to the landlady. Immediately before experiencing this sensation she had carried a bucket of water up three flights of stairs. She felt a little faint, came over pale, and was obliged to lie down. After that she felt no more of the child, but had a pricking pain in the abdomen, which kept on continuously, and she could scarcely get about. From this time till admission she felt cold shivers, which she had never experienced with any of her previous children. Labour pains commenced about 5 A.M. on the day of admission. About 7 A.M., while still in bed, the pain in the abdomen and back was very bad, and suddenly without apparent cause flooding set in, and she lost "half a pailful," at any rate enough to soak through the bed and run in a pool on the floor. She came to the hospital, a distance of about a mile, in a cab.

When admitted, a thick diaper was soaked half through with blood, and there was still slight oozing. On examination, the os uteri was found high up, fairly firm, and a little puffiness of the anterior lip. The canal would admit the finger easily. The membranes were intact. The vertex could be felt above the brim in every direction. No part of the placenta could be reached. A pinkish sero-sanguineous discharge escaped in gushes at the commencement of each pain. The pains were strong and almost continuous. The patient was not strikingly pale. Temperature 98°; pulse 108. On palpating the abdomen the usual contour of the uterus was found to be maintained. No uterine sounds could be heard. The patient was douched every half hour, and given four ten-grain doses of chloral hydrate in an hour. As the cervix expanded the anterior fontanelle could be felt forwards and to the left, high up. At 12.30 P.M. the cervix was fully dilatable, and the membranes were ruptured artificially. The head, however, would not come down. The pains preserved the same character, and became a little stronger. As no progress was made, at 1.0 P.M. forceps were applied to the head. On the introduction of the lower blade about four ounces of liquor amnii escaped, and the head rotated

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into the second position. The head was easily brought down through the cervix into the cavity, and as the pains then improved in character and remained of fair strength, with about a minute's interval between each, the forceps were removed, and nature left to take its course. The head was born at 1.45 P.M., a loop of pulseless cord following its expulsion. Though the pains were strong, the trunk was arrested. There was no attempt at restitution. With suprapubic pressure, and slight traction on the head, delivery was completed. There was no caput succedaneum. The child, a female weighing eight pounds and a quarter, and measuring twenty-two inches, was of a mottled blue colour, and stiff, as if rigor mortis had set in. This passed off in about an hour. The placenta followed the child into the vagina, and was expelled by natural efforts almost immediately after. About twelve ounces of recent clot was adherent to the uterine surface of the placenta. The portion of clot adjacent to the placenta was brownish, and detached without difficulty. The uterine surface of the placenta was a little gristy, and very smooth, yellow, and fatty-looking, from a thin lamina of fibrin covering its whole area. It also presented two yellowish fibrous masses, each about the size of an almond, near the centre, and another situated an inch from the edge, the size of a haricot bean. Nearly all the vessels on the fœtal surface were empty, and at the margin of the same surface were three pinkish laminated clots, not larger than almonds. The substance of all the cotyledons was softer in consistence than natural. The membranes, which formed an entire bag, measured fourteen and four inches respectively, in the greatest and least distance of their rupture to the margin of the placenta.

The temperature after labour was 98·4°; the pulse 72. The loss subsequent to expulsion of the placenta was almost nil. She had slight after-pains and retention of urine for the first twenty-four hours, but made a satisfactory recovery. Beyond a slight attack of urticaria, and a little pain in the breasts on the fourth and fifth days, the puerperium presented nothing calling for note. She left the hospital quite well on Oct. 30th.

CHESTER GENERAL INFIRMARY.

ABSCESS OF KIDNEY; ASPIRATION OF FORTY-TWO OUNCES OF PUS; COMPLETE RECOVERY.

(Under the care of Dr. DOBIE.)

FOR the following notes we are indebted to Dr. H. W. King, late house surgeon.

Arthur H——, aged thirty-six, a labourer, was admitted on January 4th, 1883. Upon inquiry the patient stated that his general health had been fairly good. Three months previously he caught cold from sitting on some damp grass. Soon afterwards he began to feel pain in his right side and back; he attributed this to rheumatism. Six weeks before admission the pain increased, and he was obliged to give up work. About this time he noticed a swelling in his right side; this had lately increased in size. He had been able to take very little food, had been feeling very weak, and suffered from night-sweats. His "water had been very thick" of late.

Upon examination a prominence was noticeable on the right side of the abdomen. Its point of highest projection was about one inch and a half from, and in a horizontal line with, the umbilicus; the skin over it was slightly pink in colour. There was a rounded swelling in the lumbar region, and laterally, continuous with the fulness in front. On percussion, absolute dulness existed in the right mammary line, and externally to it, from the upper border of the liver to the lower border of the tumour, about three inches above Poupart's ligament. Internal to this line there was a triangular patch of resonance (stomach), its apex outwards, between the liver and the tumour. Posteriorly dulness existed over the whole lumbar space. On palpation the tumour was movable, not adherent to the skin, and apparently not attached to the liver; but owing to the exhausted condition of the patient, the effects of forcible expiration could only be approximately judged. There was very evident fluctuation, especially where the tumour was most prominent. A thrill could be felt on percussion through the whole width of the tumour. Heart, lungs, and chest generally normal, but pulse weak (124), and breathing quick (28). Temperature ranged from 102° to 101·4° at night to 99·2° to 99·6° in the morning. Urine turbid, yellowish; after standing in a urine glass for two or three hours a yellowish deposit occurred of about half. Microscopically very numerous pus cells were seen, with some blood-corpuscles, renal epithelium, and amorphous urates. Dr. Dobie recommended that the tumour should be aspirated. On the afternoon of Jan. 10th forty-two ounces of thin but healthy-looking pus were removed by the aspirator in about an hour and a half. A needle corresponding in size to a No. 2 trocar was used. The patient at once felt much relieved, but had pain near the point of election for aspiration, which was in the centre of the prominence. Later in the evening the pain increased, and extended round to the back. The patient's legs were drawn up. One-third of a grain of morphia given subcutaneously relieved the pain and afforded sleep. The peritonitis continued for three or four days, and much consequent anxiety was felt as to the result. Opiates and hot fomentations relieved the pain, and the patient was able to take fair quantities of milk. The tumour diminished greatly in size, and dulness was now only present on the extreme right of the abdomen and in the lumbo-dorsal region. On Jan. 5th, the morning after the aspiration, there was much less pus present in the urine, but this very small amount gradually increased, until on Jan. 17th the deposit was about one-sixth. The patient, however, continued to improve in health and to get stronger. The urine continued to have a considerable deposit of pus—one-tenth to one-sixth. A lumbar incision was proposed, but the patient refused further treatment, and returned to his home near the seaside. He subsequently became completely restored to health, and was able to follow his usual employment. He was admitted into the infirmary early in May of the present year for an ulcer of the leg; and his urine, then examined, was found to be perfectly normal, and had not a trace of albumen. There was, however, still considerably greater dulness on the right lumbo-dorsal region than on the left. But the patient looked, and asserted that he felt, quite well.

NORWOOD COTTAGE HOSPITAL.

CASE OF OVARIOTOMY.

(Under the care of Dr. J. H. GALTON.)

J. W——, aged thirty-four, needlewoman. No family history of tumours. The patient had had good health. Menstruation had been regular except for the last two months, during which she has seen nothing. Four years ago she first noticed a lump in the right side, which gradually got larger. Her increase of size she attributed to sitting at her employment. She experienced no pain till April 11th, 1884, when she went for a long walk and had a "stitch" in the right side. From that time she had a good deal of pain about the middle of the right lumbar region.

On April 15th the abdomen measured forty inches and a half round the umbilicus, was dull all over the surface except below the ribs and in the flanks. She had a thin, anxious, ovarian look; tongue clean; pulse 74; bowels regular. The uterus was normal to sound and freely movable; the whole of the roof of the pelvis was filled in with an elastic-feeling mass.—April 24th, 11.30 A.M.: Pulse 98; temperature 97·8°. The ward having been duly prepared and heated to the temperature of 64° (at which it was kept for ten days after the operation), and chloroform having been administered by Dr. Brockwell with Jünker's apparatus, an incision was commenced in the median line one inch below the umbilicus, and continued downwards for four inches. One vessel was ligatured and a few others twisted (the incision, though in the median line, went through the rectus muscle). Bleeding having ceased, the peritoneum was divided to the length of the incision on a Hey's director; a small quantity of ascetic fluid escaped, and the tumour was tapped by Simpson's trocar. Eighteen pints and a half of clear fluid were removed. The cyst was drawn forwards with great difficulty, recent adhesion on the right lower portion being separated by the hand. Four separate cysts were tapped, the last containing very glairy fluid, which would not pass through the large trocar. At the posterior part of the tumour a good deal of solid growth much interfered with the withdrawal; the pedicle was transfixed, and, a twisted silk suture having broken in the second ligature, a second transfixion was made and a thick silk suture was passed through tied in two places and dropped in. A small quantity of fluid was sponged out, and no further could be expressed by pressure upon the abdominal

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walls; four twisted silk sutures were passed (threaded on double needles) through the peritoneum and buttoned, one silver suture closing the superficial part of the wound below. Antiseptic dressings were applied, no spray being used during the operation. The operation took one hour and ten minutes. Ten drachms of chloroform were used. The weight of the solid removed was 3 lb. 1½ z. At 1 P.M. half a grain of morphia suppository was given; slight sickness, brought up some food. Pulse 74; temperature 96·8°. Ordered twenty minims of the sedative solution of opium every six hours. Urine to be drawn off every six hours. Ice also to be given. 6 P.M.: Pulse 88; temperature 96·8°. No pain, except slight in back. 12 P.M.: Pulse 88; temperature 99°; perspiring freely.—25th, 6 A.M.: Temperature 100°. 9.30 A.M.: Pulse 90; temperature 100°. No pain or sickness; has slept during the night at intervals. Ordered one tablespoonful of beef-tea every hour. 4.30 P.M.: Pulse 98; temperature 100·8°.—29th, 11 A.M.: Pulse 104; temperature 99·8°. Inclination to go to stool at 9.30 A.M.; passed four ounces of urine while at stool.—30th, 10 A.M.: Pulse 118; temperature 100·6°. To take milk thickened with arrowroot, and an ounce of champagne every two hours. Wound dressed beneath the green protective; small quantity of dirty-looking, ill-smelling discharge. The buttons inverted into the wound, which appeared closed except at the surface. Slight distension of abdomen, no pain on dressing; an enema of half a pint of gruel brought away about a quart of liquid motion; also passed water naturally. 4.30 P.M.: Pulse 108; temperature 100·2°. Has slept well for three hours; no jumping. 10 P.M.: Temperature 100·4°.

May 1st: Pulse 118; temperature 100·4°. Has a bad collapsed look. There is a swelling of the right upper corner of the wound. Removed all deep sutures; in only one a little pus followed. No tenderness. Ordered two drachms of brandy every two hours. 3 P.M.: Pulse 116; temperature 100·4°. Looks better. At 1 P.M. passed urine naturally. Sick at 9 P.M. 11 P.M.: Pulse 107; temperature 100·2°.—2nd: Pulse 112; temperature 99·6°. Bowels acted naturally, and passed urine.—4th: Pulse 108; temperature 100·2°. On dressing the wound found surface adhesion giving way, and a small quantity of pus oozed from the right upper suture opening. Removed strapping. No offensive smell. Dressed with carbolic lotion and lint pad on either side of wound, fixed with broad strapping. Ordered two ounces of port wine and fish. 10.30 P.M.: Temperature 99·2°.—7th: Pulse 88; temperature 98·4°. Bowels action frequent, passing gritty foul-smelling semi-liquid motion. Ordered one drachm of castor oil and fifteen minims of tincture of opium. 10 P.M.: Temperature 99·6°.—8th: Pulse 88; temperature 98·4°. The oil acted once; no diarrhœa since. Placed patient on her right side to relieve back. 10 P.M.: Temperature 99·2°.—9th: Pulse 84; temperature 98·2°. Bowels acted once naturally. About two inches of the superficial part of the wound remain. No discharge. Dressed with dry lint. Ordered middle diet, with two eggs; to continue the port wine. 10 P.M.: Temperature 98·8°.—11th: Wound entirely healed, and progress continued uninterruptedly.

Remarks.—The case is of interest as showing that our cottage hospitals are equal to the demands of the larger surgical operations, and much of the success was owing to the careful and devoted attention of the nursing staff. A great advantage over the same operation in the London hospitals consists in the steadiness of the assistance rendered by the surgical staff of the hospital and others (Drs. Miller, Hetley, and Messrs. Sidney Turner, Gandy, and Plimmer), which was more reliable than that of comparatively untried students. The superior purity of the air is also an advantage for the cottage hospitals. The rapid improvement of the case on the removal of the deep sutures on the seventh day is worthy of notice, as also the failure of buttons to retain their place on the sutures, thus interfering with the surface healing. The large quantity of urine passed during the early days after the operation is remarkable—viz: First day, forty-four ounces; second day, sixty-six ounces; third day, forty-eight ounces; fourth day, forty ounces.

AT the inquiry into the circumstances attending the death of Mrs. Cutler (widow of the late Edward Cutler, F.R.C.S., Surgeon to St. George's Hospital), who died from injuries she received by being thrown from her carriage on the 4th inst., the jury returned a verdict of "Accidental death."

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Retro ocular Neuritis. — Amblyopia. — Irido-choroiditis. — Proptosis with Gland Enlargement.

A MEETING of this Society was held on July 3rd, Mr. Jonathan Hutchinson, F.R.S., President, in the chair. The President's paper was decidedly interesting to general medicine, and elicited considerable discussion.

Mr. NETTLESHIP read a paper on some cases of Retro-ocular Neuritis, in which acute inflammation seemed to take place in some small part of the course of the optic nerve. They were characterised by failure of sight in one eye, often accompanied by neuralgic pain in the temple and orbit, and pain on moving the eye. The disc often became more or less atrophic in a few weeks; the result was variable from complete recovery to total blindness. Two illustrative cases were quoted, the first being that of a lady aged thirty-four, in whom an attack of central amblyopia in the right eye was associated with pain in and around the eyeball, and followed by pallor of the disc. The patient had previously suffered from sciatica, and several of her relations had had gout or arthritis. The second case was that of a man aged fifty, who had rapidly and completely lost the sight of his right eye, and who presented no sign of cerebral disease; there was no evidence of syphilis or gout, the only thing being that some time previously the patient had had diplopia from paresis of the right inferior rectus. The failure of sight was usually at its worst in three days, except in the most severe cases; recovery when complete usually required about six weeks. The pain, which was often circumorbital, began before the dimness of vision, and there was a sense of stiffness on moving the eye quickly. In the majority of cases examination of the field of vision revealed the existence of a central defect; sometimes the field was contracted, at others this sign was absent. Changes in the disc were by no means constant, even in the worst cases. The cases had to be distinguished from embolism of the central artery; from progressive atrophy where one disc was affected before the other and from uniocular neuritis due to disease of the corresponding lobe of the brain. The greatest difficulty would be to distinguish them from the rare cases where a single violent papillitis occurred with severe localised pain. In some of his cases the symptoms might be explained by a periostitis of the optic canal; in others the mischief could not have been so far back; in some a rheumatic origin seemed probable. The majority of the patients were between twenty-five and forty. At least five of the twenty-four had had syphilis, and there was a good probability of it in six others. In four cases the affected eye became permanently blind; in eight more or less damage was done; twelve (exactly half) recovered.—Mr. JONATHAN HUTCHINSON said that he had met with a case in a young lady in whom there was a marked arthritic history. The blindness completely passed away. It was probably a case of gouty disease of the optic nerve.—Dr. STEPHEN MACKENZIE asked whether any examination of the blood had been made. It was known that slight papillitis might occur in leukæmia, and was supposed to be due to thrombosis of the orbital veins; in these states of blood also a diffuse retinitis may arise. He had not met with any cases of the kind; they were not cases seen in medical practice. It must be confessed that Mr. Nettleship had not given a satisfactory explanation. In the cases following "fever" what was the length of time between the "fever" and the neuritis?—Dr. C. E. FITZGERALD briefly related a case of dimness of vision in the left eye in a young lady in whom very slight ophthalmoscopic changes were present. This first attack ended in complete recovery of sight, but was followed by a recurrence of the same symptoms in the same eye after some months. Somewhat later the right eye had become affected and with intense neuritis. Later still loss of power of the right leg and arm set in. Ultimately there was improvement in all respects; vision of the left eye became nearly normal though there still existed slight haziness of the disc. There was a history of old "rheumatic" affection, and Dr. Fitzgerald regarded the case as arthritic in nature.—Mr. NETTLESHIP, in reply, asked Mr. Hutchinson what degree of blindness existed in his case.—To this the PRESIDENT replied that the

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patient was quite blind of one eye. There had been no severe pain and the patient remained free from visual affection until a threatening of the same thing began in the opposite eye.—Mr. NETTLESHIP said, with regard to the blood, nothing had been noticed wrong in their general appearance, though no special examination was made. In one case the neuritis set in within one month or six weeks after the "fever," which was either malarious or typhoid. At present it was but guesswork as to the nature of the disease. The cases were not all of the same nature. Periostitis of the optic foramen was probably present where the pain was intense and late ophthalmoscopic changes occurred. Small gummata on the nerve would explain all the symptoms.

Mr. LAWFORD read notes of a case of Central Amblyopia coincident with Peripheral Contraction of the Fields of Vision. The patient, a lad aged eighteen, noticed failure of vision about five weeks after a fall. He also had some general nervous symptoms, for which he was an in-patient at Guy's Hospital. The central scotomata, at first absolute for form, became, as recovery progressed, scotomata for colour only. Eventually perfect acuity of sight was attained, and the limits of the fields of vision became normal. The other nerve-symptoms also disappeared in the course of six months.

Mr. W. ADAMS FROST read a case of Sympathetic Ophthalmitis subsequent to the excision of the exciting eye. A man, aged twenty-five, was admitted into St. George's Hospital on November 3rd, 1883, for iritis of the right eye. There was no history of syphilis or rheumatism; and the patient traced the commencement of the affection to some hair entering the eye while he was clipping a horse a month before admission. There was conjunctival and ciliary injection, and on the inner side a few vessels encroached on the cornea. The lower half of the cornea was thickly studied with punctate opacities, and there were numerous posterior synechiæ. Tension was normal. A week later there was slight prominence of the ciliary region above, and an upward iridectomy was performed. The staphyloma increased in size, the eye became very painful, and the anterior chamber shallow. On Dec. 15th iridectomy downwards was attempted, but no iris was removed. The pain being severe, the eye was enucleated on Feb. 2nd, the left eye being then normal; but, five days later, slight conjunctival injection and punctate opacities on the cornea were noticed, but neither pain nor tenderness. Atropine, exclusion of light, and pilocarpine injections were used. On March 19th there was a *single fine* posterior synechia. The cornea was clear; V=⅔. The globe of the excised eye was bisected, and one-half was mounted in glycerine jelly. The other half was examined microscopically by Mr. Jennings Milles (the microscopical sections were shown at the last meeting). He reported that the ciliary staphyloma was formed by a nodule consisting of inflammatory cells closely packed. The sclerotic over this was much thinned. The iris was firmly adherent to the lens, and its parenchyma infiltrated with small round cells. The choroid was thickened in its whole extent, especially in the region of the papilla.—Mr. NETTLESHIP said that Pagenstecher had described a tubercular nodule of the iris, which seemed to have been set up by hairs passing through the corneal tissue; he inquired whether any hairs had been found in Mr. Adams Frost's case. This question was answered in the negative.

Mr. JONATHAN HUTCHINSON read notes and showed photographs of a Remarkable Case of Proptosis. The patient was a Hindoo gentleman, who came to him for extreme proptosis of the left eye, having not long before lost his right eye from a similar affection. The eye was extremely protruded, and mostly downwards; the lower lid was everted. The movements of the eye were not much interfered with, but there was a good deal of chemosis. The edge of the lacrymal gland, which was greatly enlarged, was felt on a level with the upper margin of the orbit. The upper lid hung loosely, but the lids could not be closed. The face was puffy, especially in the parotid region, and under the jaw. The other eye had been attacked in a precisely similar manner about three years previously, and after varying for two years had finally become so prominent that a few months before he came under observation the lacrymal gland had been removed, as also a firm lobulated mass which occupied the upper and outer part of the orbit, and turned out, on microscopical examination, to be composed of fibro-adipose tissue; suppurative inflammation set in after this operation, and the eye was lost. Within a few days of this time the hitherto healthy eye became protruded, which naturally greatly alarmed the patient. As in the case of the other eye, there had been variations in the degree of proptosis, and looking to the ill effects of operative interference in the other eye, it was decided to try the local application of ice. This was sedulously applied to the eye, to the forehead, and to the nape of the neck for a week without intermission; the patient at the same time took small doses of iodide of potassium. At the end of this time there was a decided improvement; the ice was, however, continued, and later on mercury was given in combination with the iodide. The result was that the patient was practically cured, and had since remained well. In reference to the nature of the case, it was pointed out that the enlargement of the lacrymal gland could not be regarded as in any way causal; it was coincident, but nothing more. There must have been some swelling of the fibrous or fatty contents of the orbit which caused the protrusion; whatever it was, it was capable of spontaneous diminution, it was prone to relapse, and was, as well as the enlargement of the various glandular structures, under the influence of iodide of potassium. Malignant disease could be negatived from the fact that there had been no recurrence in the eye first affected. The disease was analogous, he believed, to a group that had been described by Brodie, and more recently Mr. Morrant Baker, where there was a tendency to the formation of ill-defined, but more or less lobulated masses of fibro-fatty tissue in the region of the neck, but in none of the cases that he had seen was there proptosis or enlargement of the lacrymal gland, though he had in one case found enlargement of the parotid gland in association with fatty masses in the neck. Though the condition was remarkably local, it was not one of new growth, but rather of hypertrophic development, there being no tendency to general obesity. He suggested that one reason why glands of different function should be associated in the enlargement, was that the hypertrophy was due rather to increase of the connective tissue elements than of the gland structure itself. Exophthalmic goitre might possibly be a member of the same family, and he noted that some of the cases described by Mr. Morrant Baker were irritable even to the verge of insanity. In conclusion, he pointed out that these fatty outgrowths underwent great changes in connexion with the state of health of the patient, and that much benefit was often derived from a change of air.—Dr. STEPHEN MACKENZIE spoke of the relationship of the case to Graves' disease, in which the antecedent vascular disturbance was noteworthy, as was also palpitation and altered cardiac rhythm. In Graves' disease he had frequently found that the continuous application of cold to the neck was followed by great improvement. He asked whether there was any enlargement of the thyroid gland.—Mr. GEORGE WALKER spoke of the case of a woman with marked proptosis, in which compression of the carotid artery in the neck stopped the pulse in the arteria centralis retinæ. He concluded that aneurysmal dilatation of the artery in the cavernous sinus existed and led to venous engorgement of the orbit. He also said that the dilated "lymph vessels" on either side of the vessels could be seen. In reply to Dr. Brailey, he said the existence of a semi-translucent border was inferred to be dilated lymphatics.—Mr. EALES related the case of a man, aged forty, a glass-blower, of intemperate habits. The onset was by an acute attack of headache, associated with protrusion of both eyeballs. In this case there was also perceptible enlargement of the lacrymal glands; the left cheek was scorched, and the left eye most protruded. In glass-blowers and the like a hyperæmic optic disc was common.—Mr. JESSOP asked whether iodide of potassium diminished the size of the fibro-fatty growths.—Mr. BROCKMAN, of Madras, said that in India some cases of elephantiasis, which was common amongst Eurasians, might be associated with proptosis, and considerable improvement was effected by iodide of potassium and mercury. As a syphilitic taint was also present in many cases of elephantiasis, he could not say whether remedies acted against the elephantoid or the syphilitic element.—Mr. HUTCHINSON, in reply, urged that nationality had probably nothing to do with the disease, since it excited as much attention in India as at home. With regard to the fibro-fatty growths, he did not know whether iodide of potassium was of benefit or not, but change of air and abstinence certainly were. The dilatation of orbital veins spoken of by Mr. Walker was not mechanical in Mr. Hutchinson's opinion. No one would deny the existence of the vascular element in Graves' disease, and the want of power to control the temper with great excitability as met with in cases of the "Morrant Baker"

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type, showed that there were remote features of family likeness amongst all the conditions of which mention had been made. In his case no enlargement of the thyroid gland existed, and the patient was not in the least excitable. It would be very interesting to come across cases of gland hypertrophy associated with fat hypertrophy, but such cases had not been observed by Mr. Morrant Baker. With regard to the iodide of potassium, this never exceeded fifteen-grain doses three times a day, and began with only three grains. Ice was the means of cure without doubt in the worst stage of the case, but later on, perhaps, the mercury acted in conjunction with the iodide.

ACADEMY OF MEDICINE IN IRELAND.

At a meeting of the Sub-section of Public Health on April 10th, Dr. CAMERON read a paper on Antiseptic Experiments in the Vaults of St. Michael's Church, Dublin, celebrated for their antiseptic properties. Bodies dry up in a desiccated mass, rather than decompose, when deposited in these vaults. The author placed an infusion of melon in Tyndall's tubes, and having submitted both to a high and prolonged temperature so as to sterilise the liquid, he placed a number of them in a vault of the church which seemed to possess the greatest antiseptic properties. The tubes were deposited with great caution, and in such a way as to occasion the least possible disturbance of the atmosphere. The extremities of the tubes were broken by means of hot forceps, and the vault was kept locked up for six weeks. They were then removed from the vaults. Seven of the tubes presented no change, but in the remaining five there was great turbidity owing to the development of mycelium, &c. In the case of the liquid kept in the unbroken tubes at the laboratory of the Royal College of Surgeons, no turbidity was noticed in their contents. On nipping the ends of the tubes of those kept in the laboratory and the sound ones brought from the mortuary vaults, turbidity set in in less than forty-eight hours. The author did not venture to draw any positive conclusion from these experiments, but their results seemed to show that the preservation of the liquid was due to the great freedom from dust which he noticed in the vaults. Franklin had found that in the higher Alps organic infusions remained for a long time freely exposed to the air without undergoing decomposition, a fact attributed to the freedom of the air at great altitudes from dust, which of course included germs of various kinds.—Dr. MORE MADDEN referred to the famous vaults near Palermo, where two miles of galleries were lined with the dead bodies of monks. The sides of the galleries and the dead bodies, which were in a state of desiccation, were coated with dust. Of the character of the dust he knew nothing, but the antiseptic properties of the galleries were ascribed to the peculiar dryness of the air, and also to the nature of the soil in which the galleries were excavated.—Several members having made some brief remarks, the PRESIDENT expressed the hope that Dr. Cameron would continue his experiments.

Dr. T. MORE MADDEN, having recently read a paper in another section of the Academy on certain Mental and Nervous Disorders, called attention to other aspects of the subject, offering further evidence of the general prevalence and increase of insanity in all classes, and more especially amongst women, in whom it is frequently traceable to cerebro-nervous disorders originating in reflex irritation from utero-ovarian causes. There were also general moral and social causes. The facility with which any person could be legally confined as a lunatic was indefensible, seeing that any two of the most inexperienced of the 24,000 practitioners on the Medical Register could virtually consign any man or woman to a lunatic asylum. That this power was liable to abuse, he illustrated by cases in his own experience. He therefore suggested that the power of signing certificates should be restricted to certain officially appointed medical inspectors of lunatics, and that in the case of alleged female lunatics one of the inspectors should be a physician with some experience of the special functional disorders, the reflex consequences of which may either stimulate or eventuate in insanity. The Lunacy Laws differed in England, Scotland, and Ireland; and the pauper lunatic asylums in England and Wales involved an expenditure of upwards of £1,000,000, while those in Ireland cost £200,000, according to last year's accounts. The reform of abuses and the improvement of curative treatment could be attained with diminished cost to the public. Let all the lunatic asylums become public property, and, placed under one central official administration in each country. The compensation of proprietors of private asylums would not be a serious consideration, considering the profits that would arise from continuing these institutions as first and second-class State asylums, and ultimately these profits would relieve the cost of the general public lunacy system. He suggested the abolition of the office of resident medical superintendent of public asylums, whose functions he would transfer to lay governors or masters, leaving the resident physician free to devote himself entirely to strictly professional functions, in which he would be assisted by a staff of extern or visiting medical officers. A large number of the chronic and harmless patients of the weak-minded or semi-imbecile class would be cared for with greater comfort to themselves and less cost to the public outside the walls of lunatic asylums. As an amendment of the laws relating to so-called criminal lunacy, he suggested the adoption of a law similar to the 64th Article of the French Penal Code, and the appointment of medical assessors in all trials in which the plea of insanity was advanced.—Dr. NEVILLE took considerable interest in lunacy since his first professional appointment as locum tenens in one of the large county asylums. The effect the diseases of the female genital organs might have in the causation of mental trouble was apt to be exaggerated by gynæcological specialists, and the question of lunacy was sometimes looked at through gynæcological spectacles. Where it was a case of one specialist attacking another he discounted a good deal of the criticism. He knew some of the gentlemen who gave attention to diseases of the mind to have studied the diseases as earnestly as specialists did in any other branch of medicine or surgery. The great trouble taken both in public and private asylums could not be excelled by any specialist. As to the increase in lunacy, it should be remembered that the causes of lunacy had greatly increased—e.g., the wear and tear of modern life. On the other hand, the struggle for existence made it the more necessary to get rid of the drones of society; and certainly lunatics, being of no use to themselves or their families, were drones in society, and their families would be anxious to put them under restraint. Nowadays medical education had advanced, and with it the diagnosis of insanity. Specialists in diseases of the mind would say there had been just as much improvement in the treatment of insanity as in obstetrics. Indeed, he saw a complaint made in connexion with the meeting of the British Medical Association in Bedford that there had been no advance made in obstetrics for several years. But he did not admit the truth of either allegation. On the contrary, he believed there had been an advance.—Dr. HENRY KENNEDY said he did not see why private asylums should not be continued. That abuses might exist would be allowed, but there were competent inspectors to visit private asylums and investigate their management. As to treatment, cod-liver oil had been found almost a specific where there was a tendency to insanity, indicated by such symptoms as restlessness and refusal of food on the part of persons advanced in life. In all those cases death almost invariably ensued from tubercular phthisis. Dr. More Madden was in some respects right regarding the stress he laid on uterine irritation.—Dr. MORE MADDEN thanked the Sub-section for the reception of his paper.

Reviews and Notices of Books.

Handbook of Geographical and Historical Pathology. By Dr. AUGUST HIRSCH, Professor of Medicine in the University of Berlin. Vol. I.: Acute Infective Diseases. Translated from the Second German Edition by CHARLES CREIGHTON, M.D. London: New Sydenham Society. 1883.

THE members of the New Sydenham Society should be grateful to their Council for wisely selecting so world-famous a treatise as this of Professor Hirsch to be added to their series, and for securing the services of one so competent to translate the work as Dr. Creighton; for the book is indeed a marvel of industry and erudition, and one which ought to be consulted by every writer on medicine. It is more

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than twenty years since the author published the first edition, and he is now engaged upon the second, the first of the three volumes of which is here translated. In the long interval of time between these two editions there has been a remarkable development in literature and in the interest taken in epidemiology, which Professor Hirsch has himself done so much to further. It is gratifying to find him testifying to the value of the results effected in this direction by the publications of our own Health Department and the Epidemiological Society. In speaking of the growth of the subject matter of his work, he may well say that "some attempt to treat of Geographical and Historical Pathology anew was not merely justified, but even called for"; and in devoting himself to the task, we can well understand how "it has involved an entirely new treatment of the subject." To be sure, in these days the historico-geographical method is giving place to a mode of inquiry that goes to the root of etiology—we mean the search into the nature and properties of the virus of specific diseases, which now engages so much attention. But although this experimental method may have taught us much concerning the essential nature of disease and its propagation, it cannot replace the work done on the older plan, the comprehensiveness of which has thrown so vivid a light on the manner of diffusion of epidemic disease on a large scale.

The volume before us treats of the Acute Infective Diseases—viz., Influenza, Dengue, Sweating Sickness and Miliary Fever, Small-pox, Measles, Scarlet Fever, Yellow Fever, Asiatic Cholera, Plague, Typhus, Relapsing Fever and Bilious Typhoid, and Typhoid Fever; and concerning some of these we may advert to a few of the more notable facts presented. As examples of the exhaustive character of the work, it may be noted that the chapter on influenza contains references to the literature of epidemics dating from 1173 to 1878, and that the bibliographical references to the article on malarial fevers fill fifteen closely printed pages.

Influenza is eminently an epidemic disease—sometimes, as in 1837–58 and 1874–75, assuming pandemic proportions and spreading over a great part of the civilised world. Professor Hirsch finds no proof for the assertion that the epidemics are subject to periodical recurrence, or that they habitually travel from east to west, as many have held. He points out also how variable influenza is in the manner of its spread, in some epidemics large tracts of country being smitten almost simultaneously, in others the disease spreading but slowly. Having a geographical distribution over all parts of the globe, influenza appears to be uninfluenced by telluric conditions, by season, or by weather, and is thereby very different from epidemic bronchial catarrh. Although undoubtedly due to a specific virus, the disease is not transmitted by aerial infection, for it often spreads in directions opposite to that of the wind currents. It is interesting to learn that so long ago as 1836–37 this disease formed the subject of a "collective inquiry" by the Provincial Medical Association, the question being whether influenza were contagious or not. The replies were almost wholly in the negative. Few of the present members of the Association, which now exists under a wider name and with a much larger roll of members, can be aware that nearly fifty years ago the scheme, which is now being more ambitiously fostered, had its prototype in this inquiry.

From the widely prevalent and long-known influenza the author passes to the comparatively modern disease Dengue—a malady of the tropics, characterised by articular pain and swelling, fever, and cutaneous eruption; and although of brief duration, succeeded by marked debility and anæmia, very rarely leading to a fatal issue. In its sudden outbreaks over large districts it resembles influenza.

Next follows a chapter on the English Sweating Sickness, which carries us back to the battle of Bosworth Field, and with which Professor Hirsch inclines to believe must be allied the miliary fever recorded in many epidemics, especially in France, but also in Italy and Germany, up to the present day.

The chapter on Small-pox is one which will repay the most careful study. Its records reach back to the time of Rhazes in the tenth century, but so common a scourge was it that it would almost seem as if in pre-Jennerian times epidemics were considered too frequent to be noticed; at any rate, literature is not so full of them as might be expected. Very interesting is the evidence which goes to show that the starting-point of the disease was in India and Central Africa, and the manner in which with advancing "civilisation" it has been carried to islands and colonial dependencies. It did not reach Australia until 1838, and it has never yet appeared in Tasmania and New Zealand; and America owes its introduction to the European invasion. It appears to be especially prevalent in Peru, "notwithstanding," says Professor Hirsch, "that the natives appear to have been acquainted with the protective power of vaccine long before the advent of Jenner." Upon the value of vaccination, and the need for its thorough enforcement, Professor Hirsch speaks in no measured terms; and the testimony of one who has made himself so familiar with the ravages of the disease in times before this beneficent discovery was given to the world is not to be despised. He disbelieves in the notion of epidemic periodicity, the only factors necessary for an outbreak being in his opinion individual susceptibility and the introduction of the virus.

Measles appears to be very widely distributed; but Scarlet Fever, common in Europe, is rare in Africa and Asia, and is less frequently met with in epidemics than measles. Measles, again, prevails most in cold seasons; scarlet fever appears to be uninfluenced by climate, or season, or weather. The varying intensity in type of measles epidemics is, he thinks, largely due to the care, or rather the neglect, of the sick; but scarlet fever presents in itself various phases of malignity, increased, it may be, by insanitary surroundings.

The chapters on Malarial Diseases and Yellow Fever, diseases especially suitable for study from the geographical standpoint, are full of detail; but we must pass them by with the remark that Professor Hirsch notes that some forms of malarial disease seem to have disappeared, and that other new types, including "typho-malarial fever," first brought to notice in the American civil war, have made their appearance.

Asiatic Cholera is the next subject treated of, and a succinct account is given of the four great epidemics: that of 1817 to 1823, which reached the borders of Europe, but did not pass beyond them; that of 1836–37, which traversed the countries of Northern Europe, Denmark excepted, and was conveyed across the Atlantic from Ireland to Canada and the United States, thence spreading to Central America and across the Andes to the Pacific, whilst it also spread from North to South Europe; that of 1846 to 1863, which pursued much the same course and was marked by a remission in 1850–52; and that of 1865–75, in which also a remission occurred in 1869–70. There are regions left which cholera has never visited—as Australia, the Pacific islands, portions of the East and West Coasts of Africa, Central and Southern Africa, as well as parts of South and North America; in Europe, "Iceland, the Faroë Islands, the Hebrides, the Shetland and Orkney Isles, Lapland, and the Russian territory north of the sixty-fourth parallel"; and in Asia, Siberia and Kamtschatka. But here and there in countries which have been the seat of the disease, some regions have escaped wholly or partially—as in Switzerland, Baden, Wur-

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temberg, some mountainous districts in the south-east of France, north of Scotland, and parts of Greece. The mode of spread, the tendency to follow the course of rivers, the relation of epidemics to the level of, or rather to the admixture of air with, the subsoil water, the nature of the cholera virus, and the indecisive results of experimental research (of course Koch's recent work is not included, for this volume was published in 1881), and the non-contagiousness of the disease, are amongst the many points treated of.

Next follows a full account of the Plague, which has appeared in all parts of Europe at different times, but has never extended in Africa beyond the northern countries; whilst Asia, Syria, Asia Minor, Armenia, Persia, and India have been the seats of epidemics in the present century. Climatic influences, and especially a low temperature, are favouring causes, but not to the extent formerly accepted; indeed, extremes of heat and cold appear mostly to "cause the extinction of the epidemic, or are little favourable to its breaking out."

The history of epidemics of Typhus, with the overwhelming evidence of their association with insanitary conditions, overcrowding, and famine; the association of similar conditions in the case of Relapsing Fever, and the highly contagious character of both these diseases; and the final chapter on Typhoid Fever—afford much room for comment did space permit. No summary will, however, suffice to indicate the wealth of material so laboriously collected and so skilfully arranged, and our readers must turn to the volume itself, which will well repay perusal.

Dr. Creighton has performed his part of the task in a highly commendable manner; and he has added to the obligations of English readers by compiling an excellent index to the volume.

The Evolution of Morbid Germs. By KENNETH W. MILLICAN, B.A., M.R.C.S. London: H. K. Lewis. 1883.

THIS essay, a contribution, as the title-page informs us, to transcendental pathology, comes opportunely to remind us of the bearings of modern research upon the nature of disease. For although the notion that one so-called specific disease may, under certain conditions, be transmuted into another is not wholly novel, yet it must be confessed that the tendency of pathological discovery to resolve such diseases into the effects of the action on the body of various parasitic microphytes has given fresh impulse to such speculations. Grant the existence of specific organic germs, and there is no escape from the application to them of the doctrine of evolution—the truth of which must rest upon the universality of its operation. It is to Mr. Millican's credit that he has applied the evolution hypothesis to the elucidation of certain unexplained facts of disease in a way that has not heretofore been attempted, and with a boldness which can only be admired. It may be true—there is certainly no *a priori* objection to the hypothesis—that many, if not all, diseases which have an origin external to the human organism have primarily sprung from some common ancestral type, and consequently that variations and resemblances are due to reversions or other modifications similar in kind to those seen in the animal world. It may be doubted whether such aberrations from the prevailing order are at all frequent, or that a really marked example of one specific disease could give rise to another of wholly different type. The existence of such hybrids as "rötheln," or of such gradual modifications in type as can be seen between tonsillitis and diphtheria, is suggestive of the truth which probably underlies Mr. Millican's contention. To establish it as true will require the accumulation of a large number of facts, and the work is one which we hope the author may be able to pursue

ST. THOMAS'S HOSPITAL MEDICAL COLLEGE

THE Archbishop of Canterbury presided at the distribution of prizes on Wednesday, July 9th. The following is a list of successful candidates:—

Summer Session.—First Year's Students—College prize £15 and certificate of honour: H. J. Smyth. College prize £10 and certificate of honour: S. B. Cook. Certificates of honour: H. J. Macevoy, S. W. Wheaton, H. A. Sansom. Second Year's Students—College prize £15 and certificate of honour: E. S. Gooddy. College prize £10 and certificate of honour: A. E. Godfrey. Certificate of honour: K. Totsuka. Third Year's Students—College prize £15 and certificate of honour: H. W. G. Mackenzie. College prize £10 and certificate of honour: R. T. Cann. Certificates of honour: J. R. Staddon, E. D. Ritchie, R. Lawson, F. C. H. Piggott, G. F. C. Williams.

Winter Session.—Entrance Science Scholarship—Scholarship £100 and certificate of honour: C. W. Cooke. Scholarship £60 and certificate of honour: F. Fawssett. First Year's Students—The Wm. Tite Scholarship £30 and certificate of honour: F. Fawssett. College prize £20 and certificate of honour: E. Webster. College prize £10 and certificate of honour: H. H. Heffernan. Certificates of honour: C. H. Eccles, R. V. Solly, W. W. Ord, C. W. Cooke. Second Year's Students—The Peacock Scholarship 40 guineas and certificate of honour: H. P. Hawkins. College prize £20 and certificate of honour: H. J. Smyth. College prize £10 and certificate of honour: E. Solly. Certificates of honour: H. Duncan, E. C. Stabb, E. H. Wright, S. W. Wheaton, S. B. Cook, J. H. Topking, H. P. Helsham, T. E. Stuart, W. F. Brook, L. A. Bidwell, H. A. Sansom, J. T. Calvert, C. T. Quiller. Third Year's Students—Second tenure of half the Musgrove Scholarship 20 guineas, with College prize £20 and certificate of honour: S. H. Jones. College prize £15 and certificate of honour: A. E. Godfrey. College prize £10 and certificate of honour, with second tenure of half the Musgrove Scholarship 20 guineas: K. Totsuka. Certificates of honour: J. S. Hutton, H. C. Kidd, A. A. Brockat, F. D. Crowdy. Anatomical Assistants—Certificates of honour: A. E. Godfrey, G. A. Macdonald, F. G. Parsons, K. Totsuka. Prosectors—Prizes and certificates of honour: H. Duncan, E. C. Stabb. Certificates of honour: L. A. Bidwell, A. B. Brockway, W. F. Brook, H. P. Hawkins. Resident Accoucheurs—Certificates of honour: F. F. Caiger, W. Fell, W. J. Sheppard, W. Wansbrough Jones. House-Surgeons and Assistant House-Surgeons—Certificates of honour: W. Wansbrough Jones, G. F. Cooper, F. F. Caiger, G. D. Johnston, W. J. Sheppard. House-Physicians and Assistant House-Physicians—Certificates of honour: A. Foxwell, H. Milton, C. D. Green, W. Hull, W. J. Sheppard, J. Orford, F. F. Caiger, W. B. Tomson. Solly medal and prize: J. Pietersen. Surgery and Surgical Anatomy—The Cheselden medal, founded by the late George Vaughan, Esq.: R. Lawson. Special mention and certificate of honour: R. Lake. Practical Medicine—The Mead medal, founded by Mr. and Mrs. Newman Smith: H. W. G. Mackenzie. Special mention and certificate of honour: H. Bidwell. For General Proficiency and Good Conduct—The Treasurer's gold medal: R. Lawson.

THE SUPERANNUATION QUESTION: A SAD CASE.

To the Editor of THE LANCET.

SIR,—There is now living in the village of Eastmeon, Petersfield Union, Hants, an ex-Poor-law medical officer by the name of George Pink, aged ninety years. He held the position of district medical officer in the Petersfield Union for more than forty years, and on his resignation, when upwards of eighty, applied for superannuation allowance, which was refused. I learn that he is now nearly penniless, and that if help be not afforded him he must go into the workhouse. I shall be pleased to receive any subscriptions that may be sent me in aid of this poor man, who under no circumstances can be a burden to anyone very much longer.

I am, Sir, yours obediently,

33, Soho-square, July 6th, 1884. JOSEPH ROGERS.

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THE LANCET.

LONDON: SATURDAY, JULY 12, 1884.

THE election of Mr. COOPER FORSTER to the Presidency of the Royal College of Surgeons of England is not altogether of good omen, not because it fails to place at the head of the College an eminent surgeon, but because it perpetuates the evil and useless tradition of always electing the senior vice-president to the presidential chair. It further indicates that the Council still hesitates to bring the acts of the executive as far as practicable into harmony with the wishes of the whole of the body corporate. It will be remembered that one of the recommendations adopted at the general meeting of the Fellows and Members held at the College last March was to the effect that the President should be elected by the Fellows generally, and not exclusively by the Council as heretofore. It was argued that if it had been found necessary to have ordinary members of the Council elected by the Fellows, then *a fortiori* should the President be elected by the Fellows. The custom of always electing the senior Vice-President to the Presidency has, no doubt, often been attended by unexceptionable results, and has secured to the office many men distinguished not only as surgeons, but as administrators and medical politicians. On the other hand, it is notorious that adherence to this custom has, not unseldom, placed at the nominal head of the surgical profession of England some who were neither eminent as surgeons nor competent as administrators. Indeed, the accidental, uncertain, and indiscriminating character of the old plan of electing the President constituted its most conspicuous fault. Its other principal defect was that it excluded the specially ordained electoral body—namely, the Fellows—from participating in the particular election which most intimately concerns the dignity and prestige of the College. The antiquated system received its death-blow at the general meeting already referred to, and its doom has been definitely pronounced by the Association of Fellows, as well as by that of Members. The Council has, however, not the heart to give it the *coup de grâce*.

A fortnight ago such a resolute and decisive step would not have been expected. A majority of the Council as then constituted expressed its satisfaction with matters as they stood, and did not wish any alteration. A week might have effected more change. On the 3rd instant five members were elected into the Council, all of whom were more or less explicitly pledged to a programme of reform. It would have been an auspicious result of the first meeting if a departure had been taken from a mode of electing the President which has been condemned by many members of the Council and by the Associations of Fellows and of Members. The arrangements took their ordinary course last Thursday, and Mr. COOPER FORSTER, as senior Vice-President, was elected to the Presidency; and it cannot be denied that as far as his talents and services to the College are concerned this gentleman is as well qualified to discharge the duties of President as some of those to whom these duties have previously been entrusted. But many circumstances had conspired to suggest and justify a new departure. Exceptional circumstances call for exceptional measures. Impending legislation may affect the relations of the College, and it is desirable that the President at this time should be one who is not only acquainted with the affairs of the College, but who has a very strong hold upon the confidence and respect of the whole profession. The relations between the Council on the one hand and the Fellows and Members on the other are at present strained, and a wise and judicious man is needed at the head of the College to effect that compromise which can alone conciliate the disaffected at the same time that it perpetuates what is best in the traditions of the Council. A President who believes that the Council in all its dealings and relations is absolutely perfect, and who thinks that it is impossible to touch it without spoiling it, or an easy or indifferent President, who would be willing to perform his functions by deputy, might at this conjuncture curtail the influence and usefulness of the College, and even jeopardise its permanence. But, besides these weightier and more external considerations, there is a matter of domestic interest to be taken into account. On the 14th of next February the Hunterian Oration will be delivered. On the evening of that day the Council will entertain some of the most distinguished representatives of divinity, literature, art, and science, and it is desirable that the President of the College on such an occasion should exhibit the qualities of geniality, urbanity, grace, and culture. Without questioning the possession of these qualities by Mr. COOPER FORSTER, it cannot be gainsaid that no man in the profession is so richly endowed with these gifts as Sir JAMES PAGET. Consequently, we cannot avoid the conclusion that the election of Sir JAMES to the office of President for the ensuing year would have proved as popular as it would have been opportune.

KNOWING the sincere desire the Government entertain to pass their Medical Act Amendment Bill, and remembering how they have lost no opportunity of pressing it on, we write in the strong hope that it may be decided not to sacrifice a measure already so far advanced. Until Mr. GLADSTONE has uttered his fiat, however, we can write only on supposition. From the number and character of the amendments proposed there can be no doubt that in its progress through Committee of the House of Commons the Bill will be imperilled; and we must confess to entertaining grave anxiety as to the form in which it will be finally passed by the Legislature. Our readers will remember that although in the debate on the second reading of the Bill in the House of Commons there was a general consensus of opinion as to the necessity of the measure, and also as to the wisdom of its main provisions, there were yet numerous indications that many who supported the second reading only did so with the intention of introducing amendments in Committee. Of these the most important is that standing in the name of Sir LYON PLAYFAIR, which is as follows:—"The Medical Board in any part of the United Kingdom, with the approval of the Medical Council and the consent of the Privy Council, shall, in substitution for any final examination held in pursuance of a scheme or schemes under this section, accept the final examination in Medicine,

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Surgery, and Midwifery, of any of the bodies hereafter in this section mentioned returning a member or members to the Medical Board—that is to say, of (1) any university; or (2) any combination of two or more medical corporations who may agree on a joint examination; or (3) any combination of a university with a university or universities, or of a university or universities with a medical corporation or corporations; provided (*a*) that the Medical Council shall be satisfied that any such substituted examination is equivalent in efficiency to the examination for which it is substituted; and (*b*) that in every substituted examination such number of examiners, not exceeding half the total number of examiners, as may be determined by the Medical Board, with the approval of the Medical Council and the consent of the Privy Council, shall be appointed by the Medical Board." If this amendment is introduced, the principle of a "one-portal" examination will be sacrificed, and those who have been hoping that at last an end was to be put to a system which is a disgrace to the profession and an injury to the public will be grievously disappointed. We may be sure that the corporations would at once enter into the necessary combinations, and that we should never see any independent and really trustworthy examination conducted by the Medical Boards. We have heard three arguments advanced in support of the amendment: that it is a hardship to compel medical students who have passed higher medical examinations to pass the easier one of the Medical Boards; that the expense of the two examinations will deter students from passing the voluntary higher examination; and that the double clinical examination will be too severe a strain upon the patients in the hospitals. How amused students must be when they hear such arguments advanced on their behalf! How can it possibly be a hardship upon a man who can pass a high examination to make him pass one of a lower standard in the same subjects! It could only be so if the higher were higher in name and not in essence—if it were concerned with the minutiæ and details while the great fundamental principles are neglected. We should be glad indeed if the argument of expense might be taken as showing that the corporations had any real regard for the student's pocket; but with the fact fresh in our recollection that the Royal Colleges of Physicians and Surgeons in London have entered into a scheme by which a diploma will only be given by either to those who have passed the examinations of both bodies, and who have paid the full fee now charged for each single diploma, we must refuse to regard this as anything more worthy than a pretext. All who are practically acquainted with the matter know full well that the clinical material available in London, Edinburgh, Dublin, and the other large towns where these examinations would be held, is abundantly sufficient, and that the double examination need not, and would not, inflict any injury, or even inconvenience, upon the patients in hospitals; this is but a false cry raised to win the support of those who, without personal and practical knowledge of the question, may be led astray by appeals to economy, or to their sympathy with suffering. But it may be urged, Are not the safeguards introduced into the amendment sufficient to ensure that this portal to the profession shall be satisfactorily guarded? We must answer with an emphatic "No." The universities and combined corporations would still be left free to compete to admit students to the Register, and all experience shows that where the spirit of competition can be allowed any scope in such a matter, it always tends in one direction only. So long as a student has a choice of several examinations before him, those who profit by his choice will be very sure to devise means of attracting him, and our past and present experience shows abundantly what these means are. The principle of the proposal is wrong; it perpetuates the very evil the whole Bill is intended to put an end to, and we doubt whether by any means it could be freed from ill results. It is impossible, too, to forget that this amendment is introduced in the interest of some of the existing examining bodies, and we may therefore be assured that they are fully alive to the ways in which they can turn it to their own advantage.

We trust that the Government may yet see their way to introduce a clause conferring a title upon all holders of the diploma granted by the Medical Boards. This is a matter to which we have repeatedly referred; the students, who of all people are perhaps most interested in it, have expressed their opinion in no uncertain way; it will injure no one, and it will make the necessary registrable qualification of real value to the holders of it. Without a title the holder of the diploma will labour under a serious disability, and two results may with certainty be anticipated—a renewal of agitation for fresh legislation on this point, and the use by the less scrupulous men of titles to which the examination they have passed gives them no claim. The Government should boldly grapple with the question, and we are confident that if they will fairly look into it they will see the justice and the necessity for granting some title with the registrable qualification, and we trust that at the same time they will reintroduce the clause referring to "higher titles" which was in the Bill as originally introduced in the House of Lords last year. They will thus close this question finally, and will earn the lasting gratitude of the profession.

PUBLIC opinion means well; but it is much mistaken in its policy in relation to baby-farming. A strong prejudice exists against the provision of any systematic help for the parents of children who are a burden either because they are illegitimate or because their mothers have to fulfil daily tasks of labour. It is easy to understand, and everyone must, as society is at present constituted, sympathise with, the anxiety to avoid offering "facilities"—such as are rightly or wrongly supposed to be offered in countries where foundling hospitals abound—for the rearing of children who are, so far as natural maternal care is concerned, abandoned. It is with difficulty that we maintain a single "Foundling Hospital" in London, and if the management of that solitary institution were not in trusted hands and known to stand on the highest moral ground, it would fail to secure even the very scanty consideration now bestowed upon it. A proposal to multiply foundling hospitals in this metropolis would be scouted as inadmissible on the score of moral policy. We do not, it must be confessed, share the fear of encouraging reckless living by the establishment of houses of succour for infants, though we comprehend and respect the feeling that begets that fear in other minds; but

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we do stand in exceeding alarm at the indefinite perpetuation and extension of the evils that result from the refusal of the State to step in and provide the hospitals required. Whether we will or will not, there *must* be places and means of "taking charge" of children of tender age. Mothers *will* put their infants out to nurse, and if measures are not taken to provide places of safety for their reception, where the treatment they receive is under proper supervision, they will languish and die, in some instances, doubtless, to the grief, in others to the satisfaction, of their parents. Much misapprehension seems to prevail with regard to the significance of a full payment per week for the care of a young child. There is a disposition to accept the fact as evidence of good faith. We regret to feel compelled to look at the matter from another point of view. When a servant girl pays six shillings a week for the care of her infant, we fear it is generally understood—though not, perhaps, expressed in the agreement—that the number of weeks during which this heavy tax must be borne will not be many. The very liberality of the allowance shows that it is not meant to last. This is a point on which the Courts, as well as public opinion, probably stand in need of a little common-sense enlightenment. We only mention this as one of the facts about baby-farming which need to be scrutinised somewhat more closely than it is the wont to look into them.

It would be useless to license the keepers of baby-farms or to register these institutions unless they are to be properly inspected; and as secrecy in respect to the whole business is one of the first conditions on which parents insist, it is impossible, out of Utopia, to expect baby-farms to be conducted as private ventures without being misconducted. Sooner or later the State will have to make the provision required. Meanwhile, what is to be done? We have for many years past repeatedly pressed this matter on the attention of our readers, and, through them, on public opinion. It is a question of great importance. We have urged, and we again contend, that it should be made a misdemeanor to undertake the care of any child—not being the guardian's own child—whether for "gain" or for "love," without reporting the fact to the police. Even with this enactment there will be many cases of malpractice. Children will be represented as being the offspring of their custodians when they are in fact farmed; but a little vigilance on the part of the police will go far to render this form of imposture difficult. There might be a heavy penalty for misrepresentation. There should be no hardship in requiring those who take children in to nurse, on any terms, to notify the fact at the district police station. It would not be necessary or politic to require that they should give up the names of the persons by whom they were entrusted. This might be left a secret. No statesman would desire to throw needless obstacles in the way of the placing out of children to nurse. If it were not permissible to do this, and with a fair amount of ease, and perfect secrecy as regards the names of the parents, there would be a notable increase in the crime of infanticide. This must be distinctly borne in mind and provided against, or legislation, even on moral grounds, will be worse than useless. Again, the acceptance of children to nurse must be followed by the appointment of local inspectors, who should be empowered to visit the homes of persons known to have such infants in charge at proper intervals, and who should be held accountable for the supervision of these little ones as regards health and general management. Medical officers of districts under the Poor-law division of the Local Government Board would be suitable persons to perform this service, and while they are going their rounds among the poor, visiting the permanent sick, lunatics, and idiots, it would be easy for them to do the additional duty for the recompense of a small fee. Medical men are, of course, far better judges of "health" and "condition" as regards young children than constables or relieving officers can possibly be, and there would not be the same objection to the visits of a medical practitioner as to those of a constable or even a relieving officer.

It is clearly time that something were done in this matter. It is one of great urgency and gravity. We venture to think that even at this late period of the session a short Bill might be passed containing the three provisions we have specified. First, that all persons having the care of children not their own should notify the fact to the local police, or it might be notified by any other person by letter, addressed to the head constable or superintendent; second, that it shall be a misdemeanor carrying a heavy penalty to fail to make this notification, or to make any misrepresentation as to the facts; third, that the medical officers of districts shall be empowered and required to visit all places where children are farmed at short intervals—say once a month,—and to see and report upon the health and condition of the children so farmed. If the Legislature is practical and sincere in the often expressed wish to pass some satisfactory measure on the subject, this brief outline may be useful as a basis, and no real difficulty would, we believe, be found in framing and passing such a measure.

THE firmness of the hold which bacteria, and all that relates to them, have taken on the mind of scientific investigators may be accurately measured by the number and length of the contributions to periodical medical literature. A grand discovery, like a huge wave, is invariably followed by a succession of smaller undulations of varying size, which are of value in their own way. If complete reliance may be placed on the conclusions of M. PASTEUR'S recent work on Rabies, we may indeed congratulate scientific vivisection on having achieved a position which not only conclusively establishes its *raison d'être*, but ought surely to silence the unreasonable demands of the anti-vivisection movement.

The first communication to which we draw attention is one by OSOL on the virus of charbon, a disease which, though perhaps almost worked out, still continues to attract a large share of attention. Under the guidance of Prof. SEMMER of Dorpat, OSOL has studied the influence which the injection of charbon blood, deprived of its spores and bacilli by boiling, has on the animal organism. Blood taken from large-sized animals dead of charbon was first diluted with equal parts of water, boiled in glass vessels, and filtered while hot. The residue of the filtration and the coagulum formed by boiling were again treated with water, and once more boiled and filtered. After this double filtration the liquid was heated on three consecutive days for a period of two hours each time. Large injections were then made on rabbits and mice, with

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properly cleaned syringes. Other animals used as control subjects were inoculated with minute quantities of the charbon virus. Some sterilised broth was also inoculated with some of the reduced virus, kept in an incubating stove. Finally, the blood of the sheep and horse, taken from healthy animals, was subjected to the same manipulations as the charbon blood, and then injected in the same doses as the latter into mice and rabbits. Animals inoculated with the charbon virus previously boiled have perished in from three to six days. Their blood and glandular organs, examined immediately after death, contained in a quarter of the number of cases the bacilli characteristic of splenic fever. In those instances where bacilli were not detected, innumerable micrococci like those described by MM. SEMMER and BOLLINGER in 1872 were found. According to these observers, the rods and cocci represent two complementary morphological elements. M. OSOL never came across the protococci recently described by M. ARCHANGELSKI ("Contribution à l'Etude du Contage Charbonneux." Dorpat, 1884). Inoculations with the blood from animals dead of the induced disease on sterilised culture liquids led to the development of typical forms of bacillus anthracis. The same blood syringed under the skin of rabbits and mice led to the death of this second batch, bacilli being also discovered in the blood and viscera. The control animals experimented on with minute doses of the poison exhibited no pathological manifestations. The sterilised liquids remained perfectly clear, thus proving that the boiled virus contained no living organisms. From these investigations, M. OSOL concludes that there exists in the blood of animals affected with charbon a specific virus, soluble in water, but non-volatile and of a chemical nature. When this virus is inoculated on animals, it modifies their liquids in such a manner that *indifferent* micro-organisms contained in the normal tissues are transformed under the influence of the virus into charbon bacilli at the end of from three to six days. M. OSOL does not underrate the importance of the bacilli, which he regards as the only agents capable of producing the specific chemical poison.

M. ZAHN has made fresh researches on the blood of rabbits, cats, sheep, and calves (VIRCHOW'S *Archiv*, p. 401, 1884), tending to prove that the blood of healthy animals does not contain the germs of putrefaction. He collected, with full precautions, small quantities of blood in tubes previously filled with hydrogen, oxygen, and carbonic acid, so as to exclude the atmospheric air. After weeks and months the contents of the hermetically sealed tubes, kept at a constant temperature of 37°-38° C., remained free from any sign of putrefaction.

M. HAUSER (*Centralblatt für die Med. Wissensch.*, No. 21, 1884) has searched for micro-organisms in living healthy tissues. Entire organs and parts of tissues, removed, by means of instruments previously heated, from animals just killed, were at once placed in super-heated glass vessels, the mouths of which were securely plugged with cotton-wool. These vessels were then kept in a moist chamber at a temperature of about 30° C. The conclusions arrived at by HAUSER were to the effect that micro-organisms do not exist in healthy tissues. The bearing of ZAHN'S and HAUSER'S experiments on those of M. OSOL are plain, since the last-named believes that healthy tissues do harbour germs.

BELTZOW (*Centralblatt für die Med. Wissensch.*, No. 21, 1884) has examined five cases of pyæmia and one of pyo-septicæmia, with a view to clearing up the nature of the germs associated with these diseases. He has found that the organs of human subjects dead of pyæmia contain, besides colonies of cocci, a considerable number of bacilli which belong to two distinct morphological varieties. One of these has a distinct resemblance to the bacilli of malignant œdema, and the others have dimensions intermediate between the bacilli of tuberculosis and the bacilli of the septicæmia of mice. In one case only, by the side of the cocci and bacilli, in the liver, colonies of leptothrix buccalis were discovered blocking the capillaries of the gland.

BAUMGARTEN has given the following method for the pure cultivation of the bacilli of tubercle. A tubercular nodule rich in bacilli, removed with due antiseptic precautions from a living animal or human cadaver, is transplanted into the anterior chamber of a rabbit's eye; as is well known, under these circumstances no inflammation follows. The transplanted nodule perceptibly augments in volume, and is allowed to do so for from eight to fourteen days. Microscopical examination shows that the increase in size is due chiefly to the germination of bacilli, and, at the same time, that the histological elements have undergone corresponding atrophy. If portions of this premier nodule be inserted into the anterior chamber of the eye of another rabbit, and so on for a series of rabbits, a time comes when an absolute pure culture of tubercular bacilli is obtained. The successive inoculations required by this procedure set up specific inflammatory lesions of the eyes, followed by generalised tuberculosis.

FALK has observed that putrefaction destroys the virulence of the tubercular virus. He has endeavoured to obtain by experimental means a benign tuberculosis by inoculating virus attenuated by putrefaction, at the same time hoping to discover a means of "vaccinating" against tuberculosis. Inoculation on rabbits with putrefying tubercular lesions was followed by a local tubercular mischief only, which ended either by suppuration or calcification, no internal lesions being discovered. But it was found that animals thus experimented on derived no immunity from fresh inoculations made with pure tubercle; indeed, tuberculosis seemed to ensue more rapidly.

BAUMGARTEN has fed rabbits with milk in which tubercle bacilli had been held in suspension. After a single meal of from fifty to forty grammes of this milk, the rabbits presented, with a remarkable constancy, tubercular infiltrations of the mucous coat of the intestine, mesenteric glands, and liver. The more charged the milk was with bacilli, the more extensive were the resulting lesions. In some of these latter cases the vermiform appendix and large intestine were eaten through with caseous ulcers, on the edge of which tubercles with epithelioid cells stuffed with KOCH'S bacilli were to be found. At the surface of the tonsils there also existed, in some cases, ulcerated lesions infiltrated with bacilli. BAUMGARTEN believes that infection takes place at the upper end of the digestive tract. Of other organs in these instances the lungs only exhibited tubercular lesions. This observer has also remarked that putrefaction lessens the virulence of the tubercular material.

LAST week an interesting and instructive lecture was delivered at the United Service Institution by Lieut.-Colonel

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TULLOCH, C.B., of the Welsh Regiment (formerly the 69th) on the subject of Soldiers' Food. After a brief introduction, pointing out the sins of omission and commission, which until a recent period contributed largely to the very high rate of mortality which prevailed in our army, the author proceeded to consider in detail the various articles constituting a soldier's diet, under the headings of ration meat, bread, and groceries, and pointed out how much might be done for the benefit of soldiers by a little more supervision on the part of commanding officers and captains of companies. He then discussed the nutritive value of different foods and the amount necessary to keep a soldier in a state of efficiency. From a comparison of the nutritive value of the rations of foreign armies with our own, it appears that the total amount of water-free food in the Russian Army is 34·30 oz.; in the Prussian, 24·80; in the French, 24·14; in the Austrian, 23·30; and in the English, 23·13; so that our army stands at the bottom of the list as far as the nutritive value of the diet is concerned. Colonel TULLOCH then proceeded to offer suggestions as to the best mode of improving the existing rations; the management of the regimental canteen; the establishment of a recreation-room bar; and the introduction of a little more civilisation into the arrangements for the soldiers' meals in the barrack-room. The subject of food on troop ships was next brought under review, and the extremely difficult question of food on active service. On the latter point the lecturer pointed out the great difference which is observed in different regiments employed on the same service. "Some regiments will manage to keep well and send few men to hospital, whilst others precisely similarly situated, who are not properly looked after, suffer greatly. Instead of using strong language about the commissariat, who are often struggling against difficulties of which few but the General Staff have any idea, officers might often manage so as to add to the soldiers' rations," and he gave some instances of how this might be, and had been done. We think there cannot be a doubt that it would be most advantageous to add to the soldiers' food both in peace and in war, but the difficulty in the former consists in the large addition which it would make to the already heavy expense of our army; and in war, in obtaining supplies, and in providing and maintaining the great amount of transport necessary to keep up the commissariat with an army on the move. Lord WOLSELEY, in his "Soldiers' Pocket-Book," suggests the following as a liberal and varied war ration for British troops:—"Bread, 1¼ lb.; fresh meat, 1¼ lb.; peas or beans, 3 oz.; potatoes and green vegetables, 1 lb.; cheese, 2 oz.; sugar, 2 oz.; salt, ½ oz.; pepper, 2/16 oz.; ground coffee, 1 oz.; tea, ½ oz.; and wine, ½ pt.; or beer, 1 pt." On this recommendation Colonel TULLOCH justly remarked that "such feeding might be possible with a small force and a perfect system of transport; but a Commissary General who, anywhere but in India, could so supply a large army on the move would deserve a peerage." The paper was evidently carefully prepared, and was of an eminently practical character. The views of the author were well borne out in the discussion which followed, and especially by Dr. DE CHAUMONT, whose opinions on the necessity of feeding up our recruits and young soldiers met with general support. On one point only the paper seemed to be defective. The author made no reference to the hours at which soldiers have their food served out to them; and this is a matter in which a change is greatly needed. The long period of nineteen hours elapses between dinner and breakfast, the two principal meals of the day; and although it is true that the soldier has an evening meal provided, it is not of a very substantial character. It would, we think, be a great advantage if the hour for dinner were changed to four or five in the afternoon. We entertain a strong opinion that much of the drinking of our soldiers is due to a craving for something in the long interval, and that the thing most easily procured and most successful in allaying the feeling is found, or believed to be, some form of alcoholic stimulant. We trust that the subject of the soldiers' food may receive due consideration from the War Office authorities, and that steps may be taken to carry out the suggestions which Colonel TULLOCH has made with a view to an improvement in a matter having so important a bearing upon the health and efficiency of the army.

AT the annual meeting of the Royal Society for the Prevention of Cruelty to Animals, held on Monday last at St. James's Hall, Dr. RICHARDSON, F.R.S., had the satisfaction of reporting that one of the labours on which he has been engaged for a quarter of a century had been brought to a practical result of a most satisfactory kind to all friends of human progress. He observed, briefly, that he had been able to submit the inferior animals that have to be killed to a perfectly painless death under anæsthesia. In 1869 Dr. RICHARDSON proposed to the Society that such a plan should be instituted, and in 1871 he read a paper on the same subject to the Medical Society of London. The suggestion met with much favour, and the comments upon his paper in the scientific and other journals led to discussion of the project, and, in a small way, to its adoption in one or two foreign cities. Meantime the author himself continued his researches, and within the last few months, aided by a pecuniary grant to the committee of the Dog's Home, Battersea, from Mr. KENNETT, whose philanthropic benevolence is so well known, he has been able to carry out his design at the Home on a scale sufficiently large to prove its practical and extensive application. In describing this result, Dr. RICHARDSON first gave a short account of his early efforts to make use of electricity as a rapid means for the extinction of lower animal life, and explained the reasons why he had been forced to the conclusion that the electric shock, rapid as it is, cannot safely be entrusted to the hands of those who have to subject animals to death. He next described the various researches he had made with anæsthetics of various kinds—chloroform, nitrous oxide, ether, methylene, bisulphide of carbon, carbonic acid, carbonic oxide, coal gas, and coal gas combined with chloroform—by which agents death is produced through sleep. Into the lethal chamber which he had now set up for lost and starving dogs, from fifty to a hundred dogs, enclosed in a cage, could be wheeled at once, and submitted to the narcotic vapour, could be made to go into a sleep from which, without any awakening, they passed into death. Between four and five hundred dogs had already been destroyed by this painless process. The chief agent used for narcotising was

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carbonic oxide, with which the chamber was fully charged before the animals were moved into it. The gas on its way into the chamber passed over a porous surface, from which it took up narcotic vapour containing chloroform, which, also diffused through the chamber, increased the lethal action and maintained the lethal atmosphere within the chamber after it was closed and when not in use.

On the question of the painlessness of the process, Dr. RICHARDSON said that we had the good fortune to be assured by the best of evidence on that matter. The animals were subjected to precisely the same ordeal as were the hundreds of human beings who each day were subjected to anæsthetic sleep from chloroform, laughing gas, methylene, or other narcotic gases or vapour. The animals felt nothing more than the higher animal experiences from narcotism, while they felt none of the reaction of recovery, which is the part mainly complained of by those who have been anæsthetised. In a word, by this process science had made death for the lower creation the truest euthanasia, in which a profound sleep, induced in a few minutes, terminated with equal facility in the sleep of dissolution.

Dr. RICHARDSON concluded by indicating that the same lethal process, carried short of death, might be applied to various animals the flesh of which is used for human food. He had narcotised fourteen sheep (animals which were very readily susceptible to the gas) so completely as to admit of their being killed quite painlessly in the ordinary way; and he fully expected that the Model Abattoir Society, over which he presided, would be able to adopt a system of this character, and to show the way in which it could be made largely applicable throughout the country. If it be sometimes urged against science that she, like nature, is cruel, it must also be admitted that she, like nature, is also kind. It may perhaps be said of her, "She must be cruel to be kind." In the discovery of anæsthesia and of various anæsthetics she may have inflicted some inconvenience, even actual pain, on a limited number of the inferior creation; but here is her return, even to inferior animals. She secures for them, in their want or decrepitude, a death better and easier than falls or ever can fall to the lot of the large majority of the family of man.

Annotations.

"Ne quid nimis."

THE COLLEGE ELECTION.

THE disappointment at the failure of Mr. Oliver Pemberton's candidature for a seat in the Council of the Royal College of Surgeons of England is not confined to the provincial Fellows. Indeed, there are reasons for believing that Mr. Pemberton met with a large measure of support from the metropolitan Fellows. In proof of this, it may be stated that he received only five votes less than a successful metropolitan candidate. The provincial Fellows may fairly complain that they are practically disfranchised; they can only vote at the expenditure of a costly journey to London. The remedy is, however, in their own hands. Let the provincial Fellows generally co-operate with the Association of Fellows, and thereby force the Council to obtain a new charter, allowing voting by voting-paper, before next July. A sub-committee of the Association is actively engaged in preparing a complete scheme of reform, which will soon be ready for presentation to the Fellows. Only by united action can those improvements and reforms be accomplished that will give the Fellows adequate representation on the Council and a corresponding increase of influence and power.

THE PATENT MEDICINES STAMP ACT.

THE repeal of the Patent Medicines Stamp Act is a subject which continues to excite a great deal of interest and much discussion. That such an Act should have been allowed to remain in force for so many years is an anomaly which is hardly conceivable, and is certainly not capable of rational explanation. It must be remembered that it was passed at a time of great financial difficulty, in an age when almost everything was taxed. "We must pay taxes," says Sydney Smith in describing the condition of his times, "upon every article which enters into the mouth, or covers the back, or is placed under the foot. Taxes upon everything which is pleasant to see, hear, feel, smell, and taste. Taxes upon warmth, light, and locomotion. Taxes upon everything upon earth and the waters under the earth. On everything that comes from abroad or is grown at home. Taxes on raw material. Taxes on every value that is added to it by the industry of man. Taxes on the sauce which pampers man's appetite, and the drug which restores him to health." Times have changed since then, and almost all of these obnoxious taxes have been repealed, but for some unaccountable reason the tax on medicines is still retained. It is a subject of congratulation to every right-thinking man that its days are now numbered, and that the Government have at last consented to take decided action in the matter. Reform, to be of avail, must be thorough and sweeping, and it has long been seen that nothing short of the total repeal of the Act will be of the least use. It is a curious fact that England, the land of the free, is the only country where the stamp duty is enforced. In no other country in the world would such an iniquitous law be tolerated even for a moment. In France and Germany there is no Patent Medicines Stamp Act; and even America, with her outrageous tariff system, does not levy a special tax on medicines destined for the relief of pain and the cure of the sick and suffering. Our Act even, curiously enough, applies only to England and Scotland, Ireland and the Channel Islands being happily exempt from its operation. We have already referred at some length in our last issue to the fallacious endorsement it affords to quack nostrums, but perhaps the worst and most obnoxious feature of this law is the facilities it affords for the sale of poisons. By simply affixing a patent medicine stamp, which means no more than a postage stamp does on a letter, any person, however ignorant or however unscrupulous, can sell any quantity of the most deadly poison without a word of warning as to its nature, and without the slightest indication that it is not a harmless or simple remedy. It is a well-known fact that many nostrums contain active poisons; one which is familiar, by name at all events, to everybody contains not only morphia and Indian hemp, but a large quantity of prussic acid. Others are known to have as their active ingredients opium, chloral, and even strychnia. For suicidal purposes certain patent medicines are admirably adapted, and the mortality from their use is enormous. Scarcely a day passes without the record in the papers of an inquest on some poor deluded victim who has been sent to his last account from an overweening confidence in one or other of the much-belauded patent medicines. The facility afforded for obtaining a narcotic, whether it be in the form of opium, morphia, or the deadly chloral, is a consideration which cannot be overlooked. In no other country can poisons be purchased wholesale without a

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[illegible] inquiry as to the purpose for which they are required, that in England they are sold openly and without contradiction, under the guise of patent medicines. It [illegible] said that the revenue derived from this source is so [illegible] that it would be difficult to find other means for replenishing the exhausted coffers of the Exchequer. The income from the tax, however, is only about £150,000, and from this will in all probability have to be deducted the expenses by no means light, of maintaining the department and [illegible] paid to the common informer. This, however, is [illegible] of the question with which we are in no way concerned. *Our national health is of such paramount importance that [illegible] amount of money, much less a paltry £150,000, could compensate for its degeneration or decay.* On all grounds, then, it is essential that the Patent Medicines Stamp Act [illegible] at once repealed. Delay is fraught with danger, and [illegible] and decided action is imperatively demanded.

[illegible]ERSTRAIN IN FEMALE EDUCATION.

[illegible] pression of overwork is not a new evil, but a [illegible] of all ages. It has varied in intensity and in area of [illegible] from time to time, and has been forced to give [illegible] corrective measures, but blind custom or desire has [illegible] again revived its heedless excesses. Our own [illegible] perhaps more than any other, has yielded to the [illegible] of progress, and has removed many helpful [illegible] of labour, which naturally aid it by preserving its [illegible] power. Women suffer in consequence as well as [illegible] probably to a greater degree. The reason for this is [illegible] their aptitude is generally inferior to that of men, but [illegible] their capacity for work is on the whole smaller. The [illegible] a good deal of relatively blank time in their lives [illegible] of their periodic indispositions. There is a tendency with some to make light of such poor physical [illegible] when they seem to impede the march of [illegible] it is for studious work that women hunger most. Exceptions to rule are pointed to, of women who have [illegible] very hard studies and escaped uninjured. But many [illegible] not escape. Dr. Thorburn of Manchester, in a [illegible] this subject, has shown that the bad effects of [illegible] on women are largely due, and are felt by themselves due, to its unremitting continuance during the [illegible] periods. At such times the nervous system is [illegible] of energy in an equal or even greater proportion [illegible] any other. The obvious suggestion is that [illegible] measure should for the time be relieved in a [illegible] degree. If this precaution be not taken, not important function, but all, will probably suffer. Under [illegible] like circumstances of strain from worry or work, the [illegible] of the climacteric are apt to appear prematurely, and [illegible] to continue and preclude by their presence the [illegible] discharge of any occupation whatever. How best [illegible] difficulty be met? Not certainly by denying to women the highest type of education. The *kind* of [illegible] does not constitute the danger, but the excessive [illegible] ardour with which it is apt to be maintained. It [illegible] to see how, in a large class of female students, the [illegible] variations of energy in each case can be understood [illegible] allowed for. No such mechanical regulation, however [illegible] statistically correct, could well be introduced into [illegible] arrangements. The better plan would be to keep the [illegible] rate and quantity of work during the whole [illegible] period somewhat under the full mental capacity of [illegible] so that the reserve energy unused during three-fourths [illegible] of the time might be available to supplement the [illegible] vigour of the other fourth. The frequency of [illegible] is a separate consideration which should not be [illegible]. Participation in these contests should be [illegible] dependent on the health at the time of individual competitors, a matter not difficult of decision. Moderate physical exercise in tennis grounds or suitable gymnasia should in every ordinary case form the co-efficient of a healthy scholastic training.

PRECAUTIONS AGAINST CHOLERA AT MONACO.

THE little Principality of Monaco, always distinguished among other health-resorts of the Riviera by the scrupulous order and cleanliness of its streets, has adopted, early in the day, energetic measures to ward off the danger of cholera. Though the health of the population is exceptionally good, the authorities are alive to the risks they incur. The sewers, the public latrines, and urinals are now disinfected every day by agents of the Government. Narrow passages and streets in the old town have all been whitewashed, and the houses of the poorer classes and lodging-houses have been subjected to careful inspection. Cesspools are more frequently emptied, but this operation is preceded by the use of a large quantity of sulphate of iron. The decrees rendering it a penal offence to allow the overflow from cesspools to run into the sewers, or to empty out into the sewers any night soil, have been republished and extensively circulated throughout the Principality. The inhabitants are further called upon to keep their bedroom windows open all day, to boil and filter their drinking water, and to thoroughly cook their food. The markets are strictly watched, fruits and vegetables not absolutely sound, that seem either over-ripe or insufficiently ripe, are at once seized and thrown into the sea. Private shops are also inspected daily and large quantities of fruit have been taken away and destroyed. All who have night duties to perform—policemen, railway servants, &c.—are compelled to wear their woollen clothing in spite of the heat, and they are forbidden to drink crude water, and to touch raw fruits or undiluted spirits. All luggage and goods coming from Toulon and Marseilles must be disinfected before they are allowed to enter the Principality, and throughout the most scrupulous cleanliness is observed. Unfortunately, all these precautions are not sufficient. The entire system of drainage must be reformed before true security can be enjoyed. So long as house drains are not trapped and ventilated, so long as cesspools continue to exist, the Principality will not be free from the menace of epidemic disease. Nevertheless, so far as surface cleanliness and careful scavenging are concerned, it is admitted on all sides that Monaco and Monte Carlo stand pre-eminent among all the other towns of the Riviera.

CRUELTY TO CHILDREN.

As Alderman Cotton, M.P., quaintly put the matter, eighteen feet of signatures were appended to a requisition to the Lord Mayor of London to call a meeting to form a London Society for the Prevention of Cruelty to Children. The proposed meeting has been convened and the Society is formally constituted. We trust it will soon get into working order and fulfil the purpose in view. Mr. Fowler, M.P., was probably right in thinking that the mere thought of being watched would deter parents from many acts of cruelty; but we venture to think much more than simply moral influence will need to be exerted if any real good is to be done. There would seem to be a difference of opinion at the very outset as to what is required. Lord Shaftesbury thinks the existing laws sufficient, while Cardinal Manning considers that they will not serve to do the Society's work. We trust that before long this new beneficent organisation will show its vitality by introducing some salutary reforms, particularly with regard to the little children who are turned out into the streets to earn a fixed sum, on gaining which their prospects of bed and board depend.

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THE COLLEGE OF SURGEONS MUSEUM.

IT is scarcely necessary to state that Sir Henry Thompson's recent lectures at the Royal College of Surgeons of England constitute an important and eventful contribution to the literature of the surgery of the urinary apparatus. In these lectures Sir Henry set forth the whole of his remarkable experience. Not the least interesting circumstance connected with the lectures was the presentation to the Museum of the College of a cabinet containing many hundred calculi. The two principal matters brought forward in the lectures were—first, the great improvement in the statistics of the operation of lithotrity in the modern mode of free crushing and complete evacuation of the fragments; and second, the value of the method of digital exploration of the bladder in cases where the nature of the vesical trouble is obscure. The lecture on the removal of tumours of the bladder by operation was of especial interest, and was illustrated by microscopical specimens and drawings, in the preparation of which Dr. Heneage Gibbes largely assisted. The cabinet containing Sir Henry's unique collection of calculi was shown last week at the exhibition of the additions made to the Museum during the past year. Respecting this collection, Mr. Flower, in his annual report to the Museum Committee, says: "Upon the conclusion of his course of lectures on the Surgery of the Urinary Organs, Sir Henry Thompson presented to the Museum the cabinet containing his very important collection of calculi, the result of 812 operations by lithotrity and lithotomy, all neatly mounted in glass capsules, and every specimen accompanied by authentic details of the case. The value of this series as illustrating an episode in the history of surgery needs no comment."

PARASITES IN FISH AND FLESH.

THE free discussion of any vexed question is rarely an unmixed good. This arises from no defect in the principle itself, but from the fact that there are usually persons who rush to the front and speak with an authority that is only self-accorded. In every-day life such conduct savours of mere impudence; but when, as has happened in regard to the so-called "mackerel scare," the hasty utterances of uninformed persons have resulted in the production of much misery amongst the poorer classes, who in great part rely upon a fish diet, then we may justly characterise such conduct as blameworthy. We would willingly have let this matter drop, being well satisfied with the trustworthiness of the statement of the Inspector of Fisheries, supported as it has been by the more detailed explanation supplied by Dr. Cobbold; but it appears that in consequence of the "scare" several tons of healthy fish have been weekly sacrificed, the poor absolutely refusing to purchase mackerel. On this account it is a public duty to call further attention to the subject. After the conferences which took place at the Fisheries Exhibition last year, it seems strange that the good work then done in connexion with fish parasites should be so soon disregarded. Numerous specimens of the particular parasite (Filaria piscium) around which so much discussion has arisen were exhibited at last year's show, not only from mackerel, but also from the herring. There are many points requiring attention, but that which calls for immediate remark is the question as to the amount of temperature necessary to destroy parasites of all kinds infesting the flesh of fish and other animals used as food. So far as Dr. Cobbold is concerned, nothing could be more explicit than his recognition of foreign research in this matter. Discarding his own efforts, which, after all, were by no means unsuccessful (as the confirmatory and more extended labours of Dr. T. R. Lewis at Calcutta have shown), he rested his recent statements chiefly on the investigations of Professor Perroncito of Turin. This *savant*, after a series of elaborate experiments, which are recorded in the *Osservatore Gazzetta d. Cliniche di Torino* and in several scientific and professional periodicals, finally established the fact that cysticerci and other parasites infesting flesh perished invariably at a temperature below 50° C. (122° F.) It must be borne in mind that Professor Perroncito himself had been rather severely taken to task for having, on more slender and initiatory experimental work, previously asserted that, "if it is not certain that the cysticerci die at from 80° to 100° C., we are quite sure that they dry up and become completely mummified at 125°, 130°, and 150° C. (257°, 268°, and 302° F.)" It must be remembered, moreover, that the final results were not arrived at until after certain published statements by Professor Pellizzari, who conducted researches in relation to sanitary measures effected by the Municipal Commission of Florence. In these investigations Pellizzari was assisted by Dr. Tommasi, the translator of Dr. Cobbold's lectures delivered at the Middlesex Hospital. In Dr. Tommasi's *Appendice* to another of our English author's volumes ("Parasiti interni degli Animali Domestici") readers of Italian will find a full account of these researches. Referring to these investigations, by which it was concluded that a high temperature was necessary for the destruction of parasites, Professor Perroncito says: "Towards the end of 1874 Professor Pellizzari disputed the results of my investigations made in 1872, and agreed with Dr. Lewis, who had already stated that the cysticerci exposed to 55° C. can be held to be dead after the lapse of five minutes. It may be argued that the Italian *savant* was not dealing with nematoid worms, and that therefore his labours did not affect the fish question. Such an excuse is altogether inadmissible, seeing that Perroncito found 50° C. alike destructive to Trichina spiralis, to Strongylus filaria, and to two species of filaria. The filaria of the mackerel is just as easily destroyed by heat as is any other species of the same genus of parasites, wherever it may happen to be found.

DISEASE AND WATER IN INDIA.

IN connexion with the interest which now attaches to the condition of tank water in India, we would refer to an excellent lecture on the relation of wholesomeness of water and the maintenance of health which was delivered some two years ago to the native population by Dr. M. C. Furnell, Sanitary Commissioner for Madras. The lecture fully confirms by means of its numerous details the views that have so often been expressed as to the facilities which are afforded by the tank water supplies of India for the diffusion of infectious diseases, and especially of cholera and of enteric fever. Men and women habitually wash their clothes and garments and then bathe their bodies in the same tank as that from which they take their water for domestic purposes; the approaches to some of the tanks are filthy in the extreme, and Dr. Furnell has even seen women collecting water for home purposes, when the contents of the tank have at the same moment been in use for ablution being foul to the senses of sight and smell. So long as conditions such as these remain, it must be obvious that one of the most fertile and well-known channels exists for the rapid diffusion of cholera, and it is impossible to prove that the aerial communication of this infection is the one which is most commonly in operation. The multiplication of such lectures to the native population would be most useful, and we are glad to note that in addition to the circumstance that the Bombay Government ordered Dr. Furnell's lecture to be translated into the Vernaculars of Northern and Southern Deccan, Gurjerat, Sind, and Arabic, it has also been reproduced in several other languages.

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THE CHOLERA EPIDEMIC.

THE epidemic of cholera in the south of France does more than maintain itself; it increases, and it has diffused itself over a somewhat wider area. But for all that, it is still a limited outbreak, and the hope that it may in the main be confined to the neighbourhoods first attacked may perhaps be realised to a greater extent than was at first thought possible. Cholera, however, has more than once remained in a comparatively quiescent condition prior to a sudden and widespread extension, and hence it will be well to be prepared for all contingencies. So far the rumours as to its extension to Paris and towns in other countries do not seem trustworthy, and hitherto no case has been brought into the United Kingdom. It is true that early next week a vessel, alleged to be infected with cholera, may be expected at Cardiff; but since the occurrence has now been anticipated for several days, it ought to be quite possible for the sanitary authorities so to deal with the case as to prevent any importation of the infection. It is essentially on our being prepared beforehand that we must rely both on our coast and inland; and with a view to this the Local Government Board have re-issued to all sanitary authorities the excellent memorandum of Precautions against the Infection of Cholera which was prepared last autumn by Dr. Buchanan, their medical officer, and which specially calls attention to the duties of sanitary authorities in the matter of the adoption of all such measures of prevention as will enable them to check extension of infection in case any mild attacks of cholera escape the vigilance of port and other authorities on the coast line.

NORTH LONDON CONSUMPTION HOSPITAL.

THE affairs of this hospital have been in an unsatisfactory condition for many years. It appears from a letter to the governors, signed by the chairman of the Committee of Management and also of the Committee of Investigation, that there has been practically no management whatever from the date of the foundation of the hospital up to December, 1883. For example, an Investigation Committee, appointed a year ago by the governors, has brought to light "that the books and accounts had been kept in a most irregular way; that the system adopted by the secretary made it very hard to find whether, or when, donations paid to him had been paid to the credit of the hospital; and that the irregularities were such as to make it very difficult to exculpate the character of the secretary, although all the investigation tended to prove was that his methods, and not his character, were at fault. The committee were equally culpable, as the meetings for upwards of ten years had been most irregular, and without a quorum, and all natural stimulus to precision and care was withdrawn from the secretary." No meetings of governors seem to have been held till quite recently. Unfortunately, and possibly almost necessarily, the medical staff must share the responsibility of the past mismanagement, and there are many points connected with the discharge of their duties at the present time which the Committee of Management will have to remedy without loss of time. The senior physician, Dr. Timms, states in a letter to the Hampstead papers that he was responsible for the management up to 1868, and the majority of abuses stated above were rendered possible by the action of the committee when he had them under his own control. The publication of the private address of each member of the staff on the foil of the out-patients' notes, and their exhibition upon large boards in the out-patients' room of the hospital, are practices which must be unreservedly condemned. It is further matter for regret that, with one exception, the chief speakers at the meeting of governors on the 1st inst. who spoke against unity of purpose and compromise were those members of the honorary staff who are governors. It is an unfortunate omission from the rules that no date is fixed for the retirement of members of the staff, or for their removal in case of necessity. New regulations have, however, been proposed to remedy these omissions; and meanwhile it will be a graceful act if the senior physician will tender his resignation and thus become eligible for election as consulting physician to the hospital. We fully endorse the wisdom of the decision arrived at by the governors, to forget the past and to rest content by securing the best of good management for the future. There are two points of great public importance which arise out of the revelations made in connexion with the management of this hospital. First, the fact that the Hospital Sunday and Hospital Saturday Funds have for ten consecutive years made substantial grants to this hospital, which throughout the whole period never held an annual meeting, never had a properly constituted committee, never possessed any reliable accounts, and never produced evidence that the contributions received were paid to the credit of the hospital, proves beyond question that stricter inquiry must be made by the Councils of these Funds in future before they make a grant. Someone should certainly be sent on behalf of each Fund to inspect a hospital and the books before a grant is made. On the other hand, it is matter for congratulation that, through the efforts of Mr. Burdett, Mr. F. D. Mocatta, Mr. B. A. Lyon, and other members of the Investigation Committee, there is now every prospect that the North London Consumption Hospital will be managed upon the best known principles of hospital administration. Indeed, there is reason to hope it will become as large, important, and prosperous a hospital in the north of London as the Brompton Hospital, which may be regarded as the South London Consumption Hospital.

ISOLATION ARRANGEMENTS AT LIVERPOOL.

As the result, apparently, of a visit from Dr. Mouat of the Local Government Board, the Corporation of Liverpool have at last made some arrangement with a view to meeting the wants of their district in the matter of the isolation of infectious diseases. The intention seems, in the first instance, to be limited to dealing with small-pox, and even as regards this disease the accommodation is to be only of a temporary character. But now that the Corporation have been compelled to assent to the principle that it is the duty of the sanitary authority, and not of the Poor-law authority, to provide the means of isolation necessary for the protection of the public against the risk of infection, it is to be hoped that they will not cease in their labours until they have made proper and sufficient permanent provision for their district in this respect.

TRAINED NURSES FOR THE SICK POOR.

THE passing of Gathorne Hardy's Act of 1867 may be said to have created a revolution in the method of dealing with the sick poor in the metropolis, providing as it did for their treatment in establishments under separate management and quite distinct from the workhouses. The various boards of guardians have loyally carried out the provisions of the Act, and in all districts of London are to be found parish infirmaries specially designed and erected for the care and treatment of sick paupers, a medical superintendent being in charge of each infirmary. The finest institution of the kind is that provided by the guardians of St. Marylebone at Notting-hill, which was opened by the Prince and Princess of Wales in 1881, that occasion being the first on which Royalty had assisted at any ceremony in connexion with a Poor-law establishment. The St. Marylebone guardians soon found the same difficulty that had been experienced

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elsewhere, of obtaining suitable trained nurses, of whom they require a staff of fifty-six; and, finding that the efficiency of the working of their large infirmary was likely to be much impaired by this scarcity of nursing help, they decided upon the step—till now novel in Poor-law administration—of erecting a building as an institution for training nurses. This establishment, which comprises accommodation for forty probationers and nurses, with every proper convenience for their comfort, and includes lecture-rooms, has been erected adjoining the infirmary, at a cost of £12,000, and will be opened by H.R.H. Princess Christian on the 22nd inst. In the regulations for the administration of this much-needed work, the guardians are acting in connexion with the Council of the Nightingale Fund, who are associated with them in this desirable object, the working of which will be watched with great interest by those who know the difficulties connected with the nursing of the sick and infirm who come under the care of the Poor-laws.

SUNSTROKE.

THE past few weeks have not been unattended with the perils to health which accompany continuous warm weather. Sunstroke, comparatively rare in our temperate climate, has already been reported. It is somewhat surprising that, in the circumstances under which so many of us, particularly children, live and go about, we do not hear of it oftener. Among the poor, bareheaded children are at least as common as those with hats. They are "only about the doors," and care is disregarded. In a wealthier grade it is not unusual to find infants wheeled about in perambulators guiltless of a hood, even in a bright and hot noon-day. Persons more advanced in age are apt to be careless in their own way. Notwithstanding the sanitary value and the comfort of broad summer hats, athletes at times, and for long at a time, interpose no more than the skull between a delicate brain tissue and a temperature of 100°, or more, in the sun. Young ladies now more than ever raise over the crown the hair which naturally rests upon the nape of the neck and there protects the seat of the vital nerve-centres. Fortunately these have another means of protection from solar heat in the parasol. Sunstroke is best treated by prevention, and enough, perhaps, has been said to direct public attention to the need in such a season as this of adapting means to this end.

CRUEL QUARANTINE IN SHETLAND.

THE evil results of ignorance and want of human intercourse have found unseemly illustration in connexion with a recent outbreak of typhus fever in Shetland. Two cases of disease were attended by circumstances of wilful cruelty which appear hardly credible. Dr. Hanson of Mid Yell became infected while visiting among the victims of the epidemic. During his illness he received no aid or attention whatever from any islander, save his own domestic, the schoolmaster, and a kind lady, who amid much discouragement supplied the sick man with necessary food. After some time a nurse was procured from Edinburgh, and, thanks chiefly to her careful management, the issue of this case was satisfactory. To all these measures of mere humanity the people of Yell offered persistent opposition. They refused all assistance, abused those in attendance, and would hardly allow provisions to be taken to the doctor's house. All this, be it remembered, to the man who had spared himself least in attention to those who were stricken with the same disease, and who owed his illness directly to his professional self-forgetfulness. The island of North Yell was the first attacked. It was here that Dr. Hanson contracted the fever. One would have expected that here at least the pressure of a common evil might have led to some feeling of sympathy with the sufferers; but it was not so. Another gentleman, who officiated both as minister and medical attendant, succumbed to the prevailing malady after five days' illness. During this period not one of his parishioners would even come to inquire about him. After his death the same panic-stricken fear induced them to forbid all intercourse with his family, even for the purpose of burying the body. A coffin could hardly be obtained, and decent interment might never have been accomplished if it had not been for the prompt and efficient help rendered by some Scottish fishermen who were cruising along the coast. The history of epidemics can probably furnish few more pitiful details than these. Happily for the reputation of mankind, it has also afforded instances of heroic regard for duty. It is difficult to believe that, even at the remotest point of our islands, every heart can be so dead to generous feeling as to acquiesce entirely in the barbarous and cowardly quarantine lately instituted there. Precaution let there be, and first of all cleanliness and fresh air in every dwelling; but, in the interests of health, no more of this superstitious and heartless dread of an evil which may and must be remedied.

THE HEALTH EXHIBITION AND THE HOSPITALS.

THE grand *fête* in aid of the London hospitals, to which we alluded last week, will be held on the evening of Wednesday, July 23rd, under the special patronage of the Prince and Princess of Wales, to whom the initiative is due, and who have announced their intention of being present. On this, the second of the two special Wednesday evenings (the first having been devoted to the *conversazione* given by the Council of the Society of Arts and the Executive Council of the Health Exhibition, on the 9th inst.) for which season and other tickets are not available, the price of admission will be raised to ten shillings; and as doubtless the visitors, having once gained entrance, will readily find other opportunities of loosening their purse-strings in so good a cause, we anticipate a very handsome total. The money thus obtained will be handed to the Lord Mayor for distribution among the various metropolitan hospitals by means of the organisations of the Saturday and Sunday Hospital Funds. The grounds will be illuminated by 20,000 variegated lamps, and special effects will be introduced in connexion with the illuminated fountains. The doors of the Exhibition will be opened at 7.30 P.M., the *fête* commencing at eight. The project must necessarily command our warmest approval and heartiest good wishes; nevertheless, we still venture to hope that at the final adjustment of accounts the claims of the hospitals to a share of the profits—and, judging from the extraordinary popularity of the Exhibition, its earnings appear likely to reach a very large amount—may not be thereby discounted or in any way cast into the shade.

CHOLERA REMEDIES.

ATTENTION has been called by M. Klaczko of Vienna to the prophylactic value of petroleum or paraffin, based on the alleged fact that the workers at the petroleum wells of Galicia have "always enjoyed perfect immunity from cholera." The suggestion is that petroleum acts as a germicide. M. David Dinh of Paris writes to us respecting the use of powerful antiseptic agents in the disease. He avers that sulphate of copper acts merely in this way, and is often inoperative, as in the case of the late M. Thuillier. The perchloride of mercury, or rather the red iodide, being the most powerful of all germicides, he asks whether it can be shown that syphilitic subjects under mercurial treatment enjoy an immunity from cholera, and suggests that iodoform, a less dangerous drug and more easily administered, should be tried.

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CORONERS AND MAGISTRATES.

AT an inquest recently held at Elmer's End Station on the South-Eastern Railway, on the body of a platelayer who met his death by accident, one of the jurymen asked if the doctor who saw the deceased should not have been called. The coroner, Mr. E. A. Carttar, replied that it was not necessary in the present instance, and in the course of his remarks stated that the county justices not only surcharged him with medical fees which they deemed had been unnecessarily expended, but that they had gone so far as to take exception to his holding inquests in cases where the mode of death appeared evident, and had intimated their intention of making him pay the whole expenses of the inquiry. If these alleged facts be true, and we see no reason to doubt that they are, the sooner the legal obligations of coroners are made public the better. It is perfectly monstrous that a county magistrate should be in a position to criticise and pass judgment on the acts of an officer, holding a post of high responsibility. Fortunately, however, an appeal can be made to the Home Secretary, who can, if he sees fit, make an order for the disbursement of moneys paid by a coroner in the exercise of his discretion and the discharge of his duty. Now, coroners are usually paid by salary, and therefore they are not open to the charge of holding unnecessary inquests for the sake of increasing their emoluments, and for this reason they should be supported by the public and the medical profession against the arbitrary and overbearing interference of persons who are often imperfectly acquainted with the merits of the case in question. If such exhibitions of false economy are allowed to go unchallenged, the coroner's court will soon become a dumb show, to say nothing of the incentives that would be offered to the development of crime by reason of the check put on its detection.

M. PASTEUR'S HYDROPHOBIA EXPERIMENTS.

THE experiments which M. Pasteur is reported thus far to have made are said to be an unbroken success. Fifty-seven dogs have been the subjects of investigation. Of these, nineteen were rabid, and by these thirty-eight healthy animals were bitten under uniform conditions. Of the thirty-eight, one-half the number had been previously inoculated or "vaccinated" with attenuated virus; the other half had not. The latter, without a single exception, died with unequivocal signs of rabies, whereas the nineteen others remain as well as ever. They will be watched for a year by veterinary surgeons to see whether the inoculation holds good permanently or only temporarily. If rabies be not spontaneous in its origin, and if the experiments of Pasteur all turn out successful, there seems no reason why canine madness should not be extirpated from our midst.

THE BOWER AND KEATES CASE.

THE entire medical profession will learn with sincere regret that this case has on the appeal of the plaintiff been set down for a third time. When it was heard before the Lord Chief Justice a verdict was given for the defendants. At the first trial Mr. Justice Field left these questions for the jury to decide:—1. Did the defendants know at the time of the operation, or ought they to have known, that the child was suffering from diphtheria? 2. Did they know, or ought they to have known, that suction of the tube would be dangerous? 3. Was the plaintiff's illness caused by sucking the tube? 4. Could his illness have been prevented or diminished by warning and precautionary measures? The result was that the jury did not agree, and were discharged. The grounds for the recent decision of the Divisional Court, composed of Mr. Justice Field, Mr. Justice Manisty, and Mr. Justice Lopes, were in general terms that the Lord Chief Justice did not lay the case clearly before the jury, and, in particular, that he ought to have directed their attention to the following issues: (1) Ought Messrs. Bower and Keates to have told the defendant that the case was one of diphtheria, and that he ran a risk in sucking the tube? and (2) ought they not to have taken precautions to avert the disease, or lessen its severity if contracted? Concerning the legal technicalities, we do not wish to say a word, the more so as the case is again *sub judice*; at the same time, we agree with Mr. Justice Field that "it was a pity the action should have been brought, no doubt under the influence of mistaken feeling." This opinion will be fully endorsed by Messrs. Bower and Keates' professional brethren.

ISOLATION AND INFECTION AT PRESCOT.

THE Prescot rural sanitary authority has wisely decided to erect a hospital for infectious diseases, and in its capacity as a Poor-law authority it has determined no longer to admit non-pauper infectious cases into the workhouse. One member of the authority maintained that if patients were admitted into an infectious hospital belonging to the sanitary authority they would be just as much paupers as if they were admitted into the workhouse, on the ground that wherever expense is incurred by an authority or by the ratepayers, those profiting by it are virtually paupers. Quite apart from the fact that the law has decided otherwise, it is curious that anyone should hold such a view. The adjoining urban district of Prescot is less fortunate than the rural one in its decision. Instead of either combining with the rural district in providing a hospital, or erecting one of its own, it has sought to make an arrangement with the authorities of the Netherfield Institution in Liverpool, a city where infectious hospitals have already been much overcrowded, and where, in consequence, there is grave reason to believe that one infection—namely, that of small-pox—has been spread to the surrounding community. The arrangement, being also contingent on empty beds being available, will probably fail at some critical moment. Indeed, the whole scheme savours of an ill-matured plan, for the hospital authorities advise that if any difficulty should arise in the removal of patients, "cabs can be used, if properly disinfected afterwards." We should like to know the process by which a small-pox infected cab, with its cloth and stuffed seats and linings, can be "properly disinfected"; and we can only wonder that such advice can emanate from a hospital which professes to prevent the spread of infection.

INSURANCE WITHOUT MEDICAL EXAMINATION.

UNDER the new regulations for Government Life Insurance, a novel experiment is being tried, the result of which will be watched with interest. Insurances for sums not exceeding £25 are now granted at any post office savings bank without any medical examination. If, however, an insurant should die before the second annual premium becomes payable, the amount of the first premium, and no more, will be paid to his representative; should the insurant die after the payment of the second, but before the third premium becomes due, the representatives will be paid only half the amount of the policy. After the payment of the third premium the policy is entitled to full benefit. It is nevertheless provided that in case of death within two years of an insurant who has not been medically examined, if it can be proved to the satisfaction of the Postmaster-General that the death was caused by accident, the full amount of the policy will be paid. Persons proposing to insure for sums not exceeding £25, and preferring that their policy should have the full benefit of insurance at once, can

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undergo a medical examination by payment of a fee of half-a-crown to the medical examiner. The rules do not explain the nature of the arrangement by which the fee for medical examination to be paid by the insurant is to be supplemented. The new system by which insurances may be granted through post office savings banks affords great facilities for industrial insurance combined with absolute security, which, it may be hoped, will commend the system to the working classes. We are glad to observe that no insurances will be granted upon the lives of children under eight years of age, and the amount is limited to £5 upon children aged between eight and fourteen years.

OPHTHALMOLOGICAL SOCIETY.

THE annual meeting of this Society was held on July 4th. Mr. Streatfeild, the Treasurer, read his report, showing that the Society was in a prosperous state. The report of the Council, read by Dr. Abercrombie, stated that the nucleus of a library had been formed by the donation of some books by the President and a few others. The rules relating to the library were practically those governing the library of the Medical Society. It was also announced that the first Bowman lecturer would be Mr. Jonathan Hutchinson; the lecture will be delivered in November next. The following is the list of officers and Council elected for the year 1884–85:—President, Jonathan Hutchinson, F.R.S. Vice-Presidents: Sir Wm. Bowman, Bart., F.R.S.; C. E. Fitzgerald, M.D; Henry Power; Thomas Reid, M.D.; T. Shadford Walker; J. C. Wordsworth. Treasurer: J. F. Streatfeild. Secretaries: John Abercrombie, M.D.; W. A. Brailey, M.D. Other members of Council: George Cowell, G. A. Critchett, R. Marcus Gunn, George Johnson, Stephen Mackenzie, Charles Macnamara, E. Nettleship, Priestley Smith, Simeon Snell, J. Sympson, John Tweedy, W. Spencer Watson.

"VIEWING" THE BODY.

THERE is a great outcry against the practice of "viewing" a body as the legal basis of a coroner's inquest. We are not prepared to defend the practice in question; it is probably useless in nine cases out of ten, and often a mere farce as conducted in the tenth instance. Meanwhile, we cannot but think that it is a strong and impolitic measure for coroners to take upon themselves to dispense with the "view" at caprice or discretion. There should certainly be uniformity in the procedure. It is certain there must be something equivalent to a "view" for identification and other purposes, or it may happen that some day a criminal dies and is buried on "a coroner's certificate" without actually being dead, except to the world of informers and police, until such time as he may reasonably expect to be forgotten. A body there must be; and good evidence as to its character and condition must be forthcoming if the "view" is to be abandoned.

WHISKY AS AN ANÆSTHETIC.

IN his address as President of the Ninth Annual Session of the Arkansas State Medical Society, Dr. Keller is reported to have spoken as follows on the subject of whisky as an anæsthetic:—"To Dr. Link of Indiana are we indebted almost entirely for having gone far towards placing whisky not only along with ether and chloroform as an anæsthetic, but also in discovering its antiseptic power, equally as safe and effective as any other. So well satisfied is that gentleman from long use of it as his only anæsthetic and antiseptic in amputations, that he asserts he has discarded all others, and in his reports of several hundred cases he says that he has seen no manifestation of pain during any amputation—no unhealthy action in any stump, and not a single death to mar the report." The manner of anæsthetising the patient seems to be to administer one or two ounces of whisky by the mouth every ten minutes "until complete drunkenness is reached," and then, with or without one or two inhalations of ether or chloroform, to proceed to operate. On the face of it, this procedure appears to be open to righteous condemnation. It is well known that acute gastritis may be set up by such means, and the onus of proving that such large imbibitions of alcohol are inoffensive rests with Drs. Link, Keller, and others who may choose to employ the drug. It is possible—anything is possible in medicine—that such treatment may be innocuous; but until more accurate knowledge is forthcoming we prefer to believe the contrary.

CONVERSAZIONE AT THE HEALTH EXHIBITION.

A VERY successful and pleasant entertainment was given in the buildings and gardens of the Health Exhibition on Wednesday evening last, by the Executive Council and the Council of the Society of Arts. Most of the exhibitors kept their stalls open, and those having machinery in motion kept it running as during the day. The beautifully illuminated gardens and their fountains afforded a *coup-d'œil* to which Londoners are but little accustomed; indeed, it is only quite lately that they have had any opportunity at all of proving that they are capable of appreciating such form of amusement, and of taking their pleasures not sadly, but rationally and temperately. The bands of the Grenadier Guards and the Coldstream Guards, with those of the 1st Regiment of the French Engineers and the 7th German (Magdeburg) Cuirassiers, discoursed excellent music; while a novelty was afforded by the performance of a Chinese band in the gardens by the Chinese Court. A perfect summer evening enhanced the enjoyment of many thousand guests.

PARKES MUSEUM OF HYGIENE.

A GENERAL meeting of this Corporation was held on Wednesday last, when the annual report was read and dopted. As was to be feared, the lamented death of the President, H.R.H. Prince Leopold, is regarded by the Council as an incalculable blow to the progress of the Museum. A class of Hygiene is about to be formed at the Museum in affiliation with the Science and Art Department, South Kensington. Considerable developments have been made in the book department of the Museum. The excellent library and reading-room have been thrown open to students at the small annual fee of 5*s*. Good work has been done by the holding of lectures and demonstrations. Special thanks are due to the Treasurer, Mr. Berkeley Hill, to the Hon. Librarian, Dr. Louis Parkes, and to the Hon. Secretary, Dr. Dawson Williams. No less than 7000 persons have visited the Museum during the past session. Nevertheless, owing to the expenses incurred in removing the institution to new premises, the funds of the Corporation are not in a very satisfactory state.

THE DIFFUSION OF SMALL-POX.

WE are glad to see that the Local Government Board have instructed Mr. Power to resume his inquiries as to the diffusion of small-pox from the hospitals of the Metropolitan Asylums Board. The inquiry commences with the Fulham Hospital; and, as on the occasion of the first investigation in 1881, circular letters have been issued to all medical practitioners within a wide radius of that establishment asking them for confidential information concerning all small-pox attacks which may come under their observation.

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The inquiry is one of such immense importance both for the purposes of the metropolis and elsewhere, that we trust all will join in rendering Mr. Power every assistance they can by periodically sending him the information he needs on the forms which are prescribed, and which are supplied to all medical practitioners.

TEMPORARY PRESERVATION OF POST-MORTEM SPECIMENS.

IN the second number of *The Asclepiad*, amongst the Opuscula Practica, Dr. Richardson describes a method of temporarily preserving specimens taken from the dead body. A wide-mouthed bottle, with a large stopper which is made to fit evenly by the use of a little glycerine, is filled with a mixture of common coal gas and one drachm of ammoniated chloroform. The stopper is then tied down. Any part which is desired to be preserved is placed in a fold of soft muslin and gently pressed so as to remove superfluous fluid. The next point is to introduce the part enveloped in the muslin into the bottle without displacing more of the gaseous contents than necessary. The ammoniated chloroform is supposed "to prevent the breaking up of the water of the tissues," and the carbon monoxide of the coal gas preserves the colour of the specimen.

SIR HENRY ROSCOE.

HER MAJESTY has conferred the honour of knighthood upon Professor Roscoe of Owens College, in consideration of the services rendered by him in connexion with the Technical Education Commission. Born in 1833, Professor Roscoe took the degree of B.A. at the University of London in 1852, and subsequently graduated Ph.D. at Heidelberg. In 1859 he was appointed to the chair of Chemistry at Owens College, and his knowledge of the actual working of the German system has no doubt contributed materially to the determination of the course to be followed by the Victoria University. Sir Henry Roscoe's latest and perhaps most important work is the "Treatise on Chemistry," forming six large volumes, which he wrote in conjunction with Professor Schorlemmer. The first part appeared in 1877, and the concluding volume a few months ago.

THE DRAINAGE OF OXFORD.

IN an annotation which appeared in our issue for June 14th, p. 1086, we urged the University authorities of Oxford to specially bestir themselves in the matter of the water-supply of the city, and we are glad to learn from a letter which appears in a contemporary that, at the Vice-Chancellor's suggestion, the Hebdomadal Council have appointed an informal committee of scientific persons to inquire into the water question. In the meantime, it is understood that the Hog-acre stream, with its ill-flavoured contributions, is no longer to be drawn upon, and that the water of the Railway Lake, the reservoir from which the city is supplied, is henceforward to be supplemented by some other of the network of streams by which Oxford is surrounded.

BENGAL CINCHONA PLANTATIONS.

THE annual report of the Government cinchona plantations in Bengal, drawn up by Dr. King, shows a prosperous state of affairs. Considerable changes were effected during the year in the proportions of the different species of cinchona under cultivation. In the plantations at Mungpoo and Sittong some 232,200 red bark trees were uprooted, and these were replaced chiefly by the yellow bark variety. The new plantation at Rungjung was also planted out with 42,200 trees of the yellow variety. Calisaya ledgeriana has been found by analysis to yield much better supplies of quinine than the red bark. The total number of cinchona trees of all sorts at the close of the year was 4,740,811, of which 3,532,000 are cinchona succirubra. The entire produce of the plantations for the year was 305,160 lb. of dry bark.

THE SOURCE OF BILE ACIDS.

ACCORDING to Dr. Jensen (*Philadelphia Medical World*), Pettenkofer's test for bile also holds good for peptones. It had long been surmised that the slight bitterness of the true peptones is due to the presence of bile in one of its initial stages, as manufactured by the process of digestion. Experiments have been made on boiled albumen, flesh, and a solution of gelatine, after being converted into peptones in separate bottles by a minute proportion of Dr. Jensen's pepsin. The albumen peptone gave a much stronger reaction with the bile test than did the peptone from flesh; and the gelatine peptone was almost unaltered by the test. It is thus thought that the albumen of food furnishes the chief elements for the bile.

WOOLSORTERS' DISEASE AT BRADFORD.

THE inquest on a case of woolsorters' disease at Bradford, which was adjourned from June 18th to the 2nd inst., has been yet further adjourned to the 21st inst., in order to give manufacturers the opportunity of stating the precautionary measures in force at their factories to prevent the transmission of the disease. On the 2nd much evidence was given by medical witnesses, including Drs. Bell, Wilmot, Cadman, and Britton; and no pains are being spared to make the inquiry an exhaustive one. Since this inquiry commenced another fatal case has occurred in the same town.

NORTH-WEST LONDON HOSPITAL.

WE announced last week that a conference between representative members of the profession and a small subcommittee of the Board of Management of the North-west London Hospital was being arranged with a view of so framing its rules and regulations as to bring them into harmony with those of other institutions. We learn that Sir Spencer Wells, Mr. John Marshall, and Mr. Ernest Hart have consented to join in this conference.

MEDICAL LIFE PEERS.

WE understand that Dr. Lyons, M.P., has given notice of an important amendment to be inserted in the Medical Act Amendment Bill, to the effect that two physicians of over twenty years' standing should be made life peers and act as lord justices of appeal in medico-legal trials. Such appointments have been urged by Sir Spencer Wells, Dr. Theodore Williams, and others, and will, if made, considerably strengthen the hands of justice.

HOSPITAL SUNDAY FUND.

THE sum received on behalf of this fund up to noon on the 10th inst. was, in round numbers, £32,000. Amongst the amounts paid in during the last few days is a collection of about £130 made at St. John's, Wilton-road, and the sum contributed at St. Stephen's, South Kensington.

THE Manchester pharmacists have, we understand, sent up very strong representations in favour of obtaining some special representation for their class upon the Committee of the Pharmacopœia to be established under the Medical Bill.

THE universities of Prague and Gratz have each recently established chairs for Hygiene.

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A CORRESPONDENT at Cairo writes:—During the month of June there have been a few cases unofficially reported of vomiting and diarrhœa at Damietta, where it will be remembered the cholera of 1883 first appeared on June 22nd. The month's official return gives only seven slight cases of the character of gastro-enteritis, none of which proved fatal. Of these seven, diarrhœa was the chief symptom in three, vomiting in three, and in the remaining case the disease took a dysenteric form. It is satisfactory also to note that the mortality is below the average. And in this respect Damietta compares favourably with Cairo, where to-day the mortality reaches sixty-one, including ten cases of dysentery, six of typhoid fever, one of diarrhœa, two of "gastric fever," and seventeen of gastro-enteritis among children—that is, thirty-six of sixty-one cases, or 59 per cent., are of intestinal disease. In quoting statistics in Egypt, it is always necessary to remember that they are compiled by officials who are mostly ignorant of medicine, on information given by reluctant friends, for it is quite an exception for a sick person of the poorest class to be seen during life by any qualified medical attendant.

THE Mysore medical establishment is to be reorganised (says the *Indian Medical Gazette*), so as to allow of the subordinate staff becoming, in time, entirely composed of natives of Mysore who have passed the Madras M.B. or the L.M.S. Examination of Madras or Bombay. These will be under the supervision of two European officers, one of whom, a member of the Covenanted service, will be head of the Local Medical Department and chief medical adviser to the Mysore Government, and the second, who may be either a junior member of the Covenanted service, or a man selected from the profession in England, will have charge of all medical duties in Mysore.

MR. G. A. WALKER, M.R.C.S., L.S.A., died on the 6th inst. at Barmouth, North Wales, where he had lived in retirement for many years. Deceased played a prominent part in the agitation for the abolition of intramural interments, and in 1840 gave evidence before a Select Committee on the Health of Towns of the House of Commons respecting the sanitary condition of London and its graveyards. He was the author of "Gatherings from Graveyards," "The Graveyards of London," "Interments and Disinterments," and other works.

THE death occurred last week at Southsea of Mr. Abmnty Irwin, R.N., C.B., late Inspector-General of Her Majesty's Hospitals and Fleets. The deceased became a licentiate of the Royal College of Surgeons in Ireland in 1850, Hon. M.D. of Dublin in 1881, and was in 1874 nominated a Companion of the Order of the Bath (Military Division).

DR. GEORGE HARE PHILIPSON will deliver the Bradshawe Lecture at the Royal College of Physicians of London on Monday, August 18th, at four o'clock. Subject: "Pathological Relations of the Absorbent System."

DR. ARTHUR GAMGEE, F.R.S., has been appointed Fullerian Professor of Physiology of the Royal Institution for three years.

A CASE of meningocele starting at the root of the nose, and hanging down as far as the cheeks, was shown by M. Valtin at a recent meeting of the Société de Chirurgie.

THE Annual Report by Dr. King, of the Royal Botanic Gardens, Calcutta, for the year 1883-84 shows that the establishment is in a flourishing state.

SURGEON-MAJOR LONGMORE has been elected Foreign Corresponding Member of the Académie de Médecine.

DR. TOMMASI-CRUDELI ON CHOLERA.

ON the 30th ult., before the Accademia Petrarca of Arezzo, Dr. Tommasi-Crudeli, whose researches on the bacillus malariæ form a distinct advance in the etiology of intermittent fever, read a paper entitled "Cosa si può fare in tempo di Cholera?" ("What may be done in Cholera-time?") After tracing the history of the three great cholera epidemics that have visited Europe, he remarked that the disease was always an importation, never acclimatised like small-pox; and he defined it as a "contagio-miasma, a morbigenous germ, proceeding from a diseased human body, which never diffuses itself epidemically, except when the excretions containing it find in the soil conditions favourable to its multiplication."

THE CHOLERA GERM AND ITS DISCOVERER.

Filippo Pacini, of Florence, who died just a year ago (*vide* THE LANCET, July 21st, 1883), in 1854 was the first to recognise the cause of cholera in a microscopic organism, which Dr. Tommasi-Crudeli in 1882 classified among the schizomyceti (*σχίζω*, divide; and *μύκης*, fungus), or germs which multiply by simple division. This organism, according to Pacini, attacked the mucous membrane of the intestine; but his doctrine was ridiculed or disregarded till the other day, when the German Commission, investigating the specific cause of cholera in Egypt and in its native seat, the delta of the Ganges, came to the conclusion already arrived at by the Tuscan pathologist. Not only in the soil where fæcal dejections of cholera patients have found their way, but in the bed-linen fouled by these dejections and washed without disinfectants, may the cholera germ multiply. Pacini saw this as long ago as 1855, when, in a Tuscan township where cholera had raged in 1855, a poor woman having opened a chest of linen left to her by her mistress, who had died of the disease, was herself attacked and killed by cholera, which had been absent from the place a full twelvemonth.

LOCAL PREDISPOSITION TO CHOLERA.

The cholera germ imported by patients or their infected clothes becomes epidemic only in countries presenting conditions favourable to its development. This development does not happen everywhere in the same mode, and in certain places it does not happen at all. At Lyons, for example, a very large city on the road from Marseilles to Paris, in both of which the cholera raged, it never took root, although patients went to it from Paris and Marseilles to die. There are other places which are heavily visited on every occasion of the arrival of cholera from the East. Palermo is one of these, and presents a very grave "local predisposition." This predisposition, moreover, may be *intermittent*. At Florence the epidemic was slight in 1854, very severe in 1855. In 1867, knowing that cholera had not yet appeared there, crowds of people, many of them with the seeds of the malady in them, came to Florence, which by that time had become the capital of Italy; but, notwithstanding this immigration, cholera took no root in Florence on that occasion. When the disease has entered a country, we cannot say whether it will take firm hold or not. We only know that its spread may be favoured by four conditions: 1. Porosity of the soil in which choleraic dejections have been allowed to penetrate. 2. Oscillations of the underground waters by which the cholera miasm which has developed in the soil may reach the respirable atmosphere. 3. The accumulation of fæcal matters or of organic detritus infected by the germ. 4. The facilities offered to the diffusion of the germs in the drains, in the soil, in the air of the locality, and in the drinking water. Cholera, it should be added, has a mean incubation period of eight days before it declares itself in the organism.

FUTILITY OF SANITARY CORDONS.

Dr. Tommasi-Crudeli does not believe in sanitary cordons. They are as little able to keep cholera out of a province as custom-houses are to prevent smuggling. In Sicily, in 1837, some communes kept themselves isolated from contact with cholera-visited towns by planting loaded cannon round their suburbs; and in 1867 the same military tactics on the Alban Hills prevented the cholera-stricken Albans from communicating the malady to Castel Gandolfo, or Aviccia. But in

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more civilised countries this remedy would be worse than the disease. Besides, the sanitary cordon tends to create a false security, and leads to neglect of hygienic duty, official and private. Quarantine afloat he has more belief in, if properly carried out, with due regard to the incubation period of cholera (eight days). But the sheet-anchor of the prevention of cholera is the exclusion from the dwelling-house and its inmates of the cholera germ. His counsels in this regard are similar to those of the English sanitary authorities—if possible a little more stringent as to the washing with disinfectants of all linen, whether visibly fouled or not with fæcal matter. As to prescribing a diet different from what suits the individual in ordinary health, he ridicules the notion. Let the food and drink be good and generous, the clothing warm (silk or flannel next the skin), and the spirits cheerful. The fear which at once dictates and maintains exceptional modes of living simply invites the onset of the disease. The resisting power of the community to cholera increases with each successive visitation. On its first appearance it made most victims; on the second invasion it found the weaker subjects already killed off, and the survivors better fitted to withstand it; so with the third visitation, and, as far as we can at present judge, with the fourth. "The morbigenous power of the cholera germ," says Dr. Tommasi-Cradeli, "is not attenuated, it only finds a smaller number of persons vulnerable." Other means of augmenting resistance to cholera have not been found. Last year Dr. Burcq suggested small doses of copper as a prophylactic, and all the French Commissioners in Egypt tried the drug, with the following result:—"At the close of the epidemic in Alexandria one day there was but one death from cholera, and that was Dr. Thuillier, the head of the Commission!"

THE INTERNATIONAL HEALTH EXHIBITION.

Group 1.—Food (continued).

We must begin by correcting one or two errors and omissions which seem important. Messrs. Savory and Moore's condensed peptonised milk is peptonised by pancreatine, and is therefore distinct in character from Mr. Darby's well-known and most powerful fluid meat. Messrs. Peek, Frean, and Co. draw our attention to another novelty, in addition to the valuable "health biscuit" which we noticed. This is the "café biscuit"—a brown, crisp, and very light biscuit, of delicate flavour.

Although the more familiar vintages are for the most part unrepresented in the present Exhibition, the wines collected in the South Gallery are interesting precisely because so many of them are unfamiliar. Of late years many countries have been striving hard to upset the supremacy which Spain, Portugal, France, and the Rhineland have so long enjoyed in England; and it is satisfactory to find that every year the strife becomes more successful. Austria, Italy, and Greece, countries which have produced good wine from time immemorial, seem at last to have convinced England of the fact; and our own colonies, Australia and the Cape, have taken an honourable part in the rivalry. The colonists have had the harder task, for they have had in a few years to learn the methods of growth and manufacture, which in older countries have been the work of ages. The chief exhibitors of Australian wine are Messrs. P. B. Burgoyne and Co., the Australian Wine Company, and the Colonial Wine Company. From time to time the steady improvement of these wines has been recorded in our pages. Many of these are now really excellent, and are beginning to be kept, as a matter of course, in London clubs. It is almost invidious to pick out one for praise, but we think that the Australian "Hermitage," red and white, ought to be more generally known. The Colonial Wine Company exhibit, in addition, red "Carbinets" from California and red "Shiraz" from the Lebanon. The last is an interesting modern revival of what is probably one of the oldest vintages in existence. To see it side by side with wine from Australia and California suggests many thoughts.

The wines of Austria are well represented by the administration of the Weinlaube and the well-known firm of Max Greger (Limited). The "Weinlaube" is a pretty arbour attended by a Dalmatian peasant girl in national costume. The "Austria-blume" and several other characteristic wines are exhibited within it, and there are also some interesting specimens and drawings illustrative of wine making and the ravages of the phylloxera. Mr. Max Greger has been so successful in introducing the wines of Hungary, that nowadays they scarcely require description. "The shareholder's Carlowitz" is particularly recommended by the Company. Mr. E. Vitali has collected in a pretty case (No. 147) some of the best wines of Italy. We have before now analysed and reported on some of these wines, and have found ourselves able to praise them cordially. At present we need only notice the remarkably pretty wickered baskets which adorn the case. Messrs. F. T. Denyer and Co. have a large collection of wines and spirits. The sherries of Sanlucar, including the well-known Manzanilla, occupy a prominent and well-deserved position in the list. The chief peculiarity in the exhibit of Messrs. Stallard and Co. (No. 162) is the old, highly-flavoured, and somewhat luscious white port, made from the white grapes of Oporto. And, finally, we must not omit Messrs. J. Christmas and Co. (No. 129), whose English wines—orange, lemon, ginger, gooseberry, and even champagne, made from real grapes—are good and, we believe, wholesome beverages. Mr. Grant's morella cherry brandy, orange and ginger cognac, and non-alcoholic sparkling morella, also deserve notice, as do the excellent lime-juice preparations of Messrs. Rose and Co. and Messrs. Feltoe and Sons.

There is little to remark about the spirits exhibited. The present popularity of Scotch whisky is abundantly illustrated—a popularity for which it is impossible fully to account, since Irish whisky can hardly be said to be on the whole inferior. We presume the consumption of gin remains much as it was, but rum is seldom drunk except by seafaring men, and brandy is now chiefly used as a liqueur with coffee. The differences between Scotch whiskies seem due chiefly to differences in blending, an art in which great skill is possible. We will not pretend to compare Glen Urquhart, Glencoe, Glenrosa, "challenge," Roderic Dhu, or the other whiskies exhibited in Class 4, for the task would be impossible without analysis. Messrs. Wilson and Parker have introduced some trace of novelty by marking their whiskies according to age with one, two, or three stars, as is done with brandies.

Very few brewers appear in the present Exhibition. We find on cases in the South Gallery the well-known names of Ind, Coope, and Co., Salt and Co., H. Lovibond and Son, Collier Brothers, and Stansfeld and Co., but Barclay, Meux, Bass, Allsopp, and a large majority of the other great English brewers are unrepresented. We cannot regret their absence, for English brewing and English beer are too well known to require illustration. But the production in England of the German lager beer is still a novelty, and is, moreover, an important industrial achievement. Lager beer is one of the most successful of the many foreign invasions to which in recent times we have been exposed, and considering its lightness and excellence we are glad to find its popularity increasing so rapidly. Until lately the whole of it was imported, but a German company styling itself the Austro-Bavarian Lager Beer Brewery commenced in 1881 at Tottenham the manufacture of several varieties of beers substantially identical with those brewed in Germany. They are all brewed on the German system—that is, the fermentation is carried on at a very low temperature, much of the yeast sinking instead of rising during the process. The four varieties sold are "Tottenham Lager," "Munich," "Bock," and "Pilsen." The last of these is a light table ale, the second and third are akin to porter and stout, but to judge from the analysis submitted to us all have an alcoholic strength not greater than 4½ per cent. by weight. The peculiar flavour, compared by some to garlic and by others to curry, is, we believe, generated in the manufacture, and is liked by those who are used to it. When the beer is intended for exportation or storage, it is "Pasteurised" by exposure to a temperature of 135° F., or thereabouts, after which it will, it is said, keep good in bottle for a twelvemonth. For draught it is aerated by a force pump, which brings it to the tap; and in hot weather it is cooled down to a temperature which renders it very refreshing. The case of Messrs. Gillman and Spencer (No. 157) deserves more than a passing notice on account of the novelty and scientific interest of the manufactures represented in it. *Pale*, may shortly be described as the gelatinisation of grain for use with malt in brewing. Grain of various kinds, but particularly rice, which appears best for

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the purpose, is, after decortication, submitted to the action of super-heated steam, whereby the starch is gelatinised and brought into a fit state for the action of diastase. Some curious changes take place, and the diastasic power of the grain itself is said to be increased by the operation, so that it is to a certain extent malted. Before mashing, about 25 per cent. of "gelatinised rice-malt" is mixed with the ordinary malt, after which the brewing operations go on as usual. So far from this addition being an adulteration, it is claimed on definite scientific grounds as an important improvement in brewing, and it has been adopted already by many of the principal brewers. The nitrogenous constituents are present in barley malt in greater quantity than is required for the growth of the yeast cells, and the excess encourages the development of other organisms which spoil the beer. Such organisms are constantly found in malt. It appears, moreover, that the soluble albuminoids of barley malt have increased of late years, so that much difficulty has sometimes been found in getting beer to keep. Now rice contains a smaller proportion of soluble albuminoids than any other grain, and its addition to the mash therefore dilutes, so to speak, the nitrogen, and thus hinders the development of disease germs. Beer brewed on this system ought to keep bright better than other beer, and it is said that it actually does so, and is less likely to disagree with those who drink it.

Since Byron, in "Don Juan," commended the virtues of soda water, an enormous trade in artificially aerated waters has arisen. We suppose the so-called soda water is the most extensively used, but lemonade and the different varieties of ginger beer are also consumed in enormous quantities. We have on various occasions drawn attention to the carelessness with which the manufacture is often carried on, and to the grave risks introduced by the too frequent use of impure water, or of leaden vessels. The best makers now bestow the most studious care on every detail. Some of them employ distilled water, which gives of course absolute security as to organic matter, but which has sometimes a smoky taste somewhat hard to overcome. With a good water-supply, and proper precautions, distilled water is not essential. We find in Class 4 many exhibits of artificial aerated waters. Several of the exhibitors, notably Messrs. Packham and Co. and the Salutaris Company, use distilled water, a fact which we have verified by analysis. Messrs. May, Davis, and Co. use what they describe as purified, or "defecated" water. The last term is by no means a happy one. The manufacture of artificial mineral waters, in which the natural waters of England and the Continent are imitated, has received remarkable development of late. The current belief is that the artificial are inferior in efficiency to the natural waters. We confess that we can see no rational basis for the belief, and without venturing to dogmatise on what is still a moot point, are inclined to think that the observed differences may have arisen from imperfect knowledge and skill in the manufacturer. Many firms exhibit such artificial waters. The British and Foreign Mineral Water Company of Glasgow have sent us samples of several, including the well-known Selters, Vichy, St. Galmier, Hunyadi Janos, Carlsbad, Homburg, and Kissingen, which, in taste at any rate, are good imitations of the natural waters. The same company exhibit specimens of all the chemicals and a model of the tin-lined apparatus used in their manufacture.

Other exhibitors in this department are Messrs. T. Talbot and Co., of Gloucester and Monmouth; Messrs. W. Corry and Co., Belfast; Messrs. Cantrell and Cochrane, of Dublin and Belfast; and Messrs. J. Schweppe and Co., Pitt and Co., and Mr. H. D. Rawlings, of London. Messrs. Schweppe and Co. have a pavilion in the grounds, which at our last visit was unfinished.

PRACTICAL DIETETICS: A CHINESE LUNCHEON.

THE entertainment given on the 3rd inst. by the Chinese Commission to the Executive Council of the Exhibition is worthy of record as a decided novelty. The guests assembled at 1.30 P.M. in a picturesque cool kiosk overlooking the gardens. Decorated latticework, artificial flowers, painting and gilding combined with the soft air that had free access to the dining-room were certainly in striking contrast to the grimy stuffiness of the average London restaurant. Aloft, in a minstrels' gallery, were five Chinamen, pig-tailed, swarthy, and terrible, seated before an assortment of instruments unfamiliar to European eyes: quaint kettle-drums, tom-toms, fiddles of a kind, and bag-pipes of a sort, the minstrels resting, plying the fan, and occasionally refreshing the inner minstrel with something from a tea-pot.

The conventional waiters, some German and some English, bustling and perspiring, waiter-like, served as a capital foil to their Celestial colleagues, blue-robed, impassive, spotless, intent on the work of the instant and softly gliding in shoes of white embroidery soled with an inch of felt. The table-gear was European save the chop-sticks and the long-handled spoon which was placed to the right of every guest. Thus housed, attended, and furnished, we opened the attack on the *menu* of some twenty-five items.

Some shreds of gelatine in a saucer were followed by another saucer containing a dab of quaint pickle, highly decorative, piquant, queer, and very mixed. Following some sausage and olives came the first real excitement, "bird's-nest soup," which caused every guest's attention to be intently directed to the contents of the porcelain cup in front of him, and one after another we stooped to sip this greatest of luxuries, when suddenly Bang—whoop—smash—yah! We all started back with thoughts of dynamite. Thank goodness it was but the minstrels who had begun the Chinese national air, the first two lines of which done into English are—

> "Great Son of Heaven, thy glories shine,
> Reflected in thy land divine."

Never were sound and sense more widely apart than in this musical composition. The English paraphrase breathes forth a pious content, a sense of peace, a feeling of calm joy. The music to our ears seemed a mixture of the 5th of November (with an undue number of erratic squibs) and a railway accident; and the thwack of the high-pitched drums went through and through one. Eventually this musical tornado blew itself out, and we returned to the "bird's-nest soup," which proved to be amber-coloured, glutinous, savoury, and decidedly good. The "bird's-nest soup" was followed by a preparation of almonds, which resembled nothing so much as a cup of arrowroot, and a guest near us expressed an opinion that it ought to be eaten with the feet in hot-water and the nose tallowed. After a snippet of sole and an oddment of salmon, each on a quaint little saucer, we were refreshed with hot Shaoshing wine from a teapot. This is the only alcoholic drink in China, and is made from rice. It reminded us of something in the Pharmacopœia, but before we had made up our mind whether that something had emetic, purgative, or expectorant qualities, it was gone. The minstrels now treated us to a chorus with bagpipes, as though intent on inducing stomach-ache by sympathy of sounds and as a prelude to the Timbale *bêche de mer*, a preparation made from the holothuria, or sea-slug. This proved to be very good, and not unlike turtle; and as there is an abundance of holothuria on some parts of our coasts, it is not improbable that we may follow the lead of the Chinese, and that it may some day be found in the English market. We saw the raw material, which was shrunken like dried turtle, but plims prodigiously in the course of cooking. A mouthful of quail, a spoonful of curried mutton (excellent), lotus seeds, sunflower seeds, melon seeds, appropriate music, more hot wine, now followed in quick succession, and then came shark's fin with rice—this dish in colour and taste reminding us of bouillabaisse. Pigeons, punch jelly, quaint biscuits, and sweetmeats now came, and the tom-toms bursting into the familiar strains of "God save the Queen," very creditably performed, told us that the *menu* was accomplished. And so it was, with the exception of the final cup of imperial tea, which is worth eight shillings a pound in Pekin. The leaves at the bottom of the cup were pale in colour and apparently had not been rolled, and we were informed that this tea is sun-dried; the colour was very pale, the aroma most delicious, and the flavour delicate. Thus refreshed and restored, we passed into the Gardens, where a cigar and a concord of sweet sounds assisted the digestion of this strange mixture of Celestial eates.

ROYAL SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS.—The sixtieth annual meeting of this Society was held on the 7th inst. From the report which was read it appears that during last year there were 4618 convictions at the instance of the Society, an increase of 137 on the preceding year, and the accounts showed a balance of £222. The Society's gold medals, given by the Queen, were awarded to Dr. Fleming and Prof. Prichard.

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A MEMORIAL TO THE LATE DUKE OF ALBANY.

LORD SHAFTESBURY writes to *The Times*:—"Your columns recently contained a proposal reprinted from THE LANCET that a portion of the new building now being erected for the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, should be made a memorial to the late Duke of Albany, whose interest in the undertaking had been freely manifested. This proposal has been submitted to the Queen, and Her Majesty has been pleased to sanction its adoption. There must be many desirous to do honour to the memory of the esteemed Prince, whose short life was in so large a measure devoted to works of general utility, and in the valuable institution I write of the public sentiment will perceive an enduring memorial, and such as he would have valued most. I have gladly acceded to a request to preside over a meeting in Willis's Rooms on Monday next, the 14th inst., when the Queen's gracious communication will be read and resolutions will be proposed. The cost of the new hospital, which will be about £60,000, exclusive of site, is all provided for but a balance of £12,500, and one of the objects of the meeting is to aid the board in the collection of this sum. The treasurer, the Hon. H. D. Ryder (Messrs. Coutts) or the secretary, at 36, Queen-square, will gladly receive contributions from any willing to help the completion of the important work so advantageously inaugurated by the late Prince, but which can be finished only as a posthumous tribute to his worth."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5554 births and 3279 deaths were registered during the week ending the 5th inst. The annual death-rate in these towns, which had been so low as 18·7 and 19·2 per 1000 in the two preceding weeks, further rose last week to 19·5. During the thirteen weeks of last quarter the death-rate in these towns averaged 20·8 per 1000, against 20·9 and 21·5 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 12·5 in Derby, 13·4 in Brighton, and 14·3 in Bristol. The rates in the other towns ranged upwards to 23·7 in Sunderland, 23·8 in Oldham, 25·6 in Plymouth, and 26·1 in Huddersfield. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 572, and showed a further increase upon the numbers in recent weeks, owing to the greater mortality from diarrhœa; they included 175 from diarrhœa, 126 from measles, 103 from whooping-cough, 61 from scarlet fever, 46 from "fever" (principally enteric), 36 from small-pox, and 25 from diphtheria. No death from any of these diseases was registered last week in Derby, whereas they caused the highest death-rates in Leicester, Liverpool, and Plymouth. The greatest mortality from diarrhœa occurred last week in Preston, Plymouth, and Leicester; from measles in Blackburn, Liverpool, Plymouth, and Wolverhampton; from whooping-cough in Leicester and Sunderland; and from scarlet fever in Cardiff and Sheffield. Of the 25 deaths from diphtheria in the twenty-eight towns 15 occurred in London, 3 in Portsmouth, and 2 both in Bristol and in Liverpool. Small-pox caused 34 deaths in London and its outer ring of suburban districts, exclusive of 11 London cases registered in the metropolitan asylum hospitals situated outside Registration London; also 3 in Liverpool, 2 in Sheffield, and 1 in Hull. The number of small-pox patients in the metropolitan asylum hospitals, situated in and around London, which had been 1316 and 1290 on the two preceding Saturdays, again rose to 1368 at the end of last week; the number of new cases admitted to these hospitals, which had been 354 and 260 in the two previous weeks, were 266 last week. The Highgate Small-pox Hospital contained 81 patients on Saturday last, against 90 and 83 on the two previous Saturdays; the new cases admitted were 20 last week, against 22 and 11 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the nine preceding weeks from 360 to 218, rose last week to 231, and exceeded the corrected weekly average by 30. The causes of 71, or 2·5 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Birmingham, Bristol, Portsmouth, Salford, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Birkenhead, Oldham, Bradford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the four preceding weeks from 23·3 to 20·6 per 1000, rose to 21·8 during the week ending the 5th inst., and exceeded by 2·3 per 1000 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 12·9 and 15·1 in Greenock and Perth, to 23·2 in Dundee and Paisley, and 25·8 in Glasgow. The 526 deaths in the eight towns included 32 which were referred to whooping-cough, 13 to diarrhœal diseases, 10 to measles, 10 to diphtheria, 7 to "fever," 6 to scarlet fever, and not one to small-pox; in all 78 deaths resulted from these principal zymotic diseases, against 83 and 86 in the two preceding weeks. These 78 deaths were equal to an annual rate of 3·2 per 1000, which was slightly below the mean rate from the same diseases in the twenty-eight English towns. The 32 deaths from whooping-cough corresponded with the number in the previous week, and included 22 in Glasgow and 6 in Edinburgh. The 13 fatal cases of diarrhœa slightly exceeded the low number in the corresponding week of last year. The deaths from measles, which had been 14 and 15 in the two preceding weeks, declined to 10, of which 6 occurred in Glasgow. The 10 fatal cases of diphtheria exceeded the numbers in recent weeks, and included 5 in Glasgow, 2 in Dundee, and 2 in Edinburgh. The 7 deaths from "fever" showed a decline of 3 from the number in the preceding week, 4 were returned in Edinburgh, and 2 in Glasgow, where 4 of the 6 deaths from scarlet fever were also recorded. The deaths referred to acute diseases of the respiratory organs in the eight towns, which in the two previous weeks had been 74 and 85, were last week 83, and were considerably below the number returned in the corresponding week of last year. The causes of 104, or nearly 20 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 21·7, 27·1, and 28·2 per 1000 in the three preceding weeks, declined to 21·0 in the week ending the 5th inst. During the thirteen weeks of last quarter the death-rate in the city averaged 26·5 per 1000, whereas the rate during the same period did not exceed 19·9 in London and 21·6 in Edinburgh. The 141 deaths in Dublin last week showed a decline of no fewer than 49 upon the number in the previous week; they included 18 that were referred to the principal zymotic diseases, against 10, 15 and 14 in the three preceding weeks; 10 resulted from scarlet fever, 3 from diarrhœa, 2 from diphtheria, 2 from "fever" (typhus, enteric, or simple), 1 from whooping-cough, and not one either from small-pox or measles. These 18 deaths were equal to an annual rate of 2·7 per 1000, the rate from the same diseases being 4·0 in London and 3·6 in Edinburgh. The 10 deaths from scarlet fever in Dublin last week showed a marked increase upon the numbers returned in recent weeks, while those from "fever" were fewer than in any recent week. The 3 deaths attributed to diarrhœa corresponded with the number in the previous week. Three inquest cases were registered, and only one death resulted from violence; 49 deaths were recorded in public institutions. The deaths both of infants and of elderly persons showed a marked decline from the numbers returned in previous weeks. The causes of 14, or 10 per cent., of the deaths registered during the week were not certified.

MISS WARDELL'S CONVALESCENT HOME FOR SCARLET FEVER.—The Princess of Wales, the Patroness, has consented to open the Home at Brockley Hill, Stanmore, on Monday July 14th. A sale of work will be held at the Home on the day of the opening and following days.

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Correspondence.

"Audi alteram partem."

"THE PATENT MEDICINES STAMP ACT."

To the Editor of THE LANCET.

SIR,—In your leading article contained in the issue of July 5th you animadvert upon the present condition of the law which regulates the sale of patent medicines. Now this subject is one of such paramount importance, alike to the profession at large and to the public, that I may be pardoned for bringing forward some other aspects involved in the existing state of affairs. You mention that the Act of 1812, which by the way was passed to enlarge and amend a former statute, is still the guide and mentor for the authorities at Somerset House. In the schedule appended to this Act is a long list of nostrums, many of which are now simply names, while the ruck of the present patent medicines come under the Act by virtue of the words that any preparation is "held out or recommended to the public," by advertisement or otherwise, "as nostrums or proprietary medicines, or as specifics, or as beneficial to the prevention, cure, or relief of any distemper, malady, ailment, disorder, or complaint." And further, this Act, which you stigmatise as peculiar and incomprehensible, includes among its schedulel articles "foreign medicines of all kinds, except drugs." But the Act was passed eleven years before that eventful Oct. 5th, when No. 1 of THE LANCET appeared, and at a time when pharmacy was primitive, if not savage, and the profession were more apt at phlebotomising than conversant with the study of the physiological action of drugs. During the past three-quarters of a century this Act has lain in the limitless limbo of unintelligible statutes passed for the guidance of the people and the pecuniary aggrandisement of the lawyers; but at the present time the whole reading, scope, and, I think we may say, purport, of the Act have been altered, its spirit quashed, and its letter raised into what may prove a most disastrous prominence. When we consider the reckless and unreasoning way in which the authorities have unearthed and contorted an effete enactment such as the Stamp Act of 1812, we may well review the situation and ask how long shall such things be? You, Sir, have drawn attention to the fact that, according to the modern interpretation of the Act, it has taken upon itself the form and semblance of an impudent "puff," whereof the patent medicine mongers have not been slow to avail themselves. But another issue has yet to be considered. As it would appear, Her Majesty's Commissioners possess a wide discretionary power in the matter of selecting what constitutes a "specific" or a drug; and even the seemingly simple problem, "What is a foreign medicine?" admits, according to Her Majesty's Commissioners, of many and startling solutions. It is to the manifest injustice, and we may add, in Carlyle's English, "unreason," of this discretionary power indiscreetly administered that I wish to draw attention. Not only are the principles of free trade glaringly violated and protective policy flaunted, but medicines which are undoubtedly proprietary are privileged; while similar compounds, because they emanate from foreign warehouses, and are pushed with the vigour which characterises the manufacturing chemist of to-day, are condemned to pay toll. The Commissioners are strictly within their legal right when they assert that their province lies, not in rectifying a stupid and effete law, but in carrying the same into effect. When, however, such wide discretionary power is left in their hands, it is strange that they take no pains to ascertain whether their proceedings are in harmony with the knowledge or accepted usage of the day. To be gravely told that sulphate of quinine cannot be said to be a drug, as it is compounded of sulphuric acid and quinine, inclines one to push inquiry further, and to seek an example of a simple substance. We are told that a drug made up with a common vehicle into a suppository becomes a medicine which must be stamped. A well-known nostrum prescribed for asthma, proprietary to the ninetieth degree, escapes, because it "is neither a medicine taken internally nor applied externally." A princely fortune has been amassed by the proprietor of an agreeable laxative salt sold in powder; but this is not a patent medicine, we are told, and so eludes Her Majesty's Commissioners, because it is, so they tell us, a natural effervescing water.

I have cited a few examples out of a host, because such flagrant misdirection alike of common sense and justice must show the utter futility of anything short of a repeal of the law as it now stands and is now enacted. Let us glance at the upshot of the measures the Inland Revenue Commissioners are proposing: All medicines which have enjoyed a printed reputation in the treatment of any particular disease—for example, digitalis in disease of the mitral orifice,—all alkaloids, and practically all the less common remedies (seeing they are mostly imported) will become liable to be stamped; they will then be regarded by the intelligent British public as safe additions to the family medicine chest, and glonoin capsules will be as glibly spoken of and as disastrously used as are the present opium-dosed "soothing syrups" or "teething powders." Prescribing must cease, or be replaced by a *memoria technica* well stored with the names and addresses of those chemists who import or prepare the various alkaloids and preparations of an extra pharmacopœia. From whatever standpoint this matter is viewed it seems big with disaster, and fruitful of injustice and inconvenience.

I am, Sir, your obedient servant,

Gower-street, W., July, 1884. DUDLEY W. BUXTON, M.D.

To the Editor of THE LANCET.

SIR,—In reference to the question of the stamp duties on patent medicines, some interesting comparisons arise with respect to the custom in other countries and their consequences. In France, for instance, there is no tax of any kind on nostrums or proprietary medicines; the law carefully avoids doing anything which can be construed to authorise or approve of their sale; indeed, nostrums as such are absolutely forbidden until, by an analysis conducted by a state official, it can be shown that they contain nothing which might prove dangerous in the hands of the most inexperienced. The regulations relating to the sale of poisons in France are very strict, and the law prohibits, except under an order from a doctor, the sale of any medicine, proprietary or not, which contains other than harmless drugs. The result is materially to lessen the risk of the imprudent employment of potent remedies, while great difficulties are placed in the way of individuals disposed to indulge a morbid taste for narcotics, whether in the form of opium, morphia, or chloral. In England, apart from the extraordinary facilities afforded for the sale of these substances, the myriad quack mixtures offer a ready loophole of escape, both morally and legally, to those who desire to employ drugs, the use of which, except under medical advice, is fraught with so much risk and danger.

The stamp in England lends itself admirably, or disastrously, to the purposes of advertisement. I have before me a large collection of such advertisements, marvels of ingenuity in their way, where the stamp is made to convey the impression—and this in no ambiguous terms—that Her Majesty's Government have examined the medicine enclosed, and certify not only to its genuineness, but also that it possesses the qualities which the proprietor of the medicine has thought fit to ascribe to his compound. This is no fictitious—still less a factitious—objection. The plausible manner in which these advertisements are worded is calculated to mislead all but those who are in a position to appreciate their value, and it is a fact familiar to most of us that people attach much the same importance to the stamp as they would to the Hall mark on silver plate. That the fictitious importance so conferred—a thing, by the way, which excites a good deal of ridicule abroad—is beneficial to the proprietors of these preparations is evidenced by the fact that they are strongly opposed to the abolition of the tax; nor, indeed, is this to be wondered at, as the cost does not fall on their shoulders, and the benefit to them is only too apparent.

It is most desirable that a tax so hurtful in its effects should be at once abolished, and that henceforth, or until further legislation on the sale of poisons stops their unauthorised and indiscriminate use altogether, they will be left to rely for prestige on the specious wording of their vendors, and cease to be invested with the halo of State recognition. I am, Sir, your obedient servant,

ALFRED S. GUBB.

Westminster Hospital, Broad Sanctuary, S.W., July, 1884.

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FURTHER DISCOVERY OF ROMAN REMAINS IN LINCOLN.

To the Editor of THE LANCET.

SIR,—Permit me to supplement the letter on the discovery of Roman remains in Lincoln published in THE LANCET of June 14th.

The workmen, a few days ago, whilst extending the digging out of the foundations of the old house at the angle formed by Bailgate and Eastgate preparatory to the building of a new one, came upon a quaint-looking Roman arch, six or eight feet north-east of the sarcophagus or small chamber in which, as stated in my former letter, the ten urns were discovered. This arch or door-way, which had necessarily to be removed, formed a right angle with the sarcophagus, and was about six feet high and two feet wide Like the large Roman arch at the upper or northern end of Bailgate, it had no keystone, the formation of all the stones in the arch obviating the necessity for one. Leading from the door of the sarcophagus to the arch was a semicircular path made of concrete. This path, after passing through the arch, dipped down two feet and a half to make the floor of a small room five feet square and seven feet high.

On Thursday morning, the 26th inst., the workmen, whilst in the act of taking down the arch, discovered a large urn, and on clearing away the rubbish out of the room found three or four more urns of large size. The urns previously discovered in the sarcophagus held from two to three quarts of fluid; those recently discovered, before they were damaged, would have held as many gallons. They were embedded in lime, had no lids, and all contained ashes of the dead, the ashes being covered over with charcoal. The small room in which these urns were found smelt most offensively, and on washing a fragment of one of the urns, a most disagreeable odour arising from the fragment was complained of. Putting the pieces of one of the urns together, I could see that it was somewhat globular in shape, with a large mouth, the rim of the mouth being neatly and elegantly curved outward to the extent of nearly two inches. The colour of the urn examined is black, and it is a good, although a coarse, specimen of the old Roman ware called "Upchurch." The fragments of this urn presented an appearance which leads me to believe that the vessel was twice "fired." It is therefore probable that after the dead had been burned in the ordinary way the remains were collected, placed in this large urn, and it and its contents were again subjected to the fire of the crematorium.

Mr. *Hibbitt*, the intelligent foreman of the works, is of opinion that the arch and the room recently discovered are of much older date than the sarcophagus and apartments previously discovered. Over these old Roman buildings a Norman edifice of some kind had been erected, and Mr. Hibbitt pointed out the differences between them. The building of the Romans was "splendid," and the workmen with difficulty pulled down the old walls. The building of the Normans was as different as possible. They made the "faces" of the walls even and smooth but the spaces between the faces they filled up with rubbish of any kind that came to hand, consequently their work fell to pieces when struck by the workmen.

The crematorium and the other buildings devoted to the final disposal of the dead seem to have stood in a north-westerly angle of an enclosure or outer courtyard, and this courtyard in all probability belonged to the beautiful villa discovered a year or two ago. The villa stood on one of the finest sites in the city, and was situated only fifty yards directly in front of and southward of the crematorium buildings. Although this place of sepulture may have been owned by successive Roman governors, still it does not appear to have been held sufficiently sacred to be isolated from the busy world about it. Not more than twelve or fourteen yards from it eastward was found, firmly and well puddled in the earth, a nine- or ten-gallon water-jar for the use of animals to drink from, and a neat drain was also found to convey away the water overflow of the jar. Still nearer to the sepulture buildings was a well in the centre of a large flat stone, four feet square, and well worn by the feet of those who went thither to draw water. Scattered about were large square tiles, having one side of the square curved round, as if intended to hold something. A packing-needle, of fine brass wire, was found with thread wound around it, and also a handsomely made leaden box, resembling very much the old-fashioned poor-box, with long shaft handle. The handle in this case was wanting, but the tapering socket is there, supported by neat brackets. In still closer proximity to the buildings was the ashbin, among the rubbish of which were found numerous oyster shells and broken pottery, sufficient to demonstrate that breakages occurred in those days as well as in these. I found the lower part of a flower-pot of Samian ware, having a hole in the bottom for the escape and admission of water in the same way as a flower-pot of the present day. The inverted saucer-like lid for vessels seemed to be very fashionable in those times. The Chelsea people and Orientals made similar lids for sugar-basins. I saw the spout of a jug of Castor ware of the same shape as some of the beautiful Dresden milk-jugs.

I am, Sir, very truly yours,

Lincoln, June 28th, 1884. WILLIAM O'NEILL, M.D.

"VACCINATION IN THE METROPOLIS."

To the Editor of THE LANCET.

SIR,—Under the above heading in last Saturday's LANCET you publish an article stating that the proposal which I made in the House of Commons the other day for the prevention of small-pox in the metropolis was, as you understood it, "to transfer from the boards of guardians to the thirty-nine sanitary authorities the administration of the Vaccination Acts." Permit me to say that I never suggested any such thing. Further on you add that I "demanded a more general use of lymph from the calf." That also is an entire mistake. What I advocated was a slight modification of existing machinery, which might be secured almost without legislation, and which would secure the prompt disinfection and revaccination of infected households as well as the prompt isolation of small-pox patients. The principles of the system I advocated have in Glasgow, where there is no calf lymph, reduced the death-rate from small-pox to less than one-fiftieth of what it stood at before that system was adopted, and to less than one-twenty-fifth of the present death-rate in the healthiest districts of London. As I showed, they could be adopted here without the slightest dislocation of existing machinery, and probably when the recrudescence of the epidemic next year has sufficiently aroused public indignation, the obvious administrative improvements which I suggested will be adopted. Till then I must console myself with the reflection that I have done all I could to avert any needless addition to the thousands of lives which in the metropolis have within the last ten years been deliberately sacrificed at the altar of Small-pox by the High Priest of Red-tape. I am, Sir, yours truly,

House of Commons, July 9th, 1884. CHARLES CAMERON.

DIAGNOSIS OF SMALL-POX.

To the Editor of THE LANCET.

SIR,—It is not very surprising that errors are not infrequently made in the diagnosis of small-pox, as it is a disease which rarely comes under the observation of general medical practitioners, except during epidemics, and is even then confined to certain localities to a great extent; but with care, and a knowledge of the medical literature on the subject, so far as it can be acquired without much difficulty or expenditure of time, serious errors may be avoided. However, a case illustrative of the grave consequences of a mistake in diagnosis has come under my notice, and I think it is of a nature worth the attention of medical men, especially while small-pox is rife in London. The facts as described by one of the family are these. The father was taken ill and died after a short illness, the immediate cause of death being hæmorrhage from one of the mucous tracts. There was no apparent small-pox eruption of the usual character, but very extensive petechial or hæmorrhagic colouration of the skin, described as "purple," lividity around the eyes, on the forehead, &c.—in fact, the characters of a severe case of hæmorrhagic small-pox. Seemingly the diagnosis was simple purpura, as the family were assured that there was nothing infectious. However, first two of the children, then the wife, and lastly a third member of his family, were attacked with small-pox, without any apparent history of infection from without, but fortunately in them the disease was of a milder type. If the diagnosis

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had been correctly made in time, the spread of the disease might have been checked with the case of the father, as it was almost, if not quite, a fortnight before it showed itself in the other members of the family.

I am, Sir, yours obediently,

JAMES A. PHILIP,

July, 1884. Medical Officer, *Red Cross* Ambulance Steamer.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

CASE OF GASTROSTOMY.

I SAW to-day in the wards of the Newcastle Infirmary an interesting case in which the operation of gastrostomy had been successfully performed by Mr. Page. The patient was a stonemason, about forty-six years of age, and, except for being a heavy drinker, there was nothing to point to as a cause for the symptoms of dysphagia, which came on gradually, but became very urgent about the beginning of the present year. It is nearly a month since he was admitted to the infirmary, and fully three weeks since the operation. Mr. Page made an incision through the rectus muscle on the left side, and to this the stomach was secured by wire sutures, and opened three days later, the patient in the meantime being sustained by nutrient enemata and hypodermic injections. When the gastric fistula was fully formed he was fed through an elastic tube, and at the present time, although he is still being fed by the tube, he has recovered some power in swallowing, and has increased in weight four pounds since the operation. At the time of the operation he was harassed by a hectic cough, and this somewhat induced Mr. Page to make his opening through the rectum, the structure of the muscle acting in a valvular manner, and so preventing expulsion of the contents of the stomach during the act of coughing. The presence of the tube appeared to give the patient, who was able to walk about the ward, very little trouble. The case is doing well.

THE DWELLINGS OF THE POOR.

A conference convened by the Bishop of Durham has been held this week in Bishop Cosin's library, Palace-green, Durham, this week, having for its object the condition of the dwellings of the poor in the county of Durham. The meeting was a representative one, attended by medical officers of health and other members of our profession taking a direct interest in sanitation. A general sanitary aid committee was formed at the meeting.

REMARKABLE CASE OF EXCESSIVE DRINKING.

An inquest was held yesterday at Middleton, near Darlington, in which it was shown that a lady had died from excessive drinking, inducing epileptic convulsions, in one of which seizures she would appear to have been suffocated in her chair. From the evidence given, it was clear that she had been addicted to excessive drinking for about three years, and during that time she had drunk from two to three pints of whisky daily.

THE COPENHAGEN CONGRESS.

It might be mentioned, in view of the approaching meeting in the Danish capital, that one of our leading shipping firms here has notified its willingness to take all members of the profession from Newcastle quay to Copenhagen and back for the extremely low sum of thirty shillings. I hear on all sides of active preparations for the journey, although some are bent on crossing St. George's Channel as well as the Cattegat.

ACCIDENT TO DR. HEATH.

I regret to say that Dr. Heath, of our city, met with a serious accident yesterday while driving with a female patient and nurse in the neighbourhood of Chester-le-street. The horses bolted, the vehicle was upset, and the occupants were violently thrown out; Dr. Heath has several ribs fractured, while the females are also seriously injured.

Newcastle-on-Tyne, July 1st, 1884.

THE managing committee of the Warneford Hospital at Leamington have appointed Miss E. M. Swain, daughter of Professor Swain, of Queen's College, Birmingham, resident dispenser to the hospital.

PARIS.

(From our Paris Correspondent.)

THE CHOLERA EPIDEMIC.

THE meeting of the Academy of Medicine yesterday was looked forward to with great interest, as it was anticipated that Dr. Fauvel, in the face of evidence against him, would have made another declaration tending to modify that which he first made—namely, that the epidemic at Toulon was none other than sporadic cholera. Warm discussions would necessarily have followed; but Dr. Fauvel, acting on the wise adage, "a good retreat is better than a bad fight," made himself scarce, and instead of attending the meeting to defend his cause in person, he addressed a letter to the President of the Academy excusing himself, as from the shattered state of his health from over mental work, he was obliged to go to the country for at least a month to seek that rest which he could not obtain if he remained in Paris. In his letter, however, he still adheres with great tenacity to his former opinion, and states that, by whatever name the epidemic may be qualified, it is none other than the "cholera nostras," that is to say, engendered at Toulon, it will become extinct without extending beyond its present seat, where it will be so concentrated as to become the starting-point for an epidemic which will invade all France. There seems some contradiction in this assertion, but I give it as it appeared in Dr. Fauvel's published letter. Dr. Fauvel further states that the stray cases, more or less choleraic, and more or less numerous, met with at Marseilles will be extinguished with the end of the great heat, without having given rise to a veritable epidemic of Asiatic cholera. Dr. Rochard, who had just returned from Toulon, made his appearance at the Academy, and protested in rather strong terms against the assertions of Dr. Fauvel. I need not trouble your readers with his arguments, as he simply goes over the old ground. At the same time, he endeavours to prove that the present epidemic, which according to him is of the true Asiatic type, was not imported by the French ships coming from the East, but insinuates that the disease was brought over the Red Sea, which of course means that the English were the guilty party. Dr. Rochard then made some remarks on the treatment employed by medical men at Toulon. After having tried various remedies, the following is that now adopted. Hypodermic injections of ether in the stage of prostration, and atropine, also used hypodermically, to relieve the pain and cramps attending these cases. The inhalations of oxygen, which you have already referred to, have, according to Dr. Rochard, been attended with such favourable results as to encourage perseverance in them, particularly when the patients are plunged into a profound state of coma. Dr. Rochard observes that, whatever the treatment, the number of cases has been extraordinarily great, particularly in the navy, where the proportion of deaths was only one in five cases. As preventives, the principal remedies consist in sanitary measures, such as segregating the inhabitants, and thus preventing the crowded state of the town; with these measures the place should be thoroughly cleansed and disinfected: but he deprecates the ridiculous extent to which disinfection is being carried out, much to the annoyance of travellers, who are put to inconvenience by the unnecessary detention they are subjected to, and which, as Dr. Rochard himself admits, is perfectly ineffective. Dr. Koch, who is now at Toulon, where, it is said, he met with cold politeness by the medical staff of the hospitals, is now at work with his two young French colleagues of the cholera mission to Egypt, Drs. Strauss and Roux, who gave him a friendly reception, and it is to be hoped we shall soon know the result of their investigations. Meanwhile, Dr. Koch has declared that the disease before him is clearly Asiatic cholera. He does not believe that the germs are transported by the air, adding that the microbes are not transmissible, but by the human body, by the dejections, or by the wet linen containing these dejections. He is of opinion that after a few days, about eight, the infected linen does not contain any more dangerous microbes. In accord with the greater number of hygienists, he has no faith in simple external fumigations. A few stray cases have occurred in the provinces near Toulon, but with one or two exceptions they have turned out to be false alarms. The same thing happens daily in

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Paris, and with the same results. Meanwhile, every precaution is being taken to prevent the incursion of the disease.

FRENCH JURORS AT THE INTERNATIONAL HEALTH EXHIBITION.

The following gentlemen have been designated to represent France among the jury of the International Exhibition of Hygiene now being held in London:—Professor Arnoult of Lille, Professor Brouardel, Dr. Gariel, Dr. Henry Guéneau de Mussy, Professor Layet of Bordeaux, Dr. Lionville Deputy, Dr. Napias, Dr. Proust, and Dr. Vallin.

Paris, July 8th, 1884.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—We understand that *thirty* appointments are offered for competition at the examinations in August next instead of *nineteen*, as previously advertised.

Surgeon-Major Augustus Frederick Elliot, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon; Surgeon Herbert Cotton has been placed upon temporary half-pay on account of ill-health.

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon William J. Eames, to the *President*, additional, for temporary service at the Royal Victoria Yard; Surgeon Robert G. Bird to the *Achilles*; Surgeon John O'Callaghan, to the *Tyne*; Surgeon George W. F. Armstrong, to the *Belleisle*.

ARTILLERY VOLUNTEERS.—1st London (City of London): John Joseph Ardavon Vincent Constantine Raye, Gent., to be Acting Surgeon.

RIFLE VOLUNTEERS.—2nd Shropshire: Acting Surgeon John [illegible] resigns his appointment.

ROYAL COLLEGE OF SURGEONS.

At the quarterly meeting of the Council, held last Thursday, the [illegible] twenty elected members took their seats—namely, Mr. [illegible] Smith, George Lawson, A. E. Durham, Berkeley Hill, [illegible] Allingham. Mr. Cooper Forster was elected President of the College for the ensuing year, in the place of Mr. [illegible], and Messrs. Savory and Holmes were elected senior and junior Vice-Presidents respectively. In accepting the office of junior Vice-President, Mr. Holmes stated that he [illegible] it to be understood that he did not intend to accept the office of President, as he disapproved of the principle of election by rotation. Mr. C. Stewart was [illegible] admitted Conservator of the museum. The various committees were appointed, and the several professors and lecturers were elected. Messrs. Lund and [illegible] were elected Professors of Surgery and Pathology, and Messrs. Parker, Brailey, Stewart, Treves, and A. Hill Professors of Comparative Anatomy and Physiology. Mr. [illegible] was re-elected Lecturer on Anatomy and Physiology, and Mr. Stewart the Erasmus Wilson Lecturer. The motion of Sir Spencer Wells's motion—"That all conclusions of the Council be considered as in force [illegible] have been formally rescinded"—was not carried; the latter part—"That any existing resolutions which [illegible] on the Council be rescinded"—was by leave withdrawn. Sir Erasmus Wilson was nominated as a candidate for the honorary medal of the College, the ballot for which will take place at the next meeting of the Council.

MEDICAL ACT AMENDMENT BILL.

[illegible] going to press on Friday morning the Bill [illegible] attached, but is still on the list. Should there be no opposition, it is sure to pass; otherwise there is little chance of its becoming law this session. The passing of the Bill is to be obtained only [illegible] the adoption of Sir Lyon Playfair's amendment, [illegible] hardly be disappointed at the latter consenting that the amendment would have so seriously [illegible] value of the measure as to make it [illegible] little worth.

MEDICAL NOTES IN PARLIAMENT.

Sanitation in Clerkenwell.

THE President of the Local Government Board, in his speech on the second reading of the London Government Bill on Friday night in the House of Commons, declared that the insanitary condition of the parish of Clerkenwell rendered that district "a danger and a disgrace to the whole of the metropolis," and that the vestry which allowed it to remain in that condition was unfit to exercise the powers entrusted to it.

The Thames.

The Chairman of the Metropolitan Board of Works on Monday admitted to Mr. D. Grant that the state of the Thames at East Greenwich, in the neighbourhood of the sewage outfall, was offensive and dangerous to the public health. He said directions had been given for the liberal use of deodorising agents, but the difficulty had mainly arisen through the dry weather, there being but a small flow of upland water. Special instructions had been issued to the Board's engineer, who had full authority to take whatever measures were possible to mitigate the nuisance.

On Tuesday, in the debate on the London Government Bill, Mr. Boord, one of the members for Greenwich, reverted to the subject by way of complaint of the inefficiency of the Metropolitan Board.

Covent-garden.

Sir J. Hogg, in reply to Sir F. Milner on Monday, repudiated any responsibility on the part of the Metropolitan Board with regard to the foul condition of the streets in the neighbourhood of Covent-garden, but stated that he had called the attention of the Strand District Board to the matter.

The London Sewerage System.

On Tuesday, Mr. Russell informed Mr. Gourley that the Local Government Board had no legal control over the cleansing and flushing of the metropolitan sewers, which were under the jurisdiction of the local authorities.

The Cholera.

Replying to Mr. Gray, answers were respectively given by Mr. Russell and by Mr. Trevelyan to the effect that the necessity had not yet arisen for issuing special regulations under the Public Health Act, in view of the importation of cholera into England and Ireland. The sanitary authorities already possessed very large powers, and the exceptional provisions of Section 134 would be applied directly it became evident that this country was really threatened with the disease.

The Medical Bill.

During the week about a hundred petitions from various places throughout the kingdom have been presented in favour of Mr. Sclater Booth's amendment for the appointment of a Pharmacopœia Committee.

On Thursday evening, in making a general statement as to the course proposed to be taken by the Government, Mr. Gladstone said: "With regard to the Medical Act Amendment Bill, I do not give a final judgment, and upon this ground. In the first place, my noble friend the Lord President of the Council, and my right hon. friend the Vice-President, are, I believe, of opinion that they have very nearly arranged the principal contested points connected with the Bill. A short time would test that. It is also a Bill which has made considerable progress. It is now in Committee, with the mark of 'Progress' attached to it; and without interfering with the course of business, it is a Bill upon which we may easily ascertain at a later hour of the evening whether the House will proceed with it."

Vaccination.

In reply to Mr. Hopwood, Mr. Mundella stated that the Education Department had no power to sanction the examination of scholars in Board Schools for the purpose of ascertaining whether they had been vaccinated. The visit of some person (presumed to be in the employ of the local authorities of St. Pancras) on Wednesday last to the Henry-street School for this purpose had therefore not received the sanction of the department.

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The Patent Medicines Bill.

Mr. Mundella replied to Mr. Warton that the Irish Government had not yet communicated their decision as to whether Ireland should be included in this measure, the fate of which was now dependent upon a higher authority than his. A good many things had happened since March 22nd, and possibly there were good reasons why the Bill had not been proceeded with.

A Parliamentary Nuisance.

In reply to Mr. James Lowther, Mr. Shaw Lefevre said he had received complaints from hon. members of a very offensive odour in the House of Commons, but he was satisfied it was not caused by any defect in the ventilating arrangements of the House. It proceeded from some outside cause, which he believed to be the Victoria-street sewer; but he would have no objection to a small committee investigating the matter. He had communicated with the Metropolitan Board on the subject.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on the 4th, 7th, 8th, and 9th inst.:—

Hugh A. Clarke, Liverpool; Edward E. Barret and H. G. Tandy, Charing-cross Hospital; Rupert W. Clayton and S. G. Vinter, St. Mary's Hospital; William S. Whitehead, Arthur B. Stevens, A. E. Gresham, and H. E. Whitehead, St. Bartholomew's Hospital; Robert H. M. Roberts, St. Thomas's Hospital; Bertie S. Johnson and Walter R. Garrould, University College; Henry T. Kelsall, G. E. Haslip, Charles E. Scudamore, Horace A. Debenham, Harold E. Owen, R. Hitchings, and J. F. Vincent, London Hospital; C. H. West, G. A. Wybourn, E. F. Gardner, C. A. Lumley, and S. Woodhams, Guy's Hospital; G. McNair, King's College; John E. Appleton, St. Mary's Hospital; Richard H. Williams, A. B. Kingsford, W. C. Carter, F. P. Kitson, W. J. Gilpin, and R. B. Hughes, University College; G. T. Giddings, C. Collier, J. T. C. Williams, and A. E. Kempthorne, London Hospital; J. E. Nihill, C. Lyddon, and C. H. Ashford, St. Bartholomew's Hospital; T. G. Scott and F. T. Frost, Guy's Hospital; E. E. Dalton, Charing-cross Hospital; E. M. Calendar, St. Mary's Hospital.

ROYAL UNIVERSITY OF IRELAND.—The following degrees and diplomas were conferred last week:—

DOCTOR IN MEDICINE.—Henry Anderson, Robert Bell, J. C. S. Burkitt, Howard Carr, Jacob Fairbrother, John S. Fogerty, John D. Kenny, Michael O'Brien, Leonard Redmond, R. H. Sproule.

BACHELOR IN MEDICINE.—Patrick A. Daly.

MASTER IN SURGERY.—Robert Bell, J. J. Brownlee, J. C. S. Burkitt, Howard Carr, John S. Fogerty, James C. Hood, E. J. W. Johnston, Alexander Lindsay, Robert McElwaine, Archibald P. B. Moore, Michael O'Brien, Richard M. Ralph, Leonard Redmond, R. H. Sproule, James Torrens, Samuel Wallace.

DIPLOMA IN OBSTETRICS.—James C. Hood, James F. Hunter, Alexander Lindsay, Samuel Wallace, Patrick B. White.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on July 3rd:—

Dundas, Mordaunt George, St. Thomas's-street.
Larkin Frederick Charles, Radcliffe-street, Everton, Liverpool.
Maggs, W. Adolphus, Hanover-square.
Peake, Solomon, Coventry.
Rashib, Edmund, Park-road, Wandsworth.
Williams, Edward Lloyd, James-street, Buckingham-gate.
Williams, Robert Richard, Llanberis, North Wales.

The following gentleman also on the same day passed the Primary Professional Examination:—

Burd, George Frederick, St. Bartholomew's Hospital.

MEDICAL MAGISTRATES.—Dr. W. T. Colby and Mr. Joshua Hartley, M.R.C.S., both of Malton, have been placed on the Commission of the Peace for the North Riding of Yorkshire.

MR. WALTER A. EMSLIE, M.B., C.M., has been chosen by the Free Church Assembly of Scotland as their medical missionary at Livingstonia, and he will shortly take his departure to that station.

ON the 5th inst., the foundation stone was laid of a coffee tavern, reading room, and workmen's dwellings which are being erected in connexion with the works and at the sole cost of Messrs. Chubb and Son in Old Kent-road. When the building is completed and fitted, it will be handed over to a committee of workmen, in order that the latter may themselves manage the whole affair.

THE sanitary authorities of Wolverhampton and South Staffordshire have decided not to accept the scheme of the local Drainage Commission for the drainage of the entire district for £250,000.

DR. MANSON (Banff) and Dr. Davidson (Wartle) were last week, in celebration of their jubilee as medical practitioners, invited to a banquet by the members of the medical profession in Aberdeenshire and neighbouring counties.

AT the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on the 8th inst., Sir W. N. E. Smart, K.C.B., M.D., Inspector-General, in the chair, the sum of £70 was distributed among the several applicants.

THE last sessional meeting of the Western Microscopical Club was held on Monday, the 7th inst., at the residence of Dr. Danford Thomas, the coroner for Central Middlesex. A large and fashionable gathering assembled at a garden party given on the occasion. The band of the 18th Middlesex Regiment was in attendance. The whole affair was a great success.

THE STATE OF THE THAMES.—The attention of the Metropolitan Board of Works, the Thames Conservancy, the City of London Port Authorities, and the Royal Commission of Thames Drainage has been drawn to the present foul state of the river, and it has been proposed as a temporary expedient to deodorise the sewage at the two great outfalls in Barking Reach.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.—At the next annual meeting, to be held in St. Louis on Oct. 14th, 15th, 16th, and 17th, the following topics will be presented for consideration:—1. The Hygiene of the Habitations of the Poor. 2. The Hygiene of Occupations. 3. School Hygiene. 4. The Adulteration of Food. 5. Water Pollution. 6. The Disposal of Sewage by Irrigation and by Chemical Action. 7. The observable Effect upon Public Health of Official Sanitary Supervision. 8. The Work of Municipal and State Boards of Health.

NEW DWELLINGS FOR THE WORKING CLASSES.—On the 8th inst. the Prince and Princess of Wales opened in the crowded neighbourhood of Newport Market, Cranbourn-street, near Upper St. Martin's-lane, in the eastern part of St. Anne's, Soho, a new pile of buildings erected for the accommodation of the industrial classes. The block will lodge 257 families, or about 1250 persons. At the close of the opening ceremony a presentation of silver plate and other articles was made to Sir Sydney Waterlow and his co-directors of the company by which the building has been undertaken.

FORFARSHIRE MEDICAL ASSOCIATION.—The twenty-sixth annual meeting of this Association was held on the 3rd inst., when the following were elected office bearers for the ensuing year:—President, Dr. Keith Anderson, Arbroath; Vice-Presidents, Dr. Dewar, Arbroath, and Dr. Miller, Dundee; Secretary, Dr. Sinclair, Dundee; Treasurer, Dr. Macleod, Dundee. Council: Dr. Watson-Wemyss, Broughty Ferry; and Drs. Duncan, MacEwan, Bain, Johnston, and Templeman, Dundee. Local Secretaries were appointed as follows:—Dr. Dewar, Arbroath; Dr. Lawrence, Montrose; Dr. Mackie, jun., Brechin; Dr. Alexander, Forfar. Several papers were read, and it was decided to present to the House of Commons a petition in favour of Sir Lyon Playfair's amendment to Clause 10 of the Medical Act Amendment Bill.

ASSOCIATION OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting held at 3, New-inn, on the 9th inst., Dr. Robert Collum was elected Chairman, and Mr. Joseph Smith, of Rickmansworth, Vice-Chairman of the Committee of this Association. Great satisfaction was expressed at the progress which is being made in obtaining signatures to the petition both in London and the provinces, and at the hearty manner in which the local secretaries are aiding the object. A letter was read from Dr. Bruce Clarke, Hon. Secretary to the Association of Fellows, saying that the Fellows' Association is preparing a general scheme of reform, and asking to be informed of the views of the members. It was decided to hold a meeting at Belfast during the visit of the British Medical Association to that place.

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Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ATKINSON, CHARLES S. ABBOTT, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Fourth District of the East Ashford Union.

CREAGH, WILLIAM, M.R.C.S., has been appointed Medical Officer for the Clifton District of the Tamworth Union.

DAVIS, ARTHUR N., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Resident Assistant Medical Officer to the Second County Asylum, Forston, Dorsetshire, vice Henry George Peacock, resigned.

FAULKNER, HERBERT, L.R.C.P.Ed., has been appointed Medical Officer for the Seventh District of the Depwade Union.

GLYNN, T. R., M.D.Lond., F.R.C.P., Physician to the Royal Infirmary, Liverpool, has been elected to the Professorship of Medicine in the Medical Faculty of University College, Liverpool.

HULL, E. GORDON, M.D., B.S.Dub., has been appointed Medical Officer for the Withern District of the Louth Union.

JOLLY, SAMUEL AIRD, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Puddletown District of the Dorchester Union.

JONES, J. T., L.R.C.P.Ed., has been appointed House-Surgeon to the Flintshire Dispensary, vice Witham, resigned.

LYNAM, R. G., M.R.C.S., L.S.A.Lond., has been appointed House-Physician to the North Staffordshire Infirmary.

MURPHY, JAMES, B.A., M.D.Dub., &c., has been appointed Honorary Surgeon to the Sunderland General Infirmary, vice Dr. Ayr Smith, resigned.

PAIRMAN, THOMAS WYLD, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Fifth District of the Williton Union.

ROBINSON, CHARLES H., M.C.P., F.R.C.S.I., has been appointed Medical Examiner to the Equitable Life Assurance Society, for Dublin and District.

SAVILL, THOMAS D., M.D., M.R.C.P.Lond., has been elected an Assistant-Physician to the West London Hospital, vice Theodore Dyke Acland, M.A.Oxon., M.R.C.P.Lond., resigned.

SCANLAN, A. DE COURCY, M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the Westminster Hospital.

STONES, THOMAS, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Misterton District of the Gainsborough Union.

STOTT, HUGH, M.R.C.S., L.M., L.S.A.Lond., has been appointed Medical Officer of Health to the Friern Barnet Local Board.

WELSH, R. C., M.B., C.M.Ed., has been elected Assistant House-Surgeon to the Liverpool Dispensaries, vice Hadden, M.D., M.Ch., &c., resigned.

Births, Marriages, and Deaths.

BIRTHS.

HOWARD.—On the 6th inst., at Littleport, Isle of Ely, the wife of Wilfred Howard, L.R.C.P.Ed., M.R.C.S.Eng., of a son.

KIRKPATRICK.—On the 30th ult., at Clifton Villa, Alverstoke, Hants, the wife of Surgeon H. C. Kirkpatrick, M.D., Army Medical Staff, of a son.

POWELL.—On the 4th inst., at Seagrave-place, Cheltenham, the wife of W. Powell, M.R.C.S., of a son.

SHAW.—On the 1st inst., at Nicholas-street, Chester, the wife of Frank Herbert Shaw, M.R.C.S., of a daughter.

STEVENSON.—On the 7th inst., at Sandhurst Lodge, Gresham-road, S.W., the wife of Thomas Stevenson, M.D., F.R.C.P., of a daughter.

TICEHURST.—On the 3rd inst., at Silchester House, St. Leonards-on-Sea, the wife of A. B. Ticehurst, M.R.C.S. &c., of a son.

MARRIAGES.

CARNELLEY—HIGGINBOTTOM.—On the 8th inst., at St. Paul's Church, Withington, by the Rev. J. G. Denison, M.A., Matthew Carnelley, L.R.C.P., M.R.C.S., of Ruddington, Notts, third son of William Carnelly, of Fallowfield, to Jessie, younger daughter of the late Isaac Higginbottom, of Withington.

HARLAND—BAKER.—On the 3rd inst., at St. Pancras Parish Church, Henry Harland, M.D., of Tunbridge Wells, to Emmeline, second daughter of the late Henry Baker, F.R.I.B.A., of Gower-street.

THANE—KLINGBERG.—On the 5th inst., at the English Church, Heidelberg, George Dancer Thane, Professor of Anatomy in University College, London, to Jenny Anna Charlotta, eldest daughter of August Klingberg, of Stockholm, and cousin of Geheime Rath Professor A. von Bulmerincq, of Heidelberg.

WRIGHT—ANDREW.—On the 3rd inst., at the Parish Church, Fowey, Cornwall, Edward Wright, Surgeon, of Ollerton, youngest son of the late William Wright, Surgeon, of Pelham-street, Nottingham, to Catherine Bellman, youngest daughter of the late John Andrew, of Tregaminion, Cornwall.

DEATHS.

HEWARD.—On the 29th ult., at Bath, John Mitchell Heward, Surgeon, of Stamford, aged 54.

LA FARGUE.—On the 2nd inst., at Farncombe, G. F. H. La Fargue, M.D. St. And., aged 48.

WALKER.—On the 6th inst., at his residence, Ynysfaig House, near Dolgelly, and late St. James's-place, St. James's-street, London, George Alfred Walker, M.R.C.S. & L.S.A.Lond, aged 77.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

A PROSPECTUS of the arrangements in connexion with this institution for the sessions 1884-85 has been recently issued. As its name implies, the school is intended solely for legally qualified practitioners, no undergraduates being admitted, and no degrees being conferred. It is specially available for young graduates who wish to acquaint themselves with the practical duties of their profession, or for older practitioners who are desirous of taking up some special branch of medicine, or who wish to familiarise themselves with the modern advances in diagnosis and treatment. The instruction is given by means of clinics, subjects, and specimens. There are no lectures, except clinical lectures, and no demonstrations without subjects and specimens; the cases are not hurriedly seen and superficially examined, and each student has the most ample opportunities for making personal and deliberate examinations of individual cases. That the need of such an institution has been felt is evident from the fact that in the first session the number of medical men attending the courses was 100, a number increased in the second session to 118.

"BOILED LETTUCES."

To the Editor of THE LANCET.

SIR,—In the number of THE LANCET for June 28th, at page 1175, the statement is made that "spinach is necessarily excluded from the diet of the oxaluric patient." As a matter of some importance in the dieting of such patients, I shall be glad to know the facts on which this statement is founded.

I am, Sir, yours obediently,

July 7th, 1884. JOHN M. BALFOUR.

*** The word "necessarily" was an error in the sentence quoted. We meant to instance the *fact*, not to adopt or defend it. We should like to see this question discussed on the basis of *facts* in science. The Salsolaceæ (or Chenopodiaceæ) are characterised by the presence of a large quantity of alkali in their composition; this is combined with an organic acid. Spinach (Spinacia oleracea) and beet (Beta vulgaris) are prominent among the esculent plants of the order. A notable specimen of the family is Chenopodium quinoa, which is used as food in Peru, and called petty rice. It has the smallest starch grains known. Now, oxalic acid is obtained by the action of nitric acid on sugar or potato starch. Beet sugar will do as well as any other for this purpose, and as beet and spinach belong to the same order, spinach comes to be condemned. Moreover, spinach sometimes contains a good deal of lime, though not nearly as much as rhubarb, bistort, and many of the lichens. We confess it is not by any means plain to us why spinach should be singled out for a special anathema when beet-root and potato are not interdicted, and rhubarb is often, though obviously most improperly, allowed, or the blunder of taking it condoned. We fancy that if the objection to spinach specifically came to be scrutinised very closely, it would be found to have for its origin an impression that the "grit" so often found in imperfectly washed spinach is oxalate of lime, which, speaking generally, is not the fact.—ED. L.

A.B.C.—The operation was first deliberately and definitely advised by Paul Barbette in 1672. The first recorded operations are one by Theophilus Bonetus in 1769, and one by Velse in 1751.

"A TAILED CHILD."

To the Editor of THE LANCET.

SIR,—The case referred to in your issue of last week reminds me of one I published in your journal in 1866, a photograph of which was also attached. The tumour was succesfully removed by knife and écraseur.

I am, Sir, yours truly,

Donington, July 5th, 1884. E. W. JOLLYE.

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Enquirens.—No; a doctor cannot legally claim a fee for giving evidence at an inquest held to investigate the cause of death of a person who died in the waiting-room of a hospital or dispensary. The fact of the inquest being conducted at another place than where the death occurred does not entitle the medical man to remuneration for his services.

"MIDWIFERRY."

To the Editor of THE LANCET.

SIR,—In the course of a working-class town practice, at one time very large, I had a similar experience to that of "Somnolens" in the country. I have long held a theory to account for it, which I am induced to mention. Without denying the influence of the excitement, &c., often attending the Saturday night, I believe the principal cause is the greater frequency of coitus on that evening than on any other of the week. When we consider that it is not only a time of unusual enjoyment, but the beginning of the most considerable period of rest throughout the week, the tendency to indulgence in this direction must be evident; indeed, I have no doubt of the fact. The effect of coitus in stimulating the uterus to contraction is very marked in many females towards the end of pregnancy. It is often immediately followed by contractions described as "movements," "risings," &c., during which the abdomen may be felt to become hard when the hand is placed over it. I have known such contractions produce rupture of the membranes, shortly followed by regular labour. With respect to the suggestion that the greater frequency of labour at this time is due to the greater amount of work performed by women on Saturday, it may be doubted if such is really a fact. Nay, the very opposite might be maintained. We all know how frequently "washing-day" seems to act as the exciting cause of parturition, and, for obvious reasons, this is seldom or never Saturday. I am, Sir, yours truly,

Partick, Glasgow, June 30th, 1884. ROBERT KIRK, M.D.

To the Editor of THE LANCET.

SIR,—Having carefully gone through a book of register of births for the past quarter in our district, it may interest "Somnolens" to learn that the births were as follows:—Saturday, 82; Sunday, 74; Monday, 62; Tuesday, 61; Wednesday, 77; Thursday, 65; Friday, 79; total, 500.

I am, Sir, yours truly,

July 1st, 1884. STATISTICS.

EPIDEMIC SPASMODIC COUGH (?) OF SEPTIC ORIGIN.

To the Editor of THE LANCET.

SIR,—Can any of your readers give me information as to the nature and most appropriate treatment of the coughs that have been prevalent during the last three or four months? In each case under my care there have been loss of voice first of all, followed by irritation of the throat about the upper part of the sternum, and a dry spasmodic cough, like whooping-cough, only without the whoop. Sometimes these are followed, after the lapse of two or three weeks, by thick copious expectoration, night sweats, and loss of appetite. The temperature keeps rising and falling irregularly, and seems to indicate some septic origin. In the first stages, alkalies and diaphoretics seem to do some good, but in the later, no treatment seems to be of much avail. The only thing that appears to be of service is Fletcher's syrup of the hydrobromate of iron and quinine. I have not seen anything exactly like the present epidemic before, and I shall be glad of some information on the subject. Other medical men I find are as much puzzled as I am.

I am, Sir, your obedient servant,

Surbiton, July 7th, 1884. F. P. ATKINSON.

Mr. Musgrave.—We know of no such commission.

Holtfield has not enclosed his card.

"SISTER GRACE."

To the Editor of THE LANCET.

SIR,—While thanking you for your generous remarks on "Sister Grace," I am afraid I cannot lay claim to the lofty motives you ascribe to me. I chose the subject of hospital life because, from a dramatic point of view, it was unused ground. A play having "the accident room" as the scene of two acts, and its chief characters drawn from hospital servants, has, at any rate, something novel about it. In seeking novelty I trust I have not been guilty of bad taste. Of course, the incidents occurring in "Sister Grace" are not of ordinary occurrence in our hospitals; but that such incidents may, and do, occur few will deny. In dealing with such a risky subject as hospital life I had to avoid any but the mildest realism, trusting instead to the comedy and pathetic element; and as love in some form is the central motive of all plays, it was essential to introduce a strong love element. I confess in representation this element seemed rather too obtrusive. "Sister Grace" was never intended to represent a complete orthodox picture of hospital life, and, full of faults as it doubtless is, it contains no ill-natured satire; and though the hospital characters were not intended to be perfect men and women, they were, I trust, human, and not unfitted for the positions they were supposed to hold. In short, and speaking as a medical man, I hope I am guiltless of all mud-throwing, either at my professional brethren or at institutions as dear to me as to them. From the reception accorded to "Sister Grace" on its production, and subsequently by the press, I feel I have no reason to be ashamed of my first dramatic child.

I am, Sir, yours truly,

July 9th, 1884. THE AUTHOR OF "SISTER GRACE."

"RUPTURE OF THE URINARY BLADDER."

To the Editor of THE LANCET.

SIR,—As your reviewer of my little volume on "Rupture of the Urinary Bladder" has attributed to the publishers, without reason, certain heinous offences which they have not committed, I must ask you to allow me to perform an act of justice, and bare the breasts of the real culprits for the reception of his deadly shafts. For any closeness of print and smallness of type of which your reviewer complains I am alone responsible, having been obliged to submit to the common-place necessity of proportioning my outlay on the work to the means at my disposal. It is painfully known to medical writers, if not to reviewers, that a distinctly literary work on a special and very limited subject is practically a "gift-horse" to the profession, and cannot be expected to return, directly or indirectly, to the author more than a fraction of the expenses. Hence their poverty, but not their wills, may compel them to present their sterile labours to the profession in a form less convenient to readers than otherwise they would have been glad to select. What your reviewer terms the "remarkable intercalation of a list of the author's published writings between the text and the index" was perpetrated by the printers, whose untutored minds were evidently unconscious of the existence of those thin partitions between propriety and impropriety to which the higher professional mind is so sensitively alive. Unfortunately, it is too late to rectify this momentous error in the present edition; but it may tend to mitigate its evil consequences if I point out that the so-called "advertisement" was inserted in this literary work as a literary notification for literary reference and literary purposes only, and that it is absolutely and, if need be, demonstrably free from any tinge of that commercial element which is generally considered to be the objectionable feature in the advertisement of professional works. I am, Sir, yours faithfully,

Finsbury-square, July 7th, 1884. WALTER RIVINGTON.

J. H.—We do not call to mind a book which treats the matter so generally as that mentioned.

MEDICAL EXAMINATIONS.

To the Editor of THE LANCET.

SIR,—The question has often been raised whether examinations really test a man's knowledge and ability. Now, when the subject of overwork is occupying so much of the attention of the public, I should like to say a few words on this subject.

At the last Second M.B. Examination of the University of Cambridge a large number of candidates presented themselves. I have the pleasure of knowing two or three who went up from town after passing their "First College." They have all been unsuccessful in the anatomical and physiological part of the examination. On the other hand, men have got through who were just before rejected at the College of Surgeons. If examinations are any test, and not merely dependent on luck, this anomalous state of things ought to come to an end. It is only right that the standard of the M.B. Examination should be comparatively high. But certainly there is a limit to everything. In the physiology paper I see a question requiring the candidate to "describe the course of the nerves which are known to act upon the heart in the case of the dog or the rabbit." I suppose the so-called "accelerator nerves" are specially meant. Are Second M.B. candidates expected to possess a sound knowledge of comparative anatomy and physiology as well as human? If so, it is only fair that this should be stated in a schedule, so that candidates (especially those who go up from town) may, at all events, have an idea of what to expect. Looking over some of the London First M.B. (Honours) papers, I fail to find anything like the above question, though the London University gives its candidates a distinct schedule, and includes embryology. I am, Sir, yours faithfully,

July 8th, 1884. FAIRPLAY.

C. F. W.—Haviland's Chart, published, we think, by Stanford, Charing-cross.

UNUSUAL ACCIDENT WHILE BOWLING.

To the Editor of THE LANCET.

SIR,—The following being, I believe, a rare accident in one so young, seems worthy of record. The other evening I was called to see a young gentleman, aged sixteen, of slender build but athletic habits, who, while bowling overhand at cricket, suddenly felt a severe pain in the right groin. On examination, a direct inguinal hernia was found on the right, extending half way down into the scrotum. Pain being severe, a quarter of a grain of morphia was injected, and with some difficulty the bowel returned. Beyond temporary retention of urine, requiring the catheter once, he had no symptoms afterwards. There had been no previous hernia, but both external rings were larger than normal. Believe me, Sir, yours truly,

Leeds, June 27th, 1884. T. J. HUDSON, M.D., L.R.C.P.Lond.

REMUNERATION OF MEDICAL MEN.

To the Editor of THE LANCET.

SIR,—I enclose the following cutting from a medical journal. How, I ask, can qualified men be so indifferent to their social status as to underrate the value of their services by undertaking such duties at so ridiculous a remuneration?—I am, Sir, yours obediently,

Halstead, July 7th, 1884. A UNIVERSITY MAN.

"Wanted, qualified in door Assistant. University man preferred. To assist in small practice and also in a chemical laboratory. Must know something of practical chemistry. Salary about £30, according to suitability. Plenty of time for reading.—Address, ——— ———."

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Sanitas.—There is no hard-and-fast rule in the matter; but the Local Government Board have generally objected to a district medical officer undertaking another official appointment which takes him away from the localities where he has his Poor-law duties to fulfil.

PARACENTESIS FOR PLEURITIC EFFUSION.

To the Editor of THE LANCET.

SIR,—The following incomplete history of a case may prove of interest to some of your readers, should you consider it worth publishing.

Last July I was called to see a patient, and found him with his left thorax completely full of fluid. Unfortunately, I was very busy, and took no notes of the case at the time. However, at two operations I withdrew with the aspirator the whole of the fluid; the lung expanded very fairly, and the man made a good recovery, up to a certain point, when he insisted, contrary to my advice, upon going to work. I saw nothing more of him till the beginning of last month, when he came to my surgery, having been at work up to that day. He complained of nothing except that he had a lump on his back, which came suddenly about a week before. On stripping him, I found a swelling as big as a child's head, extending from the mid axillary line on the left side below the left scapula to the middle line of the back. Stethoscopically there was nothing to be made out, except a few friction sounds towards the base of the lung, which seemed to have quite recovered its normal state of expansion. His temperature was 99·2°. I had not the means to dress the swelling purely antiseptically, and so punctured it under a curtain of lint soaked in carbolic oil. I withdrew about a pint and a half of flaky serous fluid, and again applied carbolised lint. All went well until the fourth day, when I found my patient very feverish—temperature 103·6°—with an anxious expression of countenance, and he informed me he had had several rigors. On removing the dressing I found the wound discharging almost pure pus. I ordered a purge and a mixture containing five grains of quinine every four hours. He had no more rigors, and has been gradually improving ever since. The wound, however, has not yet closed, although it appears to be doing so, as I cannot pass the probe nearly so far amongst the tissues as I could a fortnight ago. I have no doubt that had the man remained quietly at home after the first operation until he had permission to work, he would have made a satisfactory and complete recovery.

The point that strikes one as peculiar is that such a collection of fluid could have gone on forming, and have finally forced its way out of the pleural cavity, without giving rise to more urgent symptoms. The man assured me that he had been at work the whole seven months that I had lost sight of him, and that he had been quite well, except a slight shortness of breath and a sudden pain in his side shortly before he noticed the swelling.

I am, Sir, yours truly,

Long Sutton, June 9th, 1884. J. EDWARD SMITH, M.R.C.S., &c.

POLLUTION OF THE THAMES.

To the Editor of THE LANCET.

SIR,—A party of us left London-bridge Pier by the morning Southend steamer, in order to have a day's rest in fresh open air. We had not reached Barking Creek before all on board were sickened by a "deadly insidious odour" arising in the form of sewer-gas, which continued without intermission for miles, polluting the air as well as the water of our deservedly so-called "noble river." This, I am informed, has been so for years past, and is gradually getting worse, and simply caused by the horrible system of discharging London sewage into the river at low, instead of high water, and so keeping it in the river, instead of its being carried right away to sea. This, in our century! whilst all England is full of a great Health Exhibition. Is our national spirit dead to allow our countrymen and women to be thus literally poisoned without a voice being raised in protest?

Sir, your are the representative of a great health journal, and I sincerely trust that by your giving this matter publicity something may be speedily done to remedy the evil.—Yours obediently,

July 9th, 1884. ONE OF THE PEOPLE.

M. R. M. (Bombay).—We have no practical knowledge of the effect of the agent, but think it very unlikely to be of any value as a preventive of contagion.

"SHOULD ENTERIC FEVER CASES BE ISOLATED?"

To the Editor of THE LANCET.

SIR,—All facts bearing on the above question are of great interest, so I venture to send the following.

Mr. and Mrs. R—— returned from Venice towards the end of March in this year to their home, a large and isolated house in the country. During their absence the house had been inhabited by six children with their governess, a sister-in-law of Mr. R——'s, and ten servants. On April 1st Mr. R—— was first seen, and presented well-marked symptoms of commencing enteric fever, certainly contracted in Venice. The diagnosis was afterwards fully confirmed, and the patient passed through a severe and typical attack of typhoid. Mr. R—— was nursed by three persons—his sister-in-law, mentioned as having been in the house during his absence, a trained nurse, and a sister who returned from abroad for that purpose. Of these three the two latter contracted typhoid, the nurse commencing on April 29th and the sister on May 5th. Every possible precaution had been taken with regard to disinfecting the excreta, &c. The rest of the household remained in good health.

I am, Sir, yours truly,

Burton-on-Trent, July 9th, 1884. HENRY E. BRIDGMAN.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

AT the Anatomical and Physiological examinations for the diploma of Member, on June 27th, the following were the questions in Anatomy submitted, of which the candidates were required to answer four (and not more than four) from 1 to 3 P.M.:—

1. Describe the elbow-joint.
2. Describe the dissection necessary to expose the extensor brevis digitorum from its origin to its insertion.
3. Give the attachments and nerve-supply of the two pterygoid muscles. What structures are in relation with the external pterygoid?
4. Describe the dissection required to expose the middle third of the back of the forearm as far as the bones and interosseous membrane.
5. Describe the cæcum, giving its investments, relations, and blood-supply.
6. Give the course and relations of the first part of the right subclavian artery. Enumerate the arteries with which its branches anastomose.

The following were the questions in Physiology:—

1. Describe one complete cycle of the heart's action. Give the relations of the sounds and impulse to the several events you name.
2. Give an account of the structure of a small bronchial tube. Assign to each of the textures its function, and explain its exact mode of action.
3. Describe the structure of the mammary gland. State the facts which tend to prove that milk is a secretion, and not the result of filtration.
4. Explain the mechanism of reflex and of voluntary micturition.
5. Describe the structure of a lymphatic gland. What is known of its function? Give the facts on which your statements rest.
6. What are the physical and chemical changes that accompany the contraction of striated muscle?

"BURIED ALIVE."

To the Editor of THE LANCET.

SIR,—I venture to trouble you with a few further remarks on this subject, as I wish to correct mistakes as to matters of fact in Dr. D. J. Williams's letter in the last issue of THE LANCET. I leave matters of opinion to others.

Firstly: "He describes the condition of the remains as if he had seen them." The fact is I did see them. Secondly: "The anomaly was seen by the sexton only." This is not true, independently of me. For, on seeing the strange condition of the remains, the sexton at once went to my servant-man, who immediately went and saw them. He then came and told me. I went and asked a medical man to go with me to see them, which he did. My servant saw them exactly as they were when the grave was opened. When the surgeon and I saw them the protruding limbs had been replaced in the coffin. Thirdly; I think I had "inquired" pretty "carefully" before I wrote to THE LANCET. I did not say that the coffin had not been screwed down, but that it was "possible" it might not have been. This, however, I corrected in my second letter to THE LANCET of June 7th, which Dr. Williams appears not to have seen. Fourthly: I did not express the opinion that the deceased had been buried alive, but wished to invite scientific men to explain the facts, and to tell us whether it was possible it might have been so. Fifthly: Dr. Williams is misinformed as to the quantity of water in the cemetery. I have taken funerals for seventeen years in all kinds of weather and have never seen any water in a grave. The son of a former sexton tells me he has seen a little water occasionally.

My second letter to THE LANCET mentions the fact which Dr. Williams mentions as if it were new, that the woman died on a Monday and was buried on the Friday following. I am glad to have elicited a number of letters to THE LANCET which prove beyond reasonable doubt that in this case the deceased was really dead when she was buried. Some of them, however, prove that cases of being buried alive have sometimes occurred. I may mention that I observed in the cemetery at Munich some years ago several dead bodies lying in coffins in a dead-house with a glass enclosure, exposed to public view, and was informed that the law required that no one should be buried till the body had first lain for three days in the dead-house. This, doubtless, was a precaution against burying alive.

I am, Sir, yours truly,

Vicarage, Llanelly, July 8th, 1884. DAVID WILLIAMS.

Mr. T. Strugnell.—1. It is for the coroner to decide whether a post-mortem examination is necessary.—2. Yes, it is competent for a jury to return a verdict of "Death from natural causes" when the medical evidence is that death may have resulted from poison. It is quite within their discretion, but we doubt the wisdom of such a finding.—3. We know of no special work, but the line of practice is well defined. Report the facts of the case to the coroner.

W. H. B.—We think our correspondent acted quite rightly, and, making due allowance for the "uncertainty of the law," that he could recover.

SUNSTROKE IN CHILDREN.

SIR,—I have this morning been called to a case of sunstroke in a young child. I send this notice as a caution to all who have charge of children.

I am, Sir, yours truly,

Pembridge-square, July 3rd, 1884. H. BOOTHBY DOW, M.D.

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A DAY'S HOLIDAY.

WE are asked to state that in order to give 300 children and 100 poor women, members of mothers' meetings, an escape for one day from the heat and noise of South London into the fresh air and quiet of the country, donations may be sent to the Rev. J. W. Pitchford, St. Jude's Vicarage, Southwark, S.E.

Mr. Ernest W. Haydon.—We are not aware that the point has been raised.

Mr. A. Thomson Drake.—We are unable to extend our free list.

CORRIGENDA.—In the description of Dr. Blaikie Smith's Ether Inhaler, as published on July 5th, for "economical of the anæsthesia," read economical of the anæsthetic; and in the explanation of the woodcut, for "A, Respiratory valves," read A, Inspiratory valves.—In the Paris letter of June 28th, page 1184, in the tenth line from the bottom, for the word "frame" read *flame;* and in the succeeding paragraph, for Dr. "Harriot" read Dr. *Hanriot.*

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Henry Thompson, London; Dr. Colcott Fox, London; Mr. Boothby Dow, London; Dr. Cameron, Huddersfield; Dr. Wakefield, Aix-les-Bains; Mr. Balfour, Brighton; Mr. J. Campbell, London; Mr. Jollye, Donington; Mr. Haydon; Dr. Harkin, Belfast; Mr. Van Praagh, London; Mr. J. A. Philip; Mr. Powell, Beckenham; Mr. Pohl, Liverpool; Mr. D. Dinin, Paris; Dr. Ranking, Mean Meer; Dr. J. Seaton, Ospedaletti; Dr. H. N. Carter, Bombay; Mr. P. H. Kidd, West Hartlepool; Mr. J. M. Balfour; Messrs. Sleeman and Co., London; Mrs. Fedarb, London; Mr. Day, Aden; Mr. Browne, London; Mr. McDonald, Manchester; Dr. Le Grande, Queen's-town; Mr. Davies, Tenbury; Dr. Wyer; Mr. Bura, Shrewsbury; Mr. Blora, Leeds; Mr. Collies; Dr. Hart, Corby; Mr. West, Bickley; Mr. Grant, Birmingham; Mr. Armstrong, Manchester; Messrs. Kegan Paul and Co., London; Messrs. Burgoyne and Co., London; Mr. Douglas, Sunderland; Mr. Worton, Pontypool; Mr. Smithson; Dr. Hale White, London; Dr. Althaus, London; Mr. Butlin, London; Mr. T. E Gibb, London; Dr. Blaikie Smith, Aberdeen; Mr. Lawson Tait, Birmingham; Mr. Pulbrook, London; Dr. Robertson, Kimberley; Mr. J. St. T. Clarke, Leicester; Rev. D. Williams, Llanelly; Dr. Lunn, London; Mr. F. Guthrie; Mr. Bridgman; Rev. J. W. Pitchford, London; Dr. Dickenson; Mr. Forbes, Blairerno; One of the People; M.B., C.M.; Physician; M.R.C.S.E., L.M., L.S.A.; Public Vaccinator, Cardiff; Medicus.; Z., Birmingham; R. A. A.; Epsilon; M.D., Belper; J. H., London; J. D. B.; Sanitas.

LETTERS, *each with enclosure,* are also acknowledged from—Mr. Crasweller, Clapton; Mr. Phillips, Hanley; Dr. Sutherland, Castletown; Mr. Davidson, Appleby Magna; Mr. Rawling, Colchester; Mr. Jones, Carnarvon; Mr. Hankin, Dublin; Mr. Roberts, Croydon; Dr. Ashdown, Tetbury; Mr. Taylor, Retford; Dr. Mair, Bayswater; Dr. Scatliff, Brighton; Dr. Tashby, Guernsey; Dr. Waller, Peterborough; Mr. Bridgman, Glaidbarn; Mr. Fenwick, Dansford; Mr. Long, Blackburn; Mr. Greenwood; Dr. B. Smith, Aberdeen; Mr. Rollin, Jersey; Mr. Tattersall, Victoria; Mr. Orde; Dr. Jennings; Mr. Matheson, Milford Haven; Mr. Carnelly, Manchester; Mr. Dukes, Rugby; Mr. Corbishly, Macclesfield; Mr. Gutteridge; Mr. Menzies, Edinburgh; Miss de Lattichau, Holloway; Mr. Lloyd, Yarmouth; Lady Superintendent; M. T.; J. W., Oldham; Epsilon; M.D., South Kensington; L.R.C.S.I., Southwark; Albuminus, Plymouth; Beta; H. S., Limehouse; M.D., Manchester; Anglicus; J. F. M. B., Leicester; Lindsey; J. M. F.; C. O. R., Barnsley; Oran; Omega; M.R.C.S., King's College; Fargo; Gargantua; S. C.; H. B. M., Clapham; Forceps; Alpha; Zeta.

Liverpool Courier, Glasgow Evening Citizen, Malton Gazette, Bromley Telegraph, Hull Express, Liverpool Echo, Dundee Advertiser, Aberdeen Evening Gazette, Kimberley Diamond Fields Advertiser, Manchester Guardian, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 10th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 4	29·92	E.	74	65	120	86	63	..	Bright
,, 5	29·94	E.	71	64	103	78	64	..	Hazy
,, 6	29·94	W.	63	60	116	71	58	·04	Cloudy
,, 7	30·08	S.W.	65	60	119	78	57	·71	Overcast
,, 8	29·94	S.E.	71	64	122	84	60	..	Hazy
,, 9	29·80	E.	73	65	122	84	65	..	Hazy
,, 10	29·64	S.E.	67	61	84	69	65	..	Raining

Medical Diary for the ensuing Week.

Monday, July 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, July 15.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, July 16.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, July 17.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, July 18.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, July 19.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Lectures

ON SOME

IMPORTANT POINTS IN CONNEXION WITH THE

SURGERY OF THE URINARY ORGANS.

Delivered at the Royal College of Surgeons,

BY SIR HENRY THOMPSON, F.R.C.S.,

SURGEON EXTRAORDINARY TO HIS MAJESTY THE KING OF THE BELGIANS, PROFESSOR OF SURGERY AND PATHOLOGY TO THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL, ENDRIBIS PROFESSOR OF CLINICAL SURGERY, ETC.

LECTURE VI.

The Results attained by Lithotomy and Lithotrity in Great Britain during the present Century; with an Analysis of more than 800 Cases by the Author, presented therewith.

[THE lecturer commenced by observing that before entering upon the question of results of treatment there were two considerations to be dealt with, demanded by the great fact of modern practice—namely, that lithotrity is almost universally applicable to the cases of adult calculous patients. He continued]:—

The first consideration is that it is essential to determine, and if possible to define, what is to be understood henceforward by the term "a stone in the bladder." The second is that, in estimating the value of treatment for calculous cases, the result of a single operation for stone can no longer be regarded, as it invariably was until a few years ago, as a fact of the highest importance, and as synonymous, or almost so, with the history of a calculous case; since such an operation may now be only a single incident, and not always a very considerable one, which may be repeated sometimes on several occasions, in the course of such a history. The importance of these statements will appear as we proceed. We will first consider what is in future to be regarded as a definition of the term "stone in the bladder."

When a calculus was removable only by lithotomy—a period, moreover, which was anterior to the discovery of anæsthesia—the magnitude of the operation almost invariably prevented the surgeon from proposing it, or the patient from accepting it, until painful symptoms had been endured for a considerable period of time, and the stone was at any rate no longer small. Indeed, among the operators of the eighteenth century it was considered not always desirable to attack a stone when first discovered; but rather that, if small, it should, to use a term then in vogue, be allowed to "ripen," in other words, to increase in size somewhat before the operation was performed. Again, it was very rare to operate on the same individual twice. A man who had once passed through the ordeal of a cutting operation was, if he had the misfortune to form another stone, not lightly advised by a cautious surgeon to undergo a repetition of the process, and was himself naturally reluctant to submit to it. Now and then an individual was operated on twice; but it was a rare occurrence. One or two histories are on record of fortunate patients who survived a third operation; but such an event was one of the extremest rarity. The result of these conditions was that a great number of calculous patients died of their malady, relieved, it is true, for a time by medicines, but not subjected to any operation. I am quite sure I am within the limits of truth if I say that, regarding the class of elderly calculous patients, probably not more than one in fifty during the last century was submitted to operation. The stone, although present, was often not suspected to be so, much less was it sought for; and its symptoms were mostly attributed to "strangury," a term which formerly covered several forms of urinary disease, not then distinguished. If a search were made, it was often fruitless, because the instruments were faulty, and the experience, as well as the tact which comes from it, were small. In the country districts there were very few men who could or would undertake the operation; and the conditions of locomotion at the period referred to rendered a journey well-nigh impossible for most of the suffering patients. Hence it was that the itinerant lithotomist supplied a pressing want in times gone by. Then the dread of the operation itself and of its dangers deterred a majority of those sufferers who were within reach of aid from invoking it. The result of these various circumstances was that a very large proportion of calculous patients were children, who, unable themselves to exercise any will in the matter, and being known by their relatives to incur comparatively less risk than their seniors, were without difficulty placed under the care of the operator.

You will see, then, that in all the past experience of calculous disease, anterior to and terminating with the year 1836 or thereabout, an operation for the stone was necessarily a very important fact; and was almost invariably the culminating point of the long history of suffering in the individual affected. The event was looked forward to as demanding great courage on the part of an adult patient to confront not only the torture of the operation but the chance of a fatal result. Hence a list of the several stone operations which a surgeon had performed was equally a list of all his stone patients and of their entire histories; and the number corresponded with the number of his cures and of his failures. And when we come to analyse the work of the old masters you will see how the remarks which have been made respecting the vast importance to an adult patient of an operation are warranted from the fact that almost all their cases were those of children. And this, too, explains the large proportion of recoveries which some of their lithotomy records present. Indeed, compared with our experience of to-day, an operation for stone was rare indeed among elderly men—not that stone was less frequent then, but that, on grounds already referred to, it did not come to the operating table. Now, in order not to expend time unnecessarily, I shall adduce but one illustration of this fact, taking it from the figures of our great English master, Cheselden. The well-known record which he published at the end of his career amounted to 213 cases of operation, of which 135 were under ten years of age, with three deaths; only 14 were above fifty years of age, and of these 6 died. By way of marking the contrast which the records of to-day furnish, the cabinet of my own calculi there contains the cases of 595 male patients of that age alone, out of a total of 812, or more than forty times his number.

But the great fact of to-day which marks the difference between this age and the past is that we are able now to remove a stone even of considerable size from the bladder of the elderly adult with a risk to life which, in most instances, is very small, and which is serious only in cases of exceptional character. The consequence is that a moderate-sized calculus is generally disposed of as soon as it is discovered, because uncontrollable dread of a dangerous operation is no longer an occasion for delay. At the same time it is equally the aim of the surgeon and the interest of the patient that a calculus should be discovered as early as possible in order that it should be removed when small. It follows further, and this is a matter of the highest importance, that if the calculus recurs the operation is easily repeated, whether it be a new product of uric acid or of oxalate of lime which has recently descended from the kidneys, or a renewed accumulation deposited from decomposing urine in an incompetent bladder which has long been emptied by the catheter. In either case lithotrity is available time after time, if need be, to afford relief; and a patient's life, which formerly depended on the result of a single formidable cutting operation, is now indefinitely prolonged, for many years on easy terms by an occasional recurrence to the lithotrite. I repeat, therefore, the statement that the record of a single calculous operation and the history of a calculous patient are now very far from being synonymous terms.

Hence I desire to place on record the following deduction as most important in the interest of accuracy in reporting and in observing results—viz., that a computation of the results of lithotrity is not possible by the numerical record of cases only, and by the bare exhibition of a list of so-called "cures" and deaths; but that the entire record of the calculous patient's history—its commencement, the number of operations, the quantities of debris removed, and the incidents of the subsequent history, so far as they can be obtained—is essential in order to furnish evidence in regard of the treatment employed, and to render the case useful as a contribution to surgical experience. And it follows also that, in speaking of "a stone"—which no longer necessarily means a considerable product of accretion during years, such as that for which a patient was formerly cut,—a certain understanding

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ought to exist among surgeons in order to indicate some limit to the meaning of the word. At any rate, it is now necessary in all cases that the composition and weight should be recorded, while it might be convenient to apply the terms "stone" or "calculus" only to such aggregations of material as attain a certain amount of size or weight. I think, however, it will be generally agreed that when a bladder is found for the first time to contain a calculus, whether urate, oxalate, or phosphate, which is too large to be expelled by the natural efforts, the crushing and removal of it (together with others, if such be present), so as to empty the bladder, necessarily constitute an "operation for the stone," whether it (or they) be large or small. If a small stone only is present the patient is fortunate in having it detected, because it would inevitably have become larger had it not been discovered, and the operation is then attended with a corresponding increase of risk. Some patients will produce with great frequency a small acid calculus so that every three months or so during several years a small pisiform body, usually uric acid, drops into the bladder, and if too large to be expelled remains there. Such a patient may most advantageously avail himself of lithotrity every two or three years during a considerable portion of adult life. Nevertheless be it remarked that in five cases out of six he may, by well-chosen diet, speedily overcome the tendency to produce superfluous uric acid, and cease to form these calculi. But there is another type of patient who rapidly forms calculus, more rapidly even than the preceding. I refer to the patient who passes all his urine by catheter and is the subject of phosphatic urine. In a certain proportion, happily small, of these cases a healthy acid condition of the urine is not attainable, and small phosphatic calculi are formed with surprising rapidity. I have had several patients under my care whose bladders require clearing by means of the lithotrite and aspirator as often as once or twice a year. On the very first occasion, perhaps, a phosphatic calculus of considerable size has been removed, and again, in two or three years another, and these are fair examples of "stone," regarding the sense in which it has been customary formerly to employ the word. But at length the chronic condition described above is reached; smaller calculi are rapidly produced, and now the result of each operation has no right to be so regarded, if we maintain in future the idea hitherto associated with the term "stone." Hence I have in practice termed these small and recurring bodies "concretions," in order to draw a needful distinction between these and the large primary formations. I have removed at least 200 or 300 of these small bodies without placing them in my list of stone cases. But there is no recognised rule to this effect, and it is confessedly not easy to construct one, and I have long felt how open the door is to error unless one is careful to avoid misrepresentation in regard to this matter. That such small concretions have been made to do duty in augmenting the figures which represent cases of stone I have good reason to know. By way of suggesting a limit I think that after the first phosphatic calculus has been removed from a patient, no subsequent phosphatic formation of the kind described weighing less than about a drachm should be permitted to rank as a second stone, but should be described as a concretion.

It is strictly in accordance with the plan thus advocated that I have treated from the very first all the cases of my own, which are now exhibited in the cabinet before you. It consists entirely of my own cases, and of all those cases without exception. Each number in the catalogue, from No. 1 onwards, denotes not a mere operation, but a separate individual, who has been operated on either by lithotomy or by lithotrity; so many numbers, so many individuals. To each number is added his name, age, and a record of the one or more operations he has submitted to, with the result; and as much of the subsequent history as, in a good many cases, I have been able to obtain. I shall merely add now that the number of individuals is 716, and that the total cases of operation, embracing both lithotomy and lithotrity, are 812 in number. For I have to submit for your consideration some very interesting matter in connexion with the chief statistical records which precede my own in date, for the purpose of estimating the results of operations for stone, not merely by lithotomy alone, but also during that transition period which intervened between what may be called the two epochs, respectively, of lithotomy and lithotrity; for it will appear, if we recall the brief retrospective sketch given at the last lecture, of stone-operating during the present century, that its history is naturally divided into three chief stages.

I. The era of lithotomy pure and simple, when the operation was applied to cases of every description.

II. The era in which lithotrity, having appeared, was adopted for a certain proportion of patients for whom the crushing was believed to be better than the cutting operation, which latter, on the other hand, was preferred on certain grounds for other patients; the relative numerical proportions submitted to the two procedures differing in the practice of different operators, but approximating more or less to equal moieties of patients to each method.

III. The era which appears now to be established, in which lithotrity may be regarded as applicable to all adult cases as the rule, the exceptions of any kind, besides the cases of children, being extremely few.

1. Now, as an example of the first period, or that of lithotomy pure and simple, I cannot adduce a more complete or trustworthy record than that which exists in the archives of the Norfolk and Norwich Hospital. During the first sixty years after the establishment of that hospital, where the best provincial experience in our country was to be found, 704 cases of all kinds and ages were operated on. The period referred to commenced about 1770, and ended about 1830.

Of the 704 cases, 35 were females, with two deaths; 343 were male cases under twenty years, with 27 deaths—a mortality of one in thirteen cases, or 8 per cent.; 326 were male adults, with sixty-four deaths—*a mortality of one in five cases, or 20 per cent.* Among these there were only 75 males over sixty years of age, among whom the deaths were 22; or one death in every 3½ cases, or 30 per cent.

2. We now consider the transition period, which may be roughly regarded as commencing about 1835, and ending between 1860 and 1870. The experience of two well-known operators will admirably illustrate the results attained during this epoch by the nearly equal division of adult male cases between lithotomy and lithotrity. I am happy in being able to present to you, first, the exact and complete experience of my old friend Dr. Keith of Aberdeen. He left it to me to utilise at such time and in such manner as I thought best. I have before casually referred to it in general terms, and I think I cannot now more worthily commemorate the work of that kind-hearted and excellent man, and most able surgeon, than to record it first fully here in our College. Keith operated chiefly between 1835 and 1868. He recorded all his facts with great care and attention to detail, his own manuscript notes being in my possession, and I have made the following analysis of them:—

Dr. Keith operated on a total of 304 cases at all ages. Of these four were females:—

Lithotomy	2	No death.
Lithotrity	2	

Twenty-three were children:

Lithotomy	19	One death.
Lithotrity	4	

27, leaving 277 adult males.

Of these 277 adult males, 161 were by lithotomy, with 38 deaths—1 case in 4¼, or 24 per cent. 116 were by lithotrity, with 7 deaths—1 case in 17, or 6 per cent. A total of 277 adult males, with 45 deaths—*1 case in 6½, or 15 per cent.*

It will be in the recollection of most of us, that in the year 1865, Sir William Fergusson occupying the chair which I have now the honour to hold, presented the sum total of his experience to the College. His cases were fewer in number than those of the list just given, and they included a larger number of children.

Sir William Fergusson operated on a total of 271 cases at all ages. Of these, 52 were children, all lithotomy, with 2 deaths—1 case in 26, or 4 per cent., leaving 219 adult cases. Of these 219 adult males (comprising a few female cases, number unknown), 110 were by lithotomy, with 33 deaths—1 case in 3⅓, or 30 per cent. 109 were by lithotrity, with 12 deaths—1 case in 9, or 11 per cent. A total of 219 adult males, with 45 deaths—*or 1 case in 5, or 20 per cent.*

3. We now enter on the third epoch, or that in which lithotrity is the manifest rule of practice for the adult, and lithotomy the occasionally necessary exception. And this may be illustrated by my own cabinet of calculi, now before you, which was commenced shortly before 1860. A small early portion of it may perhaps be regarded as almost belonging to the period just passed by; but as at the outset I aimed at accomplishing as much as possible by lithotrity, it belongs in reality to the present epoch.

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In this country lithotrity was, before 1860, as we have already seen, slowly becoming responsible for a large share of the work in the hands of the leading operators. In most parts of the kingdom, however, it was still employed only for exceptional cases. But I was strongly of opinion that it was not sufficiently appreciated in this country, and that it ought to be much more widely employed, and I persistently urged this view in my earliest writings.[1] Accordingly, among my first 200 cases of adult males, only forty-eight, or not quite one-fourth, were submitted to lithotomy. The proportion of cutting operations then gradually diminished henceforward to about one case in seven or eight. But in the end of 1878 I commenced to employ lithotrity at a single sitting, doing so extensively at the commencement of 1879. Since that date I have performed 196 cases by this method solely—that is, during a term of five years and a half, and only fifteen lithotomies—in all 211 cases, the mean age of the entire number being upwards of sixty years. But, taking my last 125 operations up to the present date on adult calculous patients, only four have been treated by cutting; all the others—viz., 121—were cases of lithotrity at a single sitting.

The total result of all my operations by carefully adapting the two procedures during a period of about the last twenty-five years, is as follows:—I have performed 812 operations on cases of all ages. The number of individuals on whom these operations have been performed is 716; some of the lithotrity patients having, of course, been operated on more than once, as will be stated hereafter. Of these cases 13 are adult females—10 by lithotomy with one death, and 3 by lithotrity; 15 are children—12 by lithotomy, with one death, and 3 by lithotrity. Then two operations (one a suprapubic lithotomy) for foreign bodies recently introduced, There remain 782 cases of operation on the adult male.

Of these 782 adult male cases, 110, or one-seventh of the entire number, were by lithotomy, with 39 deaths—one case in almost 3, or 35 per cent.; 672 were by lithotrity, with 43 deaths—one case in 15½, or under 6½ per cent. A total of 782 adult male cases, with 82 deaths—*one case in 9½, or 10½ per cent.* It is worthy of remark that among the adult males no fewer than 595 individuals were upwards of fifty years of age at the date of operation. I may now add that of the 716 individuals, 61 were operated on a second time, at various intervals, when a second stone of considerable size was developed; evidence existing, in long-continued absence of symptoms after the first operation, that the calculus was undoubtedly a new formation. Nine patients were operated on a third time, three patients a fourth time, and two as many as five times. It is worthy of note that each of the last named, the history of whose operations extends over a period of from twelve to fifteen years, are now living in comfort. One has passed more uric acid than any man I have seen, unless the patient, No. 62 in the series, from whom I removed four large calculi at four different periods in the course of about sixteen years. In both cases, each succeeding calculus of large size was a fresh deposit of uric acid, which each still continued to excrete largely, and not the mere accumulation of phosphates often so abundantly produced in a bladder incapable of emptying itself.

In analysing the results of the preceding table it is unnecessary to say that it is not possible to make any comparison as to the relative value of lithotomy and lithotrity. The position of the two operations towards each other is no longer one to invite comparison, but is that of complementary relation. Each accomplishes a part for which the other is less competent; nor, for the same reason, is it any longer possible to compare the results obtained by different operators in regard of employing either method, unless each operator is guided by the same principle in applying them, for it is obvious that the surgeon who adopts lithotrity for [illegible] of his cases—that is, for all but those which are [illegible]—necessarily obtains for his lithotomy only an unfavourable residuum of exceptionally bad patients. And it is not to be forgotten, as Keith has remarked, that when an operator obtains reputation, he attracts the worst cases, and is compelled to deal with some of the most unfavourable of the disease, unless he refuses such applicants which I have never pursued. During my [illegible] I have refused operation to six patients in such instance because I thought the proceeding [illegible], hopeless, or impossible of performance. [illegible] I regretted my decision, for the patient lived long and suffered very severely. Hence the lithotomy of an operator who employs the knife only for the worst case in eight or ten cannot be compared with that of the surgeon who applies it to a large proportion of his cases, and therefore to a considerable number of healthy and promising patients with not very large stones, such as I have always treated by lithotrity.

It is the sum total of result obtained by employing the two procedures which is to be regarded as the measure of the surgeon's success. And I think I may say that a list of 782 cases in male adults, the mean of whose united ages exceeds sixty years, with 82 deaths, or one in 9½ cases, is a result which will be held to justify the selection and adaptation of the method to the case, which has been adopted throughout this series. I venture to say that it is a result which has not, certainly to my knowledge, hitherto been realised. Thus we saw that Cheselden, with patients of this age, lost 6 in 14, or one death in 2·3 cases; that the Norwich rate for male adults was one death in 5 cases; that Keith advanced to a rate of one death in 6½ of his adults, by both methods; that Fergusson, who had many bad cases sent him to King's College Hospital, lost one in 5 both methods. But while the sum total of my whole work has been one death in 9½, the result of the last five years, since I have adopted the one-sitting operation, has been still better—namely, one death in 12½ cases (211 elderly adults with 17 deaths), or 8 per cent. While, if I take my very last 125 cases up to this date, and already referred to as containing only 4 cases of lithotomy, I have to report 6 deaths only (of which 2 were from the cutting operation), making only 1 death in 20, or a rate of less than 5 per cent. And I further beg you to observe herewith, that the clinical notes made at the time in every case are presented to you here; each patient with his own proper name, together with the name of the attending medical man whom I met in consultation in each instance; and finally, the calculus of almost every patient is presented also. In every single case, therefore, in the whole collection, I am responsible for every fact stated, and offer with it absolute guarantees of its accuracy. No labour has been spared to pursue this system throughout, and my satisfaction is complete at being thus enabled to offer to the College, if they will do me the honour of accepting it, a faithful record of one man's practice during five-and-twenty years, as complete and as elaborately reported as it has been possible to make it.

[The lecturer then proceeded to show that calculus was far more frequent in elderly men than in children; that the symptoms in the former were often very slight and had been mostly overlooked, and that the great practical lesson from this fact was the necessity for discovering the calculus in its early stage, and for crushing it at once, when the risk of danger in doing so was practically almost nothing. He then discussed the conditions which should determine the choice of operation when the calculus was extremely large, and concluded that only for such should lithotomy be employed in the adult, as well as for most of the cases in children. He then continued:]

There is unquestionably a growing expression of dissatisfaction among surgeons, especially abroad, with the lateral operation for stones of unusually large size. I have for some time fully shared in that feeling. No incisions can be made in the region which belongs to that operation through which a calculus of three ounces or more can be extracted. Laceration, either avowedly made by instruments, or but half concealed under the name of gradual distension, invariably takes place, and that affecting very important structures, often to a large extent. Hence it is that the suprapubic operation has always invited consideration when the stone is exceptionally large; but the conditions sometimes met with, especially in corpulent subjects, have often presented peculiar difficulties and dangers, which indicated that if Scylla has been avoided above, Charybdis appears to be equally dangerous below. A modification of the operation, however, has recently taken place, if not originated, at least, first executed by Professor Petersen of Kiel, and described by him in 1880, which gives a new and improved position to the high operation. The improvement suggested consists in ensuring, to a degree not before attained, the raising of the bladder above the pubic symphysis, and the steadying it in that position during the operation. These objects are thus attained. The patient, lying on his back, and under the influence of an anæsthetic, the bladder is first distended with a weak solution of boracic acid, in quantity from ten to twelve ounces if possible,

[1] See THE LANCET, Jan. 21st, 1860.

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which must depend on the condition of the organ. The penis is then firmly tied; nothing is better than an indiarubber tube for the purpose. Then a pear-shaped bag of indiarubber, tolerably stout, so as to retain that form, and capable of holding at least sixteen ounces of fluid, is folded longitudinally and introduced into the rectum. By the tube which forms its apex, and is supplied with a stopcock, water is forced in so as fully to distend the bag *in situ*. The outline of the bladder will now be traced above the pubic symphysis. The usual vertical incision is made, and dissection carried down to the bladder, with the usual precautions with which we are familiar. The ease and the certainty, however, which are ensured by the firm position of the bladder in this system, render it much superior to the old one. I have operated by the high operation twice only, and that before the introduction of the new method. Since that time I have met with no case which I have not been able to deal with satisfactorily by lithotrity at a single sitting, of which several examples are placed before you—the calculi weighing from one to nearly three ounces. The next case which offers for which the knife is required, I shall almost certainly submit to the high operation, with Petersen's modification. And the only reason why I have not yet performed it is that I have easily and successfully employed lithotrity in cases precisely similar to those for which the French surgeons are at present adopting Petersen's procedure.

Lecture

ON THE

PRINCIPLES WHICH UNDERLIE THE

CONSTRUCTION OF APPLIANCES FOR THE REMOVAL OF SICK AND WOUNDED.

By ROBERT LAWSON,

INSPECTOR-GENERAL OF HOSPITALS, LATE PRESIDENT OF THE EPIDEMIOLOGICAL SOCIETY, FELLOW OF THE STATISTICAL SOCIETY.

AT the request of the Committee of the Volunteer Medical Association I have undertaken to give a lecture on some subject within the range of those on which it is the object of their organisation to diffuse information; and it appears to me I cannot meet their wishes more advantageously, at the present time, than by pointing out the principles which underlie the construction of the appliances recommended for the removal of the wounded from the field of battle. Such appliances are of great use in moving sick and wounded elsewhere; but inasmuch as the transport of individuals who have sustained severe injuries in action is their most prominent and important employment, all their details require to be arranged with especial regard to the requirements of this service. Military operations in which this country is engaged are usually carried on at some point with which our communications are by sea; this requires that our transport vehicles should be constructed so as to permit of their being taken to pieces, and packed in the most compact form for stowage on board ship.

The first service to be rendered to a man disabled in action is to remove him to a position out of fire, where his injuries may be examined and the requisite treatment applied, to enable him to be sent on to the hospital where it is intended he should be retained for cure. To facilitate this a great variety of appliances have been recommended at various times, and employed more or less, as the materials for their construction were available. These are now pretty generally displaced by the field stretcher.

Field Stretcher.

A field stretcher is essentially a hand litter, with the assistance of which two bearers can remove a wounded man, with the least exertion on their own part, and with the least injury to the patient, and it will approach perfection in proportion as it realises these ends. The stretcher usually consists of two side poles, to which a canvas or net bottom is attached on which the patient is laid, and there are cross pieces of wood or metal to prevent the poles coming together when raised from the ground. Legs or feet are frequently added, to keep the bottom off the ground when a sick or wounded man is on it. These elements have been combined in a great variety of ways, according to the views of individual constructors, some of which have proved pretty successful, while others can be considered little better than failures.

To obtain a clear idea of what is required in a field stretcher, it is necessary to analyse the motions of the bearers while carrying it. While they are standing still, with their feet together, a perpendicular line passing through the centre of gravity of their bodies will touch the ground between their feet, but, as soon as they begin to move, they must bend their bodies to that side on which a foot touches the ground so as to bring their centre of gravity over the point of support, and thus maintain their equilibrium; the effect of this is to cause a motion swaying from side to side with each pace of the bearers, which might prove beneficial if not counteracted; by making the bearers walk out of step, however, the sway of one to the right is neutralised to a very large extent by the simultaneous sway of the other to the left, and the individual carried is but little affected.

There is another motion, which is in a vertical direction, which requires a different mode of treatment. Let there be two bearers, 5 ft. 8 in. in height, carrying a stretcher; when standing, with their feet together, the perpendicular from the centre of gravity of the body of each to the ground will pass through his hip-joints, and the distance of the centre of motion in these to the ground will be 34 in. If now one foot be advanced 30 in. (the usual military pace) and placed on the ground, while the other remains in its original position, the distance from each hip-joint to the point of support of each foot will remain 34 in., but the perpendicular from the joint to the ground will be 30½ in. only, or 3½ in. less than when the feet were together; so that the body of a man about the height mentioned, with anything he may be carrying, is raised and falls again 3½ inches every pace he takes, when these are 30 in. in length. With paces of 20 in. long the perpendicular from the hip-joint to the ground in the middle of the pace is 32½ in., so that the rise and fall is 1½ in. only, instead of 3½ in. with the longer step. Surgeon-General Longmore, in his Treatise on the Transport of Sick and Wounded Troops, at p. 171, gives some actual measurements, which coincide exactly with those arrived at above from calculation, when there was no one on the stretcher, but with a man carried they were with each length of step three-quarters of an inch more. He proceeds, "Of course, in marching at either pace there is an alternate rise and fall to the same extent, and the effect of this on the elastic poles of a stretcher can be readily imagined."

A stretcher with light side poles, such as circular poles of 1½ in. in diameter, even with the most careful walking will bend much more than the distances given above as due to the motions of the bearers; the effect on the person carried is a vertical oscillation greatest over the lower part of the chest, the abdomen, and thighs, less towards the head and feet, and repeated at every step. Serious cases of ordinary sickness would be much incommoded if subjected to such a trial, but for men with severe wounds in the trunk or fractured thighs it would be little short of torture. As regards the bearers, the descent of the stretcher from its highest point, with the body of the person upon it, is to be regarded as a body falling under the action of gravity, and every inch it proceeds beyond that due to their movements in walking generates an additional force acting downwards, which might be avoided, but which they have to meet by additional exertion of the arms, shoulders, and trunk. To give a quantitative illustration of this, let it be assumed that a stretcher with a wounded man upon it weighs 150 lb., and that the vertical oscillation due to the motion of the bearers amounts to 4 in., but, that owing to the yielding of the side poles the mean fall of the body is 2 in. more; the additional force generated is equal to that required to raise 150 lb. 2 in. in the same period of time, or its equivalent to raise 10 lb. 30 in., or 2½ ft. This is the force produced by the fall, but inasmuch as the body has to be raised 2 in. again, the actual force thrown on the bearers is that required to raise 150 lb. 4 in., or 10 lb. 5 ft. If, now, by adding 10 lb. more material to the side poles, they were sufficiently stiffened not to yield the additional 2 in. above mentioned, the extra work thrown on the bearers would be to raise this weight 4 in. only, which is rather less than one-fifteenth of the extra work thrown on them by the yielding of the weaker poles.

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There was a considerable display of ambulance and field hospital equipment at the Paris Exhibition in 1867, and in 1868 a committee (of which I was a member) was appointed in this country to examine into the condition of the British equipment, and to suggest improvements. The field stretcher then in use had round side poles of ash, 8 ft. long and 1¼ in. in diameter; it weighed 16 lb. The objections to it were the great amount of vertical oscillation inseparable from its use, and the want of any means of keeping it off the ground while the bearers were resting, or assisting the wounded man in their charge.

A stretcher which had been adopted by the French army authorities shortly before was placed in the hands of the Committee. This had side poles of ash, square in transverse section, with an area very close on 3 square inches, and of the same thickness throughout, except where reduced at the ends for the bearers to grasp. It weighed 20 lb., and in the extensive trials of it at Aldershot, under my own observation, it was found remarkably free from vertical oscillation, and was characterised by the men employed as bearers as being the easiest to carry of all those they had practised with, though none among them seemed aware of the principle on which this depended. The great stiffness of the stretcher was due to the large sectional area of the side poles combined with their small length, while the weight (only 20 lb.) was not such as to lead to any strong desire to reduce it. The objections to it were that the length (about 5 ft. 8 in.) was too small for many men, and there were at least three separate pieces, the absence of any of which would render it useless, or nearly so.

In designing a stretcher for the British army, the committee were actuated by the following considerations:—(1) That the sacking should be six feet in length; (2) that the stretcher should have as much stiffness as was compatible with moderate weight; (3) that the sacking should be raised from the ground by feet; (4) that the side poles should be capable of being brought together, the feet doubled up, and the whole packed compactly; (5) that every part of the stretcher should be so fixed that it could not be separated or lost. To carry out these objects, the side poles of ash were made square, with the corners above slightly rounded off, with the sides 1¼ in. at the middle, with a transverse section of 3 square in., and to save weight tapering down to 1½ in., or 2¼ square in. section, at the ends of the canvas, beyond which they were rounded off for the better to grasp. Steel traverses, hinged in the centre, and to the poles at the ends, permitted of the poles being brought together or extended as required; and steel feet, hinged so as to close in one direction, but to stand open against a check-piece when extended, completed the arrangement. The stretcher so completed weighed 25½ lb., it afforded a steady bed, though not quite so much so as the French stretcher, and possessed advantages which that did not. On reconsidering the matter, subsequent to the committee making their report, it appeared to me it would have been better to have made the poles of the same dimensions up to the ends of the sacking as they were in the centre; this would have added about 2 lb. to the weight of the stretcher, but would have secured practically as much stiffness as in the French stretcher, and would at the same time have relieved the bearers. This alteration has since been made, and a truck added in place of the steel feet. Stretchers so fitted are now to be seen in the Health Exhibition, and weigh 27 lb.

In the above remarks there has been very little notice of pillows for the stretchers, or slings for the bearers; the committee, however, considered both points fully. As regards pillows, they considered these were unnecessary for the field, inasmuch as every soldier has his great-coat or blanket and valise with him, and if wounded these would have to be carried to the rear with him; either of them can be employed to raise his head as desired, and under such circumstances a pillow, which would add to the weight and bulk and be of little real service, had better be dispensed with. As to slings, these are of two descriptions: that issued to our bearers is a simple leather strap, the middle of which is placed over the back of the neck, and the ends hang down over the upper part of the chest in front, while there are loops at the lower part into which the handles of the stretcher are inserted for carriage. This arrangement, it will be perceived, combines a vertical pull over the front of the chest with a forward pull of the neck, the latter having to be met by a corresponding exertion of the long muscles of the back to retain the head and neck in their proper position, in addition to their doing their portion of the work of steadying the trunk under the vertical pull. Now, this additional exertion simply exhausts the bearer more rapidly than he would be if the forces he has to meet were differently disposed. This can be effected readily by employing what is called the yoke system of sling, which consists of two leather straps, the ends of each of which are fastened together, forming a sort of loop; these are placed one on each shoulder, and the poles of the stretcher are put into the bight of the loops below; a cross piece fixed to each loop just behind the shoulders prevents them slipping off, without causing any drag on the neck at all. The committee recommended that these, and these only, should be issued for use by the stretcher bearers.

Ambulance Waggons.

With ambulance waggons, as with stretchers, mere weight affords but a vague means of ascertaining their relative merits; alterations introduced with a view to improvement often turn out the reverse; and even high commendations by reputed authorities may prove an unsafe basis for an exact estimate of their qualities and of their fitness for rough service in the field. At the Paris Exhibition of 1867 thirteen full-sized ambulance waggons, besides four models, were brought together, including those of the French, English, and American Governments, and prizes were offered to inventors who, after a study of these patterns, and with the permission to adopt any valuable feature they displayed, should construct waggons better fitted for the transport of wounded. Two competitors were successful. Locati of Turin, who produced a waggon embodying some recommendations by Baron Mundy; and Dr. Evans of Paris, who had what was considered an improved form of the Rucker waggon, which had been employed in the United States. On the appointment of the Ambulance Committee in 1868 they applied to have specimens of these waggons placed at their disposal for thorough examination and trial, and at the end of the year they were delivered at Aldershot. Locati's waggon weighed 17 cwt. 2 qr., and had wheels of 33½ and 45½ in., with 1½ in. tyres. Evans's weighed 17 cwt. 1 qr., with wheels of 35½ and 52½ in., with 1¾ in. tyres. The heaviest English waggon in the service at the time weighed 16 cwt. 2 qr. 21 lb.; it was equirotal, wheels 50 in., with 3 in. tyres; its draught was consequently much lighter and much more suited for active service than either of the prize carriages.

In both of the Paris prize waggons it was proposed to carry two persons recumbent in the body, or eight sitting; an average man with his clothing and accoutrements weighs about 150 lb., or rather more than 1½ cwt., and with these numbers the load on the hind springs would vary from 2½ to 10 cwt., in addition to that of the body of the carriage. Now, springs which would act properly with the smaller load would be quite unequal to sustain the greater one; and, *vice versâ*, springs suitable for the greater would act so violently with the lesser ones as to be most injurious to serious cases, as anyone who has travelled over roughish roads in a vehicle with springs insufficiently loaded must have found out. It is usual in this country to meet this difficulty by having a check spring, which comes into action only after the ordinary springs have received their full load, and within certain limits this arrangement is applicable to ambulance waggons, but it is very doubtful whether, even with the check spring, loads varying so much could be carried satisfactorily. Neither Locati's nor Evans's waggon had check springs; and the springs of the former were found so weak at Aldershot that they had to be replaced by a stronger set, and soon after this, with full loads, the body of the waggon settled so much that it bore on the hind wheels, and ultimately tore the spokes out of the naves.

All these waggons, both British and foreign, were fitted with special stretchers, so that a wounded man had to be removed from that on which he was brought to them and transferred to the stretcher belonging to the vehicle itself. It was obviously for the advantage of the wounded that this change should be avoided, and to meet it the Germans had had their ambulance waggons built to receive their ordinary field stretcher—an example followed by the Ambulance Committee in this country. The ordinary track of our military vehicle is 5 ft. 2 in., and with this width the committee found they could have a serviceable waggon with a clear inside breadth of 4 ft. 2 in., which admitted two of the field stretchers, each 1 ft. 11 in. wide, and left space for a partition of 1 in. thick between them, which was carried up sufficiently high to prevent the occupant of one rolling over

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or incommoding his neighbour from any unusual motion of the waggon.

The object of an ambulance waggon is to transport men who have sustained severe injuries with the least risk or inconvenience; and to effect this they must be subjected to the smallest amount of motion attainable, and in the least hurtful directions. When the springs of both sides of the waggon act equally, at the same time and in the same direction, a vertical motion only results. When the springs of one side only are put in action, they react on the mass above them, causing a heave upwards of that side, with a tendency of the body of the waggon to rotate round a line passing through its centre of gravity longitudinally, and compressing the springs on the opposite side. At the level of the floor this causes a vertical rising motion on the one side and a falling one at the opposite side, while at a variable point between them there is none; at some distance above the floor the vertical component is reduced, and a lateral motion becomes developed largely. In practice, of course, the two modes of action of the springs here mentioned are combined more or less, and varied to infinity by the varying obstacles the wheels encounter, but the motions resulting therefrom are all resolvable into the vertical and lateral components noticed above. If, now, the action of these motions on a person lying on a stretcher be considered, it will be seen that while either rising or falling every part of his body is borne on the stretcher, and all that it is possible to do is to render the transition from either to a state of rest, or to the opposite direction, as soft and gentle as possible by carefully adapting the springs to the load they have to carry. With lateral motions everything is different; there is no support anywhere, and even when the heave is not sufficient to throw the patient to one side of, or even off the stretcher altogether, it causes a rolling motion of the most injurious description for men with serious wounds or fractures; the body rolls from side to side on the chest, and the pelvis and lower extremities follow in the same direction, but at such an interval that the chest has nearly completed its oscillation in the opposite direction before the legs and feet have reached their full swing in the original one. During the Civil War in America, though some of the ambulance waggons were fitted for carrying two tiers of stretchers, the use of the second tier was virtually abandoned.

Locati and Evans introduced springs inside their waggons for the stretchers to rest on, with a view of easing the motion for their occupants, and many others have followed the same practice. All, however, seem to have overlooked the fact that springs, like musical strings, have periods of vibration, varying with their length and thickness, and that to place shorter and lighter springs inside a waggon to lessen the jar of those outside, was, at the same time, to place there a source of movement not in unison with the external springs, and one which this very want of unison could not fail to call into vigorous and, in the case of wounded men or serious medical cases, most injurious action. The committee tried, in the same waggon and at the same time, two stretchers in every respect similar, save that one was fitted with springs while the other was without them, and the difference as regards steadiness in favour of the latter was most marked. From all these considerations it is obvious that a man severely wounded is most advantageously situated where he is subjected to the motion of the body of the waggon alone, at a point as near the floor as can be managed, and the ease of this motion can only be adequately provided for by careful adaptation of the springs to the weight they have to carry.

As already stated, in both Locati's and Evans's waggons, when there were no recumbent cases, men sitting were intended to be carried, but the arrangements for those were far from satisfactory. An ordinary sized man, with a seat of 1 ft. 6 in. in height, requires a space of about 2 ft. 9 in. from his back forwards for the limbs; and if he have to sit for any length of time, it is advisable this should be extended to 3 ft., to admit of greater change of position to relieve the irksome feeling caused by retaining the muscles too long in the same state of tension. If the height of the seat be reduced, it can be made comfortable only by inclining the back, and extending the legs, or, in other words, increasing the horizontal space occupied by the individual. The importance of these points is greatly enhanced when the persons concerned are feverish, or weakened by sickness, for what merely causes irksomeness in healthy men will add much to the suffering of these, and may even aggravate their disease. In Evans's waggon, with seats 1 ft. 2 in. in height, the horizontal space available was only 2 ft. 9 in. at the utmost, and in Locati's, with seats 1 ft. high, the horizontal space was 3 ft., both of them far too small for these heights of seat, while the structure of the vehicles prevented any inclination being given to the back.

There is a strong desire on the part of many persons to have the weight of ambulance waggons largely reduced, without considering fully how far such reduction would affect their durability and usefulness. This question of weight has to be regarded from two points of view—(1) the actual dead weight in the waggon to each person carried, and (2) the manner in which the weight is distributed in the structure itself, and its influence on the draught. As regards dead weight, the Locati waggon, with two recumbent cases, could carry four other persons, including the driver and an attendant, or six in all, with a weight of 329 lb. to each. The Evans waggon, with a similar load, would have a dead weight of 322 lb. to each; and in the heaviest of the English waggons with the same number the dead weight would be 300 lb., but if the number were eight, which the vehicle could carry, it would have been 234 lb. only. In the new pattern ambulance waggon recommended by the committee the weight of the vehicle with all its fittings complete was 18 cwt. 5 lb., and with eight persons, including driver and attendant, the dead weight per man was only 253 lb. With regard to the distribution of the weight, the following facts are of great importance. The waggon of the Ambulance Committee as a whole was 1 qr. 19 lb. heavier than that of Locati, and 3 qr. 5 lb. heavier than Evans's; the body of the vehicle, including axles, springs, and fittings, is lighter than the corresponding parts of Locati's by 1 cwt. 2 qr. 22 lb., and lighter than Evans's by 3 qr. 12 lb. The increase of weight is altogether in the wheels, of which the fore are 36 in. in diameter, the hind 56 in., and both with 2 in. tyres, while they are made of the Madras pattern, with metal naves, which, though heavy, are unequalled as regards strength, suitability for different climates, and facility of repair. The wheels of Evans's, and still more of Locati's waggon, had been reduced, to save weight, until they were no longer serviceable for campaigning, and their draught was most materially enhanced everywhere but on firmly paved streets or roads; and from these an additional hundredweight, or even more, in them would have been a decided advantage for the horses.

It will be borne in mind that the above reflections apply to the ambulance service of troops in the field. In this country, during peace, there can never be the same pressure as after a battle, or with a sickly army, and this will admit of considerable modification of the means employed without material harm accruing. Carriages, too, which are scarcely ever required to move but over paved streets or well-made roads, may prove useful which would tumble to pieces in less than a week in real campaigning, with the rough usage of untrained soldiers; but the principles inculcated, it is believed, are intimately connected with the efficiency of the service everywhere.

THE ETIOLOGY OF TETANUS, AND THE OCCASIONAL VALUE OF NEURECTOMY IN ITS TREATMENT.

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TETANUS has ever been a subject of deep interest to the surgeon, as much for its mysterious causation as for its terrible and all too frequently fatal manifestations. Well-nigh as often the result of a trivial as of a grave injury, and at times appearing unconnected with any traumatism, it is no wonder that since pathology became the science it is to-day, its best efforts should have been devoted to the discovery, if possible, of the morbid conditions which mark a disease, some of the strongest features in which are that the widest and ripest experience may entirely fail to apprehend its advent, to explain why it should have appeared, or to predict with any certainty the anatomical changes which underlie it. And even now the task is unaccomplished, for, great as the progress has been in the demonstration and elucidation of the morbid anatomy of the spinal cord, there yet remains a hiatus in our knowledge as to any one condi-

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tion which may be regarded as characteristically *the* lesion of tetanus. Lockhart Clarke, Dickinson, Allbutt, and Coats, investigators whose knowledge of spinal pathology was and is transcendent, have each described certain appearances which they are inclined to regard as necessarily associated with the disease; but other observers equally earnest, and we believe equally careful, have failed entirely to corroborate their results. Nor are we inclined to regard this as extraordinary, for it seems to our thinking that it would be indeed difficult to understand, were the marked changes they have described always to exist, how such complete relief of symptoms and rapid recovery could have followed as has undoubtedly obtained in certain cases treated by neurectomy and by amputation. It almost appears as if this very search for morbid lesions, and the descriptions given of them by the observers to whom I have already made reference, had, in that necessary questioning which has arisen as to their probable causation, turned the attention of the profession so thoroughly to the humoral pathology of tetanus that its members seem in danger of forgetting the possibility that an excentric irritation may at times play a very important part in the origin of the disease. Before, however, entering upon the cases which I mean to detail in support of this last proposition, I desire to consider shortly the usually accepted theories of its causation — the humoral and the nervous,—and the reasons adduced in their support.

Dr. W. B. Richardson's opinion, expressed many years ago, was that the disease depended upon a poison developed in the wound as a result of decomposition; and this view has been sustained by the recent investigations of Coats,[1] who believes that the special changes observed by him in the spinal cord are the secondary effects of a *materies morbi* which, circulating in the blood, acts primarily upon the bloodvessels themselves. Certain etiological and vital conditions are admittedly strongly in favour of such a view; the occurrence of idiopathic tetanus seems difficult of explanation upon any other supposition than that of an alteration in the blood itself; and yet so intimately associated is the bulk of such cases with certain climatic conditions, the presence usually of damp and cold, that I would incline to the belief that in some of them we may have in their atmospheric surroundings the sources of peripheral excitation. Mirbeck[2] cites a case of an infant who died of tetanus four days after having received full upon its chest a glass of iced water while in a state of perspiration; and the fact is well established that by chilling a healthy nerve with ice its condition is so changed that the least tap upon it brings about violent and sudden spasm. Baron Larrey states that in a case of acute tetanus in which amputation was resorted to, and in which the symptoms entirely disappeared, the patient having been unhappily exposed to the chill air of night, immediate and fatal relapse followed. Tetanus is not uncommon in the horse as a direct and rapid sequel of "clipping" done in very cold weather, and in aged animals it is not unfrequent after exposure to storms of snow and cold winds. It seems, then, that if a comparatively limited shock from cold is capable, as in the case of the child it proved to be, or, by a more general impression, as in the horse, of originating the disease; if it exercise, as it surely does, so strong an influence on nervous tissue; and if, as probably occurred in Larrey's case, the irritation of the cut nerves in the face of the cut stump reproduced it,—then we can believe that in some individuals it may be the direct result of excitation arising from the exposure of surfaces rich in nervous supply to the chilling effects of damp and cold.

Nor is tetanus the only disease which is rendered more common by certain atmospheric conditions. Many authorities in midwifery state that puerperal eclampsia is similarly influenced, and as this is a condition not always due to the existence of a poison in the blood, it is probable that in the nervous system itself the phenomena which mark it have primary origin.[3] The occurrence of tetanus in an epidemic form, and its direct association with bad hygienic surroundings, are to my thinking the most powerful of all arguments against the nervous theory; and yet even here one must consider how much the lowering of nerve-tone, which is ever the outcome of such conditions, may have to do in predisposing to its development a patient whose nervous system, either as the result of traumatism or atmospheric conditions, has been subjected to peripheral irritation. The rise in temperature usually observed in septic states has been pointed to as an indication of change in the blood, but this is by no means certainly present in cases of tetanus; indeed, I have seen a case run rapidly to a fatal termination with scarcely any rise in temperature, such rise as did occur being perhaps explicable as the result of severe convulsions in a man whose nervous system was for the time being in an extraordinary state of instability. The testimony of O'Beirne[4] is on this point of interest, for although he had necessarily no knowledge of clinical thermometry, he doubtless possessed the power of recognising the febrile state, and yet he notes that in 200 cases he witnessed in the Peninsula none were febrile. Of moment as a prognostic sign, for a high temperature in tetanus indicates as a rule a severe form of the disease, it is yet no positive indication that a poison is circulating in the blood. Trismus nascentium, the pathology of which has been long in dispute, but which in later times has been accepted very widely as a well-marked instance of zymosis, has received from different quarters fresh questionings as to the truth of the doctrine. The first and much the earlier is that of Marion Sims, who asserts that it is "a disease of centric origin depending upon a mechanical pressure exerted on the medulla oblongata and its nerves; that this pressure is the result most generally of an inward displacement of the occipital bone, often very perceptible, but sometimes so slight as to be detected with difficulty." After viewing the disease in all its bearings one has difficulty in accepting such an explanation; but Dr. Hartigan,[5] who has made 150 post-mortem examinations in such cases, records his experience as entirely in accord with Sims' views. But there is another authority, Parrot, who has, according to the thinking of Nicaise, demonstrated that in temperate climates at least the disease, which has been described as trismus nascentium, is only a form of eclampsia due to uræmic brain disease;[6] and in support of this there is the recognised fact that its symptoms differ in some important particulars from those of true tetanus. Attention, too, has been drawn to an unhealthy state of the wound as a possible cause of tetanus, and in many recorded cases there existed such a condition; but its importance diminishes when we remember the fact that tetanus may occur with wounds which are perfectly aseptic, or appear when the primary injury has soundly and completely healed. As the result, however, of careful consideration of the arguments in its favour, and the objections which may be urged against them, there yet remains a seemingly insuperable difficulty in explaining upon any other grounds than those of a dyscrasia many cases marked by all the impressive features of tetanus. That a certain number of cases are due to direct nerve irritation is my belief, and, great as the difficulties are in demonstrating or explaining scientifically how peripheral irritation can excite and keep alive the widespread series of phenomena which characterise the disease under consideration, there are, I submit, a sufficient number of cases on record in which section of nerves has cured it to warrant the belief in a *post et propter hoc*.

There is one fact which must strike all interested in cases of tetanus, that in the mass of tetanic histories the irritation which we contend has arisen is connected with the extreme distribution of nerves. Not only so, but injuries in certain localities are notably more liable to be followed by it, and in some of these regions, as in the instance of the fingers and hand, the tactile corpuscles of Meissner and of Pacini are most abundantly developed. In my own experience of the disease nearly two-thirds of the cases had sustained injuries of the hands or feet, and in a very considerable number of instances which I have collected in the practice of my professional friends more than half were connected with wounds of the upper extremity. That these facts are not mere coincidences I feel well assured, and I believe they admit of a solution which may have some bearing in explaining one possible mode of origin of the disease. It is within our knowledge that as nerves approach the cutaneous surface, and especially when they enter the region of the skin, they lose their protective coverings, the medullary sheath and the sheath of Schwann. They are, therefore, especially exposed to injury and to irritation; and so much importance would I incline to attach to this circumstance, that I would venture to guess that the very presence of these sheaths and the protection they afford to the enclosed axis cylinder mainly accounts for the observation that injuries to large nerves in their course are not so pro-

[1] Medico-Chirurgical Transactions, vol. lxi., p. 79.
[2] Nicaise: International Encyclopædia of Surgery, vol. iii., p. 608.
[3] Fordyce Barker: The Puerperal Diseases, p. 11[illegible].
[4] Poland: Holmes's Surgery, vol. i., p. 312.
[5] American Journal of Medical Sciences, Jan., 1884.
[6] Internation[illegible] Encyclopædia of Surgery, vol. iii., p. 613.

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dustive of tetanus as when in their distribution they have reached the periphery. The experiments of Brown-Séquard,[7] performed long ago, proved the fact that irritation applied to the cutaneous ramifications of certain nerves induced convulsions, while irritation of their trunks had no such power; and Weir Mitchell, in his valuable monograph on "Injuries of Nerves,"[8] remarks "that the tendency towards irritation, resulting in spasm, seems to increase as the nerves divide and approach the skin." Mitchell Banks, in the Liverpool Medical and Surgical Reports for 1869, details some cases of slight injuries to digital nerves, giving rise to distressing symptoms and widespread reflex sympathies, while the cases detailed by Swan in connexion with lancet wounds of nerves would lead one strongly to suspect that wider reflex symptoms are likely to be aroused by wounds of small cutaneous nerves than by those of larger and more important trunks. But the difficulty lies not so much in finding the probable source from which the irritation springs as in explaining in what way it induces tetanic symptoms. The theory that would explain its occurrence in every case as due to an ascending neuritis cannot be accepted, for the evidence pathology can offer is clearly against it, but that reflex symptoms may arise independently of any inflammatory condition is proved by the cases of Banks, to which I have already made reference, for not only in them were portions of the affected nerves removed with excellent results, but the most careful examination failed to detect any morbid change in the parts removed. That neuritis does occur in some cases, and that without the presence of an open wound, I have personal knowledge, for in the very last case of tetanus which came under my observation, where it followed extraction of a tooth within twelve hours of the operation, and where death occurred in little more than thirty hours from the seizure, the inferior maxillary nerve was hard and red, and was by careful examination demonstrated to be in an undoubtedly inflamed condition. Moreover, the presence of pain and tenderness in the line of the nerves of the extremity involved in an injury of which records exist seems to warrant the conclusion that in such cases there is present a more or less developed neuritis. Independently, however, of any such direct transmission of harm, it seems to me, arguing from other morbid states than that of tetanus, that in certain individuals—for I believe there is a personal equation in most tetanic cases—it is possible for a peripheral irritation to induce exaggerated spinal reflex excitability, or direct reflex excitation either, as has been supposed, by paralysis of the moderator centre for reflex action or by Ringer's ingenious theory of lessened resistance.

In two other nervous maladies have we symptoms somewhat similar in their manifestations, and I believe equally difficult as regards their *rationale* of scientific explanation. Epilepsy, no longer regarded as a blood disease in the sense that Dr. R. B. Todd held it, is now considered to have its probable seat in the middle motor region of the cerebrum. Several cases are on record where irritation of a particular cutaneous region induced attacks of this malady. Dieffenbach details a case cured by the removal of a bit of glass lying in close proximity to a nerve; Pouteau cured the affection by destruction of a painful cicatrix; Carron by the removal of a tumour on the thumb; Bryant by an incision through a tender spot on the scalp; while Brown-Séquard states that "we know many cases where there was in the beginning of the fits a local cramp resulting from a secondary irritation of the nervous centre—i.e., produced by a reflex action due to excitation of sensitive nerves near the muscles attacked with cramp."[9]

And again, chorea, the morbid anatomy of which is still unwritten, has, in some instances, the most intimate connexion with excentric irritation. Packard, in the *American Journal of Medical Science* of April, 1870, records a case arising from injury to the terminal end of the median nerve in the thumb, which was cured by exsection of the sensitive part; while Weir Mitchell,[10] writing of it in connexion with wounds of nerves, and especially in association with the changes which take place in the divided ends of nerves in stumps, says, "The stump muscles or nerves are in the condition of those of a person fully charged with strychnia, ready to respond excessively, and without regularity, to any excitation." If, then, epilepsy and chorea, diseases having their seat in higher centres than those affected in tetanus, can be the result of irritation in the ultimate distribution of nerves, then it seems more easy to receive without sufficient or adequate explanation the possibility that tetanic spasms may arise in a similar way, and thus we escape the necessity, which many seem inclined to accept, that only through a poison in the blood can tetanus be produced.

One fact among a very considerable number that is difficult of explanation on the sepsis theory is the *rationale* of the cause of death in such cases as those recorded by Bandelaben and Robinson, where it followed in a quarter of an hour from the time of the receipt of the injury. Severe nervous excitation sufficient to upset the working of some highly sensitive and delicate nerve centre, the outcome of which was a suffocative spasm, might produce this. It is certainly well nigh impossible to conceive a poison generated *de novo* in the wound capable of development and of such momentous action in so short a period. Further, the disease has never been transmitted by inoculation or transfusion; while the kindred states, to which as regards physical manifestations it is often likened, hydrophobia and strychnia poisoning, are but too readily propagated by the transference of the blood in which the poison is circulating.

(To be concluded.)

[7] Researches on Epilepsy. Boston, 1857. [8] P. 147.
[9] Op. cit., p. 39. [10] Op. cit., p. 363.

A NEW INHALER.

WITH REMARKS ON OPEN ANTISEPTIC INHALATION.

BY J. WARD COUSINS, M.D. LOND., F.R.C.S.,
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THE discovery of Koch's bacilli amid the morbid processes which are now grouped together under the term pulmonary phthisis, and the new theory grafted upon it, that micro-organisms are the essential elements in the development of tubercular disease, have certainly stimulated the revival of the old treatment by inhalation, and have stamped it with fresh value and importance. It is, however, a matter for pathological investigation to unravel what is the exact relation between these specific bacilli and the pneumonic changes which pass on to softening and excavation; and whether the organisms are to be regarded as the cause or the mere outcome of these necrotic processes. At present we are not warranted in assuming that phthisis is the product of a distinctive bacillus embedded in the tissue of the lung, and we must wait for the results of future investigation and experiment; still the progress of research clearly points to the conclusion that phthisis, with its many variations, will soon be recognised as a specific disease, characterised by the formation of a new growth, containing specific micro-organisms, which can be detected in the sputum during life, and in the structures invaded by the disease after death.

Now, there is some subtle association between this modern theory and the fashionable treatment of inhalation which appears to be almost anticipating its final demonstration. But it must be stripped of all speculative value, and the test of experience alone must be the real guide for its adoption. The notion that antiseptic vapours are weapons of destruction upon these mysterious organic forms may seem a hopeful creation of the imagination, but certainly there is not a fragment of evidence even to suggest the assumption that volatile antiseptics are killers of bacterial growth hidden in the substance of the lung. Moreover, it is not possible to conceive how either dry or moist vapours in any form, possessing a low degree of volatility—whether administered by the aid of respirators, or by immersion in the atmosphere of a chamber charged with the most powerful medicinal substances—can ever be sufficient in potentiality to arrest within the pulmonary tissue the development of the specific organisms which are found to be intimately associated with the existence of tubercle.

The recent revival of the old question as to the contagiousness of phthisis has also exercised an important influence in promoting the treatment by inhalation, and has even succeeded in giving it a new direction. The possible communication of the disease by contagion of some sort has long been a matter of controversy, and many men of distinction have taken part in this ancient disputation; but at the present moment it is still surrounded by many difficulties, and it

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appears almost as far off as ever from a final settlement. The discovery of micro-organisms has produced a complete resuscitation of the old dispute, and has surrounded it with new and impressive issues. Some regard the results obtained by the inoculation and artificial cultivation of the specific bacillus as strong evidence in favour of the doctrine, and their convictions on the matter induce them to advocate a special method of applying topical remedies to the air-passages. The speculations concerning the existence of the bacillus in the phthisical breath and the dissemination of its germs in the air, mingled with the germs of universal distribution, are far beyond the limits hitherto reached by scientific research. Yet the mere conjecture that germs may find an entrance from without has certainly roused the ingenuity of some inventive minds, and suggested to them the grave necessity of intercepting them by a mechanical device at the very threshold. It is in this way, too often, that enthusiasm develops theory, and theory wields a directing force in the construction of methods of treatment which are utterly inconsistent with scientific truth, and even common experience. Surely it is a fact beyond dispute that no kind of inhaling contrivance can defy the entrance of germs with the air of inspiration; at the same time no form of respirator can be persistently employed by the patient. In reality it is a mere fad to attempt to filter and sterilise the air, for there is not a particle of evidence to support the notion that such filtration can be essential to the successful application of inhalations in those individuals who are actually labouring under tubercular disease, and it is extremely improbable that any laborious endeavour to sterilise the air can help to check the growth of organisms which have already found a lodgment in the lung. Even admitting that it is possible, by the intermittent application of a complex cover over the mouth and nose, to reduce the number of infective particles which enter the body, and to isolate, in a measure, the patient from the invisible hosts around him, then it clearly follows that such device ought to be considered in the light of a protecting instrument for any individual threatened with pulmonary disease, who is unfortunately exposed by social circumstances to the danger of a pollnted atmosphere, by contact with others actually labouring under phthisis, and, therefore, the disseminators of an infective material which is capable of impregnating the organs of any susceptible of its invasion.

On the other hand, I am not singular in holding the opinion that all efforts to filter the inspired air are theoretically unsound and practically useless, and that the cumbrous instruments constructed with this intention often indirectly exercise a baneful influence on the surroundings of many who are daily endeavouring to protect their lungs with antiseptic inhalations. The constant use of a close inhaler fosters the common prejudice against fresh air and sufficient ventilation, and the treatment degenerates into a struggle between germs within and germs without, hopelessly carried on by breathing through an uncomely mask, and by confinement in a close and stuffy atmosphere. I feel convinced that every remedial agent employed in the management of chest disorders must be positively injurious to the patient whenever it distracts the attention from the common and hygienic measures which are so essential to the general improvement of the system and the increase of the vital resistance of the whole organisation.

Now, in whatever light the speculations are regarded concerning the action of inhalations as destroyers of bacilli or as protectors against floating germs, it must be admitted that this treatment has made remarkable progress, and has also been practised with very great success. What, then, is the *modus operandi* of antiseptic inhalations in pulmonary affections? Surely the action of these remedies admits of a very simple explanation. They are valuable not only in the treatment of phthisis in all its forms, but, fortunately, they are equally applicable for many other chronic disorders of the lungs, and their judicious administration is certainly followed by very considerable relief. Dr. Solomon Smith[1] observes: "We are forced to believe that the benefits derived from the use of antiseptic inhalations are due to the infiltration of the lungs with antiseptic material, rather than to any action upon the floating germs." The vapours which are mingled with the inspired air penetrate to the finer passages, and are there absorbed by the moisture of the respiratory surface; and thus, by direct application, they purify the air in the remote portions of the lungs and cleanse the mucous membrane generally by preventing decomposition in the fluids and stimulating more healthy secretion. In chronic bronchitis, bronchorrhœa with dilated bronchi, and emphysematous affections, the efficacy of the treatment is beyond dispute; for by assisting the discharge of the expectoration, and by delaying the septic changes which occur within it, they remarkably modify the disorder at the very seat of its activity. In phthisis these topical remedies have proved also powerful auxiliaries to general treatment. They check decomposition in the secretions, and aid in the evacuation of the infectious materials, which are the direct products of the disintegration of the pulmonary tissues, and which, by the processes of absorption and diffusion, often establish new centres of disease. But, apart altogether from any specific effect of the antiseptic vapours, it must be admitted that the act of continuous inhalation exerts a very salutary influence by stimulating full and repeated expansion of the lungs; and this forced activity of these organs is in itself an important factor of the treatment. The value of free inspiration, and the part it plays in the successful application of antiseptic inhalation, have scarcely received the general recognition to which they are justly entitled. Many years ago the late Dr. Ramadge warmly advocated the use of an inflating tube for the simple purpose of expanding the lungs and stimulating their functional activity by voluntary effort. In phthisis these organs are very imperfectly expanded. The sputa, collecting in the passages, obstruct the aerial movements, and some portion of the air, only partially changed, becomes imprisoned in the remote parts of the pulmonary tissue, and thus the healthy balance between inspiration and expiration is disturbed, the breathing becomes shallow, at the same time gradual contraction and emaciation of the thoracic parietes are seriously accelerated. Now, it appears to me that much of the success which has followed the introduction of antiseptic inhalation is due to persistent expansion of the lungs by forced inspiration, and, certainly, this novel and fashionable system corroborates the value of the mechanical method practised by Dr. Ramadge. His notions respecting the antagonism between emphysema and phthisis have now almost passed into oblivion, but his special treatment of utilising functional activity as an instrument for arresting the progress of tubercular disease is surely now receiving a remarkable acknowledgment in the revival of respirators and local medication. The new treatment is, in fact, a close repetition of the old mode of inflation, with the addition of an antiseptic vapour to the inspired air; and the beneficial effect produced by its persistent employment can in a great part at least be fairly attributed to the expansion of the chest in full and forced inspiration, for this not only assists in maintaining the volume of the lungs, and in stimulating the activity of those portions of their structure still free from the elements of tubercle, but it also favours the circulation itself, and helps on the processes of local and general nutrition, by which a vital resistance is developed, restraining the progress of the disorder, and powerfully contributing towards its final arrest through the contraction and limitation of the local disease.

The advocates of antiseptic inhalation are quite unanimous as to the necessity of employing it with great regularity and perseverance over a long period; but there is much diversity of opinion as to the method of application and the form of instrument best adapted for the treatment. Recently Dr. Hassall has referred to "the comparative inefficiency in diseases of the lungs of the methods of inhalation now in use by means of oral and oro-nasal inhalers," and he advocates the revival of the old method of treatment by means of a chamber charged with antiseptic vapours, and is now engaged in perfecting an apparatus which he hopes will render this system more generally practicable. The experience of most practitioners at the present time is, however, clearly in favour of the direct inhalation of dry vapours, and a great variety of instruments have been constructed for the purpose—for the most part modifications of the original respirator inhaler suggested by Dr. Sinclair Coghill in 1876. The simplest forms of apparatus are now almost universally preferred, as they are more comfortable to the patient, and more readily tolerated during prolonged application. Some inhalers are too heavy and cause a feeling of oppression, and sometimes even difficulty of breathing; others are objectionable by pressing on the face and causing irritation of the skin. It is my opinion that all close oro-nasal respirators

[1] Vide British Medical Journal, Feb. 23rd, 1884.

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and complex instruments present no real advantages, and that they must soon fall into disuse, as their employment is seriously irksome to many patients. An inhaler ought to be a very light mechanical contrivance, especially designed to permit the voluntary introduction of medicated vapour by full inspiration, at the same time securing the freest possible access of air, so that the continuous and daily practice may be rendered both endurable and pleasant. The small instrument represented in the engraving appears to me to possess all these essential qualifications. It consists of a vulcanite receptacle (see Fig. 1) for holding the little pledget of cotton-wool upon which the inhalant is dropped. The

FIG. 1.



FIG. 2.



wire suspends the inhaler, and serves also as a compressor of the nose. When used for nasal inhalation one of the balls (see Fig. 2) must be selected, and half only of its circumference ought to enter the nostril. During oral inhalation another ball is used, or the neck of the inhaler can rest against the upper teeth. Figures 3 and 4

FIG. 3.



FIG. 4.



explain the methods of adjusting the instrument. By merely opening and closing the mouth the patient can regulate the entrance of the antiseptic vapour into the lungs. It is extremely light, and causes no fatigue or oppression, and it does not require to be taken off during coughing and expulsion of the sputa. I am much indebted to Messrs. S. Maw, Son, & Thompson for the care they have bestowed upon the manufacture of my inhaler, and I am glad to add that it can be obtained from that firm at a very moderate price.

The following table exhibits the respective weights of some of the best known inhalers now in general use :—

	Drachms.	Grs.
Coghill's metal inhaler	8	45
,, nickel-plated inhaler ...	7	19
,, celluloid ,, ...	3	27
Mackenzie's metal ,, ...	15	40
,, nickel-plated ,, ...	18	52
,, celluloid ,, ...	8	29
Robert's nickel-plated ,, ...	9	3
,, metal ,, ...	7	2
Burney Yeo's perforated zinc inhaler	3	40
Ward Cousins' inhaler	1	12

In conclusion, it has been my endeavour to confine this paper strictly to the consideration of open inhalation; and I have ventured to suggest that it is not merely a convenient mode of employing the breath as a medium for the introduction of antiseptic vapour, but that it is also a simple and mechanical method of sustaining forced inspiration, and thus utilising the antagonism which fortunately exists between pathological change and healthy activity. Any reference to the value of different inhalants and antiseptic combinations has been intentionally avoided, and for information on these important matters I must especially mention the paper of Dr. Sinclair Coghill,[2] and also many recent contributions by Dr. Burney Yeo, and other eminent physicians. To Dr. Sinclair Coghill we are undoubtedly indebted for the revival of inhalation as a regular part of the treatment of pulmonary disease, and a perusal of his published experiences will be extremely serviceable to any who have not yet given it the attention which it merits.

Southsea.

A CASE OF NASO-PHARYNGEAL POLYPUS;

REMOVAL BY THE ÉCRASEUR AND ACTUAL CAUTERY, AFTER SPLITTING THE SOFT AND CUTTING AWAY THE POSTERIOR THIRD OF THE HARD PALATE.

By W. J. WALSHAM, F.R.C.S.,

ASSISTANT-SURGEON TO, AND DEMONSTRATOR OF ORTHOPÆDIC AND PRACTICAL SURGERY AT, ST. BARTHOLOMEW'S HOSPITAL.

W. B——, aged forty, a maltster, was admitted, under my care, into Pitcairn ward, on Jan. 1st, 1884, having for some weeks previously been an out-patient. He complained of a stoppage of the right nostril, attended with a discharge from both nostrils, which at times was blood-stained. He had also severe and continued frontal headache, and frequent pains, darting from the nose to the right ear. He stated that about nine months ago he had been taken ill with bronchitis, and was treated for it at Victoria-park Hospital, where he was told he had weak lungs. Since then he had lost twenty-eight pounds in weight. The obstruction of the right nostril had come on gradually, and he was now unable either to blow or breathe through it. The discharge, which was often offensive, at times passed down his throat, and was brought up on coughing. He had always been a temperate man, and had hitherto enjoyed excellent health, and there was no history of cancer or syphilis.

Nothing abnormal could be seen on examining the nose through the anterior nares, even with the aid of a long Zaufal's speculum. It was found, however, on attempting to pass a small indiarubber tube for the purpose of tying up the palate, that the right nasal cavity was blocked posteriorly. On introducing the mirror behind the palate tied forward by the indiarubber tube, which was easily passed through the left nostril, a large swelling in the naso-pharynx on the right side was made out, and could also be felt with the finger carried behind the palate. Manipulation with the finger caused excessive hæmorrhage, although it was done with all gentleness, the patient losing more than half a pint of blood. A small gland could be felt just behind the angle of the jaw on the right side, and one or two smaller glands on the left side of the neck, posterior to the sterno-mastoid muscle. On Jan. 8th the growth was found to have markedly increased in size, and although its exact attachments could not be made out either by posterior rhinoscopy or with the finger, it was thought that it sprang from the basilar process, and probably also from the posterior wall of the pharynx. It was resolved to attempt its removal.

On Jan. 12th, the patient having been placed under chloroform, two silk sutures were passed through the soft palate, one on either side of the middle line, and the soft palate divided to its junction with the hard. The incision having been carried forward in the middle line for about an inch and a half, the soft tissues were separated from the bone with the aid of raspatories, and having been held aside with silk sutures, the posterior third of the hard palate was cut away with a mallet and chisel. An excellent view of the parts was now obtained, and the stem of an écraseur was passed through the right nostril, and the cord guided round the growth with the aid of the finger in the pharynx. It was found that the growth had a more considerable attachment to the posterior wall than was imagined, and it had to be torn and raised with the finger so as to form a groove for the cord of the écraseur. On screwing up the écraseur the greater part of the growth was in this way removed, and what remained of its base was destroyed with a Paquelin's benzoline cautery. The palate was then brought together and united with horse-hair and silver sutures in the ordinary way. The operation lasted upwards of an hour, and a considerable amount of blood was lost from the great vascularity of the growth, and

[2] British Medical Journal, May, 1881.

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its tendency to bleed on even the gentlest manipulation. The growth removed was about the size of a small orange. It was tough, hard, and fibrous in consistency, of a yellowish-white, shining appearance on section, and, as was seen on microscopical examination, was composed of fibrous tissue with an admixture of spindle-shaped cells. On the 13th he passed a fair night. The evening temperature was 100°, but in the morning it was again normal. There was great pain in the head. The nose was ordered to be syringed out every two hours with weak Condy's lotion. On the 20th the sutures were removed from the palate. On the 22nd he was up for the first time, and on the 31st he was discharged from the hospital breathing freely through the right nostril, and well in every respect. The gland at the angle of the jaw was much smaller. On March 4th the patient was readmitted, as the gland had increased in size, and others had appeared. These were removed on March 6th, and the naso-pharynx was thoroughly examined whilst under chloroform. Some induration was felt at the former situation of the growth, but there were no definite signs of a return. The wound of the neck healed readily, and the patient left the hospital on March 20th.

Remarks. — The severe hæmorrhage which attended even the most gentle examination with the finger made it exceedingly difficult to define the exact attachments of the growth, and its size was such that the rhinoscope revealed little more than that there was a large mass blocking the right choana, and occupying the right half of the naso-pharynx. It became a question therefore what operation, if any, should be attempted for its removal. It was clear that, from its size and attachments, it could not be removed through either of the natural passages—i.e., anteriorly through the nostril or posteriorly through the mouth; and for the same reasons the operation of turning up the ala of the nose, or that of Rouge, did not commend themselves. The choice of operation was therefore narrowed to that of the partial or complete removal of the superior maxilla, or splitting the palate after the method of Nélaton. The last, as attended with the least danger, was finally decided on. A better view of the parts could not have been wished for, and although the removal of the growth was still difficult on account of its broad base of attachment, the whole of it was ultimately removed. The patient made an excellent recovery. The temperature, which never rose above 100·6°, fell to normal on the fourth day, and so remained for the rest of his stay in the hospital. The growth, though hard, firm, and apparently fibrous, was found on microscopical examination to be a spindle-celled sarcoma, and it is therefore interesting to note the secondary affection of the glands in the neck. The superiority of Nélaton's method of splitting the palate, over Langenbeck's operation of resection of the maxilla for the removal of such naso-pharyngeal polypi as do not allow of extirpation by simpler methods, cannot, I think, be too strongly insisted upon; and the more so as it does not appear to be generally admitted. I have seen both, and have no hesitation in preferring the former. The one is comparatively speaking a slight, the other a most serious, undertaking; in one there is but little shock, in the other it is severe; in one there is next to no hæmorrhage, in the other it is free, sometimes alarming. The latter, moreover, leaves an external scar, is necessarily attended with some injury to the lacrymal apparatus, and may be followed by unsightly œdema of the lower eyelid. In both an excellent exposure is obtained, but I do not think that that in Langenbeck's operation is any better for the purpose than that in Nélaton's. When the growth has invaded the anterior part of the nasal fossæ or the antrum, no doubt resection of the maxilla is the better operation; but when it is confined to the posterior third of the nasal fossæ, Nélaton's in my opinion should be performed, and it is principally for the purpose of calling attention to this point that the case is published.

Wigmore-street, W.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.

At the meeting of the committee of management of this institution, held on the 5th inst., Dr. Robertson stated that during the half year ending June 30th, 1102 in-patients were admitted to the hospital. Of these, 684 were discharged as improved, 127 as no better, 6 at their own request, 8 were dismissed, 4 died, and 278 remained on the books at the end of the half year. The number of out-patients admitted was 91, and of these 26 remained on the books.

A CASE OF CEREBRAL EMBOLISM WITH HYPERPYREXIA FOLLOWING CHILDBIRTH;

WITH POST-MORTEM APPEARANCES AND REMARKS.

BY ERNEST F. NEVE, M.B.ED., M.R.C.S.,
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MRS. F——, aged about thirty-seven, multipara, consulted me on Feb. 20th, 1883, for considerable uterine hæmorrhage, from which she had suffered on the previous day. She was eight months pregnant. Palliative measures were adopted with success. On March 22nd hæmorrhage recurred, and continued in spite of treatment. Having diagnosed partial placenta prævia, I introduced a sponge tent. The hæmorrhage ceased, and she slept fairly well during the night. The following morning, however, on removing the tent, bleeding recommenced. I then ruptured the membranes, and with the aid of Barnes's bags dilated the os uteri to the size of an orange. Dr. Underhill, for whom I now sent, at once proceeded to perform bipolar version. The contractions of the uterus proving, however, a serious obstacle, the child did not survive.—24th: The patient had not slept at all. Great after-pains; weakness of both legs. Free lochial discharge; transverse colon greatly distended with flatus; pain in the hypogastric region. Temperature 98·4° F.; pulse 78, slightly dicrotic. — 25th: Had passed a quiet night. Lochia had a slightly fetid smell. Pain and swelling of the lymphatic glands at the inside of the right thigh. Temperature 101°.—26th to 30th: Still complaining of weakness in both legs. The pain in the groin and hypogastric region less. Lochia diminished and with less odour; spirits better. A tendency to diarrhœa. Temperature never found to be above 100°.—April 1st: Depression of spirits; complaining of a slight cough, about which she was very nervous. Legs still weak, with pain in the groins on movement. Temperature 101°. During this time milk diet was adopted, with the addition of concentrated soups and small quantities of wine at regular intervals. For the pain and elevation of temperature Battley's solution, sulphate of quinine, and turpentine stupes were employed.—2nd: Patient nervous and anxious; cough more frequent. Slight cold sensations in the back; no physical evidence of pneumonia. Temperature 103·4°. I was sent for suddenly in the evening, and on arriving was told that as she was sitting up to take her medicine she fell back and became insensible. I found her quite unconscious, with paralysis of the left side of the body and clonic spasms of the right. The movement of the right arm was circumduction at the shoulder-joint forwards and from within outwards. The foot was alternately flexed and extended. Eyes open; pupils contracted and equal. Mouth open; tongue and lips dry; cheeks flapping slightly with the respiration, which was stertorous. Temperature 105·4°; pulse rapid, weak, and jerking (106). Sulphate of quinine in fifteen-grain doses was exhibited at frequent intervals. Sinapisms over the chest, and the cold douche applied from a height above the head did not restore consciousness. The hair was cut and cold water compresses applied to the head during the night.—3rd: Both arms and legs motionless and flaccid. Right pupil much dilated; left pupil moderately contracted. Respiration stertorous (40); pulse 125; temperature (tested in both axillæ with two thermometers and observation repeated) 106°. Ice was applied to the head, and an enema of quinine administered. The patient died at 11 A.M.

Necropsy, twenty-five hours after death.—Gas was seen bubbling up from the nostrils and mouth. Pupil of right eye slightly dilated, and the cornea unusually bright. Rigidity well marked in lower extremities; lividity slight. Abdomen very greatly distended with gas. Brain: Superior longitudinal sinus contained a long decolourised post-mortem clot. The vessels of the vertex injected with dark fluid blood, and their terminations distended with gas. An excess of subarachnoid fluid, which was turbid; vessels of pia mater injected. The internal carotid artery of the right side, immediately below and at the origin of the posterior communicating branch, was completely closed by a firm pale ante-mortem clot. The basilar artery contained three small cream-coloured clots from ¼ to ½ in. long, with rounded ends. These were not impacted, and may have been of post-mortem formation. The cere-

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bral substance was injected. Both lateral ventricles contained a small quantity of blood-stained fluid. There was no evidence of anæmia of the right hemisphere. Brain tissue very soft. Heart: Flaccid; almost empty. Endocardium stained very darkly, valves being plum-coloured. The anterior internal aortic valve presented on the ventricular surface a small dark clot, which on removal disclosed a slight roughening of the endocardium. The inner surface of the left ventricle presented a marbled appearance. Spleen: Measured 7 in. by 4 in., very soft. Lungs: Pleural cavities contained no fluid. Both organs very soft, highly congested, with œdematous bases. No consolidation. Bronchial mucous membrane reddened and softened. Liver: Congested and fatty. Kidneys: Both very soft and greatly congested. Stomach and intestines greatly distended with gas; no evidence of peritonitis. Uterus measured 6 in. by 4 in. Ligaments thickened; no evidence of cellulitis. The interior, which had a fetid smell, presented a slate-grey appearance. At the placental site there were two depressed patches measuring respectively ½ in. by 1½ in., with rough granular floor of ash-grey colour; ovaries large and congested. Microscopically the clot from the internal carotid artery showed almost throughout the outlines of the individual corpuscles. It was adherent to the walls of the vessel by granular débris, fibrin, &c.; muscular fibres from the heart were cloudy and fatty. In the lungs some of the air vesicles showed evidence of croupous exudation. There was no thrombosis of the pulmonary veins. Kidneys: Epithelium of tubules greatly swollen, cloudy, and desquamating. Uterus (from the placental site): The inner surface presented the appearance of a false membrane composed of fibrin, leucocytes, compound granular corpuscles, and granular débris. In the kidneys and uterus there were some highly refractile bodies, giving no reaction with osmic acid solution, and not unlike micrococci.

Remarks.—References to the state of the body temperature after the occurrence of cerebral embolism are omitted in most text-books of medicine. According to the observations of early writers, especially Cohn, it was formerly believed that following embolic impaction there was both an initial and, for a time, a permanent general diminution of the temperature of the body. Bourneville's observations, on the other hand, have shown that there is a rise (reaching in some cases even 104°) on the second and third days and then a rapid fall.[1] Dr. Hamilton[2] quotes a case of Sokolowski's in which the temperature on the first day was 101·2°, and the next evening 104·8°. In this case, however, there was acute endocarditis. In a case of his own in which embolism occurred during the resolution stage of croupous pneumonia, the temperature was not high till the second day, when it reached 104°. I have, however, been unable to find any case on record in which there was hyperpyrexia. The pulse and respiration of Mrs. F——, contrary to the observations of M. Rosenthal,[3] were found to be both of them unusually rapid. It is, I believe, rare for a case of cerebral embolism to prove fatal within twenty-four hours. It appears to me, therefore, highly probable that the hyperpyrexia was the cause of the anomalies in, and the rapidly fatal issue of, this case. The question next arises as to its origin. The clinical history, especially as regards the persistent elevation of temperature, its steady rise immediately before, at the time of, and after the embolic impaction occurred, and the presence of flatulence with diarrhœa, together with the pathological evidence—viz., the rapid decomposition, the congestion of all organs, the absence of pelvic cellulitis, and the condition of the uterus,—lead me, notwithstanding the fact that in many respects the case ran a very unusual course, to think that some form of puerperal septicæmia was present. The puerperal state of the blood, the morbid condition of the aortic valve, slight though this was, and the unusual strain upon the heart from the high temperature and sudden change of position of the patient, may account for the formation, point, in the absence of pulmonary thrombosis, to the source, and explain the departure of the travelling clot or clots.

[1] Ziemssen's Cyclopædia, vol. xii., p. 290.
[2] Nervous Diseases, 1878, p. 139.
[3] Clinical Treatise on Diseases of the Nervous System, 1878, vol. i., p. 78.

AT Exeter, on the 10th inst., the Mayor laid the foundation-stone of a new Asylum for Pauper Lunatics. The building will cost some £100,000.

DISLOCATION OF THE STERNAL END OF THE CLAVICLE, BACKWARDS AND UPWARDS.

BY J. HARRY POLAND,
CHIEF MEDICAL OFFICER, SANDHURST HOSPITAL, VICTORIA.

R. G——, aged twenty, was admitted to hospital on Feb. 22nd, 1880. While wrestling with another man, both fell, the patient being underneath. He came at once to the hospital. On admission, the patient complained of pain in the right shoulder and inability to use the right arm; slight difficulty in breathing, and great difficulty and pain in swallowing. He was unable to say in what position he fell. On examination the right shoulder was slightly lower than the left, and projected more forwards; the arm was extended and kept at an angle of about 40° to the body, this being the least painful position. The head was inclined and turned slightly to the left side. There was a well-marked depression at the right sterno-clavicular articulation, and the sternal end of the clavicle could be felt beyond this, and at about three-quarters of an inch higher level than the corresponding articulation, the trachea apparently being pushed to the left side. The line of the clavicle could be felt throughout, and also the vacant sternal articulation. The patient was seated in a chair and reduction effected by placing the knee in the hollow between the two scapulæ, taking firm hold of the upper part of the arm and shoulder, and bringing them backwards and a little upwards. The parts were retained in position by means of a large pad placed over the right scapula, and the right arm bandaged so as to keep it well backwards, the elbow a little upwards, and the forearm folded across the chest. There was some difficulty in keeping the parts in position, and the bandage had to be reapplied three or four times. The head of the clavicle did not completely resume its normal position, and at the end of four weeks, when the patient was discharged, a slight depression could be felt over the articulation. There was, however, not the slightest trace of any upward displacement. The patient has since resumed work, and experiences no inconvenience from the injury.

Beyond the comparative rarity of the lesion, the only point remarkable is the absence of dyspnœa, which in this case was almost complete. This seems to have been due to the head of the bone forcing the trachea to one side, instead of directly pressing upon it. Of all the authorities I have been able to consult I can only find one other case in which dysphagia was the prominent symptom and dyspnœa absent, or nearly so. The case referred to is that of Sir Astley Cooper, in which he removed about an inch of the sternal end of the clavicle to relieve the dysphagia, but in this case the cause of the luxation was spinal curvature. This case is given in both Fergusson's System of Practical Surgery and in Holmes' System of Surgery. Of the other cases quoted, Hamilton, in his treatise on Dislocations and Fractures, gives some thirteen cases, five of which were the result of direct violence, and the remainder by indirect violence; and from various other authors I have collected seven other cases, two of which were the result of direct and five of indirect violence, making a total of twenty cases, seven from direct and thirteen from indirect violence. In one case, Dr. Brown's, of Callington, the cause was a fall in wrestling; but there, as in the present case, it is doubtful whether there was direct or indirect violence, since, when wrestling, men are not likely to be able to say the exact position in which they fall. According to Dr. Brown's case it was indirect, but in the present one, if the man could be relied on as to the position, it was probably direct violence that caused the injury, the patient stating that he fell with his right shoulder against the kerb, while his opponent was immediately above him. In any case, however, this injury seems to be far more frequently the result of indirect violence. Further, it is generally accompanied by dyspnœa, rarely by dysphagia alone, and not unfrequently by both, the former, however, being the most urgent symptom. It is, according to all authorities, seldom completely reduced, and is not unlikely to give some trouble to retain the parts in position. In the majority of cases the displacement is backwards only, and in those in which it is backwards and upwards the upward displacement is

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slight compared with the backward. The diagnosis is easily made, and the reduction and treatment similar to that employed in the foregoing case.

Sandhurst, Victoria.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nullaautem estalia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF TUBERCULAR PERITONITIS AND PLEURISY; CYSTITIS; DIPHTHERIA; NECROPSY; REMARKS.

(Under the care of Dr. F. ROBERTS.)

FOR the following interesting notes we are indebted to Mr. Thomas Wilson, M.B., B.S. Lond., late house-physician.

F. T——, aged fifteen, a "stripper" in a telegraph works, was admitted on Nov. 15th, 1883, complaining of pain in and swelling of the abdomen. At his work he had been exposed to draughts and damp, his diet had been deficient in meat, but his clothing had always been plentiful and warm. Until the present illness he had always enjoyed fairly good health, though he had never been robust. The family history was good. About Nov. 1st he experienced a chill, but did not feel unwell till two or three days after, when he became rather drowsy and apathetic. Two days later he complained of pain in the hypogastric and lumbar regions and of headache. Shortly afterwards his abdomen became distended and his appetite failed. The bowels were in a normal state. About this time the patient received a blow on the lower part of the abdomen, causing pain, which, however, soon passed away. About a week before admission he was, he stated, unable to pass urine for two or three days, and the quantity afterwards passed was diminished. On Nov. 9th the abdomen became painful and also more swollen. Since then the man had suffered much from thirst. During the fortnight previous to admission he had experienced much discomfort from external piles. There had been no constipation or diarrhœa.

On admission the patient was found to be a slightly-built, badly-nourished lad, with a sallow and anæmic complexion, and an anxious, fretful expression. He could lie without absolute discomfort in any position, but preferred lying on his right side, with his legs slightly flexed. Temperature 102° F. There was great thirst. Appetite fairly good; no nausea or vomiting. Bowels opened once or twice daily; stools semi-fluid, light in colour, consisting of curdy-yellowish material, with occasional light-green-coloured streaks. Lips dry and cracked; breath very offensive; tongue covered with thick, creamy fur, except at tip and edges, which were red with prominent papillæ. The abdomen was much distended, especially in the upper half; its walls were very tense, and not œdematous; the umbilicus protruded slightly; there was no marked bulging of the flanks. The lower margin of the thorax was somewhat everted. There was slight fulness of the superficial veins. The abdomen felt very tense, the resistance being greater in dependent parts. There was no marked tenderness on manipulation. There was dulness on percussion in the flanks, extending as far forwards as the anterior superior iliac spines when the patient was lying on his back. Each flank became resonant when the patient turned on the opposite side, the dulness then rising on the lower side. Distinct fluctuation was obtained between any two points in the area of dulness. The liver dulness reached as high as the fifth intercostal space in the right vertical nipple-line; the lower border could not be defined by palpation or percussion. The splenic dulness was not increased. Respiration 30, shallow, and thoracic. Slight cough with clear mucous expectoration. No abnormal pulmonary signs. Pulse full, regular, moderately compressible. Heart sounds weak, but otherwise normal. There was no pain, but some difficulty in micturition. Urine acid; it contained no sugar or albumen, but large deposit of amorphous urates on standing.

On Nov. 16th the patient complained of sharp, scalding pain in the abdomen, especially over the lower ribs. On the 17th the urine became alkaline, depositing a large sediment of phosphates. The bladder was very irritable. There was great thirst; no vomiting; slight diarrhœa, with light coloured stools; tongue thickly coated. The temperature varied from 101·4° to 103·2°. The urine continued alkaline till the 23rd, when it was again noted as being acid, and free from deposit and albumen. The abdomen was more tense, but less painful and tender. The thirst and diarrhœa continued. Temperature 101·2° to 103·4°, generally slightly higher in the evening. On the 26th the patient vomited twice. The diarrhœa and thirst continued, but to a less degree. The abdomen was more distended and tense, especially in the epigastric region. The man now began to suffer from troublesome cough and more difficult breathing. On the 28th the patient was stated to have been delirious during the night. There were signs of fluid in both pleuræ as high as the angles of the scapulæ. There was cough with expectoration of greenish glairy mucus, streaked with blood. The diarrhœa was worse. There had been no return of vomiting. Pulse 112, weak, irregular, and rather dicrotic. Temperature 101·6° to 103·6°.

On Dec. 3rd the patient remained in the same condition, except that the bowels were now rather confined. On the 7th the abdomen was distinctly larger and more tense; the signs of fluid at the base of the left lung were much less marked; the man slept better. On the 10th he vomited a little bitter yellowish fluid. On Dec. 14th the abdomen was aspirated, 212 ounces of clear yellowish serous fluid being withdrawn, a portion of which became solid on boiling. On the 17th the skin of the abdomen was hot and dry; there were still signs of a considerable quantity of fluid in the abdomen, and the signs at the bases of the lungs remained as before the tapping. The bowels were opened once daily, the motions being formed. There was catarrh of the nasal passages. On the 18th the urine contained a small quantity of albumen for the first time. On Dec. 19th the soft palate and fauces were found to be covered with thick greyish-white exudation, and the patient was isolated. His breathing was very laboured, on account of the obstruction in the throat and nose. The swelling of the abdomen was increasing. There was some œdema about the ankles. He slept fairly well. Temperature 100·6° to 102·8°; skin hot and dry. On the 20th there was more membrane about the throat; the lips and teeth were covered with sordes; the urine contained a large quantity of albumen. Temperature 101·2°; pulse 120, small and compressible. On the morning of the 21st the pulse was 148; the nasal passages and throat were covered with thick greyish-white exudation. The patient gradually sank, and died from asthenia in the evening.

Necropsy, sixteen hours after death.—The peritoneal cavity contained a large quantity of clear yellow serous fluid. The parietal layer of the peritoneum was from a quarter to a third of an inch in thickness, and adherent to the subjacent organs by a thick layer of reddish lymph. The intestines were firmly matted together; on separating them a large number of grey granulations were seen beneath the lymph. The liver and spleen were adherent to the surrounding parts by thick layers of lymph, beneath which the peritoneal coverings were found to be infiltrated with grey granulations. These organs were otherwise fairly healthy, as were also the heart, kidneys, and brain. The mucous membrane of the intestines showed no sign of ulceration or of tubercular deposit. The left pleural cavity contained ten ounces, and the right six ounces, of blood-stained fluid; no adhesions. Over the posterior aspect of the lower lobe of the left lung there was a fine coating of lymph. Over this surface and in the fissure numbers of grey granulations were scattered in the pleura. The right pleura was similarly affected. The lower lobes of both lungs were œdematous. No tubercles were observed in the substance of the lungs. There was an enlarged bronchial gland with caseous masses in its centre at the root of the right lung. Both tonsils, the soft palate, and the epiglottis were covered with a fawn-coloured, pultaceous, easily separable membrane. This extended down the pharynx as far as the cricoid cartilage, and was continued through the larynx and into the trachea for two inches. The glands about the angles of the jaw were enlarged.

Remarks.—This case is interesting from the localisation of tubercle in the pleura and peritoneum, no deposit being found in the substance of any of the organs. The diagnosis of the cause of the peritonitis on admission was somewhat obscure; the age of the patient, insufficient diet, and unhealthy occupation pointing to tubercle, while, on the other hand, difficulty in accepting this diagnosis was found in the

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absence of tubercle from the family history as far as it could be ascertained, and in the absence of signs in the lungs. The parents were inclined to attach considerable importance to the history of a blow, but this did not seem warrantable. The finding of an enlarged caseous bronchial gland at the root of the right lung is of considerable interest in relation to the etiology of tubercle. That the gland was affected prior to the deposit of tubercle would appear likely from the latter not having undergone fibrous or caseous degeneration. The presence of nasal catarrh was noticed on December 17th, but the presence of albumen in the urine next day for the first time rendered it probable that the nasal affection was diphtheritic. Unfortunately, attention was not drawn to the throat till the 19th, on which date a considerable quantity of membrane was observed. The cause of diphtheria was obscure; no contagion could be traced; the drains connected with the ward in which the patient was placed were not, however, in an unsatisfactory condition. The special receptivity of tuberculous persons for diphtheria is mentioned by Dr. —— in Quain's Dictionary (p. 374).

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

CASE OF PACHYMENINGITIS; NECROPSY; REMARKS.

(Under the care of Dr. TOTHERICK.)

FOR the notes of this case we are indebted to Dr. E. A. Dingley, house-physician.

William H——, aged fifty-seven, a labourer, was admitted on April 27th, 1884. The patient's history was fairly good, but formerly he had indulged rather freely in alcohol. No history of syphilis could be obtained. About the end of March, when at his work, he fell down some steps into a cellar, the depth being about fifteen feet. He was slightly stunned by the fall, and had a deep cut on the left temple, which bled freely, but otherwise seemed none the worse for the accident. The next day he returned to his work and continued at it for four days, and then gave up, complaining of giddiness and of pain in the head, but still seemed in fairly good health. This continued with a slow increase of the symptoms till April 26th, when he left home for a walk, and did not return in the evening, but was found lying in a ditch, paralysed and partly conscious. He was taken to a house, and the next day brought to the hospital.

On admission the patient's temperature was 99°. He was conscious, but very heavy and dull. When spoken to loudly he replied rationally, but did not make any voluntary statement, and could not remember the circumstances of his attack. As regards his motor power, the left arm and leg were paralysed, and also the left facial nerve. The tongue deviated to the left when protruded. The other cranial nerves were normal, and there was no paralysis of the trunk muscles. Sensation was normal, both as to acuteness and localisation. The superficial reflexes were increased; the knee-jerk was very easily obtained in both limbs, and ankle clonus was very well marked on the left side and slightly on the right. The pupils were equal, and reacted to light and to accommodation. He passed his urine in the bed, but retained his fæces. The left limbs were rigid. His arteries were rigid and tortuous, and the pulse slow, full, and regular. The heart sounds were rather weak, but no murmur could be distinguished. Respiration was slow and rather laboured, but there were no abnormal physical signs in the chest. His tongue was clean; there was no vomiting, and the bowels were confined. The abdomen was retracted. Urine was abundant, of low specific gravity, and contained no albumen.

During the first week the patient was in the hospital he improved considerably, and could move his left arm and leg to a considerable extent. He also was able to take light diet. On May 4th he seemed more drowsy and apparently slept all day; on the 5th it was difficult to rouse him, and on the 6th he was in deep coma and could not be roused. His limbs were quite flaccid and motionless on both sides, the pulse was 60° and decidedly irregular, and he had Cheyne-Stokes breathing very well marked. On the 7th he was in much the same condition, except that the breathing was irregular and superficial; and on the 8th he died. As it was an inquest case, the post-mortem examination was delayed for four days.

Necropsy.—Rigor mortis passed off; no external wounds or bruises, except an old cut on the left side of the forehead. On removing the calvaria and opening the dura mater the right hemisphere appeared to be covered with blood; this extended all over the convexity of the brain nearly to its base, but was strictly limited to the right side, and did not extend along the falx cerebri. On careful examination this turned out to be a very thin and delicate membrane, translucent and of a yellowish-red colour. It was composed of two layers—one spreading over the pia mater and not dipping into the sulci; and the other and more important one adherent to the under-surface of the dura mater, from which, however, it could easily be stripped off. When removed, the membrane was found to contain in its substance numerous clots of blood, varying in size from a pin's head to a plum-stone. On close examination, many of the larger ones were found to consist of two parts—the one being more recent than the other, which was paler and harder; the clots were more numerous and larger in the vicinity of the vertex; there was no free blood or clots, except those in the new membrane; there was no sign of lymph or pus; the vessels of the pia mater were congested and distended, but not ruptured; the vessels at the base of the brain were healthy. The brain was cut into small slices and carefully examined, but no trace of hæmorrhage or softening could be found. There was no fracture of the skull; the spinal cord was normal; the aortic and mitral valves were thickened, and on one of the cusps of the former there was a small projection about the size of a pin's head. The lungs were very emphysematous and congested at the bases; the liver was of the "nutmeg" variety and the kidneys smaller than natural.

Remarks.—This is one of those cases which show the importance and value of a post-mortem in every instance, for if there had been no examination one could never have certainly diagnosed pachymeningitis. The chief points of interest in the case are the severe blow on the left side of the forehead, causing the formation in about seven weeks of the pachymeningeal membrane over the right hemisphere, this causing only slight giddiness, &c.; then came the first hæmorrhage into the membrane, causing the left hemiplegia and semi-unconscious condition in which the patient was found on April 26th. From this he recovered in great part, till a fresh series of hæmorrhages into the membrane on May 5th and 6th caused his death by pressure on the brain. During the whole time his temperature was not over 99°. The occurrence of well-marked Cheyne-Stokes breathing and the retraction of the abdomen are interesting points.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Sympathetic Neuro-retinitis.—Miners' Nystagmus.—Model Apparatus for demonstrating Operations on the Eye.—Congenital Defects.—Cataract Extraction for Lacrymal Obstruction or Catarrh.—Cystic Tumour of Iris.—Head Injury followed by temporary Blindness and Anosmia.

A MEETING of this Society was held on July 4th, Mr. Jonathan Hutchinson, F.R.S., President, in the chair.

Dr. BRAILEY showed a living specimen of Sympathetic Neuro-retinitis.—Mr. NETTLESHIP inquired of the precise order of events in this case.—Dr. BRAILEY said there were no symptoms of disease until March 6th, when the patient received a cut from a jug in the left eye right through the ciliary region. Aching in the right eye began two weeks later, and vision began to fail. One week later vision was $\frac{6}{60}$, the optic disc was slightly swollen, its margins blurred, vessels rather contracted, and some edged with faint white streaks for a short distance into the retina. The vessels near the yellow spot were rather larger and more numerous than usual, and also somewhat tortuous. Since then the vision has improved to $\frac{6}{24}$, but the optic disc has become flatter and more white. The left eye remained *in statu quo*, and no pain had been felt since the first week of the injury.—Mr. HUTCHINSON said that the lapse of only two weeks before the supervention of optic neuritis in the other eye was remarkable.—Mr. ADAMS FROST narrated a somewhat similar case.—Mr. NETTLESHIP asked whether the failure of sight preceded the ophthalmoscopic changes.—Dr. BRAILEY said

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that when he first saw the case optic neuritis was present and vision had failed.

Mr. SIMEON SNELL read a paper on the Cause of Miners' Nystagmus, and stated that he had long held the opinion, as the result of clinical experience, that the cause of the disease was to be found in the peculiar manner in which the miner performed his work, whatever secondary influences and other surrounding circumstances might exert. He had seen no evidence to support the theory of central disease, and believed the poor illumination of the safety lamp, and other causes mentioned by writers, were insufficient to account for the affection. He described the various classes of men engaged in a coal pit, and the kind of work performed by them. The disease appeared to be confined to the coal getters. He had previously stated that, in his experience, men suffering from this affection had been engaged in work which necessitated their lying on their sides. Some of the coal getters were employed in this manner in what was termed "holing," the process of driving a cutting under the seam of coal, and the hole made might reach a yard or more underneath the coal. This was done to facilitate bringing down the coal by wedges. The hole made might be only eighteen inches to two feet high, and a man working in this would be cramped up and lying on his side. Further experience had completed the opinion expressed nine years ago, and though cases were constantly under observation, he believed they had all been engaged in the manner mentioned. He stated also that he had descended into a pit, and, as anticipated, found the men occupied in "holing" and working on their sides affected (four out of six examined), whilst other coal-getters and other workers in the pit appeared to be free from it. Other evidence in support of this view was adduced from the cases mentioned in Mr. Oglesby's paper (Transactions of the Ophthalmological Society, vol. i.) and also the opinion of Dransart (Annales d'Oculistiques, 1877) that all the sufferers had worked in shallow inclined bearings. Mr. C. S. Kilham had also, at Mr. Snell's request, examined in Durham over 500 colliers, and found not a single instance of nystagmus; in none of these pits were the men occupied in work compelling their lying on their sides. Dransart had held the disease to be due to fatigue induced in the elevators by the frequent upward gaze of the miners at work. Mr. Snell explained that, working in the manner mentioned, it followed that the eyes were frequently thrown into an oblique position upwards to the left or right—a position much more fatiguing than simply looking upwards. The muscles affected would thus be the superior rectus, the inferior oblique, left internal rectus, and right external rectus, if looking to the right, or substituting the right internal rectus and left external rectus if looking to the left. He considered the nystagmus arose under conditions recognised as "chronic fatigue" in other regions, and analogous to writers' cramp, &c. Recovery took place if the patients ceased their work in the pit in a variable time; it was quite possible that changing the manner of work would be quite sufficient. Strychnia and other remedies appeared to be useful adjuvants.—Mr. JONATHAN HUTCHINSON said that he believed Mr. Snell had come nearer to the position taken up by Mr. Oglesby than he seemed to think. With regard to causation, the miners in Cornwall did not work long hours, had good light, and adopted the sitting posture. Amongst these nystagmus was practically unknown. The analogous affection known as "writer's cramp" was most probably due to some fatigue of the nerve centre. Mr. Oglesby had pointed out that with some cases of miner's nystagmus a form of epilepsy was associated; and, further, some patients had been relieved by the use of bromide of potassium. Mr. PRIESTLEY SMITH said that he agreed in a great measure with Mr. Snell, but he would be inclined to lay more stress on some points on which Mr. Snell laid less. As to whether peripheral or central disturbance of function was the cause, he would say that the affection was invariably bilateral and symmetrical, although unequally so. He should look upon the affection as due to a perverted nutrition of the centres in the brain; he thought that this view was borne out by the fact that the nystagmus was rotatory in one case which he had seen. It ought to be remembered that stimuli received from the retina had a great deal to do with fixing the attention on any object. Most favourable conditions for malnutrition existed in the surroundings of the miners, which further made fixation of the eyes exceedingly difficult. Instances were given tending to show that the nerve centres lost their good vigorous action in the absence of well-formed retinal pictures. Such states of ill-health as anæmia, aided by the horizontal posture, and any condition of nervous exhaustion would favour the production of malnutrition of the centres.—Dr. BRAILEY considered that little doubt could be entertained that muscular fatigue rather than any defective nutrition of the nerve centres was the fault. If anyone looked up and to the left continuously, he would find that the eyes would become nystagmic.—Mr. NETTLESHIP asked how cases of unilateral nystagmus could be explained on the central theory where the eye was blind or vision defective.—Dr. STEPHEN MACKENZIE thought that we could not separate the fatigue of the muscles from that of the energising centre. He was of opinion that it was a central disease. In all muscular action there was a balance of antagonistic action, and a more careful adjustment would be required in those cases where the men worked on their sides, so that the balance of antagonism could be more easily disturbed and the muscles most in action would be found to fail first. The occurrence of nystagmus in cases of central nerve disease—e.g., disseminated sclerosis—favoured his view.—Mr. ADAMS FROST drew attention to the difference of practice which prevailed in different mines. Where the Davy lamp was not in vogue nystagmus was not found. The miners assign the lamp as the cause, but it was probable that the causes which led to the use of the lamp also developed the nystagmus.—Dr. BEEVOR expressed his belief in the central origin of nystagmus, as was certainly the case in disseminated sclerosis. Mr. PRIESTLEY SMITH explained unilateral nystagmus by supposing that one centre of the bilateral nucleus may be atrophied.—Mr. MCHARDY considered that the unnatural use and fatigue of the muscles used might lead to a condition of diminished conductivity of the nerves involved.—Mr. SIMEON SNELL, in reply, urged that although both eyes were affected yet it could not be denied that one eye was always worse than the other. As Mr. Hutchinson had explained, Oglesby's view more especially dealt with the notion that a congestion of the central apparatus was at work, and not that position was the essential factor.

Mr. J. F. STREATFEILD showed a Model Apparatus for demonstrating Operations on the Eye. After commenting on the difficulty of demonstrating ophthalmic operations to a large class owing to small dimensions of the organ, and the impossibility of all the members of a class of students catching even a glimpse of the manipulations, he explained the construction and uses of a large model made for him by Hawksley, of Oxford-street. The model was made on a scale exactly ten times that of the actual eye, and the models of the eye instruments were on the same scale, excepting the handles of the instruments, which had been altered and shortened. The apparatus allowed of a fair amount of rotation in every direction, and the front hemisphere of the eye could be fixed in any desired position. The sclerotic and the eyelids were constructed of white felt. The cornea was made of stout glass of the right curvature. The iris was imitated in thin sheet indiarubber, with a round hole for the pupil. The cataractous lens was made of xylonite. The internal and external rectus muscles of the eye were represented by pieces of linen bandage. With this apparatus could be represented the *modus operandi* of the peripheral section of the cornea, of iridectomy, of extraction of cataract, and of squint operations. The anterior chamber could only be entered for iridectomy, cataract extraction, &c., in the usual place, at the sclerotico-corneal junction. Here, at any part of the upper half-circumference, the knife, forceps, pricker, or curette could be entered between the felt sclerotic and the glass cornea, which gave way for their admission, and resumed its natural position when the instrument was withdrawn. The sheet indiarubber of which this imitation iris was made could be seized with the (model) iris forceps at any part, drawn out of the eye more or less, and so much cut off as might be desired in the demonstration. Mr. Streatfeild illustrated his remarks by performing a cataract extraction on the model.

Mr. J. F. STREATFEILD read a paper on a Preliminary Precaution to be taken in cases of Cataract Extraction when there is, or has been, any lacrymal obstruction or catarrh. The operation, in such cases, involved an almost certain failure of the worst kind; and as the cause of failure in these cases had been overlooked or misunderstood, this catastrophe seemed to have been almost as inevitable as it was complete. When suppuration followed purulent infiltration of the corneal wound, when it occurred as the direct and immediate consequence of the extraction operation, it was the common, almost

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invariable, beginning of the suppuration of the whole eye. These cases were of course not common, because the absolute loss of an eye after cataract extraction operation, from any cause, was a rare event; but absolute loss of vision was, as a rule, the result of suppuration. He had had two such cases within the past year,—one in private practice, and the other in Moorfields. The cause of this suppuration after cataract extraction, he was inclined to think, was generally some lacrymal obstruction, and secretion of purulent matter from the outlets of the tears in connexion with the eye operated on. No surgeon would think of operating for extraction when there was any lacrymal catarrh, or at least when there was any purulent regurgitation from the lacrymal sac, or indeed, any pus of any kind, or from any part of the mucous surfaces within the palpebral aperture; but the state of the lacrymal mucous membrane was difficult to investigate, and it was liable to be considered to be in a healthy state when it was not so. A purulent discharge from either mucous tract, but especially from the lacrymal mucous membrane, was likely to recur at any time, especially if an operation on the eye had been done. An inconspicuous quantity of pus would be sufficient to infect the corneal section. In the case of J. L——, a thin and healthy countryman, aged sixty-eight, admitted into Moorfields Hospital on July 4th, 1883, with mature cataracts, both the lower lacrymal puncta were somewhat everted, and, consequently, there was an overflow of the tears in either eye. The lower canaliculi were slit. Pus was found in the lacrymal sac on either side. After this the nasal ducts were probed every day, or nearly every day, for ten days, and the cure seemed to be complete. On July 16th the left cataract was extracted. On the day after the extraction a purulent infiltration of the wound at the upper part of the cornea had begun, and spread rapidly thence; the eye was very soon lost for all practical purposes, and on July 23rd it was excised. The patient left the hospital on August 2nd. On November 24th he was readmitted; there was some lacrymation of the right eye, but no evidence of any pus in the discharge from the sac at this time. The lower canaliculus, which had been slit, was patent. The eye was in all respects healthy with the exception of the opaque lens. Now, this was a very unsatisfactory state; there was no difficulty in passing the large probes and there was no pus to be seen in the discharge, but recovery was not complete. Mr. Streatfeild resuscitated the old operation for the total obliteration of the lacrymal sac, the canaliculi, and all the lacrymal mucous surface, which used occasionally to be performed twenty years ago for chronic obstinate discharge from and distension of the lacrymal sac, from obstruction of the nasal duct. On December 10th the upper canaliculus of the right eye was slit from the puncture to the lacrymal sac; when the bleeding had stopped the eyelids were held widely apart, the eye itself being covered and protected, and the pointed end of Paquelin's thermo-cautery was passed rapidly in the direction of first one and then the other canaliculus, along them, and quite into the sac. He then made a skin incision over the lacrymal sac, rather longer than the whole of its extent, downwards and a little outwards, between the root of the nose and the lower eyelid; this was then continued into the mucous cavity itself; and, when the bleeding was arrested, the two edges of the deep incision were held widely apart, and the broader end of the cautery was very freely and repeatedly applied to all parts of the exposed mucous surface, from the top to the bottom of the sac. The cavity was stuffed with carbolic oiled lint. On January 1st the wound had healed, and the sac and the canaliculi were apparently obliterated. There was a slight lacrymation, but there was no pus or any muco-purulent matter in the eye. On April 23rd he was again admitted. There was then a depressed scar in the place of the lacrymal sac, and a small hole leading down that direction; there was also an indication of a part of the lower canaliculus. The following day the cautery was again applied to the fistulous orifice and to the remains of the lower canaliculus, and on May 8th for a third time. On May 20th there seemed to be no trace of the canaliculi remaining, and no indication left of a lacrymal sac. There was now no discharge upon the conjunctival surface at any time; the flow of tears was not much, and it was no longer troublesome. On June 2nd the cataract of the right eye was extracted. The eyelids were washed with a one in forty solution of carbolic acid before the operation, and boracic acid ointment, ten grains to one ounce of vaseline, was smeared on the dressing. A weak solution of boracic acid was used subsequently every day to bathe the eye, and the same ointment was reapplied with after-dressings. Slight ciliary congestion with photophobia occurred about a fortnight after the operation, but the patient made a good recovery. The objections to the obliteration of the lacrymal sac were not practically very strong; and, in the cases in which he advocated a revival of this obsolete practice, it seemed to be absolutely necessary in order to succeed in operating for cataract subsequently.

Mr. SIMEON SNELL related the following cases of Imperfect Development. 1. Congenital cysts in the lower eyelids, with (apparent) anophthalmos. The patient was an infant of a few weeks. In the left lower eyelid a large cyst, with bluish tint, was situated; it extended deeply into the orbit. On being tapped the fluid escaping was straw-coloured, and corresponded, on analysis, to that examined from similar cases recorded as "congenital cysts with anophthalmos." Subsequently the cyst wall was partially excised, and it was thought a rudimentary globe was detected at the back of the orbit. In the right lower eyelid, at first, there seemed to be a very small cyst; it was not tapped, and a year later it was hardly apparent. Here also a resistance, particularly at the later period, was detected in the orbit, and was thought to indicate the presence of a rudimentary globe. Both orbits were normally developed. 2. Congenital cyst in lower eyelid with micro-ophthalmos; the infant was under the care of Mr. W. M. Jones of Wath. The cyst filled the orbit. After dissecting it out, a micro-ophthalmic eye came into view. The cornea was well formed, there was a coloboma at the lower part of the iris, and the eye was possessed apparently of some vision. An ophthalmoscopic examination was made, and, as far as could be made out, the child was almost moribund with tubercular peritonitis. The coloboma extended into the choroid, but did not reach to the optic disc. The cyst in the eyelid presented a bluish tint; the fluid was straw-coloured. Mr. Snell quoted the recorded cases, and remarked on the various causes assigned for the origin of these cysts by Talko, Manz, Van Duyse, and others. The theory advocated by Van Duyse, that they arose from the encysting of a staphylomatous coloboma, was held to correspond with their association with micro-ophthalmic or rudimentary globes. 3. A case of absence of eyeball on one side. 4. Micro-ophthalmos of the left eye, with coloboma of the optic nerve-sheath, and coloboma of the choroid in the right eye. The fundus in the left eye displayed the rare condition described as coloboma of the optic nerve-sheath; the coloboma was six or eight times the size of the optic nerve, perhaps being the largest recorded on the left side. V = fingers, possibly more; on the right, V = $\frac{1}{60}$. Between the optic disc and the periphery below, a pearly white patch was situated; the edges were well-marked and pigmented; otherwise the fundus was normal. This was considered to be congenital, and to be due to arrest of development (coloboma of the choroid). In neither eye was there a cleft of the iris, nor any deformity beyond those named. Nystagmus, affecting both eyes, was present. 5. Remains of hyaloid artery. The attachment to a vessel in the centre of the optic disc was clearly made out; at this point it was a little more funnel-shaped. Anteriorly, it was attached to the posterior lens capsule, where it occasioned a striated opacity. V = fingers at one foot. The eyes were myopic. 6. Coloboma of upper eyelid, situated at the junction of the inner with the middle third. There was also a lipoma of the conjunctiva.

Owing to the lateness of the hour, the two papers of which we are able to give the following abstracts were taken as read.

Mr. W. J. CANT, of Lincoln, related a case of Cystic Tumour of the Iris. The patient was a man, aged forty, suffering from loss of vision of the right eye, which prevented him from following his occupation; when a boy it had been injured by a piece of steel, but apparently it completely recovered. About three years ago his eye again began to trouble him, and he noticed soon after something growing over the sight which gradually increased. On examination, a cystic tumour was seen almost filling the pupil, growing from the iris at the upper segment. V=$\frac{1}{12}$, and he read Jaeger 16 with difficulty. A fundus reflex could be obtained through the tumour. The tension of the eyeball was increased (Tn+1 or 2). His left eye was almost useless from opacity of the cornea. The tumour, with a piece of iris, was removed through an upper section, and afterwards an iridectomy downwards was made. The eye completely recovered with good vision, V=$\frac{1}{1}$, and Jaeger 2.

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Mr. CANT also contributed a paper on a case of Injury of Head, followed by temporary Blindness and Anosmia. The patient, a potman, threw himself out of a window a height of 40 ft., and was taken up in an unconscious state. He regained partial consciousness, and then became violently delirious. After the swelling of the eyelids had passed off, he was found to be absolutely blind, and ophthalmoscopic examination revealed engorged optic discs. Loss of smell was also noticed at this time. In a few days the sight improved, and at the end of six weeks was quite restored. The anosmia, however, remained. The probable cause of these losses of sensory activity was hæmorrhage in the middle and anterior fossæ.

Mr. SIMEON SNELL showed a section under the microscope of a specimen of Bony Tumour of the Conjunctiva. It was removed from the right eye of a girl aged thirteen, and had probably existed since birth, but had caused no inconvenience until shortly before she came under observation.

Dr. WALTER EDMUNDS exhibited an ophthalmoscopic drawing from a case of Cerebral Tumour presenting appearances like those of albuminuric retinitis. There was well-marked double optic neuritis with hæmorrhages round the disc, there were also bright radiating lines at the yellow spot. The retinal veins were not tortuous.

Mr. LANG showed a child with a growth on the Iris of a possibly Tubercular nature. The eye had been noticed to be a little bloodshot about the middle of May. When first seen a month ago there were several growths on the lower part of the iris, and the cornea was hazy, the growths had since been steadily increasing in size, and there was pus in the anterior chamber.

Mr. A. CRITCHETT exhibited a patient with Conical Cornea on whom he had operated. Also, with Mr. TYLER, he exhibited a case of Squint cured by operation, and a leucoma of the cornea treated by tattooing, and the formation of an artificial pupil.

Mr. W. ADAMS FROST showed two cases of Double Optic Neuritis in Children. In the one case, which was a girl aged ten, the failure of vision had been preceded for several months by very severe headaches, accompanied by vomiting, and these still persisted. There was slight paresis of the left external rectus, but no other paralytic affection. The knee reflex was normal. The patient was a very healthy looking and intelligent child. There was no history of any personal illness or family tendency. The other was a girl aged seven. When first seen on May 1st, vision was said to have been failing a week. There was well-marked papillitis in both eyes. No history of headache or illness could be obtained at the time. A few weeks later the child was attacked with severe occipital pain and vomiting, and the headaches without vomiting have recurred frequently since. There seemed to be no paralysis of any ocular muscles. The left eye has improved slightly under small doses of mercury.

ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Medical Section held on April 18th, Dr. J. W. MOORE read an abstract of Surgeon-Major GORE'S paper on the Etiology of Climatic Fevers in India, which was before the section *in extenso* at the previous meeting, when, owing to the lateness of the hour, the discussion was adjourned. Surgeon-Major Gore showed that the common climatic fevers of the Kumaon Hill Ranges of N.W. Bengal presented themselves under two very distinct forms—namely, as intermittents and remittents. He disputed the doctrine held by some that remittent fevers were not to be met with in India as distinct from enteric fevers, and quoted briefly a description of the severe epidemic of malarial fever which prevailed in the neighbouring N.W. Provinces in 1879, which differed in no respect from that met with in many parts of Lower Bengal. Having alluded to the aqua-malarial fevers of the mountain regions of North America, as described by Waggoner and Smart, he referred to the observations of Macnamara and Walker on the presence of malarial fevers in the hills in India, and to the great varieties in the degree and severity of the types of malarial fever, which often obscured the diagnosis between malarial and enteric fevers. He showed how malarial fevers varied in intensity and duration according to the dose of the poison, exposure to intense heat, individual peculiarities of constitution, different altitudes, the causes of scurvy or acquired anæmia from a previous residence in the plains, giving examples from the records of the 30th Regiment. At the same time he pointed out how the malarial fever might ascend; in how many different ways it might be taken into the system; how the quinine test might be vitiated by a variety of circumstances, and what therapeutical combinations were necessary to render it effective, alluding to those congestive remittents caused by an excessive dose of the poison on the nervous system or blood, so altered from the natural standard as not to be amenable to any therapeutic combination which might be administered to avert a fatal issue.

Dr. J. P. DOYLE read a paper on a case presenting some symptoms of Disease of the Bladder. A gentleman, aged sixty-eight, came under his care in May last for irritability of the bladder and pain along the urethra, especially about an inch from the orifice. He consulted a London specialist, who from the symptoms expected to have found a calculus, but afterwards diagnosed enlargement with hardness of the right bone of the prostate, which he said by pressure on the nerves produced the pain, numbness, and lameness in the right lower extremity from which the patient suffered. He also informed him that he would not be free from the pain during his life. On January 18th inflammatory symptoms with great increase of pain set in. The slightest touch or movement produced increase of pain with contraction of the muscles of the thigh, which in a few days became very tense and swollen, and later on some stercoraceous vomiting ensued along with great tympanitic distension of the abdomen. The patient obtained great relief from puncturing the abdomen with the needle of a veterinarian's hypodermic syringe in the position of the ascending colon, which allowed the escape of a large quantity of very offensive gas. On post-mortem examination no calculus was found, and the bladder and prostate were normal. The veru montanum appeared enlarged; the cæcum, ascending colon, and vermiform appendix were found inflamed. The former were distended, and contained dark-coloured matter like moist charcoal, and the latter was filled with a hard mass, which on fracture looked like charcoal.—Dr. MORE MADDEN considered that all the symptoms pointed to disease of the bladder, including displacement of the cæcum, which gave rise to an amount of trouble sometimes under-estimated.

Dr. J. MAGEE FINNY read a paper illustrating the Identity of Progressive Muscular Atrophy and Progressive Bulbar Paralysis. The subjects of this communication were men of the labouring class, both from the country—one aged fifty, the other thirty-nine—who came under his care in the spring of 1882. The duration of the disease was seven and nine months respectively. In both disease began, without any discoverable predisposing or exciting cause, in the tongue, by impairment of speech and difficulty of deglutition, and after five or six months evidences of progressive muscular atrophy were perceived, although it was very probable that its occurrence was considerably earlier. The bulbar symptoms were extremely well-marked in each, though one differed from the other by the amount of glossal atrophy and the involvement of the lips. Fibrillary movements were noticed in the tongue of both, and in the lips of one. The constant dribbling of saliva, the difficulty of pressing the lips to blow smoke or spit, the difficulty of carrying the particles of food to the back of the mouth, were all well-marked, while speech was reduced to "aye" and "no" in one patient and to a few monosyllables in the other. In both the dentals and labial letters were impossible, and in one suffocative attacks from the food entering the larynx were frequently imminent. The amyotrophic changes were well marked in the neck and upper extremities of one and of both arms and legs in the other. Fibrillary movements were most distinctly seen in all the paralysed muscles. Sensation and tendon reflexes were unimpaired, and there was no paralysis of the bladder or rectum. In one treatment by barium chloride and frequent galvanism and faradaism seemed to arrest the progressive muscular atrophy, and even to restore to the deltoids the power they had lost, while the bulbar symptoms remained unaltered, though not increased. The other case was rapidly wasting, and the bulbar symptoms were worse. Both cases left the hospital, and their future progress was unknown.—Dr. C. J. NIXON observed that in bulbar paralysis there was always to be found a constant lesion in the motor roots of the nerves and the motor ganglia and the medulla. In all the post-mortem examinations there had been found constant trophic change in the motor roots of the nerves, whereas in nineteen recorded cases of progressive muscular atrophy no change whatever was found in the motor roots. Another pecu-

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liarity was that the first sign was the atrophic condition of the muscles, while there were some cases recorded where, with distinct bulbar paralysis, there was no atrophy of the muscles at all. The absence of atrophy of the muscles could be explained by assuming the disease to be confined to the motor cells in the anterior grey horns, while the trophic cells in the neighbourhood had escaped the disease.—Dr. FINNY, in reply, acknowledged that Dr. Nixon had touched more points than he had dealt with in his communication; but he thought it was hardly time yet to come to any positive conclusion in comparing the two diseases, the number of observations on progressive muscular atrophy being much larger than that on bulbar paralysis.

Mr. STORY read a paper on Atrophy of the Nerves, and Paralysis of the First and Fifth, from probable tumour in the brain, the discussion of which was postponed to the next meeting.

CAMBRIDGE MEDICAL SOCIETY.

AT a meeting of this Society on June 6th, Mr. ROPER related a case of Cerebral Hæmorrhage simulating Opium Poisoning. Mrs. W——, aged sixty, had for many years suffered from renal stricture, for the relief of which she had been accustomed daily to use laudanum by enemata, using about sixteen ounces during the fortnight. About six o'clock P.M. on Thursday, Feb. 28th, she complained of feeling ill, different from anything she had ever before experienced, with pain at the back of her head and giddiness. She appears to have retched, although she did not actually vomit. She made several ineffectual attempts to swallow tea. Mr. Roper saw her about twenty minutes after nine, when she was in a state of profound coma. Upon inquiry he was informed that she had been unconscious since about eight o'clock. The limbs were flaccid, the eyelids closed, and the mouth open. The breathing was infrequent and noisy; the pulse full, forcible, and between 70 and 80 a minute. The carotids pulsated visibly. The pupils were minutely contracted, and sensibility was in abeyance. Towards the end the respirations became still less frequent, the pulse intermittent, and finally very feeble, but continuing to beat for two minutes after respiration had ceased. She died about ten o'clock. The post-mortem examination was made at a quarter to five on the following day. Rigor mortis had set in. The brain was removed and the membranes found much congested, and there was an area of great congestion upon the surface of the brain in the position of the left parietal eminence. There was a clot of the size of a large walnut occupying the centre of the right cerebellum. Mr. Roper brought this case before the Society, as the symptoms bore so close a resemblance to those which occur in opium-poisoning, and the case was therefore interesting from a medico-legal point of view, and as showing that it is not wise to place too much reliance on circumstantial evidence. This case differed from one which came under his notice two years ago, in which he found a small clot in the pons Varolii, in that consciousness was much longer retained, and the pulse remained full, regular, and firm till nearly the end; whilst in the other case, profound coma occurred almost immediately, and the pulse was extremely feeble and rapid.

Mr. CARVER alluded to the Treatment of Nævus with Ethylate of Sodium. He had tried it very successfully in several cases. It was easy of application and gave little pain. It should not be applied too freely or sloughing would ensue, but just enough to discolour the skin; then in about ten days the crust should be separated. After repeated applications, the blood is coagulated and a puckered mark remains. This after a time disappears, and there should be little or no scar left.

Mr. WHERRY showed a specimen of Fracture of First Rib, with Pressure on Subclavian Artery, which was taken from a patient who fell from a brake-van of a ballast train; the wheels crushed his legs so that both had to be amputated. Fever and delirium followed, the flaps partly sloughed, and the patient died three days after admission to the hospital. During life his breathing was quick and shallow. His chest was carefully examined, but no fracture of the rib could be discovered. There was a slight bruising about the left clavicle, and a musical systolic bruit heard just below the middle of that bone. There was dulness on percussion in this region. The radial pulse was alike at both wrists. After death the first rib on the left side was found to be fractured, the line of fracture running very obliquely from the tuberosity behind to the tuberosity in front. The subclavian artery was pressed upon by a displaced portion, and a great quantity of blood was extravasated about the vessels and fractured rib. The clavicle was not broken, nor were any of the other ribs. The left chest was full of bloody fluid, and the lung collapsed and consolidated.

Dr. BRADBURY showed portions of the Small and Large Intestines removed from a man who had died of Typhoid Fever, and afterwards read the notes of a patient, aged twenty-six, a plumber, under his care in the hospital suffering from Bright's Disease. In addition to his other symptoms, he had frequent attacks of colic and passed blood by the bowel. He was very ill when admitted on January 1st, suffering from dyspnœa and great debility, the urine containing much albumen. On the 13th he passed a quantity of blood in the night, followed by severe abdominal pain. On February 5th he suffered from severe pain over the heart, and after great distress died suddenly. Post-mortem: The kidneys were enlarged and firm, the capsules slightly adherent. The left pleura contained much fluid, and the heart was dilated and hypertrophied. The intestines were congested in many places. In the lower half of the small bowel were numerous patches of submucous hæmorrhage. In the upper part of the ileum were three small ulcers close together, the largest about half an inch long by one-eighth of an inch broad, superficial, the edges ragged but not undermined. The submucous tissue around was deeply stained with blood, and the ulcer appeared to have its origin in a hæmorrhage similar to that found elsewhere. Dr. Bradbury said that ulceration of the intestines was rare in Bright's disease. He thought it probable that the hæmorrhage into the submucous tissue was the cause of the ulceration, there being great tendency to hæmorrhage in the disease. He referred to cases recorded by Dr. Dickinson, in all of which the patients were under twenty-one, exceptionally young for granular kidney. His patient was only twenty-six.

Dr. HUMPHRY showed the Head and Neck of the Femur from an old woman which had been sent to him to prove that, as was usually accepted, the angle of junction of the neck of the thigh bone with the shaft was smaller in aged persons than in the adult. He believed this to be quite an erroneous notion, and indeed this specimen did not show it to be the case. What had occurred in this instance was that there had been disease and absorption of the upper part of the head, while new bone had been deposited on the under surface, so causing the appearance of alteration of the angle. Dr. Humphry thought it probable that the angle varied to a slight extent in different persons, but he could not allow that any change of this kind occurred from old age. It would be quite unique, for he was not aware of any such alteration of form occurring in any other part of the skeleton from this cause. He had in his possession the femur of an old woman aged 103, and the angle was as open as in the adult.

Reviews and Notices of Books.

An Introduction to Pathology and Morbid Anatomy. By T. HENRY GREEN, M.D., Physician to Charing-cross Hospital, &c. Sixth Edition. London: H. Renshaw. 1884.—The issue of the sixth edition of this work indicates its deservedly sustained popularity and value. It is not many years since the first edition appeared as "a boon and a blessing" to those who, then but tyros, are now representatives of pathological science in England. Fifteen years ago there were scarcely half a dozen serious students of pathology and morbid anatomy in England; there was certainly no distinct school. Now the votaries to these studies may be counted by hundreds, and the work done by many of them will bear comparison, as regards its thoroughness, ingenuity, or utility, with that of the best continental investigators. Dr. Green's book was a pioneer of the new movement, and it has done much from time to time to consolidate this enviable progress. It will therefore be a double pleasure to those who have not forgotten their early debts to find that the demand for Dr. Green's manual continues as great as ever, and that the author's ardour remains unabated.

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The new edition has been carefully revised and brought up to the level of contemporary knowledge. Dr. Green acknowledges with satisfaction the co-operation of Mr. Stanley Boyd in the preparation of this edition. This gentleman has contributed the general introductory chapter and the chapters on Tumours, Degeneration, Septicæmia, Pyæmia, and Vegetable Parasites, including Bacilli. Every one of these articles is excellent. Though Dr. Green's manual has now two or three formidable competitors, we may confidently recommend it to the medical student and practitioner as altogether the best in our language.

The Extra Pharmacopœia of Unofficial Drugs, &c. By WILLIAM MARTINDALE, F.C.S., and W. WYNN WESTCOTT, M.B. Lond. Third Edition. London: H. K. Lewis. 1884.—The rapidity with which this excellent little work has passed through two editions testifies to its utility, as well as to the really remarkable attention that is given to pharmacy in the present day. Nor need the near approach of a new edition of the British Pharmacopœia at all interfere with the domain covered by Mr. Martindale's book, for it is safe to say that but a very small proportion of the drugs and preparations here described will as yet find a place in the official list. The compilers of the British Pharmacopœia are likely to err on the side of caution and conservatism, and will hesitate to include many useful remedies on the score of their novelty. Therefore we think that an extra pharmacopœia will always be of use, and if, as seems likely, the present work continues on its successful career, practitioners will be enabled to estimate at their true value many a novelty which might otherwise be neglected. Doubtless several of these new remedies enjoy but an ephemeral period of favour, but besides these there are many that will endure and will replace older and less efficient drugs. To enumerate the whole list would be to reproduce the index of the volume before us; but a selection of the following from its pages shows how various are these new remedies, which have gained considerable acceptance:—Abrus (jequirity), boroglyceride, bromide and iodide of ethyl, caffeine, chinoline and kairin, convallaria, homatropine, duboisin, emetine, erythrophlæum (casca bark), eucalyptol, hamamelis, hydrastin, iodoform, iridin, menthol, muscarine, not to mention the widely known salicine compounds and special preparations of drugs of old-established use. A great merit of this book is its conciseness, and the addition to the description of each drug of recorded experience of its effects. The index, which comprises a detailed "therapeutical" as well as a "posological" part, is also a feature; and it may be said of the book, with more truth than the phrase often conveys, that it should be the constant companion of every practitioner.

A Synopsis of the Bacteria and Yeast Fungi. By W. B. GROVE, B.A. London: Chatto and Windus. 1884.—This synopsis of the bacteria and yeast fungi and allied species (hyphomycetes and saccharomycetes) has been drawn up by the hon. librarian of the Birmingham Natural History and Microscopical Society. The aim of the little work is almost purely morphological. The first two chapters are translated, with additions (the more important of which are indicated), from Dr. G. Winter's edition of "Die Pilze" in Rabenhorst's "Kryptogamen-Flora." The book must be regarded as of much value as a work of reference, for it is decidedly laconic and elaborate.

Homburg vor der Höhe, a Health Resort. By H. S. C. WISE, M.D. Pp. 63. Homburg vor der Höhe: Steinmetz. 1884.—This little work contains a good deal of miscellaneous information respecting Homburg. After a brief historical notice of the spa from the beginning of the seventeenth century to the present time, the author gives an account of its climate as a health resort, and of the situation and composition of its mineral springs, which are of two kinds, chalybeate and saline. After some observations on the principal components of the spring, he enumerates briefly the diseases in which he thinks they may be used with advantage, and those in which they are contra-indicated. The latter are diseases of the bronchi and lungs, especially tubercular; diseases of the heart and its vessels, dropsical affections, softening of the brain, and acute inflammatory processes. The Kur establishments are described, and the dietary to be observed by the patients is detailed. The latter part of the work is devoted to an account of Homburg and its neighbourhood, with the excursions which may be made by visitors, and the amusements provided for them during the season. The book has been translated from the German by some one evidently not used to such work, and might easily be improved in its style, but it contains information which may be useful to those who are desirous of sending patients abroad to take a course of mineral waters. We are disposed to think that Dr. Heyd considers the waters applicable to too extended a class of cases, but he furnishes information which may enable physicians to decide whether they are likely to prove useful to the patients under their care.

Wiesen as a Health Resort in Early Phthisis. By A. T. WISE, M.D. London: Baillière. 1883.—This book has been written to bring to notice a new Alpine health resort. Wiesen is situated about eleven miles from and about 334 ft. lower than Davos. The mean temperature is said to be two or three degrees higher, and the winter to be shorter than at Davos. It lacks, however, many of the comforts of the latter, and is defective in some of the most important sanitary arrangements. "Promises are made that these defects will be remedied;" but we think it would have been judicious to postpone the publication of this book till these promises had been fulfilled. There are a number of meteorological tables relating to the period from Nov. 1882 to March 20th, 1883, but as we are informed in the preface that they "were made in a winter unprecedented in ten years," we fail to see how they can be useful. There is also a table giving the ages at death of the inhabitants since 1834, with a view to show how many deaths occurred at advanced periods of life, but as there is no information given of the numbers living at each age during the period, it is absolutely of no value, and may possibly be misleading. We do not think the remarks on clothing, diet, exercise, &c., add anything to the existing knowledge on these subjects.

The J.E.M. Guide to Switzerland. The Alps, and how to see them. Edited by J. E. MUDDOCH. Pp. 416. London: Wyman and Sons, 1884.—*The J.E.M. Guide to Davos Platz.* Edited by J. E. MUDDOCH. With Analytical Notes on the Food, Air, Water, and Climate. By PHILIP HOLLAND. Third Edition. Pp. 135. London: Wyman and Sons, 1884.—The first of these works is the fourth edition of a very good practical guide to Switzerland. It appears to contain the information which a tourist requires without being overladen with unnecessary details, and is of a portable and convenient size. The hints to travellers and the general information prefixed to the guide are judicious, and will amply repay the careful study of anyone intending to visit Switzerland. We have no hesitation in recommending it as a valuable guide book; it has also the advantage of a copious index.—The Guide to Davos Platz by the same editor gives a very good description of the place, its climate, accommodation, and amusements. In addition to all the necessary information respecting the routes by which it may be reached, there are two interesting papers by the editor on Alpine Climbing in the Winter. Written from a non-professional point of view, but with an evident appreciation of the importance of good sanitary surroundings, this little work appears to us to afford all the information required to enable the members of the profession

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to judge of the value of Davos Platz as a health resort and of the precautions which it is necessary or advisable to impress upon patients sent there in the hope of arresting the progress of pulmonary disease.

The Riviera, or the Coast from Marseilles to Leghorn, including Carrara, Lucca, Pisa, Pistoja, and Florence. Illustrated with Eight Maps and Six Plates. By C. B. BLACK. 8vo, pp. 284. Edinburgh: A. and C. Black. 1884.—This is a very good guide book to the stations of the Riviera from Marseilles to Leghorn. It does not treat of them from a medical point of view, but affords all the information necessary for travellers generally, the means of locomotion, the hotels and boarding-houses, the excursions which may be taken from each of them, and the places of interest which may be visited. The maps and plans have been carefully prepared, and the volume is altogether worthy of the reputation of the publishers. It has the great advantage of containing a large amount of really useful information without being either tiresome or too large to be conveniently used as a handbook.

Health Exhibition Handbooks. Water and Water Supplies; and Unfermented Beverages. By JOHN ATTFIELD, Ph.D., F.R.S.—*Food and Cookery for Infants and Invalids.* By C. JANE WOOD; with an Introduction by W. B. CHEADLE, M.D.—*On the Principles of Cooking.* By SEPT. BERDMORE.—*Healthy Schools.* By CHARLES E. PAGET.—*Ambulance Organisation, Equipment, and Transport.* By Surgeon-Major G. J. H. EVATT, M.D.—*Fires and Fire Brigades.* By Captain EYRE M. SHAW, C.B.—These handbooks, issued by the Executive Council of the Health Exhibition, treat of the subjects indicated by their respective titles in a lucid and popular manner. They are not written for specialists, but for the information and enlightenment of the general public, an object which they are well calculated to attain.

Birmingham Medical Review. July, 1884.—The original communications of this number are:—The Surgery of the Kidney, by Lawson Tait, F.R.C.S.; Random Recollections of Eighteen Years' Experience of a Parish Medical Officer, by Jabez Jackson, M.R.C.P.; Cerebellar Disease, with Crossed Paralysis, by C. U. Suckling, M.D.

British Medico-Chirurgical Journal. June, 1884.—The current number of this quarterly journal contains an excellent article on Chorea by Dr. Long Fox. Ingrowing Toenail is treated of by Mr. Greig Smith, and Ligature of Main Arteries by Mr. Paul Bush. A case of Tumour (Columnar Papilloma) in the Fourth Ventricle of the Brain, with Hydrocephalus, is reported by Mr. J. Taylor.

The Journal of Mental Science. July, 1884.—Professor Herzen continues his dissertation on the Physical Conditions of Consciousness; Dr. J. A. Campbell discusses the question of "Unlocked Doors" in Asylums; Dr. Chapman institutes an inquiry into the value to be attached to the different Recovery-rates of different Asylums as Tests of Efficiency; Dr. Newington treats of Unverified Prognosis; Dr. Fox writes on Exaltation in Chronic Alcoholism. Interesting cases of Cerebellar Hæmorrhage are recorded by Dr. James Shaw; Mr. Bevan Lewis gives an illustrated account of an example of Post-Hemiplegic Hemichorea associated with Insanity; an illustrated case of General Paralysis with Pachymeningitis is described by Dr. Savage; and Dr. McDowall reports cases of Congenital Mental Defect with Delusions of Suspicion in Twins (with portraits).

The American Journal of Neurology and Psychiatry. May, 1884.—Our neurological brethren in America manage to keep pace with us in the number and value of their contributions to the medicine of the nervous system. In the current number of this quarterly many original articles may be found, amongst the best of which are:—A case of Spinal Hemianæsthesia and Hemiparaplegia (a fearful combination from a nosological standpoint) after Fracture of Dorsal Vertebræ, by Dr. Thomas M. Taylor; a case of Nodular Tumour of the Corpus Callosum, by Dr. Francis McGuire; a case of Tumour in the Optic Thalamus, by Dr. McBride. The editor, Dr. Spitzka, has abstracted many valuable articles from various European periodicals. A large amount of information has been given in the Proceedings of the Societies, and several books are critically reviewed.

New Inventions.

"APPUI" CHAIR BACKS.

NOVEL and useful inventions are the "appui" chair backs, giving elastic and yielding support to the spinal column, which can be regulated to the required position. No. 1 is composed of a steel spring about two inches wide, with a centre pad stuffed with horsehair, forming a soft cushion-like rest; the whole can be covered with stuff or cretonne to match the furniture; it will fit any chair. No. 2 is adjustable also, can be made more or less prominent, lowered, heightened, or placed at any angle, by means of a screw at the back of the pad. It is most suitable for a chair with a solid back. The apparatus is the invention of Mr. Moppett, Kemp Town, Brighton.

VENTILATING QUILTS.

MESSRS. BOOTH and FOX, of Cork, and Hatton-garden, London, have submitted to our notice a quilt which, to the qualities of lightness and warmth which are combined in an ordinary down quilt, add the advantage of admitting of efficient ventilation. This is provided for by the exclusion of the down from the double row of stitching which divides the sections of the quilt. The seams thus serve as excellent ventilators. The device is novel, and can scarcely fail of being effective.

"RECENT STUDIES IN BACTERIAL PATHOLOGY."

To the Editor of THE LANCET.

SIR,—In a leading article on the above subject in your issue of the 12th inst., you remark that "Falk has observed that putrefaction destroys the virulence of the tubercular virus," and that the same observer "has endeavoured to obtain by experimental means a benign tuberculosis by inoculating virus attenuated by putrefaction, with the view of discovering the means of vaccinating against tubercle."

It may be of interest to some of your readers to know that I have observed that the bacilli of tubercle are not destroyed, or even appreciably altered, by their continued presence in sputum which has undergone putrefaction. Thus, on the 14th inst., they were readily detected in laryngeal phthisical sputum which had been kept from August 10th last, now nearly a year ago. This sputum, originally muco-purulent in character, is now of a dirty milky consistence, with a strongly putrefactive odour, and scarcely any of its original constituents can be recognised by the microscope. The bacilli seem unaltered in their physical or chemical characters, with the possible exception of staining rather faintly with rosanilin—a feature, however, which is not unusual under certain circumstances with bacilli from recent sputum. Judged by appearances, they seem as capable as ever of communicating tubercular disease.

I am, Sir, yours, &c.,

Edinburgh, July, 1883. G. HUNTER MACKENZIE, M.D.

A MEMORIAL, praying the Lieutenant-Governor to call the Calcutta Corporation to account for its neglect of sanitation, has received over 1000 signatures, including those of the Chief Justice and Judges of the High Court, the Bishop of Calcutta, the Surgeon-General, and others.

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THE LANCET.

LONDON: SATURDAY, JULY 19, 1884.

WE deeply regret to have to say that the Government are in danger of surrendering the most vital point in their Medical Bill, and we confess to feeling the utmost anxiety as to the measure. If there is one thing more than another which all medical reformers have desired, and for which they have laboured from the time of the founder of this journal till now, it is the creation of a single portal to the profession, through which all its members would have to pass. Whatever higher title they might attain, all were to pass through this one gate. The public is often duped with titles. Many bodies, even universities, have been well known to dispose of their highest titles on the lowest terms. There is nothing in a high title to guarantee a high examination. And many a meritorious medical man with humble title is placed at a disadvantage by a neighbour who has found medical authorities base enough to give him a high-sounding title on low terms in respect of everything but money payment. The Bill of the Government as originally introduced provided two or three safeguards against the trade in high titles. It provided that higher titles were only to be registered on condition of the Medical Council being satisfied that they were obtained after higher examinations than those for the licence to practise. This safeguard was abandoned last year. The Bill further provided—as every Bill for the last fifteen years has provided—for the creation of a single board in each division of the kingdom, the examination of which every medical man was to pass. The passing of this examination alone was to entitle the successful candidate to a licence to practise. Though a minimum examination, it was to be essentially a sound, honest, and disinterested one. As a common test, it was to try not only every student's work, but the work of the schools in which he had been educated, and incidentally the nature and stringency of the examinations of other bodies which he might have passed. It will not readily be believed that the Government is going to abandon this essential provision of their Bill and of all similar Bills. If they do so, they will deeply disappoint the profession.

The gentleman under whose persuasive eloquence they are said to have been induced to take this step is Sir LYON PLAYFAIR. The Government will make a great mistake if they attach too much importance to the somewhat cantankerous and warped views of Sir LYON PLAYFAIR. They should remember that he is not a member of the medical profession, and that the near approach of a general election, in which he is threatened with the loss of his seat, may explain his protesting so much about the interests of the Scotch universities. Sir LYON boasts of the number of his medical constituents. But he greatly mistakes the views of medical men if he thinks to advance his political interests, or those of the Government, by inducing the Government to abandon the One-portal system. Medical men will never forgive such a use of his, not medical, but quasi-professoria position in the House. Better far to be represented by a lawyer, by one who has no half knowledge of the profession, giving a false value to his views, than to be thus misrepresented. The more closely Sir LYON PLAYFAIR'S amendment is examined, the more does it appear full of most doubtful suggestions and statements: as that "the profession is undermanned," whereas almost every place is overstocked, the last year's Register containing several hundred more names than that of 1882; that "conjoint examinations alter the case and guarantee satisfaction to the State," whereas the greatest scandals brought to light by the inquiry of the Royal Commissioners have reference to bodies which have been acting conjointly for years; that the "creation of a sound and independent minimum examination will lower all examinations and make men more indifferent to higher degrees and distinctions," as if the raising of the basis of a pyramid could lower its apex; that "the highest professional authorities in the Commission were Mr. HUXLEY and Prof. TURNER," leaving Sir WILLIAM JENNER and Dr. MCDONNELL out of account as supporters of a Final Board; and that "the universities of Scotland will be injured and the demand for their degrees lessened by the creation of such an examination." How comes it that such Scotch graduates as Sir ANDREW CLARK, Dr. DUCKWORTH, Dr. SPENCER CORBOLD, and others, have besought the Government to pass their Bill? Seriously, Sir LYON PLAYFAIR is degrading the Scotch universities by representing them as afraid of such a small measure in the interest of the State; and he is sacrificing the interests of the medical profession, by whom hitherto he has been largely supported.

We have throughout supported the Bill of the Government. Not that it satisfies us. But in the present impotence of Parliament, and in the absence in it of even one medical man who can rise above the standpoint of the corporation interests of nineteen medical bodies—half of which are superfluous and need disestablishment—we were content to take it as a measure of reform. But if legislation is to become a mere piece of accommodation, if the Scotch and Irish bodies are to dictate their own terms, if effete bodies are to be perpetuated at the expense of the profession in the form of conjoint schemes, if the One-portal system is to be abandoned—then our interest in the Bill is gone, the surrender of Ministers is complete, and the incompetence of Parliament to deal with such a momentous question is well-nigh demonstrated. We look forward anxiously to Monday night, in the hope that Mr. MUNDELLA will see through the weakness of the platitudes and the plausibilities of Sir LYON PLAYFAIR'S amendment. In a very short time he could demolish them with his own strong common sense, and carry the House in support of the Final Board demanded by the profession, recommended by the Royal Commission, and accepted by the House of Lords.

WERE the matter otherwise of sufficient importance, it would be an interesting ethical investigation to discover what moral maxim, if any, underlies the action of the dominant party in the Council of the Royal College of Surgeons of England. It will be remembered that at the general meeting of the Fellows and Members, held in the College on March 24th last, a question was asked respecting the significance of a resolution of the Council. "Was it

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not a fact that it had been held in the Council that a Resolution adopted by one Council did not bind another?" "Yes," said the President. "Then a Resolution of the Council may at any moment become a dead letter?" "Not unless it were distinctly rescinded," promptly answered the President; "and no rescission of a Resolution of the Council can take place without notice, argument, and confirmation. The Council really ought to be treated as gentlemen" (!) Pressed a little more closely, the President devised the memorable but confusing duplex classification of Resolutions of the Council—namely, first, "Resolutions which were intended to be directly *operative* when confirmed," and second, "Resolutions which were *not of an operative kind.*" It is necessary to bear this discussion and apology in mind if we would appreciate the meaning of a motion brought forward, after many postponements, by Sir SPENCER WELLS, at the meeting of Council held on the 10th instant, and referred to in our columns last week. Sir SPENCER WELLS proposed to move—"That all confirmed Resolutions of the Council be considered as in force until they have been formally rescinded, and that any existing Resolutions which are not binding on the Council be rescinded." This was at length divided into two parts. First, the Council was asked to pledge itself to the view that all Resolutions of the Council should be considered as in force until formally rescinded; in other words, that the Resolutions should in reality be directly "operative." This motion was negatived; hence it logically follows, in spite of the indignant remonstrance and protest of the ex-President, that all the Resolutions of the Council shall as heretofore be considered as *not* in force, and thus they shall all continue to remain in the category of "inoperative" Resolutions. The second part of Sir SPENCER WELLS' motion, "That all existing Resolutions not binding on the Council shall be rescinded," was withdrawn.

Now, what are the Resolutions which the Council has in times past deliberately adopted, but which it now, as always, with equal deliberation refuses to act upon? They are chiefly these:—First, that no one who has been twice elected a member of the Court of Examiners shall, at the expiration of his period of office, be eligible for immediate re-election. Second, that it is desirable that not less than one-half of the members of the Court of Examiners shall be Fellows who are not, and have not within twelve months, been members of the Council. Third, that the Minutes of each meeting of the Council shall be posted in the Hall of the College within five days of each meeting. The first of these Resolutions was adopted and *confirmed* eighteen years ago; the second and the third fourteen years ago; and yet we believe that not one has ever been "operative." As regards the first Resolution, it may be said that the present senior Vice-President is enjoying his third period of office in defiance of a *confirmed* Resolution of the Council. As to the second, it is enough to recall the fact that at the present time every member of the Court of Examiners is also on the Council, as well as one member of the Board of Examiners; while as to the third Resolution, we doubt whether, outside the Council, twenty Fellows and Members are aware that they are, by a *confirmed* Resolution of the Council, entitled to read in the Hall of the College the Minutes of the Council meetings within five days of the holding of such meetings. But when we remember how the Council to the very last persistently and wilfully disregarded a solemn obligation of a Charter respecting members of the Council who had ceased from the *bonâ-fide* practice of the profession of a surgeon, it is not difficult to account for the small value it sets on its own resolutions.

ALTHOUGH cholera has spread to some few outlying places in France, yet the disease is still limited as an epidemic to Toulon and Marseilles; but in both these towns the average daily number of deaths has undergone an increase since last week. This is especially the case as regards Marseilles, where the deaths have for some days past varied from about fifty to seventy. What is in store for France and for Europe cannot as yet be foretold. Twenty years ago, when Marseilles received the cholera infection from Alexandria, it infected the rest of France, and before France admitted itself as infected, Valencia had received a serious amount of infection through it, and through Valencia all Spain became involved. The policy of concealment, which has so largely influenced the attitude of those who are in authority in France, is the least hopeful feature of the subject, and it is probably to this attitude that some of the rumours as to the spread of the scourge are due, for the people themselves cannot believe that the Government allow the whole truth to be known.

The Academy of Medicine has wisely decided against any attempt at an inland quarantine and sanitary cordons, deeming such measures to be impracticable in a commercial and populous country like France. They have also entered a protest against the futile and vexatious processes of so-called disinfection to which people are subjected on entering Paris and other towns. This is a wise step, and it is to be hoped that the energy which has been thrown away in this direction will now be devoted to general sanitary measures, which, by the removal of conditions of filth, will make the towns and villages to which the infection may be brought less susceptible of the disease. The danger as regards secondary cholera centres may be more and more removed as the adoption of adequate sanitary measures shall bring within control the conditions which usually lead to the spread of what are known as filth diseases. It is also on these measures that we must ourselves rely in case infection is imported into this country; and it specially behoves the sanitary authorities of ports and towns in frequent communication with France to set their houses in order from this point of view, and so to hold themselves in readiness both as regards the removal of filth and the provision of means of isolation that they will at once be prepared to face any emergency. Scares are sure to arise, and the majority of them will be either altogether or nearly unworthy of credit. One has passed quietly by this week. The *Carthagena* has arrived safely at its Welsh port, the few men who were recovering from choleraic diarrhœa have been isolated, and the danger is apparently over.

During the past few days cases of so-called cholera are alleged to have occurred in London. That they were not instances of the genuine disease is tolerably certain from the subsequent history of the places and families in which they arose; and we cannot too forcibly urge medical practitioners to be careful as to the diagnosis which they may make when called in to treat cases of severe diarrhœa.

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such as always occur in the metropolis during the hot summer months, and which are so often misnamed cholera. At the present moment the right course is to adopt the strictest preventive measures as regards isolation and disinfection with respect to every case that may present doubtful features, and it will be policy in all such cases to communicate with the local medical officer of health; but it is at the same time no less important not to create a panic by proclaiming a case to be cholera merely because it is fatal and has been accompanied by some of the signs of the epidemic disease. Some of our neighbours have already lost their heads; during, at least, one of our previous epidemics of cholera people in this country did the same thing. It will be well to learn by experience, and to remember that in the face of a common danger every member of the community has a definite duty towards his neighbour, and this duty he will certainly not accomplish by running away and so tending to increase a panic. There is still time for householders to disconnect their houses from the drains, to secure a current of air through all house drains, to remove all offensive appliances, fittings, and accumulations, and to see that water cisterns are clean and overflow into the open air; and having done this they may, by the observance of the most ordinary precautions, remain where they are, at a risk which is but trivial compared with that which many are now running because they have not abolished from their homes conditions favourable to the spread of some of our current but very fatal preventable diseases.

THERE seems no improvement in the lamentable condition of affairs that for many months has distracted the inhabitants of the Diamond Fields. The Kimberley Board of Health, having expended over £16,000 in the attempted suppression of a singularly fatal epidemic, finds itself in pecuniary difficulties. Nor is this to be wondered at when one considers that the great mining interest which represents the main source of income to the districts of Kimberley, Beltfontein, and Dutoitspan has been led by what we venture to think the mistaken policy and action of certain medical men. Surely it ought to be sufficient to convince the most sceptical that a mortality of twenty-two out of fifty-three cases has obtained in one district alone—the native location in the division of Hay or Herbert. What does it matter to the victims whether the plague of which they suffer and die is small-pox or "a disease allied to pemphigus," or the still more problematical "varicella hæmorrhagica"? We have already explained our firm conviction that there has been a visitation of genuine variola, notwithstanding Drs. JAMESON and WILLS have declared to the contrary. In the *Cape Times* of June 10th is the doctors' report from Griqualand West. It is there stated that, whilst the epidemic is causing great alarm in Kimberley, Dr. WOLFF, one of the surgeons to the sanitary boards, winds up a report with words to this effect: "The disease is a miasmatic one (like malaria), and *not* contagious; and the isolation of a hospital is hardly necessary, and the destruction of suspected contagious fomites is a needless expense." Can it be matter of surprise that the local executive authorities find their work brought to a dead-lock when they are confronted with such compromising professional opinion? A general idea of the confusion that prevails may be gathered from the fact that at a meeting of the Beaconsfield Town Council the following question was formally put to the members: "Is the disease 'small-pox' or 'so-called small-pox'?" It says something for the sagacity of these gentlemen that by a large majority they voted in favour of the latter description of the pestilence. We see it is recommended that a commission composed of leading medical men in Cape Colony should determine the point in dispute. Certainly a competent official tribunal ought to investigate the whole matter; for as it stands at present, it is a scandal and a disgrace to the medical profession, and a source of immeasurable mischief to the community. Cannot the Secretary to the Colonies see his way to sending out a skilled and unbiased observer to examine and report on the nature of the outbreak?

Annotations.

"Ne quid nimis."

THE PRESIDENCY OF THE ROYAL COLLEGE OF SURGEONS.

IN our report last week of the meeting of the Council of the Royal College of Surgeons of England held on the 10th inst., we inadvertently omitted to state that Mr. Heath's motion, "That at the ordinary meeting of the Council in November next, the Council do consider the mode of electing the President and any alterations suggested in the method of proceeding in the election," was carried *nemine contradicente*. At the meeting in November Mr. Heath will be prepared to present a scheme for electing the President, and it may be confidently assumed that this scheme will not only depart from the existing absurd system of electing the President by rotation, but that it will provide for the election in some such way as that suggested in a recommendation adopted at the general meeting of Fellows and Members held at the College last March.

DIARRHŒAL MORTALITY IN ENGLISH TOWNS.

THE outbreak of cholera in the south of France invests the usual advent of summer diarrhœal fatality in our English towns with more than the usual amount of interest. Although May was exceptionally warm, the mean temperature and the amount of rainfall in June differed but slightly from the average, and the deaths attributed to diarrhœal diseases in the English towns during June were very considerably below the corrected average. In London, for instance, the recorded deaths from diarrhœa and dysentery in the four weeks ending June 28th were only 95, the corrected average number in the corresponding period of the ten years 1874–83 being 177. The materials for a similar comparison as regards the mortality from diarrhœa and dysentery in the twenty-seven provincial towns are not available, but for present purposes it is enough to state that the diarrhœal mortality during last month was also below the average in these towns. At the beginning of the present month, however, concurrently with a marked increase in the temperature, the mortality from diarrhœa showed a rapid increase. The deaths referred to this cause in London, which had been but 21 and 39 in the last two weeks of June, rose to 104 and 336 respectively in the first two weeks of July, the latter number exceeding the corrected average number in the ten preceding corresponding weeks by 115. In the twenty-seven provincial towns the deaths from diarrhœa also showed a marked increase, but the increase was not nearly so great as that recorded in London; they were 34 and 51 in the last two weeks of June, and rose to 71

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and 159 in the first two weeks of July. With reference to these figures, it may be stated that the aggregate population of the twenty-seven provincial towns is slightly greater than that of Registration London, and that summer diarrhœa fatality has in a long series of years almost invariably shown an increase in London prior to the recorded increase in the provincial towns. With regard to the recorded mortality from diarrhœa in the second week of July, it was equal to an annual rate of 2·9 per 1000 of the estimated population of the twenty-eight large English towns; in London the rate was equal to 4·4 per 1000, whereas it did not exceed 1·7 in the twenty-seven provincial towns. Among these provincial towns the diarrhœa death-rate showed a marked divergence. No death was attributed to this cause either in Sunderland, in Derby, or in Halifax; while the highest diarrhœal death-rates were 2·3 in Norwich and Birkenhead, 2·6 in Salford, 3·1 in Preston, 3·8 in Bolton, 3·9 in Leicester, and 6·1 in Nottingham. It should be noted that 25 deaths in the twenty-eight towns were also attributed to choleraic diarrhœa, or cholera, of which 16 occurred in London and 9 in the provincial towns; a certain number of deaths are so attributed every summer, and the number above-mentioned, as regards its proportion to the recorded diarrhœa deaths, is below the average.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

IN May last it was suggested by THE LANCET to make the new wing of this hospital now rebuilding in Queen-square a memorial to the late Duke of Albany, and the consent of the Queen having been cordially given to the proposal, no time has been lost in taking action upon the suggestion. A public meeting was held at Willis's Rooms on Monday last, which was worthily presided over by the Earl of Shaftesbury, and at which resolutions embodying the idea were passed. The resolutions were supported by Sir William Gull, Mr. Carter, Mr. Hutchinson, Lord Denman, Canon Fleming, and others. Of especial interest and significance was the presence of Mr. Arnold Royle, C.B., the Duke's medical attendant, who in a few well-chosen sentences adverted to the intense sympathy ever felt by the late Prince towards any movement which had for its object the alleviation of human suffering, and warmly endorsed the object for which the meeting was held. Between £2000 and £3000 were subscribed by those present. We understand that the rebuilding of the hospital has been making rapid progress since last autumn; and great hopes are entertained, if money can be obtained, that a commodious hospital may be completed in the course of next summer.

SECONDARY SUTURE OF THE MEDIAN NERVE.

AT a recent meeting of the Academy of Sciences M. Tillaux related two cases of secondary suture of the median nerve followed by rapid restoration of the functions in the parts depending upon it. The first was a young girl who cut the front of her wrist whilst cleaning some windows in November, 1883. The wound healed without suture of the nerve being performed, and there remained complete paralysis of all the parts supplied by it. Incapable of working, the girl went to the Beaujon Hospital to seek relief. The parts supplied by the median nerve were found to be colder than on the opposite side, and of a slightly violet colour. Notwithstanding the discouraging nature of the case, M. Tillaux decided to give the patient a chance. The ends of the nerve were found about a centimetre distant from one another, the central one bulbous, the peripheral atrophied. They were cut so as to present a fresh equal surface and carefully drawn together by a hair suture (*crin de Florence*). An antiseptic dressing was applied and the limb immobilised in extreme flexion. Two days after the operation sensibility began to return and increased daily. Six weeks later she left the hospital with sensibility and movement entirely restored. The other patient was a woman who, witnessing the result in this case, begged M. Tillaux to operate upon her also, notwithstanding that the accident had occurred fourteen years before. The operation was identical, and the next day sensibility began to return, and was soon entirely restored. The physiological curiosity of these cases lies in the fact that when examined microscopically (by M. Ranvier) the portions of nerve removed exhibited no trace of cylinder-axis, and that it is difficult to explain the restoration of function by our present ideas on the subject. M. Tillaux's observations may be the starting-point of an important discovery.

THE PRESERVATION OF COMMONS.

THE need for the existence of the Commons Preservation Society has been abundantly proved in the history of litigation during the last few years. The success which has attended the efforts of the Society is a public benefit of the most fruitful kind. A common is something more than the official public garden. It has advantages which the latter has not. It affords not only fresh air and an undiluted share of what sunshine there may be, but a place for the free exercise of muscle under those very helpful conditions. Nor must it be forgotten that commons are in their way teachers, and that their lessons, as valuable as any others, cannot well be learnt in schools. The lover of nature, if he is careful to observe, finds in them much intellectual profit and amusement. His opportunities in this respect have unfortunately already undergone serious reduction, since nature in many districts has been nearly effaced by the town. The spreading edges of cities approach one another more and more nearly, the contagion of building occupies the intervening areas, and the country is rapidly being converted into a smoky town-tract. It is certainly as unwise as selfish, then, to grudge to recreation a piece of land here or there which the forethought of an earlier time has assigned to that purpose. Yet this is what railway companies and rich private persons are equally prone to do. With them the convenience of wealth admits no prior necessities, and conditions of public health are mere pedantic theorisings. It is true, notwithstanding, that the care with which we guard the means and places for suitably using leisure time will go far to decide whether our material prosperity, as it increases, shall exhaust us by universal toil, or shall carry with it an equal degree of national vigour, with promise of even greater attainments.

GLOUCESTER INFECTIOUS HOSPITAL.

THE Gloucester urban sanitary authority seem singularly averse to take the action which they should do as regards the isolation of the infectious sick. Last year, in consequence of the very imperfect character of the existing arrangements, Dr. Thorne Thorne conferred with the urban and rural sanitary authorities on behalf of the Local Government Board, and urged combination in the erection of a proper hospital. The rural authority appear willing to take this step, but the urban authority prefer spending money on a temporary building which has already been condemned. The medical profession have now joined in a protest against this parsimonious action, and they have appealed to the central authority for support. For years past the existing building, which we believe was one of the many truly structures erected during a period of panic, has been regarded by the profession as practically useless, and since only one infectious disease can safely be received into it, they have

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not dared to send in patients lest another disease should happen to be under treatment there at the same time. What is wanted is such a scheme as will secure the erection of at least two separate pavilions, one of which should be an isolation building, such as we recently referred to as intended to be erected at Bournemouth. In this way the needed first requirements of the district would be met, and the accommodation which the town would require would probably in the first instance suffice also for the needs of the adjacent rural district, and hence combination would result in considerable economy, whilst increased efficiency would be secured. It is much to be hoped that the Town Council will be advised in this matter by the medical practitioners who have counselled them aright, and who, whilst knowing the sanitary requirements of the city far better than many members of the corporation can do, have as deep an interest in the prosperity of the city as any other inhabitants, be they in authority or not. Gloucester has suffered serious mortality from infectious diseases whilst the present hospital has remained all but empty; so serious a state of things should never be allowed to recur.

DEATH OF DR. W. G. BALFOUR, OF BOMBAY.

IT is with deep regret that we learn the sudden death, from apoplexy, of Dr. W. G. Balfour, which took place in Bombay on Sunday morning, June 15th. Dr. Balfour, who received his medical education in Edinburgh, had for some years devoted himself to the specialty of lunacy, in which he had acquired considerable practical experience; but, owing to circumstances, he gave this up and went out to India in the capacity of surgeon to the Great India Peninsular Railway Company, and subsequently settled in Bombay in private practice. The deceased gentleman was a good microscopist, and has contributed some valuable papers to these columns, mostly in connexion with cholera and the cholera germ. Like the German *savant*, Professor Rudolph Emerich, he not long since drank a concentrated solution containing cholera excreta by way of experiment. He leaves behind him a family at home in Scotland to mourn their loss.

REMOVAL OF PATIENTS FROM HOSPITAL.

A VERY interesting question relating to the removal of patients from infirmaries and such institutions has been raised in Glasgow by the publication of a letter from Sheriff Spens in the *Glasgow Herald* of Monday last, in which he states that he has found, to his surprise, that in both the infirmaries it is thought the officials are bound to hand over patients on the demand of the natural guardians or relatives, to be removed to their homes, although it is known that such removal will cause extra risk to the patients, and may even be certain death. Sheriff Spens gives it as his opinion that the infirmary authorities are mistaken as to their being under any obligation to hand over patients to relatives on demand where it is known that the removal over the rough streets will of necessity be fatal or even injuriously affect the chances of recovery. The primary duty which the infirmary authorities are entrusted with is one to the patient and not to the relatives, and that duty they are entitled to defend against all. They have become the temporary guardians of patients for the purpose of curing them; and it appears to Mr. Spens that no court of law would for a moment give countenance to the view that there was a higher right in a guardian or a relative to demand delivery than in infirmary authorities to refuse on the ground of obvious risk to life. The force of this strongly expressed opinion is apparent, but its validity is not so obvious. Are we to understand that in an infirmary the medical attendant is not simply the adviser of the patient, as he would be regarded in private practice, but is also his responsible guardian? Or do the authorities, lay and medical, step into the position of "natural guardians" of the infirmary patient? This is not a mere matter of professional etiquette, but rather one affecting the liberty of the subject; and it is one which demands very prompt settlement. The distrust of hospitals among the ignorant poor is great enough, and would be increased tenfold if these institutions were endowed with such powers as Sheriff Spens indicates. Pending the settlement of the question, and till further instructions are issued, the secretary of the St. Andrews Ambulance Association has directed his officer "to be guided on all occasions by the opinion of the officials in charge, and to refuse to undertake removals which they consider dangerous."

QUARANTINE AND THE FORTHCOMING CONGRESSES.

THERE appear no grounds for apprehending that any measures of quarantine will in any way affect the attendance at the forthcoming Medical Conferences at the Hague and Copenhagen. Neither the government of the Netherlands nor that of Denmark has followed the example of Spain; and in view of the example set them by Germany, which is willing to follow very much the lead of England in this matter, it is highly probable that our own system of inspection and subsequent isolation of those actually sick may be carried out in the case of the two countries referred to, should real danger of cholera importation arise. Both Denmark and the Netherlands seem desirous of excluding small-pox quite as much as cholera, but if any action should be taken for this purpose it will probably be limited to an inspection of persons entering the country by sea merely with the view of placing under isolation any who are found to be suffering from infectious disease. Such a system should in no way interfere with the attendance at either of the Congresses mentioned.

"THE DROWNING SEASON."

IT must, we presume, be accepted as a general proposition capable of particular application in the most vexatious directions and specialities, that any and every sport, exercise, and pastime which involves a certain amount of personal risk will have an inevitable attraction for English folk of all classes and ages. On no other principle is it possible to account for the curious fact that, although year after year many lives are ruthlessly and uselessly sacrificed in such practices as bathing, boating, hunting, and skating, no lover of these several pursuits is deterred from indulging in them by the peril incurred. On the contrary, it is beyond question that this very peril adds zest to the pastimes. When, therefore, we encounter a paragraph in the press under the above ominous heading giving particulars of eleven deaths by what are, almost facetiously, termed "accidents" in the course of a few days, we do not dwell long on the mournful epitome, but pass it over with something of the same feeling as may be experienced on reading the bare statistical statement of a death-rate. Nevertheless, it is a grim fact that every one of these lives might have been saved by a little timely precaution. Either the bath was taken in too deep water or at an unsuitable spot, or there was some neglect of obvious measures and conditions of safety. Nothing would be gained by reiterating the warnings we have repeatedly given as to sudden plunges into cold water, if the heart be weak, or there be a tendency to cramp; as to severe trials of strength in buffeting with heavy waves or trying to swim long distances; and as to going into the water weak or exhausted by want of food, or with a stomach so loaded that disturbance of the circulatory and nervous systems must almost inevitably ensue if there be even a moderate amount

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of congestion set up by the immersion in a fluid colder than the atmosphere. These and a score of other dangers arising out of, or dependent upon, states or diseases of the organism, have been pointed out and the importance of caution insisted upon. We preach to heedless ears. Tell an English man or boy that anything is dangerous, and he will burn to do it. If he be weak, he will try to behave as though he were strong. If he be unfit, by reason of physical disability of some sort, for a particular exercise, he will yearn, above all things, to do the impossible and to hazard the extremely perilous. In health he will scorn safeguards and precautions as signs and tokens of cowardice. We do not think that mere carelessness is so common as some people are apt to suppose. We believe it is downright foolhardiness that leads to "accidents" of the class represented as "deaths by drowning." This is an important consideration, and it is one that must to some extent modify what we have to say on the subject of the "drowning season" year by year. The accidents that occur are deplorable, it is true; but, on the whole, it is more honest to say that they are discreditable, and it is high time to have recourse to plain speaking. Pity must give way to reproaches, even though it be necessary to violate the rule that nothing but good should be spoken of the dead.

ACUTE ALCOHOLIC POISONING.

AN inquest was held at Royston on July 1st touching the death of a little boy named Enderby, aged nearly four years. The father of the deceased found him insensible at half-past ten o'clock in the morning, breathing stertorously, and smelling of spirits. It appears that a bottle of brandy was kept in a box in the bedroom, and to this the unfortunate little fellow gained access and regaled himself with the contents. Convulsions succeeded the coma, and death ensued about twenty-four hours after the onset of the symptoms. There was no smell of alcohol in the contents of the stomach ejected after an emetic was administered in the course of treatment. This, however, does not negative the supposition that death was due to alcoholic poisoning, for Taylor gives a similar case in which a pint of spirits was taken, and a fatal effect produced eight hours afterwards. Investigations, both on the human subject and on animals, have shown that the poison may be detected in the blood and viscera a considerable time subsequent to all traces of it having disappeared from the stomach. In the case under notice it is believed that half a quartern of neat brandy was swallowed—an amount quite sufficient to account for the results. From a toxicological point of view, it is a pity that no post-mortem examination and analysis were made, although there seems no reason to doubt the accuracy of the assigned cause of death. Acute alcoholic poisoning is not of very rare occurrence, since Taylor mentions the fact that thirty-five cases were registered in four years in England and Wales. There is no specific physiological antidote to alcohol. The treatment aims mainly at removing what remains in the stomach; keeping up the body temperature, which always shows a marked depression; and administering readily absorbable nourishment. The last-mentioned item is of the greatest importance, since to the toxic action of the poison is superadded the asthenia consequent on privation of food. Our experience does not lead us to concur in the view expressed by the coroner, "that the child must have in some extraordinary way acquired a taste for brandy." Children have a natural tendency to imbibe whatever comes in their way, as the records of violent deaths too fully prove. For example, it could scarcely be contended that because a child swallowed some of the contents of a kettle of boiling water the act showed an appreciation of the results of previous indulgence, and yet this accident is not at all uncommon. There is one lesson to be learned from the sad event described above—viz., that those who have the charge of children should take care that all deleterious liquids are kept in safe custody.

THE COUNTRY HOLIDAY FUND.

ONE of the happiest developments of business habit has been the general application of method in projects of benevolence. The unobtrusive visitations of many true friends of the poor, unnamed perhaps in public, have had much to do with this result. They have kept open the communication between rich and poor, and have taught the wealthier class who of their less favoured brethren deserve their help, and how that help should be given. It will readily be admitted that the "Country Holiday Fund," for the benefit of London children, is one that merits the support of names distinguished in philanthropy which it has received, but which alone can cover but a part of its requirements. The name of the Fund fully describes its purpose, and pleads its own cause almost better than any more elaborate explanation. Lord Rosebery, in an exact and comprehensive speech at the Mansion House on Monday, dwelt on the affinity between the mind of childhood and the natural country, on the benefit to health from their association, and on the public good which must accrue when every class combines to further an object so humane. No one who knows the tender life of children, and how it thirsts—plant-like—for pure and wholesome conditions, can question that these observations are true in every word, or can doubt that a week or two of country, to many a luxury, is to them other than a vital necessity.

THE THAMES.

IT was felt while the Royal Commission on Metropolitan Sewage Discharge was sitting that some of the evidence given was exaggerated, and that the pessimist view taken of the matter by the medical officer of health for the port was scarcely justified by the facts. Unfortunately, however, the decision arrived at by the Commission has during the recent hot weather been far more than justified. It is no exaggeration to say that the whole river from Greenwich to Greenhithe has been full of sewage. The colour of the water is black and the odour intolerable. Such a state of things has naturally caused much anxiety. The Port of London Sanitary authority, alive to the danger, has addressed the Local Government Board, pointing out the necessity for immediate action. As a consequence pressure has been brought to bear upon the Metropolitan Board of Works, who have tardily agreed to the deodorisation of the sewage before it reaches the outfall. This, however, can merely be a palliative measure, the only real remedy being to remove the outfalls many miles further down.

SMALL-POX IN NEWCASTLE.

ON the 10th inst., at the Newcastle-on-Tyne police-court, a woman who carries on the trade of a cowkeeper and milk retailer was charged with having neglected to give notice to the medical officer of health of the existence of small-pox on the premises occupied by her. It was stated that the milk from two cows and the milk-vessels were kept in the one room where the defendant, her daughter, and two children lived and slept. The milk was carried to the house from the cow-byre and strained, and was afterwards retailed by the defendant. On March 11th a neighbour saw that one of the children was suffering from small-pox, and told its mother that she ought to report the case to the medical officer of health. On April 16th the medical officer went to the house and saw the girl, who was then

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convalescent, but showed evidence of having had a very severe attack of small-pox. The child had been prescribed for by a chemist, who, however, had never seen it. In the yard in which defendant lived this was the first case of small-pox, but since then there have been four cases, and one, that of the head of the family, has proved fatal. The magistrates imposed a fine of forty shillings and costs, the full penalty, and expressed the wish that the greatest publicity possible should be given to the case. It is unfortunate that such an offence should not entail imprisonment without the option of a fine, a monetary penalty being wholly inadequate to the gravity of the case.

THE BROMPTON CEMETERY.

ON July 2nd we published a letter describing the state of the Brompton Cemetery, and showing in our opinion good reason for its disuse as a place of burial. This cemetery, and also one or two others in the east of London, no longer occupy their original position on the margin of the city's growth, but lie well within its ever-widening limits. The modes of burial are no better than elsewhere, and are such as we have frequently criticised unfavourably. The choice of soil, sand and gravel, has not been a happy one. Sand has no doubt a certain advantage in its porosity, but it does not favour the processes of oxidation which ought to go on in the buried body, and so rather hinders than helps the due restoration of earth to earth. In warm weather, such as we have lately experienced, the evils of organic contamination must be doubly felt. Their influence cannot but be magnified when they are generated in a soil like sand, which readily absorbs and radiates heat, which but feebly assists chemical change, but wants nothing to enable it to nourish the living germs of putrefaction.

HEALTH EXHIBITION.

THE *fête* to be given on the evening of the 23rd instant in aid of the London Hospitals promises to be a very gay and attractive affair. The Prince and Princess of Wales have both promised to attend, and nothing will be omitted which is likely to give *éclat* to the proceedings. Military bands will be provided to the number of three or four, and we believe that a special orchestra has been engaged to play in "Old London." The Water Companies, under the direction of Sir Francis Bolton, are conspiring with the Electric Lighting Department to make the illuminated fountains more than usually attractive, and the Chinese Restaurant, which is now in full working order, may be expected to form a special centre of attraction. A committee of ladies has arranged for the erection of a number of stalls, each of which will be presided over by ladies of social distinction and at which fruit and flowers will be sold; but beyond this there will be no bazaar element in the display. All who have visited the Exhibition are agreed that its appearance of an evening is unequalled, and most of the foreign jurors and commissioners who are over here admit that their various countries can show nothing like it. "'Tis a dream from the Arabian Nights," said one; and so it is. And we can only hope that the British public will remember that next Wednesday, when they visit the Exhibition, they will not only be seeking enjoyment, but indirectly helping to alleviate the sufferings of their less fortunate brethren. We heartily hope that the hospitals may have what in "theatrical parlance" is called a bumper benefit, and that the Executive Council may find their doors thronged to the utmost.

CONVALESCENTS FROM SCARLET FEVER.

THE Home established by Miss Mary Wardell for scarlet fever convalescents, at Brockley-hill, Stanmore, was opened by the Prince and Princess of Wales on Monday last. Miss Wardell's great credit in this undertaking is enhanced by the pleasing announcement that so far the committee are not in debt. The Prince seems never more at home than in acts of practical philanthropy, and as usual made a very apt speech on the occasion. We heartily congratulate Miss Wardell on the great amount of influential sympathy already experienced, and wish her entire success in her arduous and benevolent undertaking.

THE PORT OF LONDON: CHOLERA.

IN view of the possibility of the importation of cholera from Marseilles the precautionary measures adopted in the Thames in 1883 have been scrupulously maintained. The only vessels which arrive regularly direct from Marseilles are the Peninsular and Oriental, the Messageries Maritimes, and the Trieste boats, and these are all receiving special attention. Dr. Collingridge has moreover made arrangements for the medical inspection of every vessel entering the river in the event of any serious spread of the epidemic rendering such a course advisable.

FOOD ADULTERATION AND ANALYSIS.

UNDER the auspices of the Institute of Chemistry a most important conference on adulteration, which seems likely to lead to valuable results, has just been held at the Health Exhibition. The opening paper was by Dr. James Bell, F.R.S., of Somerset House. The discussion lasted over two afternoons, and many well-known chemists took part in it, as well as several gentlemen who represented the trading interest. We give in another column an abstract of Dr. Bell's paper.

LOWER THAMES VALLEY SEWAGE.

THE Select Committee of the House of Commons have rejected the scheme of the Lower Thames Valley Main Sewerage Board, and recommend that the district shall be divided into four or five districts, each of which shall purify and dispose of its own sewage. The decision is a most important one, and we shall shortly offer some remark upon it. There is no doubt as to the urgency of the question, for the present condition of the river is a most serious danger to London. The letter of Sir Thomas Nelson, which appeared in the morning papers the other day, will increase the alarm generally felt.

MR. GAY, F.R.C.S.

WE regret to announce that Mr. Gay's state of health is such as to give his friends very great anxiety. About Christmas last Mr. Gay found himself rapidly becoming unequal to the fatigues of his professional duties, and a few months later he was compelled by increasing physical weakness to relinquish all active work. From time to time hopes have been cherished that with genial weather a measure of health and strength might return, but unfortunately these hopes have not been realised.

THE danger of disease being disseminated by means of imported rags is very patent. The Hull Sanitary Authority is properly concerning itself with this matter in reference to shipments of rags, and it is certainly desirable at the present time that extra precautions should be taken. A cargo of these objectionable articles having arrived from Marseilles, the ship was boarded by the Hull port sanitary officials, detained and thoroughly disinfected, the cargo being transhipped and submitted to disinfection. A few days since a large consignment of rags from Marseilles was landed in the Royal Albert Dock, London. They were at once detained by the medical officer of the port, and will be thoroughly fumigated by the superheated steam process.

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THE following is the programme of the Conference of the Epidemiological Society of London at the International Health Exhibition to be held on the 22nd and 23rd of July, 1884. President, Dr. Norman Chevers; Hon. Secretary, Mr. Shirley Murphy:—July 22nd, at 2.30 P.M.: The President's opening address on Health in India; Dr. Squire on the Change of Type in Epidemic Disease. 23rd, at 11 A.M.: Surgeon-General Pringle on Leprosy in India, and the best means of Preventing its Increase; Mr. Barrington Kennett on Floating Hospitals, with a view to showing their Efficacy in Checking the Spread of Epidemics. At 2.30 P.M. a Consideration of the Present Aspect of Cholera in Europe will be opened by Inspector-General of Hospitals Robert Lawson, M.D.

WE hear that Dr. Donald MacAlister is a candidate for the post of Physician to Addenbrooke's Hospital, Cambridge, rendered vacant by the retirement of Dr. Paget. Dr. MacAlister for some time past, we believe, has seen Dr. Paget's out-patients, and at times has taken charge of his wards. As is well known, he had a most distinguished academical course, and has shown ability as marked in the pursuit of medicine as in that of mathematics. He is strongly supported in his candidature by the members of the staff at Addenbrooke's Hospital, and we should imagine that his appointment is certain.

WITH the view of preventing the importation of cholera into the United States, telegraphic instructions from Washington have been received at the American Consulate-General in London to appoint medical inspectors to examine all vessels sailing from London and Liverpool for the United States of America. The Consul-General has accordingly appointed Dr. J. Higham Hill health inspector at London.

THE managers of the Metropolitan Asylums District have found it necessary to enlarge their camp at Darenth for convalescent patients from small-pox, so as to accommodate some of the less severe cases for which room cannot be found in the hospitals and hospital ships. The managers have purchased a river steamer called the *Marguerite* to convey passengers to and from their hospitals.

THE condition of the River Lea is causing disquietude. Dr. Tripe has called the attention of the Hackney District Board of Works to the dangerously foul state of the stream, and the Poplar Board has resolved to serve the Lea Conservancy Board with a notice to remedy the evils which are but too conspicuous.

PROFESSOR TYNDALL has promised to preside on Tuesday next, at 5.30, at a lecture at the Health Exhibition, to be given by Dr. G. V. Poore, on "Thrift in its Relation to Health; the Right Use of Refuse."

THE Glasgow Town Council have caused regulations to be put in force for the purpose of preventing the entrance of cholera, and for the treatment of persons who may be attacked with the disease.

FROM Sheffield comes the report of the death of another medical man, Mr. Morris, formerly surgeon in the army, from an overdose of that treacherous drug, chloral hydrate.

SMALL-POX has broken out at the Spital cavalry barracks, Windsor, and a fatal case is also reported to have occurred among the troops stationed at Aldershot.

THE MEDICAL ACT AMENDMENT BILL.

AT a recent meeting of the Senate of the University of London, Sir Lyon Playfair's amendment was discussed, and a deputation, consisting of Sir J. Paget, Sir J. Lubbock, Sir W. Gull, Dr. Quain, Dr. Storrar, Mr. Wood, LL.D., and Mr. Shaen, was appointed to wait upon the President and Vice-President of the Council to point out to them the objectionable nature of that amendment. The deputation believed it to be contrary to the spirit of the Bill, and that if adopted, the evils which it was desired to remedy would be aggravated. Lord Carlingford said the chief aim of the Government was to secure uniformity and completeness of qualification in candidates for the medical profession, and he believed that end would be accomplished by the Bill. The Government also conceived that greater power would be given to the reformed Medical Council, and, further, that under a system of joint examiners, appointed by the Medical Board, uniformity of qualification would be secured. The deputation, dissenting, maintained that neither the power of the Medical Council nor the confidence which might be reposed in the conjoint examiners would be sufficient to secure the object aimed at in the original Bill. During a long discussion, it was suggested that the objects of uniformity of qualification and examination might be ensured by the appointment of assessors, who could visit and report on the manner in which the examinations were conducted. This suggestion, originally made by Professor Turner, a member of the Royal Commission, seemed to be viewed with favour by the President and Vice-President, and the deputation, having thanked the Ministers for their courteous reception, then withdrew.

THE INTERNATIONAL HEALTH EXHIBITION.

THE FRENCH SECTION.

[FIRST NOTICE.]

THE French have strictly adhered to the spirit and principles that might be expected to govern a sanitary exhibition. Once within the French section, the visitor feels that he has around him the silent testimony of earnest study, all strictly bearing on health and education. The bazaar element and trading interests are all strictly excluded, and may only be found outside the walls of the enclosure which forms the principal portion of this section. Within this inner temple, the great problems that have been so ardently debated among specialists on the other side of the Channel, and the sanitary progress attempted and accomplished during the last few years, are fully illustrated by the exhibits, which are skilfully grouped. A comprehensive catalogue alone is wanted. The details given in the English catalogue are altogether insufficient, and there are no numbers to enable the visitor to find the objects he wishes to examine. The town of Paris, however, publishes an admirable catalogue of its own exhibits, which occupy half of the entire court.

Holding the place of honour in the centre of the section, the very complete exhibits of M. Pasteur give a history of his researches and discoveries. The descriptions both in English and French that are attached to each object are of great aid, for it is not always possible to guess the precise use of a flask or the liquid it may contain. When M. Pasteur's assistants, Dr. Roux and Dr. Chamberland, were in London, they always commenced their explanations by pointing out the cardboard models of the left and right hand crystals of tartaric acid. It was the discovery that microbes were developed more rapidly with the right hand crystals which led up to many of M. Pasteur's subsequent and successful investigations. Next to these crystals is the historic and large vessel charged in 1861, and which still contains unaltered the production of a fermentation of

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200 grammes of sugar acted upon by a minute particle of yeast that had been deposited in a mineral medium. The purity of the yeast and the previous sterilisation by heat, practised, at the very onset, explain the success of the operation. From this dates the use of sterilised liquids or pure cultures. In front of this celebrated experiment is a double row of flasks or glass "balloons," which were opened on the summit of Montanvert in 1860, and the culture broth they contained has remained pure ever since, with the exception of two bottles which were accidentally broken in descending near the foot of the mountain. In two little bottles, close at hand, there are specimens of blood drawn from the heart of a rabbit which has remained pure after many years, and of unaltered serum of bullocks' blood gathered *in vacuo* in tubes purified by fire, but kept without heating. Taking a step further to the right, we come upon a number of tubes, flasks, &c., used for cultures *in vacuo*, with some tubes containing vaccine for anthrax; and one hundred doses for sheep and fifty for bullocks are held in tubes of the same size. There are also specimens of liquids sterilised by cold, and in the background statistical tables giving the practical results attained in the prevention of splenic fever among cattle. The eastern side of the table is occupied with stoves used for cultures, and methods of indicating and automatically maintaining a given temperature within the apparatus. In one of these, constant temperature may be regulated to the tenth of a degree Centigrade, and there are steam coils to surround the funnels holding filtering-papers, warmed plates to stand cultures upon, and gauges for gas pressure &c. On the north side will be found instruments used for inoculation. One especially ingenious contrivance contains the vaccine in the handle, which can be squirted out at a regulated dose so rapidly that it is possible for one man to inoculate two thousand sheep in one day. But, to the general public, Dr. Chamberland's filter will be of greater practical interest. For the sterilisation of liquids a biscuit tube is employed. Placed in a flask where vacuum is produced, the liquid is drawn through the biscuit or porcelain. This constitutes so fine a filter that even the minutest microbes are unable to pass. With a much larger ube fixed to an ordinary water-pipe, the water under usual pressure will filter through slowly; but by placing several biscuit tubes side by side, a sufficient quantity of water can be obtained for domestic purposes, in spite of the slowness of the process. A filter thus contrived and in working order is exhibited; and experiments made with one of the smallest known microbes, that of chicken cholera, prove that it cannot pass through the biscuit. The cleanliness of this filter is easily maintained, as the biscuit tube can be taken off, cleaned with a brush, or, better still, placed for a little while in the fire. The fourth side of the table is devoted to microscopical instruments. There are photographs all round of microbes, and close at hand a graphic sketch of M. Pasteur's kennels for the dogs, rabbits, &c., used in his researches. M. Houdard's apparatus for the prevention of the second fermentation of wine by heating to 145° F., and the appliances for the prevention of silkworm disease, both based on M. Pasteur's principles, are also close at hand.

Facing this centre of attraction, and forming part of the exhibits of the town of Paris, the chemist will find subjects of interest in the specimens from the Montsouris Observatory and the Paris Municipal Laboratory. The new apparatus which M. A. Dupré has brought into use for the analysis of food are shown, and some ingenious pipettes, but there are also many things that offer no novel feature.

Passing these two scientific collections, we at once enter upon the all-important question of water-supply and drainage. An inner chamber is entirely devoted to models bearing on these questions, and a great portion of the surrounding wall space is covered with drawings on the same subject. Official mortality statistics are given, with innumerable charts, &c., on the prevalence of typhoid fever, and maps of the districts most affected; so that we have side by side both cause and effect. In this the exhibits relating to water-supply are far more satisfactory than those concerning the drainage of Paris. It will be seen that Paris has two water-supplies, one for domestic purposes, and the other for watering the streets and industrial use. This necessitates the creation of two different systems of canalisation. The waters of the Seine, the Ourcq, and the Marne should only be used for watering purposes; but unfortunately this is not always the case. The pure waters of the Vannes and the Dhuis are sometimes insufficient for the domestic requirements of the capital. Maps, plans, drawings, and lengthy reports will be found affording the fullest information on all these points, and M. Couche, the chief engineer, may be warmly congratulated on the pains he has taken to make these matters clear and to give the fullest details in a terse and most intelligible manner. The newest features of this exhibit are the photographs and aquarel drawing of the water works at Ivry. They were completed last year, and can raise 84,000 cubic metres of water to a height of sixty-three metres in twenty-four hours. This great work was accomplished at the cost of £80,800. The new reservoir at Villejuif, constructed to receive this water, will cost £55,000, and when it is finished will supply a very powerful and much-needed flush for the Paris sewers. Indeed, these great works were undertaken with the view of assisting the projects of water drainage so warmly advocated by the partisans of English systems in Paris. But immediately opposite we find the whole scheme challenged by the presence of the apparatus employed by the town for carrying out M. Berlier's system of pneumatic drainage. The Municipal Council has sanctioned the application of this system to the richest and most fashionable district of Paris; it certainly constitutes the most novel and interesting feature of the Paris exhibits. Whatever may be said for or against it, and we have not space to enter upon this controversy at the present moment, it is the one new feature; and, considering the large scale on which it has been applied, the very weighty scientific and popular support it has received, the Berlier system has become a practical as well as a theoretical question.

The opposing theory is of less interest to Englishmen, for it is simply an attempt to impose on a different people and under different conditions an almost servile imitation of our English method of water drainage. A map shows that thirty-eight houses, barracks, or public establishments in Paris are now entirely drained into the sewer. A model and many plans and drawings of these buildings are given, but we must confess that most of them are unsatisfactory. The ventilation of the soil pipes is very imperfectly indicated: we failed to detect any provision for the inlet of air; and, though syphons are used, they are apparently not ventilated, and some seem so placed as to incur at least a slight danger of syphonage. A project for some villas in the Commune de Bondy, by M. Masson, is far in advance of anything that has actually been done; but unfortunately this is only a project. In this case the manholes with open channels and air inlets, as suggested by Sir Robert Rawlinson, are provided; and thus we find the best, instead of the worst, features of English drainage reproduced. But houses such as that of the rue Albouy, the house inhabited by the celebrated author Francisque Sarcey, in the rue Douai, and other specimens of what is known as the official installation of the *tout à l'égout*, only repeat the very defects which it is the object of such institutions as the Health Exhibition to prevent.

In Paris there is little or no water within the houses available for the purpose of flushing the soil pipes. Hence the law insists that these must be at least eight inches in diameter and vertical. Taking these facts into consideration, the celebrated firm of Rogier and Mothes, who manufacture from 30,000 to 40,000 closets per annum, may be congratulated on having made the best of bad circumstances. Where there is not an abundant flush of water the syphon trap can only be a source of danger. Messrs. Rogier and Mothes have, therefore, an iron enameled valve with a counter-weight in one piece. This is adroitly balanced, the pivot resting on a glass socket. The weight presses the valve tightly against the indiarubber flange that goes round the bottom of the closet pan. This is nicely adjusted so as to prevent the sewer gas passing through. Also the valve, holding a small quantity of water, forms a slight water seal, though the indiarubber is in this case the best protection. Yielding to weight, the valve opens automatically, and is so shaped that this action throws its contents down the soil pipe. At the bottom of the soil pipe, and sealing the opening into the cesspool another and larger automatic valve of the same description is placed. Indeed, as these valves cannot get out of order, any number of them may be used and placed at short intervals one from the other. Provision for the inlet and outlet ventilation of the soil pipes is also made, and this system of trapping is applied equally to waste-water pipes and the mouths of sewers. In the latter case the counter weight being much greater, a large volume of water accumulates before the valve opens, and thus an automatic and sudden flush is produced. The solids on the valve are

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thrown well forward, a fact we have tested with heavy pieces of wet sponge, clay, &c. These closets, combined with the Berlier system, would enable the Paris authorities to drain the town without increasing to any large extent the water-supply. For countries where water is scarce, or the levels unfavourable, the Berlier system and Rogier and Mothes' closets offer a way out of the difficulty which merits the careful attention of the sanitary authorities. In the closets there is nothing to break; the action is automatic, and the same may be said of the apparatus for the pneumatic drainage. The successful working of such a combination would in no wise depend on care and cleanliness of the inhabitants, and is therefore especially suitable to populations who are ignorant of sanitary matters and have not been taught how to cope with sewer gas. In this latter respect, even the most prominent authorities of Paris have made a grave mistake, and a great educational work must still be accomplished before the French householder has learnt how to protect his dwelling from the foul emanations of soil pipe, sewer, and cesspool.

FOOD ADULTERATION AND ANALYSIS.

In a paper read at the Conference on this subject on the 14th inst., Dr. JAMES BELL remarked that the practice of adulteration is by no means of modern date, but has existed, more or less, from time immemorial. There is evidence that it was practised by the Greeks and Romans, and it has probably been co-existent with the development of commerce. The earliest enactments in this country in reference to food appear to have had a much wider scope than those of recent years, for they embraced the quality as well as the genuineness of the article, and dealers in foods or drinks which, from whatever cause, were considered as unwholesome were fined once or oftener, and then, if found incorrigible, were condemned to bodily punishment. With the exception of one or two Acts relating to the adulteration of bread, all the legislation upon articles of food from the time of George I. to the year 1860 had reference to the protection of the revenue, and therefore only indirectly guarded the health or pocket of the consumer. "In the year 1851 there was considerable agitation amongst planters and others interested in the production and sale of coffee, in consequence of the falling off in the consumption of that article caused by its wholesale admixture, as permitted by Treasury minute, with chicory. Petitions were presented to both Houses of Parliament on the subject, and it was perhaps the general attention directed at that time to this matter which induced the proprietors of THE LANCET to perform a public service of the highest value. In 1851 and several following years, at their own expense, they instituted an extensive inquiry into the character of the food, drink, and drugs sold in London, and engaged chemical and microscopical analysts for that purpose. The results showed that adulteration prevailed to an alarming extent, and that in many cases the adulterants were of a nature highly injurious to health. The Editor of THE LANCET showed his confidence in the analysts employed by publishing in that journal the results of the analyses, whether favourable or otherwise, together with the name and address of the vendor. The increased public attention thus caused, resulted in an inquiry by a Select Committee of the House of Commons in 1855, which reported that adulteration of food, drink, and drugs was very prevalent and that some of the adulterants used were of a poisonous nature. Following upon that report, and as a consequence thereof, the first general Act in this country was passed in the year 1860. This Act may have exercised to some extent a deterrent effect, but beyond this the practical outcome of it was but small, for the appointment of analysts was permissive, and the obtaining of samples for analysis was left to private purchasers. Another Act was passed in 1872, extending the right of appointing analysts to boroughs having separate police establishments, but still left such arrangements optional. A most important provision, however, was made for the purchase of samples by local officials, and the right was given to private purchasers to have samples analysed on payment of a small fee." The adoption of the Acts of 1860 and 1872 was by no means general, but was principally confined to London and the large towns; and even where adopted, the action taken was often of a very restricted character. The prosecutions which ensued, however, were sufficiently numerous to cause a general outcry from tradesmen about alleged miscarriages of justice; and in answer to petitions from most of the large towns, the Government decided to appoint another Select Committee of the House of Commons to inquire into the working of these Acts. This Committee recommended that the Acts of 1860 and 1872 should be repealed, and that a new, extended, and compulsory Act should be substituted for them. The chief amendments suggested were the inclusion of the fraudulent abstraction of an important property of any commodity, such as the removal of cream from milk, as a punishable offence; the examination of tea on importation; better regulations for obtaining samples, and for securing the appointment of qualified food analysts. To meet an important want provision was also made for obtaining an independent analysis in case of dispute. Upon the lines indicated in this report was framed the Bill which passed into law as the Sale of Food and Drugs Act, 1875, and which is the Act now in force, though amended in some respects by the Sale of Food and Drugs Amendment Act, 1879. It is much to be regretted that an evident unwillingness has been found on the part of some local authorities to bring these Adulteration Acts into operation. The Acts are practically a dead letter in some districts, even where nominally complied with, owing to the small number of samples purchased, or the conditions under which the purchases are made. In the twelfth report of the Local Government Board it is stated that in some cases "scarcely any attempt is made to conceal the official character of the buyers, or the purpose for which they are buying"; and the Board add, what must be perfectly obvious, "that unless the samples obtained by the inspector are of the quality ordinarily sold to the public, the object of the purchase is frustrated." In some districts the local authorities have been much discouraged by the small fines imposed by the magistrates, even when the offence has been committed more than once. There can be little inducement for them to carry out these Acts energetically when they find that after going to all the expense and trouble of the purchase and analysis of samples, and taking the necessary legal proceedings against a fraudulent tradesman, the heinousness of his offence is assessed by the magistrates at such a trifling sum as cannot be held to be a deterrent penalty, but one readily covered by the illegitimate profits of a few days. The tendency in recent years has been to place increased discretionary power in the hands of magistrates. For many years prior to 1879, their discretion in matters of fines in revenue cases was limited to reducing penalties to not less than one-fourth of the amount named in the Act. By the Summary Jurisdiction Act of 1879, however, they were given full discretionary power in first offences, but the former restriction remains in force for second and subsequent offences. Some such regulation may be found desirable under the Sale of Food and Drugs Acts, especially in cases where the vendor is the actual adulterator.

THE OLEATES AS THERAPEUTIC AGENTS.

THESE substances, which have lately come into evidence as therapeutic agents, formed the subject of a lecture which Dr. Shoemaker, of the Jefferson Medical College, Pennsylvania, U.S., lately delivered at the Westminster Hospital. After expressing the pleasure which he felt at addressing a body of English students for the first time, he proceeded to describe the imperfections of the oleates hitherto manufactured, which were not, he said, oleates at all, but merely solutions of oleic acid and the various bases, and in addition, owing to their oleic acid being derived from the "red oil" of the candle makers, they invariably contained a large proportion of oxyoleic acid and various other compounds, all possessed of an irritating action on the integument. He alluded to the first descriptions of the oleates by Chevreul, and later, 1872, their more definite classification

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by Attfield and Marshall, and lastly, their true chemical combination as described by Dr. Shoemaker himself before the Medical Society of the State of Pennsylvania in 1879. Dr. Shoemaker claimed to have overcome the disadvantages attached to the employment of the older oleates, not only by having obtained definite chemical compounds instead of the unstable, unreliable solutions of oleates hitherto sold as such, but also that by drawing his oleic acid from other sources he has been enabled to produce it chemically pure and in a condition favourable to the formation of definite oleic salts with any given metal. Dr. Shoemaker insisted on the impropriety of employing any of the various petroleum products, vaseline, &c., as a basis for ointments, either of oleates or not, the animal fats having much more affinity for animal tissues than the former, and penetrating the epidermis and glands much more easily and completely. This he had established by a series of experiments extending over many years, both in the physiological laboratory on the lower animals and clinically in the wards, where one set of cases were treated with the metal or alkaloid in a petroleum basis, and a second group where lard was the vehicle. The results went to show that absorption took place much more rapidly and effectually in the latter set of cases than in the former. He remarked incidentally that the alkaloidal oleates were exclusively local in their action, no trace of them being obtainable in the secretions or excretions, although large quantities were used. For instance, the oleate of quinine, which in the hands of certain practitioners is said to possess a controlling influence over malarial fevers, has proved inert in the many cases which have been treated by its means by Dr. Shoemaker, nor was there any evidence of its having been absorbed. Veratria, similarly used, demonstrated even more markedly this difference. The lecturer next considered the individual oleates of the metals, the first being the oleate of aluminium; this is prepared by treating the sulphate of aluminium with sodium oleate, the result being a powder which, combined with a fatty substance, forms an ointment of service in muco-purulent discharges from the cutaneous surface, as, for example, in intertrigo occurring round the breasts and in the inguinal regions in eczema, and as a dressing for burns. It may be used in the proportion of from five to thirty grains to the ounce of lard. The arsenicum oleate, a reddish-brown waxy substance, is a preparation which, rubbed down with lard in from five to sixty grains to the ounce, according to the effect desired, forms a most important alterative and escharotic, of use in the treatment of epithelioma, ulcerating lupus, and in old chronic ulcers. Bismuth oleate, a pearly unctuous material, is a valuable emollient application in the various forms of rosacea, acne, sycosis, &c. Cadmium oleate, a yellowish-white mass, combined with lard in the proportion of from five to fifteen grains to the ounce, has a marked astringent action bordering on an escharotic, and has been extensively employed in the treatment of glandular enlargements and thickening of the integument. Copper oleate, a beautiful green substance, mixed with lard in from ten to sixty grains to the ounce, yields an elegant preparation, which is especially effective in ringworm, also in favus and tinea versicolor, or chloasma. The oleate by itself, melted and spread on muslin or leather, is of great service in thickened conditions of the integument, as corns, warts, and bunions. The oleate of iron is a reddish-brown mass, readily soluble in the fats, and has a decidedly styptic action, and may be used with benefit in arsenical sores. Lead oleate, similar in appearance to the cadmium oleate, when mixed with equal parts of lard produces an elegant ointment, which is preferable in its action to the litharge ointment, and has been much employed with satisfactory results in the various forms of eczema. Mercuric oleate made into an ointment with lard is useful as a discutient to inflammatory exudations, in thickened conditions of the integument, such as corns and warts, in pigmentary deposits, and parasitic affections. The mercurous oleate is a new preparation, which I have quite recently described for the first time, and may be used for the same class of cases where more decided effect is required. It is one and a half times as strong as the preceding, and it is the oleate which should be used in the inunction treatment of syphilis. Nickel oleate is a greenish waxy mass, which Dr. Shoemaker has employed in an ointment containing from five to fifteen grains to the ounce, as an application to hard, horny granulating surfaces. It resembles cadmium oleate in its astringent and somewhat escharotic effects. Silver oleate is a brownish pulverulent substance, and in the form of an ointment is valuable applied to ulcers, especially bedsores, in pruritus, erysipelas, and the old indurated ulcers met with on the extremities. The last of the series, the zinc oleate, is a white, pearly, impalpable powder, and is the most important of all the oleates. When diluted with an emollient powder it forms an excellent toilet powder for the face, particularly in seborrhœa oleosas, or "shiny face," and in intertrigo, and as an ointment it is most valuable in acute eczema, hyperidrosis, and bromidrosis. Dr. Murrell has used this preparation extensively, and has reported very satisfactory results from its employment.

THE NEW INFIRMARY AT FULHAM.

THIS building, situated near Hammersmith Station, and opened by Sir Charles Dilke on the 26th ult., has been erected for the accommodation of 446 sick poor, with an ample nursing staff, and is perhaps the most complete establishment of its kind consistent with the fact that it has been erected at a much less cost than similar recently erected establishments, although containing every requisite of a good hospital. The contract for the whole of the infirmary buildings, without machinery or fittings, was let in 1882 for £40,700. To this sum has been added further contracts for heating apparatus, engines, boilers, hot-water supply, laundry machinery, &c. These, with the original contract for buildings, and certain additional and extra works, also fittings and fixtures throughout, bring up the total cost of the institution (without furniture) to £51,422. The infirmary proper, with all its sanitary appliances, machinery, gas and water-supply, fittings and fixtures, has thus cost but £116 per bed. The ground plan comprises a central block, in which are placed the whole of the official and administrative departments; on the right hand side of the central block are placed two main blocks or pavilions for males, and one subsidiary one for special cases; and on the left two main blocks for females, and a subsidiary one for special cases. Between the two wards on each side are placed the receiving-rooms for patients. The main blocks are three storeys in height, and consist of wards ninety-six feet long and twenty-four feet wide, containing thirty-two beds each. Special attention has been paid to the ventilation, heating, and lighting of the buildings. Water for the use of the establishment is supplied at high pressure to all parts, and there are reserve tanks in the tower to contain a supply during any temporary stoppage through repairs to mains or otherwise. Fire mains are carried through every part of the building, and exits have been provided on each floor for patients in case of need. Every possible attention has been given to the sanitary appliances and drainage. All the lavatories, &c., are lined with white glazed bricks or tiles. No pipes are directly connected with the drains, nor can any effluvium enter the building. The drains have a good fall, and all the man-holes are ventilated. The guardians of the Fulham Union are to be congratulated on the acquisition of such an infirmary for the reception of their sick poor.

THE HIGHLANDS OF BRAZIL AS A HEALTH RESORT.

WE have received some notes on this subject from Mr. Arthur E. Jones, a gentleman whose complete recovery from indubitable phthisis after a residence in these mountains is vouched for by Dr. W. H. Walshe. On the east coast of South America from lat. 22° south to 26° a range of mountains runs parallel to the coast line and forms the boundary of the highlands of the provinces of Rio de Janeiro and S. Paulo. These provinces consist for the most part of table lands of 2000 to 3000 feet elevation, sloping gradually towards the interior and having a precipitous edge next the coast, and it is the climate of the region just within this edge that is specially eulogised by our correspondent. The towns in this district, being almost on the tropic of Capricorn, at an elevation varying between 2300 ft. and 2900 ft. above sea-level, have the sunshine of the tropics and the mildness and freshness of the temperate zone. The annual rainfall is about fifty inches, but since as much as an inch of rain some-

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times falls in an hour, this fact must not be supposed to indicate a wet climate. At S. Paulo during 1875, rain fell on twenty days in the morning and afternoon, on eleven days in the morning only, and on fifty-nine days in the afternoon only. There is no winter as it is understood in England, but there is a season of six or eight weeks like an English May or September, when a fire is pleasant in the evening, and when there is occasional frost in the early morning in exposed situations. A most remarkable feature of the climate is the steadiness of the atmospheric pressure, the variations of the barometer being almost *nil*. The range during one whole year was only 0·7 in., rarely exceeding one-third of an inch during any one month. During 1875 the number of days on which the sun shone for the whole or greater part of the day was 215, distributed as follows:—January, 17 days; February, 14; March, 17; April, 21; May, 23; June, 22; July, 23; August, 24; September, 18; October, 22; November, 21; December, 23. During the year the maximum only once rose as high as 90° F. in the shade, twice to 88°, five times to 87°, twice to 86°, eighty-nine times it ranged from 81° to 85°, two hundred and six times from 70° to 80°, fifty times from 60° to 69°, and ten times from 52° to 59°. Nova Friburgo is the place most recommended as a resort for invalids. It contains a hydropathic establishment, conducted with much success by an Italian; and several Brazilian and German hotels, at which the cost of living amounts to about 9*s*. to 10*s*. 6*d*. a day.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birmingham (*Urban*).—This large borough enjoys special advantages in connexion with elevation of site, undulation of surface, porosity of soil, &c., and, having regard to its population of nearly 415,000 persons, it does not stand badly as to general mortality when compared with other large towns and cities. Last year the death-rate per 1000 was 21·0. The vaccination statistics show very different results according to the unions in which the various parts of the borough are situated. In the Birmingham and King's Norton Unions the work is well done, but this is not so in the Aston Union, and Dr. Alfred Hill points out that while in Edgbaston, in the King's Norton Union, the percentage of children who live to the age of three months and remain unvaccinated is only 2·2, in Aston as many as 8·1, or nearly four times the number, evade the law in this respect. In this connexion we find that small-pox was very prevalent during the third quarter of 1883, and that the prevalence was maintained during the present year. Last year 1090 persons were treated in the borough hospital; and having regard to the interest now taken as to the possible distribution of small-pox from hospitals as centres, we note with some surprise that whereas a map is given showing the distribution of such diseases as measles, scarlet fever, and typhoid in the various parts of the borough, no such information is forthcoming as to small-pox. Scarlet fever was also very prevalent in 1883, this disease having caused 326 deaths. During the year a new isolation hospital intended only for the reception of cases of fever was opened, the pavilions already erected being a first instalment of a more complete establishment. As many as 412 deaths from diarrhœa took place, some 90 per cent. of these occurring in children under five years of age. Dr. Hill is of opinion that the great sacrifice of infant life from this cause during the hotter seasons of the year, though doubtless dependent on a number of causes, is in Birmingham at least largely due to the ignorance of the vast majority of mothers as to the proper mode of feeding and rearing their offspring. Dr. Hill's report is, as usual, a very comprehensive summary of a large number of subjects relating in various ways to the health of the borough under his supervision.

Hartismere (*Rural*).—Steady progress is being made in this district. The death-rate for 1883 was only 14·2 per 1000, and the death-rate under one year of age was as low as 9·5 per cent. of the registered births. Much has been done towards improving the water-supplies, and Dr. Barnes expresses the opinion that the sanitary state of the district is better than in any former year. There were eight outbreaks of diphtheria, but only one death occurred. Three of the outbreaks were in Mellis, a small village principally composed of houses scattered round a large undrained green, consisting of stiff wet clay. The outbreaks appeared to be quite independent of each other, and, as in former years, the occurrence of diphtheria in this place cannot be very satisfactorily accounted for.

Middlesex and Herts Combination.—Dr. Saunders prefaces his reports on the several sanitary areas within his combined district by a general report to all the authorities, and he is able to point out that during the past decade so large an increase in sanitary work has been carried out, and so much increased interest has been created in the matter of public health, as to augur well for future progress in the matter. Turning to details, we find him once more exhorting the Barnet urban authority to provide for the adequate cleansing of their sewers, either by requiring proper means of flushing to the waterclosets, or, if this is not done, by some special scheme for sewer flushing. Our opinion is that no watercloset should be tolerated that has not proper flushing apparatus, and this provision should, wherever possible, be insisted on. A somewhat similar want is felt in East Barnet. The undrained state of Hemel Hempstead is adverted to, and it is distinctly stated that to this cause are due the recurring outbreaks of enteric fever. The inhabitants themselves seem mainly responsible in this matter, being opposed to the expenditure of money. The need for hospital provision, as for example at Hemel Hempstead, is pointed out, and at Tring it is explained that by the use of the excellent hospital at Albury, belonging to the Berkhampstead rural authority, the spread of infection has been effectually stayed.

Milton-next-Sittingbourne (*Rural*).—This rural sanitary district, according to the census report, has an area of 28,350 acres, or forty-four square miles, and comprises sixteen parishes. The population in 1881 was 11,195, and Dr. Sutton, in his report for 1883, estimates the population in that year to be but 11,344, and only 149 more than it was at the time of the census; the method adopted for the estimate is not stated. The birth-rate during the year was stated to be 35 per 1000, decidedly high for a rural district; while the 175 deaths gave a rate of only 15·1, which is over-stated if the population be under-estimated. The births being 387, it is added that "the deaths under one year were 49, being to registered births under 8 per cent." Presuming that there is no misprint in the report, the proportion of deaths under one year to births was 12·7, instead of under 8, per cent., and this proportion is exceedingly high for a rural district. In other respects the report is a favourable one, the death-rate from the principal zymotic diseases not exceeding 1·5 per 1000, and being mainly due to ten deaths from whooping-cough. Dr. Sutton is able to report that the local estimation of the value of the infectious diseases hospital is increasing, and the prejudice against its use is disappearing. This augurs well for the future sanitary welfare of the district. The report of the inspector shows that much useful work was done in his department during the year.

Hackney.—Dr. Tripe reports that sanitary work has been more actively carried out in his district during 1883 than in any year since 1866, the causes being, first, the stimulus to work given by the outbreak of cholera in Egypt, and secondly, the inspections which were made in connexion with the question of work under the Artisans and Labourers' Dwellings Acts. A description follows of some of the worst property in the district; and as regards some of the houses, it is stated that unless they are pulled down very shortly compulsory action will have to be taken. Special reference is made to the danger resulting from brick drains under houses. These old culverts almost invariably contain a considerable deposit of filth, and the last place where they ought to be tolerated is beneath dwelling-houses. As regards what are generally known as tenement houses, it appears that for many years past a large amount of inspection and improvement has been carried out, and that the regulations hitherto in force require a larger amount of cubic space per head than is the case in any other metropolitan district. New regulations have, however, now been drawn up and submitted to the President of the Local Government Board, with a view of bringing them into conformity with the more recent statutes relating to the subject. The general improvements effected in the district include a large amount of disconnexion of sink and overflow

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effect improved water services to closets and otherwise, the provision of cisterns instead of butts, the substitution of efficient traps for the imperfect bell-traps, and the cleansing of cow-sheds and slaughter-houses, &c. All such work, when attended to in its various details, removes from amongst the people constant sources of nuisance and ill-health, and must hence be regarded as amongst the most important that can be carried out. The death-rate for Hackney during the year was at the rate of 17·6 per 1000, as opposed to 20·4 in London generally. Some of the mortality was due to small-pox, apart from cases of strangers brought to Homerton Hospital, and Dr. Tripe gives some interesting account of the outbreak and of the protective power of vaccination. The number of houses and articles disinfected during the year was very considerable.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5507 births and 3726 deaths were registered during the week ending the 12th inst. The annual death-rate in these towns, which had been so low as 18·7, 19·2, and 19·5 per 1000 in the three preceding weeks, further rose last week to 22·2. During the thirteen weeks of last quarter the death-rate in these towns averaged 20·8 per 1000, against 20·9 and 21·5 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 11·1 in Plymouth, 12·5 in Derby, 13·3 in Bristol, and 13·9 in Brighton. The rates in the other towns ranged upwards to 24·7 in Birkenhead, 24·9 in Liverpool, 25·2 in Nottingham, and 25·9 in Halifax. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 495, 514, and 572 in the three previous weeks, further rose to 876 last week, the increase being mainly due to the greater mortality from diarrhœa; they included 495 from diarrhœa, 103 from whooping-cough, 102 from measles, 71 from scarlet fever, 51 from "fever" (principally enteric), 32 from small-pox, and 22 from diphtheria. No death from any of these diseases was registered last week in Derby, while they caused the highest death-rates in Wolverhampton, London, and Nottingham. The greatest mortality from diarrhœa occurred last week in Nottingham, London, Leicester, Bolton, Leeds, and Preston; from whooping-cough in Sunderland and Leicester; from measles in Halifax and Wolverhampton; and from scarlet fever in Cardiff and Sheffield. Of the 22 deaths from diphtheria in the twenty-eight towns 15 occurred in London and 2 in Brighton. Small-pox caused 21 deaths in Registration London, exclusive of 15 London cases registered in the metropolitan asylum hospitals situated outside Registration London; also 6 in Liverpool, 2 in Sunderland, 1 in Sheffield, 1 in Hull, and 1 in Cardiff. The number of small-pox patients in the metropolitan asylum hospitals, situated in and around London, which had been 1290 and 1368 on the two preceding Saturdays, declined to 1249 at the end of last week; the number of new cases admitted to these hospitals declined to 179 last week, from 354, 260, and 266 in the three preceding weeks. The Highgate Small-pox Hospital contained 79 patients on Saturday last, showing a further decline from numbers on preceding Saturdays; 18 new cases were admitted last week, against 22 and 20 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 218 and 231 in the two previous weeks, declined to 206 last week, but exceeded the corrected average by 10. The causes of 101, or 2·7 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bradford, Newcastle-on-Tyne, and Plymouth. The largest proportions of uncertified deaths were registered in Birkenhead, Manchester, Sheffield, and Cardiff.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 20·6 and 21·8 per 1000 in the two preceding weeks, was 21·0 in the week ending the 12th inst., and was 1·2 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 12·5 and 16·4 in Leith and Edinburgh to 29·4 in Paisley and 33·6 in Perth. The 507 deaths in the eight towns included 32 which were referred to diarrhœa, 23 to whooping-cough, 10 to scarlet fever, 10 to measles, 9 to diphtheria, 3 to "fever," and not one to small-pox; in all 87 deaths resulted from these principal zymotic diseases, against 86 and 78 in the two preceding weeks. These 87 deaths were equal to an annual rate of 3·6 per 1000, which was 1·6 below the mean rate from the same diseases in the twenty-eight English towns. The 32 deaths attributed to diarrhœal diseases showed a considerable increase upon recent weekly numbers, and exceeded by 11 the number in the corresponding week of last year; they included 10 in Glasgow, 6 in Dundee, and 5 both in Leith and in Paisley. Diarrhœal fatality in the Scotch towns last week was, however, less than half that recorded in the English towns, after correction for difference of population. The 23 fatal cases of whooping-cough in the Scotch towns showed a marked decline from recent weekly numbers, and included 11 in Glasgow, 5 in Edinburgh, and 4 in Aberdeen. Nine of the 10 deaths from scarlet fever, showing a considerable increase upon the numbers in recent weeks, occurred in Glasgow. The 10 fatal cases of measles corresponded with the number in the previous week, and included 7 in Glasgow. The deaths referred to diphtheria, which had been 7 and 10 in the two previous weeks, were 9 last week, of which 2 occurred in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The 3 deaths from "fever" showed a decline from the numbers in recent weeks. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 85 and 83 in the two previous weeks, declined to 54 last week, and and were 27 below the number returned in the corresponding week of last year. The causes of 80, or nearly 16 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 27·1, 28·2, and 21·0 per 1000 in the three preceding weeks, was 22·3 in the week ending the 12th inst. During the thirteen weeks of last quarter the death-rate in the city averaged 26·5 per 1000, whereas the rate during the same period did not exceed 19·9 in London and 21·6 in Edinburgh. The 159 deaths in Dublin last week showed an increase of 9 upon the number in the previous week, and included 13 that were referred to the principal zymotic diseases, against 14 and 18 in the two preceding weeks; 5 resulted from "fever" (typhus, enteric, or simple), 4 from whooping-cough, 3 from scarlet fever, 1 from diphtheria, and not one either from small-pox, measles, or diarrhœa. These 13 deaths were equal to an annual rate of 1·9 per 1000, the rate from the same diseases being 6·8 in London and 2·5 in Edinburgh. The deaths referred to "fever" in Dublin, which had been 7, 5, and 2 in the three previous weeks, were 5 last week. The 3 fatal cases of scarlet fever showed a decline of 7 from the number in the previous week, while those of whooping-cough showed an increase. Nine inquest cases were registered, and six deaths were referred to violence; 54 deaths were recorded in public institutions. The deaths both of infants and of elderly persons showed an increase upon the numbers returned in the previous week. The causes of 16, or rather more than 10 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General William Stewart, M.D., is granted retired pay, with the honorary rank of Surgeon-General. Brigade Surgeon William Henry Corbett, M.D., to be Deputy Surgeon-General, vice W. G. N. Manley, V.C., granted retired pay. Brigade Surgeon John Henderson Whittaker is granted retired pay, with the honorary rank of Deputy Surgeon-General. Surgeon-Major Samuel Stacy Skipton, M.D., to be Brigade Surgeon, vice W. H. Corbett, M.D. Deputy Surgeon-General T. W. Fox has been appointed to act as Principal Medical Officer of the British Army of Occupation in Egypt, vice Surgeon-General J. Irvine, granted special leave of absence to England till September next.

INDIA OFFICE.—Surgeon-Major Henry William Graham, of the Bengal Army, has retired. Surgeon-Major Francis Ronayne O'Kearney, M.D., of the Bombay Army, has been transferred to the retired list.

ADMIRALTY.—Staff Surgeon Donald MacIver, M.D., has

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been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet. Surgeon William S. Lightfoot has been appointed to the *Duke of Wellington*.

ARTILLERY VOLUNTEERS.—2nd Devonshire: Frederick Everard Roe, Gent., to be Acting Surgeon.

RIFLE VOLUNTEERS. — 1st Volunteer Battalion (the Leicestershire Regiment): Surgeon and Honorary Surgeon-Major Edward Ranson Denton resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement.—3rd Forfar (Dundee Highland): Charles Stewart Young, Gent., to be Acting Surgeon.

Brigade Surgeon Elkington, M.D., Grenadier Guards, Staff Surgeon-Major Hamilton, M.D., and Surgeon Pocklington, M.D., 3rd Surrey R.V., are again in charge of the field hospital at the Wimbledon meeting.

Correspondence.

"Audi alteram partem."

CHOLERA, ITS ETIOLOGY AND TREATMENT.

To the Editor of THE LANCET.

SIR,—I have been anxious for some little time to ask you to allow me to recommend in your pages a treatment of cholera which, in India in 1865, when Surgeon-Major of the 72nd Highlanders, I found, beyond all comparison, more successful than any other I had ever tried, during a rather extensive previous experience of the disease in Canada and the Crimea, as well as in India. I have been hitherto deterred from addressing you by the fact that, although I felt sure that two-thirds of the cases treated at the time I refer to recovered, I had no record of the fact, nor of the number of cases treated. Meeting, however, a few days ago Lieut.-General W. Payn, C.B. (very lately returned to England from the command of a division of the Madras Army), who was Colonel commanding the 72nd Highlanders at the time I speak of, at Poona, near Bombay, and who had taken great interest in the cholera cases which occurred in the regiment, he asked me whether I had published any statement of the treatment I had employed. I told him I had thought of writing to THE LANCET, but that, as above stated, I had no figures to give. He then told me that he had been so much struck with the comparatively small proportion of deaths from cholera in the regiment in Poona in 1865, that he had obtained, before the regiment embarked for England in October of that year, a return of the admissions and deaths from cholera in the 72nd and in the two other European infantry regiments stationed at Poona; that he was pretty sure that in the 72nd there were fifteen admissions and four or five deaths, a statement which quite corroborated my impression as to the proportion of recoveries, a very large proportion in true Asiatic cholera. General Payn believes he still possesses the return, and when he can lay his hand upon it he will let me have particulars.

I will now state what the treatment was. A dose of calomel, followed immediately by cold affusion, frequently applied. What led me to think of this treatment was this. At Mhow, Central India, in 1859, when some cases of cholera occurred in the 72nd I was advised, by the late Deputy Inspector-General of Hospitals, Dr. Archibald Stewart, to try the cold affusion, which, he said, had been used with success in Bengal by a medical officer, whose name I am sorry I do not remember. I did so, and certainly with some success, inasmuch as the cramps were much relieved by it, and reaction to some extent obtained. I am writing from memory, having no notes of these cases, but (whether it was because I did not repeat the baths sufficiently often or not I cannot tell) I think I had not much more ultimate success than I had obtained under other methods of treatment. A few years later it occurred to me that, as in cholera the secretions are arrested, if I could introduce into the system a dose of calomel, which is said to promote all the secretions, and could then induce a certain amount of reaction by the cold affusion, the calomel might do good, being, as it were, on the spot, ready to promote secretion.

When, then, cholera appeared in the regiment in 1865, I adopted this treatment. I usually began with ten grains of calomel, and if there was much vomiting, five grains more were given. The patient, even if in a state of complete collapse, was then stripped of all clothing, carried in the horizontal position to the bath-room, where he was laid on a bedstead without any bedding. Three or four large earthenware "chatties" of cold water, the coldest we could get, were then dashed over him. He was rubbed dry with towels as rapidly as possible and replaced in his bed. The patient almost invariably felt relief; the cramps were mitigated, and sometimes in cases of collapse the pulse could now be just felt. In about five minutes the bath was repeated as before, after which, even in the worst cases, the pulse could now generally be felt; the skin became warmer, and the patient would beg for another bath. With reaction, vomiting and purging gradually ceased. The cold affusion was used at least five or six times in each case, at intervals varying according to circumstances; and, as a rule, after each application of it the pulse grew stronger and all symptoms improved. Experience had taught me long before that all piling of bedclothes on a cholera patient, the application of heat, as by hot bottles, hot turpentine, &c., were almost loathed by him, and that the only thing he ever begged for, besides water to drink, was to have his limbs rubbed when he was tortured with cramps. In the intervals between the baths, the patient had merely a sheet thrown over him, with a thin blanket or coverlet; and if there were any lingering cramps, the parts affected were rubbed with the dry hand. Such was the treatment. I need hardly add that when all immediate danger was over, the patient always required the most careful and watchful treatment, not only for days, but for weeks. Sometimes diarrhœa would come on, or consecutive fever, rendering recovery very slow. One patient, after recovery from cholera, succumbed to mucous enteritis fourteen days after admission. Only one patient I failed to rally from collapse. He was a staff sergeant, who lived by himself in a small detached bungalow, and was found early one morning by a soldier lying on the floor of his bedroom in a state of extreme collapse. I could make no impression on this case; he was too far gone when I saw him.

I am, Sir, yours faithfully,

W. C. SEAMAN, M.D.,
Deputy Inspector-General of Hospitals.

Junior United Service Club, S.W., July 16th, 1884.

To the Editor of THE LANCET.

SIR,—It is nigh twelve months since you gave insertion to an article by me on cholera epidemic, wherein I expressed the view that cholera is a specific fever analogous and of a severity inferior to yellow fever; that the temperature is raised, and that the low indication is caused by the abstraction of heat by the surrounding media, the fevered body being incapable of preserving its temperature uniformly; that cholera is not caused by a fungus, as maintained by Klebs, De Bary, and Hallier, and now advocated by Koch, nor is it dependent on any peculiar fomentable condition of the underground moisture layer as propounded by Pettenkofer; and that it is contagious, and may be originated and propagated even when the water is good. Surgeon-Major Fitzgerald took exception to the statement that the water of any Indian village is good. If the Indus, where it is two-thirds of a mile wide, running five miles an hour, and averaging twelve feet, can be polluted for over two months, then the drinking water of Kotree in 1869 was bad. But I look upon the insinuation as absurd. A few authorities deny the contagion because they have witnessed attendants escape contagion. Well, if attendants did not escape contagion; any epidemic of a contagious disease would affect the entire population of a country. Dr. Cuningham and Sir J. Fayrer consider cholera a malarial or effluvial disease, and Sir J. Hunter deems the poison an entity which is capable of being nursed through diarrhœal cases, and stored up till the period for an epidemic arrives in the unhealthiness of the people. I trust no one believes that cholera or its contagium existed in the Ark as a specific thing; this being granted, it follows that cholera may under extraordinary and exceptional circumstances arise spontaneously. In the epidemic through which I passed I had many cases to which a trace of contagion communication could not be assigned, but the vast majority were otherwise. Spontaneous combustion is possible, yet in most instances of conflagra-

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tion the originating and propagating cause is the kindled spark. No one thinks that other than insanitary conditions are inviting to cholera. The meteorological states which favour disease in plants and animals, and precipitate it in man, nurse cholera: heat, moisture, stillness, and free electricity have developed disease like a shadow passed, but for this purpose it is essential that the constitution of the plant or animal should be below par. Most thinkers concede that cholera observes a periodicity in its occurrence; whether incident to moral causes (like the commercial panics), to physical (like the floods), or celestial (like the sun-spots), has not been argued.

The statement which I made in my article in THE LANCET, July 28th, 1883, that cholera has a predilection, or seems to wear itself out amongst a people, is expressed in other words by Dr. Darwin—"that the effluvia or exhalations from one group of people may be poisonous to another group," and disease may break out among a people who come into contact with another, even though the latter have no positive manifestation of such." Dr. Blanc has contributed cases to THE LANCET where the temperature was raised in every stage. The regulators of metabolism are totally disarranged in the severer forms of fever; the nervous system is numbed; the excretory and genetic organs are, as it were, paralysed. Thus is it that stimulating frictions, shower baths, emetics, cholagogues, &c., do good by acting on the nervous controllers of metabolism. The cholera witnessed by Dr. Lucas in new-born children discards at a stroke the fungus theory. To show my faith in the proposition "that fungi or bacilli in cholera are mere indices of the disease and not the cause," I would swallow any amount of Prof. Koch's bacilli provided they are well washed in distilled water until the colour of the permanganate solution is slowly affected. "Wherever organic matter decays, fungi sit upon it and devour it" (Pasteur). The world was not made so imperfect as to leave us a prey to such a capricious, insidious, and treacherous enemy as Prof. Koch would describe the cholera bacillus to be.

I am, Sir, yours truly,

JOHN ROCHE, M.D.Q.U.I.,
Retired List, Indian Medical Service.

Mount Clarence, Kingstown, June, 1884.

P.S.—I failed to communicate cholera to hungry pariah dogs through cholera discharges, rotten eggs, carrion, and combinations covered with milk and chapatties.

RELATION BETWEEN THE SPLEEN AND THE THYROID.

To the Editor of THE LANCET.

SIR,—In reading your article in THE LANCET of May 17th, 1884, referring to Tauber's recent experiments on the splenic function and his deductions from those experiments, a clinical point has occurred to me as tending to strengthen very much the conclusion arrived at from experiment—viz., the absence of any physiological affinity between the spleen and thyroid gland.

In 1881 and 1882 I was in a district where goitre is endemic, and among upwards of 2000 cases of goitres of all kinds I find, from reference to my notes of recorded cases, not a single case of anæmia in a goitrous subject. This would be a very remarkable fact if there were really any such affinity as has been asserted between the spleen and the thyroid. Were this the case, we should with reason expect to find at least some degree of anæmia in cases of hypertrophied thyroid. In hypertrophied spleen there is, I think I may say invariably, some degree of anæmia or leucocythæmia, varying directly as the amount and duration of the splenic enlargement. The question at issue being the identity of function of the spleen and thyroid, it appears to me that the fact, which is indisputable, that similar changes in the two organs do not produce similar effects on the mass of the blood, affords conclusive proof that the physiological functions of the two organs are, as far at least as the blood is concerned, dissimilar. Again, splenic enlargement in this country is almost exclusively malarial; thyroid enlargement, on the other hand, owns no such cause. Further, constitutional treatment, which with certainty reduces an enlarged spleen, has not the slightest effect on the enlarged thyroid body. And lastly, inunction of biniodide of mercury ointment in enlarged thyroid never to my knowledge results in cancrum oris, while such a result in malarial splenic enlargement is by no means uncommon in my experience.

The function of the thyroid body remains imperfectly defined; but, whatever that function may be, it appears certain that it has no affinity with the spleen as a blood modifying organ.—Yours faithfully,

GEORGE S. A. RANKING, M.D. Cantab.

Punjab, June 8th, 1884.

"COVENT-GARDEN MARKET."

To the Editor of THE LANCET.

SIR,—As the responsible agent of the Duke of Bedford, I beg to state that your article on the subject of this market seems to have been written under a misapprehension of facts. Within the market quadrangle I unhesitatingly deny that there is any neglect of "ordinary cleansing and the prompt removal of offal." The whole of the market is regularly swept twice a day, and many of the gangways thrice or oftener. The contractor's men and carts are in constant attendance. A large sum is paid for the cleansing, but the work is exceptionally heavy, and is required to be well done. All the sanitary arrangements within the market are under the direct supervision of the estate surveyor, and the costly latrines erected a year or two ago are admitted to be the best of their kind in London. I am privileged to know many of the medical men in the neighbourhood, and I am not aware that the state of health among the salesmen and their servants is otherwise than satisfactory. Obviously a market that is limited in size, that at certain seasons is in use throughout almost the whole twenty-four hours, over which the traffic never ceases, and in which all the commodities sold give out refuse, presents peculiar difficulties in the way of management. There must inevitably be periods of apparent confusion and untidiness. These periods frequently occur, and the more frequently during such seasons as the present, when fruit and vegetables are continually arriving from the suburbs of London, the south of England, the Channel Islands, and the Continent. But no expense is spared to secure efficient control, and especially to have as prompt a clearance of all refuse as the business of the market will permit. For the proper cleansing of the streets leading to the market quadrangle the Strand District Board is wholly responsible, the traffic being regulated by the police. The public crowd their vehicles into these approaches, and by their continuous occupation hinder the contractor employed by the district board from efficiently doing his work. Added to this is the circumstance of shopkeepers blocking up the roadway with their merchandise, instead of keeping it within their shops. These are matters that are entirely under the control of the police. I quite concur in your remark that the cross traffic is an occasion of much inconvenience, but the police alone can deal with this difficulty. Although Covent-garden Market is private property, yet from its popularity and use it has acquired a quasi-public character, and therefore is open to criticism; but that criticism should be reasonable and truthful.

I am, Sir, your obedient servant,

Bedford Office, July 11th, 1884. JOHN D. BOURNE.

CHOLERA AND SANITATION ON THE RIVIERA.

(*From a Correspondent.*)

THE fact that cholera has spread from Toulon to Marseilles, and thence to Aix-en-Provence, Nîmes, Grenoble, &c., not to mention a number of outlying villages, Sollies, La Seyne, Collabrières, and the beautiful valley or gorge of Ollioules, must naturally suggest that, even if Paris and England escape the scourge, the Riviera, in any case, is in the greatest peril. Though cholera is so near at hand, the celebrated health resorts of this favoured district might have escaped had sanitary measures kept pace with the increase of population. The people in the south of France, however, are slow to move, and what little progress has been accomplished is mainly due to the pressure brought to bear by the numerous English residents. Hence the question of drainage, though earnestly discussed at Cannes,

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Nice, Monaco, Mentone, and other health resorts, has remained in abeyance at Marseilles and Toulon, where comparatively few English reside. The result, however, in either case, is anything but satisfactory. The sanitary condition of the entire Riviera is such as to offer no security against cholera; and this is a most serious matter, both for the native population and the very large number of English who prolong their lives by wintering in the South.

The nearest health resort to the present centre of the cholera epidemic is the town of Hyères, which is only fifteen miles from Toulon. The sanitary condition of this town is truly deplorable; its death-rate is about 28 per 1000, which, considering the smallness of the population, is high even for the Riviera. Along the main street there is a ditch to which the complimentary name of sewer is given. It is some three feet deep, and simply covered over by the flagstones of the side-walk. The intervening space between the loose fitting stones supplies means of ventilation, but there is no protection against the effects of the sun, which acts directly upon the sewage below. In some places the fall is insufficient, and at one point the sewer had an inclination upwards. But a sudden death in a house opposite this defect alarmed the authorities, and the level has been rectified. This sewer receives the overflow of several cesspools and the slop-water of the neighbouring dwellings. None of the conduits are trapped, so that the foul air of the sewer rises into the houses. There are no proper means of flushing, and the sewage, freely exposed to the heat of the sun, rapidly ferments. Cesspools abound on all sides, and are for the most part built immediately under the houses.

The primitive system of drainage, if it may be so called, still prevalent in the old portions of the various towns on the Riviera, was less dangerous than the unscientific modern methods introduced for the special benefit of foreign visitors. The streets had no sewers, the houses no closets and no cesspools. What little water was used for washing purposes and the kitchen water was poured away into the gutter, which ran down the centre of the street to the river or the sea; and as every town was built on a hill-side, it quickly passed away. Whatever foulness there might be, was at least exposed to the purifying action of the open air, and not drawn up by untrapped pipes into the interior of the houses. With regard to the night soil, this was kept in small wooden barrels, and when two were filled they were placed on the back of a donkey or mule, taken up the hill-side, and used to manure orange, olive, or lemon trees. Thus what is known as the pail system was carried out to the great benefit of the surrounding agriculture. These buckets were nasty but not particularly dangerous, and from a sanitary point of view infinitely preferable to cesspool or badly constructed sewers with untrapped house-drains. This system, however, was only practicable when each householder had his plot of land to cultivate in the outskirts of the town; and for hotels, &c., houses with cesspools were built. Subsequently sewers were laid, at least in the more fashionable portions of the town. These sewers were made to receive only the surface water together with the kitchen and washing water; but, in innumerable cases, the rules are defied and the sewers are polluted by overflows from the cesspools. This is all the more dangerous as the sewers are much larger than those used in England; while, on the other hand, they are rarely and, in many cases, never flushed, except by storm water. The accumulation of deposits is the natural result; and the local engineers have so little faith in a self-cleansing sewer, that they invariably insist on the channels being large enough to admit the passage of a man, so that they may be occasionally cleaned by hand. Though English sewers receive everything, they are ventilated with some care, constantly flushed, and are comparatively so small that the rush of water is really effective in cleansing them.

Putting aside the few isolated villas standing in the centre of gardens, which have been drained under English supervision, the great majority of the higher class houses in all the towns of the Riviera are exposed to a twofold danger. First of all there is the cesspool, which has, it is true, its ventilating shaft carried to the roof of the house; but the soil pipe, being within the house, has a higher temperature, and is therefore a more active ventilator of the cesspool. This pipe is generally of iron, at least eight inches in diameter, and can never be kept clean. There may be a valve under the closet pan, but there is no syphon trap, and no effective means of excluding the effluvium from the cesspool, which is generally situated under the inhabited portion of the house. Secondly, all the waste water pipes communicate directly with the sewers, and, being untrapped, supply about the only means of ventilation existing. Thus the houses are impregnated with the effluvium from the cesspools brought up by the soil pipes and by the sewer gas drawn up through the waste water pipes. Under such circumstances the high death-rate of every Riviera health resort need not surprise anyone. But when we consider that at any moment the specific germs of cholera may be distributed throughout this defective system of drainage, the prospect may well awaken the keenest alarm. If the practice of isolation in cases of infectious diseases had become customary, we might feel less anxiety; but the principles that govern us in such matters are ignored. The disinfection of dejections from typhoid patients is rarely if ever attempted, while thorough fumigation after infectious fevers is in no wise enforced. There was not a single public disinfecting stove along the whole Riviera till a few months ago, when Dr. Albenois constructed the model of a portable stove at Marseilles, which however up till last December had never been used, and was only shown as a curiosity. If, therefore, one or two cases of cholera are imported into any of the Riviera health resorts, the sewers may be contaminated, and then there will be no safety for the inhabitants of the houses that drain into these badly constructed channels. Yet an epidemic would be the ruin of such towns, for their prosperity depends almost exclusively on the presence of foreign, especially English, visitors. Perhaps this prospect may serve to arouse the inhabitants to a truer sense of their real interests. They may finally learn that for health resorts good sanitation is more important and profitable than the plantations of avenues of palms, the construction of new boulevards, or the erection of theatres, casinos, clubs, and other attractions which, though they may amuse, cannot in themselves impart health, cure disease, or ward off epidemics.

LIVERPOOL.

(From our own Correspondent.)

THE CHOLERA.

THE prevalence of cholera in France recalls vividly the epidemic of 1866, and it is instructive to notice the difference in our past and present sanitary laws. Had the local authorities possessed in 1866 the same powers as they have now, they would have been enabled, humanly speaking, to have arrested the disease at the onset and to have saved many lives. The spread of the infection was caused by a wake being held on the body of one of the first victims of the disease in a crowded court in one of the poorest streets, and there was no law to prevent the wake nor to remove the corpse. At the present time the local authorities on each side of the Mersey, as well as in the river itself, are furnished with ample powers to prevent the pestilence from being brought ashore; but should this be frustrated, it can be at once isolated and checked. These powers, which were conferred by the Public Health Act, have since proved to be of the greatest value.

THE EPIDEMIC OF SMALL-POX.

Ample provision has been made for the accommodation of small-pox patients in temporary hospitals erected on the grounds near Parkfield House, which latter is for the resident staff. The site has been well chosen, and by a coincidence the epidemic began to subside as soon as the arrangements were completed. The epidemic has been useful in proving the necessity of a permanent hospital for infectious diseases, independently of that afforded by workhouses. Another lesson has been taught, which it is to be trusted will not be forgotten, and that is the importance of universal revaccination in adult life. Much might be done if all employers of large bodies of workmen insisted upon its performance before engaging any applicants. As it is, revaccination is seldom demanded except in times of epidemic, and then only by the better classes.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The annual meeting, under the presidency of Henry Rayner, M.D., will be held at the Royal College of Physicians, Pall Mall, on Wednesday, July 23rd, at 11 A.M. and 2 P.M.

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IRELAND.

(*From our own Correspondent.*)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

AN election for a lecturer on Surgery in the Medical School of the College will take place on the 24th inst., and two of the candidates, Messrs. Corley and Hamilton, have had to resign the Vice-Presidency and the membership of the Council respectively, in order to qualify for the appointment. The President, in consequence of a requisition, has named the 21st inst. as the day to fill up these vacancies; and the candidates for Council consist of Messrs. Meldon, Nixon, and Story. For the Vice-Presidency there are two candidates, Dr. Cameron, medical officer of health for Dublin, and one of the professors of the School of Surgery; and Mr. Ormsby, surgeon to the Meath Hospital.

ROYAL UNIVERSITY OF IRELAND.

At a recent meeting of the Senate the following arrangements for 1885 were adopted. There are to be two matriculation examinations in each year, conducted at local centres, one in June for pass candidates only, and the second in October; the First University Examination is to be held twice yearly, while the examinations for A.B. and A.M., and the Second University Examination in Arts, and for the University studentships will take place in September. The medical examinations of the University are to be held twice in each year—viz., towards the end of April and in the month of October. Candidates failing to pass at either of these will be allowed to present themselves again at the succeeding examinations. There will be a Honours Examination in connexion with each of these medical examinations; and one first class exhibition and one second class exhibition out of the number already assigned to the several medical examinations respectively may be awarded at the one held in April, while the residue of such exhibitions may be awarded at the October examinations. At a meeting of the Senate held on the 7th inst., Dr. John F. Hodges was elected an examiner in Sanitary Science.

DISPENSARY MEDICAL OFFICERS IN IRELAND AND THE COMMISSION OF THE PEACE.

In consequence of a recent statement that the medical officers of dispensary districts in Ireland are ineligible to hold Her Majesty's Commission of the Peace in Ireland, considerable dissatisfaction has arisen, and a memorial has been framed for presentation to His Excellency Earl Spencer drawing attention to the matter.

PRECAUTIONS AGAINST CHOLERA.

Great precautions are being adopted in the Health Department of the Corporation of Dublin by Dr. Cameron, the energetic medical officer of health for that city, so as to be prepared in case the cholera should visit these shores. The inspectorial staff has been doubled, and faulty privies are being attacked vigorously. One hundred and forty-four waterclosets were put up last month in the tenement houses in place of the middens previously existing. These privies in connexion with tenement houses in Dublin have done much to pollute the soil and air of the city, and the substitution of waterclosets must be regarded as a very satisfactory arrangement.

The amalgamation scheme of uniting the private Medical Schools with that of the College of Surgeons was defeated at the Council by eight votes against six. The motion has been remodelled, and has been referred to the Education Committee to report on the feasibility of amalgamation.

The President of the Royal College of Surgeons in Ireland has left for London, to have an interview with Mr. Mundella in reference to the Medical Acts Amendment Bill.

Dublin, July 15th.

ROYAL COLLEGE OF PHYSICIANS.

AT the adjourned Comitia, held on Thursday last, the only important business transacted was the appointment of a Committee to draw up a list of recommendations to be submitted to the Local Government Board, and to be issued to the public for their guidance in the event of the appearance of Asiatic cholera in England.

MEDICAL NOTES IN PARLIAMENT.

The State of the Thames.

IN the House of Commons, on Friday, Sir W. Harcourt, replying to Dr. Cameron, said there was no doubt the river was in a very serious state in consequence of the sewage which was being poured into it. He had communicated with the Royal Commission which was now sitting, and also with the Metropolitan Board, and in his opinion immediate and urgent measures ought to be taken.

On Monday, in answer to Sir A. Lusk, Sir C. Dilke stated that all the sewage at the main outfall was now deodorised by the Metropolitan Board, but there were many sewers discharging into the upper part of the river without any purification. A scheme for dealing with this had been proposed by a joint sewerage board, but it was understood that the committee who were considering the Bill were going to throw it out. If so, they accepted a grave responsibility, and most serious difficulties would result. He was inquiring as to the effect upon the river of the abstraction of water by the water companies.

Vaccination Inspection.

In reply to Mr. Hopwood, Mr. Mundella read a letter he had received from Dr. Buchanan, stating that in only one instance had he ever met with any objection to his examining the arms of children in public and private elementary schools. His custom was to give a list of the unvaccinated children to the master of the school, and to ask him to call the attention of the parents to the fact that they were not protected against small-pox.

Cholera Hospitals.

Mr. Trevelyan stated to Colonel Nolan, on Tuesday, that there was no authority in Ireland which possessed a portable hospital that might be put at the disposal of any union where cholera broke out. The sanitary authorities at Dublin, Queenstown, and Londonderry had floating or other intercepting hospitals.

On Thursday, in reply to a further question, the right hon. gentleman stated that in the event of cholera reaching this country it would be the duty of local sanitary authorities to provide hospitals.

Cholera in India.

Mr. Cross, in reply to Dr. Cameron, agreed to present a copy of the correspondence between the Government of India and the Sanitary Commissioner of Madras as to the report of the latter, in which a cause was assigned for an outbreak of cholera. The Government view was that the sanitary officers should refrain from stating theories as to the propagation of cholera. In answer to Mr. O'Donnell, the hon. gentleman said the scarcity of salt had nothing to do with the cholera in India. The condition of the finances made any reduction of the salt tax improbable.

School Pressure.

Mr. Mundella informed Mr. T. Leighton that Dr. Borham's letter as to cases of alleged death from school pressure had been referred to the London School Board, who were investigating the cases.

The River Lea.

Sir W. Harcourt stated to Mr. Picton that he had communicated with the Lea Conservancy as to the sewage pollution of the river, and had formally certified that it was polluted, but he had no power to do more.

The Case of Mr. French.

Mr. Trevelyan, replying to Mr. Healy, said it was true that Mr. French was recently reported by three doctors to be suffering from mental disease, but that was with reference to his employment in the police. Insanity was no bar to arrest.

The Medical Act Amendment Bill.

On Tuesday, Mr. Gray asked the First Lord of the Treasury whether, considering that notice had been given of a large number of amendments to the Medical Act Amendment Bill, upon which there was likely to be prolonged discussion, it was intended to proceed with the measure this session; and if so, whether he could state upon what day it would be taken so as to avoid the inconvenience occasioned to opponents of the Bill by its

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being placed upon the notice paper day after day. Mr. Gladstone said that it would be the second order on Monday.—Meanwhile many petitions, mostly in favour of the measure, with amendments, continue to be presented.

Notices.

Mr. Hopwood would on Monday question the Secretary to the Admiralty about an alleged error in the statistics relative to the Contagious Diseases Acts. Sir Trevor Lawrence would ask the Secretary for War whether the regulations for the embodiment of a volunteer hospital corps would be promulgated.

Obituary.

GEORGE ALFRED WALKER, M.R.C.S., L.S.A.

THE death of this gentleman, which, as previously announced, occurred on the 6th inst., at his residence, Ynysfaig House, near Barmouth, serves to sever another link of the chain which binds the medical profession of to-day to that of the early part of this century. Mr. Walker was in his seventy-eighth year, and formerly practised with success in London; he was a staunch supporter of the warm vapour cure, upon which subject he wrote a pamphlet. He, however, was a firm believer that prevention is better than cure, and distinguished himself greatly by the energetic way in which he exposed the sanitary dangers arising from intramural interments in churches and chapels in the metropolis and throughout the country. He was popularly called "Graveyard Walker." In 1840 Mr. Walker was one of the principal witnesses before the Select Committee of the House of Commons on the Health of Towns. He was the author of several works upon this important question, and just before he died was writing another book, a summary of his previous works. He wrote several treatises upon surgical subjects, and for these works he was offered the Fellowship of the College of Surgeons, which he did not accept, as he had retired from practice for many years. He was also a geologist, and was instrumental in opening two quarries, Henddol and Golenwern, which are well known in the district.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on the 10th, 11th, and 14th inst.:—

Edward L. C. Smith, William H. Duce, William E. Redman, John P. Millington, Richard W. Young, R. H. F. Routh, N. A. Butterfield, T. J. Hall, and P. J. Clark, University College; Henry S. Smith, and Joe Iredale, St. Bartholomew's Hospital; Alexander J. Adie, Thomas Austen, John G. D. Cort, Warburton V. Carden, John Dallewy, and G. P. Barton, Charing-cross Hospital; Brown Clark, Evan J. Williams, and Reginald J. Braye, London Hospital; Edward H. C. Sullivan, Alfred E. Cox, Richard E. E. South, and W. J. Harris, St. Thomas's Hospital; Henry A. Haviland, Cambridge and St. Bartholomew's Hospital; Henry Craig and G. S. Shute, Guy's Hospital; R. W. Cameron, Manchester; E. C. Anderson, St. Mary's Hospital; F. R. Mallard and T. A. Mast, St. George's Hospital.

Of the 234 candidates examined during the past fortnight, 100 failed to satisfy the Board, and were referred for three, and 21 candidates for six months' further anatatomical and physiological study.

COLLEGE OF PHYSICIANS IN IRELAND.—At the July examinations the following candidates obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—George Stamer Browning, Alexander Edward Carte, James Vance Collins, George Patrick Cope, William Henry Clarke, Thomas Joseph Daly, Vernon Kitchen Dearden, Thomas Francis Griffin, Hudson Hairsine, Richard A. Hayes, Thomas Francis Higgins, John Colclough Hoey, Denis Kennedy, Frederick Duncan Lawson, Patrick W. Maxwell, William Cox Neville, Michael Alcock Ottley, Robert Chambers Owen, James Robinson Phillips, William Henry Banner Robinson, Agnes Russell, John Richard Rygate, Francis William Sullivan, John Williams.

MIDWIFERY.—George Stamer Browning, Alexander Edward Carte, William Henry Clarke, James Vance Collins, Thomas Joseph Daly, Vernon Kitchen Dearden, Thomas Francis Griffin, Thomas F. Higgins, Denis Kennedy, Frederick Duncan Lawson, John Joseph Lyons, Thomas Joseph McGrath, William Cox Neville, Michael Ottley, Robert Chambers Owen, William Henry Robinson, Agnes Russell, John Richard Rygate, J. Shackleton, Francis William Sullivan, John Williams.

The under-mentioned has been admitted a Member:—
Lambert Hepenstal Ormsby.

The diploma in Sanitary Science has been obtained by
Thomas Robert Judson.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on July 10th:—
Marriott, Hyde, Dial House, Stockport.
Samut, Carmel, Floriana, Malta.

AT a meeting of the local authority of the parish of Dundonald, held at Troon on the 5th inst., it was resolved to form a special drainage district.

UNIVERSITY COLLEGE.—Former students of University College will be glad to learn that Sir William Jenner has promised to preside at the annual dinner of the old and present students, which is to be given at the Freemasons' Tavern on Saturday, October 4th.

EAST LONDON HOSPITAL FOR CHILDREN.—Mr. Meriscord has received a letter from the secretary of the above-named hospital, acknowledging the receipt of £60 in all as the proceeds of the matinée at the Avenue Theatre on the 26th ult.

ST. JOHN AMBULANCE ASSOCIATION.—On Monday next, Mr. John Furley will read a paper on the "Carriage and Removal of the Sick and Injured" at the International Health Exhibition, the chair to be occupied by Sir James Paget. On the following Friday, a meeting will be held at the United Service Institution for the discussion of matters connected with the instruction of pupils in the work of the Association.

THE HOSPITAL OF ST. CROSS, RUGBY.—This hospital, presented to the town of Rugby by Mr. and Mrs. R. H. Wood, was opened on the 17th inst., and supersedes the cottage hospital founded in 1869 under the medical superintendence of Dr. Clement Dukes. The new building is constructed on the block system, and, together with the nucleus of an endowment fund, constitutes a gift by the munificent donors of the value of some £25,000.

SEAMEN'S HOSPITAL, GREENWICH.—At the quarterly general Court of Governors, held on the 16th inst., it was reported that 396 seamen had been admitted as in-patients during the past quarter from British and foreign ships. The drainage of the hospital having been condemned by the engineer consulted, a sum of £7370 is required to put it in an efficient state. In addition, it is proposed to erect an entirely new chapel at an estimated cost of £1281.

PRIZE ESSAY OF THE BRITON LIFE ASSOCIATION.—At the general meeting of the members of the Briton Life Association, held on Thursday, July 17th, the award of the adjudicators of the fifty guinea prize offered by the directors for the best essay on "Life Assurance" was declared to have fallen on P. J. Thomson, Esq., M.R.C.S. and L.R.C.P., 14, Rue d'Egmont, Brussels. We congratulate the successful competitor. The adjudicators were Dr. Richardson, F.R.S., Mr. Savory, F.R.S., and Mr. Messent, F.I.A. Thirty-four essays were sent in for the prize.

THE PARKES MUSEUM.—At the annual meeting held on July 9th, a report was read showing the work that had been carried out during the past year, from which it appears that twenty-one lectures have been delivered. The Museum has been largely used by lecturers on Public Health, and by other skilled teachers for practical demonstrations to various classes of students, &c., who for this purpose have been admitted without entrance fee. The members, who numbered 99 on June 30th, 1883, just after the opening of the Museum, now number 260. During the year there have been 6870 visitors.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The second annual dinner of this Society was held on Tuesday, July 15th, at the Star and Garter Hotel, Richmond, under the chairmanship of Dr. J. L. Thudichum, President of the Society. Much amusement was afforded by the *menu*, which had been rendered into classical Latin by Dr. E. Hart Vinen, a feat of no ordinary difficulty. The after-dinner proceedings were enlivened by an excellent programme of vocal and instrumental music, given with much ability by the Misses Thudichum, Mr. Bere, and others. Thirty-five members and visitors sat down to dinner.

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PROPOSED CONVALESCENT HOSPITAL.—At a meeting held on the 14th inst. at the Mansion House in support of a proposal for the establishment of a convalescent hospital and home of rest for the poor and wage-earning classes of London, it was suggested that 500 beds should be provided in three homes. The estimated cost of maintenance is about £12,000 per annum. The institution is intended for those who, having been under treatment in hospitals or elsewhere, need change of air with a continuance of medical or surgical aid, and for those who, suffering from illness or overwork, require change, good food, and rest; it will be partially self-supporting. A council was appointed to carry out the scheme.

SANITARY INSTITUTE OF GREAT BRITAIN.—At the anniversary meeting held at the Royal Institution, Albemarle-street, on July 10th, Earl Fortescue, Vice-President of the Institute, in the chair, an address was delivered by Dr. H. C. Bartlett, F.C.S., entitled "Some of the Present Aspects of Practical Sanitation"; and the medals and certificates were presented to the successful exhibitors at the Exhibition held at Glasgow in September, 1883. At the close of the address the chairman proposed a vote of thanks to Dr. Bartlett, which was seconded by R. B. Grantham, M.Inst.C.E.; and a vote of thanks to Earl Fortescue for presiding was moved by Dr. A Carpenter, and seconded by Prof. F. de Chaumont, M.D., F.R.S.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual quarterly Court of Directors of the Society was held on July 9th, Sir Henry Pitman, Vice-President, in the chair. It was resolved that a sum of £1257 be distributed among the fifty-nine widows, the five orphans, and the three recipients of grants from the Copeland Fund. The expenses of the quarter were £39 17*s*. The Treasurer announced the following donations: Sir Erasmus Wilson, Vice-President, 100 guineas; Cæsar H. Hawkins, Esq, Vice-President, £5 5*s*.; Dr. Bisset Hawkins, Vice-President, £10; and J. Gregory Forbes, Esq., Vice-President, £2 2*s*. Six new members were elected; the secretary reported the deaths of two. Applications were read for the first time from two widows, and grants were made to each. A discussion having occurred at the annual general meeting on the meaning of Law 66, and a wish expressed to have the law defined, the secretary read a letter from the honorary solicitor, Mr Upton, from which it appeared "that eligibility depends on the applicant being the widow or orphan of a person actually a member for three years immediately preceding his decease, and not on the payment of three subscriptions."

Medical Appointments.

Instructions for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ATKINS, GEORGE PURCELL, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Government Medical Officer at Port Lincoln, South Australia.

BAKER, A. DE WINTER, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Dawlish District, Newton Abbot Union, vice A. W. Parsons, deceased.

BASS, FREDERICK, L.R.C.P.Lond., M.R.C.S., has been appointed Assistant Aural Surgeon to the Newcastle-on-Tyne Dispensary, vice Chalmers, resigned.

BEATLEY, WILLIAM CRUMP, M.D.Durh, M.R.C.S., has been appointed Senior Assistant Medical Officer to the Somerset and Bath Lunatic Asylum, Wells.

BOULTER, WALTER ERNEST, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Superintendent to the Woolwich Union Infirmary, vice Rice.

CARROLL, E. R. W., M.R.C.S., L.R.C.P.Lond., has been appointed House-Surgeon to the Royal Westminster Ophthalmic Hospital.

CHAMP, J. H., M.B.Lond., has been appointed House-Physician to Guy's Hospital.

CLARKSON, CHARLES HOWARD, L.R.C.P.Ed, L.R.C.S.Ed., has been appointed Resident Surgeon of the Hospital for Pacific Islanders in the Mackay District, Queensland.

CLEGG, W. T., M.R.C.S., L.R.C.P.Lond., has been appointed Registrar to the St. Paul's Eye and Ear Infirmary, Liverpool.

CUFF, R., M.B.Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Scarborough District, Scarborough Union.

DAVIES, W. T. F., M.B.Lond., has been appointed House-Surgeon to Guy's Hospital.

DONOVAN, DENIS DEMPSEY, L.R.C.P.Ed., L.R.C.S.Ed., L.A.H.Dub., has been appointed Medical Officer of Health for Cork, vice Cremen, resigned.

FORT, J. WILSON, L.D.S.R.C.S.Eng, has been appointed Honorary Dental Surgeon to the Lancaster Infirmary.

GRAY, C. EDWARD, M.D., Ch.M., has been appointed Government Medical Officer and Vaccinator for the District of Inverell, New South Wales.

HARDY, H. NELSON, F.R.C.S.Ed., M.R.C.S., has been appointed a Divisional Surgeon to the P Division of the Metropolitan Police for North Dulwich and East Dulwich Stations.

HEATON, C. W., F.C.S., has been reappointed Public Analyst for the Parish of St. Martin-in-the-Fields.

JOHNSON, SAMUEL E., L.R.C.S.Ed., L.S.A.Lond., has been appointed Medical Officer for the Moseley District of the King's Norton Union, vice Richard Farncombe, M.R.C.S., L.S.A.Lond., resigned

JONES, M. PARRY, M.B.Lond., has been appointed Resident Obstetric Physician to Guy's Hospital.

KNIGHTS, Mr. J. WEST, has been reappointed Public Analyst for the County of Huntingdon.

MANLEY, J. H. H., M.B., B.C.Cantab, has been appointed Resident Obstetric Physician to Guy's Hospital.

MEYER, C. H. L., M.B., B.S.Lond., has been appointed House-Surgeon to Guy's Hospital.

PHILLIPS, F. B. W., M.R.C.S., has been appointed Resident Obstetric Physician to Guy's Hospital.

POLLARD, W. R., M.R.C.P.E., L.R.C.S.I., has been reappointed Medical Officer of Health for the Rural Sanitary District, Blackburn, and the Urban Sanitary District, Church.

RYLE, R. J., M.B.Oxon., has been appointed House-Surgeon to Guy's Hospital.

SCOTT, T. HARRISON, M.B., B.S.Univ.Dub., has been appointed Assistant-Surgeon to the Adelaide Hospital, Dublin.

TARGETT, J. H., M.B.Lond., has been appointed House-Physician to Guy's Hospital.

WHITTON, JAMES, M.D., L.R.C.S.Ed., has been appointed Surgeon to Mount Ida Hospital, Nasaby, New Zealand.

WORTHINGTON, S., M.B.Lond., has been appointed House-Physician to Guy's Hospital.

WRIGHT, HOLLAND H., L.R.C.P.Lond., M.R.C.S., has been appointed Registrar and Chloroformist to the Evelina Hospital for Sick Children, Southwark, vice R. A. Milligan, L.R.C.P., M.R.C.S., resigned.

Births, Marriages, and Deaths.

BIRTHS.

ADAM.—On the 5th inst., at Fernhead-road, St. Peter's-park, W., the wife of C. Denovan Adam, L.R.C.P.Lond., of a son.

BISDEE.—On the 12th April, at Trincomalie, Ceylon, the wife of Surgeon-Major N. Bisdee, Major Army Medical Department, of a daughter.

BROWN.—On the 8th inst., at Charterhouse, Godalming, the wife of Clarence Haig Brown, M.B., of a daughter.

DEANE-BUTCHER.—On the 16th inst., at Clydesdale Villa, Windsor, the wife of W. Deane-Butcher, M.R.C.S., of a son.

OWEN.—On the 8th inst., at Highfield House, Rushden, Northamptonshire, the wife of Charles R. Owen, L.R.C.P.E., M.R.C.S., &c., of a son.

WHITHAM.—On the 2nd inst., at Adlington, Lancashire, the wife of Alfred Whitham, L.R.C.P., L.R.C.S.E., of a daughter.

MARRIAGES.

CUMMINS—HALL.—On the 9th inst., at St. Michael's Church, Blackrock, Cork, William Edward Ashley Cummins, M.D., eldest son of William Jackson Cummins, M.D., to Jane Constable, second daughter of Robert C. Hall, J.P.

ELLIOTT—HAYWARD.—On the 16th inst., at Sanssalter Church, Whitstable, by the Rev. Wm. Blizard, M.A., Edgar Elliott, M.R.C.S., of Bromsgrove, to Annie, eldest daughter of J. W. Hayward, M.R.C.S., of Whitstable.

HARLAND—BAKER.—On the 3rd inst., at St. Pancras, London, by the Rev. Canon Spence, Henry Harland, M.D., of Calverley-place, Tunbridge Wells, to Emmeline, second daughter of the late Henry Baker, Esq., F.R.I.B.A., and granddaughter of the late Sir Robert Baker, of Montague-place, London.

JOHNSON—SCHREIBER.—On the 9th inst., at the Congregational Church, Stamford-hill, Geo. Lindsay Johnson, M.B., C.B.Cantab., of Upper Norwood, to Emily Maria Schreiber, adopted daughter of the late Rev. M. and Mrs. Symes, of Salisbury.

LUCAS—SMITH.—On the 8th inst., at St. Mark's Church, Hamilton-terrace, N.W., Robert Harry Lucas, M.R.C.S., of Bury St. Edmunds, to Helen Maude, youngest daughter of the late Ambrose Smith, of Blackheath.

DEATHS.

BALFOUR.—On the 15th ult., at Bombay, suddenly, of apoplexy, William Green Balfour, M.R.C.S., L.R.C.P., late of Alton, Hants.

KEELAN.—On the 17th ult., at Roseau, Dominica, West Indies, Nicholas Walter Keelan, L.R.C.P.E., L.R.C.S.I., Government Medical Officer of Roseau, aged 42.

MOORE MILLER.—On the 9th inst., at Southsea, after a short illness, John William Moore-Miller, M.D., M.R.C.P., M.R.C.S., J.P., only son of the late Captain Miller, 40th and 24th Regiments, aged 64.

PARKER.—On the 13th inst., at Pulteney-street, Bath, William Parker, M.D., for many years Medical Officer of Health for Bermondsey, and only surviving son of the late William John Brown Parker, Surgeon, of H.M. 14th Regiment, in his 72nd year.

STAUNTON.—On the 12th inst., at his residence, Waterloo-road, Dublin, Charles Frederick Staunton, M.D., R.A., one of the last surviving officers of the Euphrates Expedition, aged 83.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, July 17th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
July 11	29·75	W.	64	57	120	73	54	·42	Cloudy
,, 12	29·84	W.	66	60	118	80	58	·10	Cloudy
,, 13	29·89	W.	74	67	119	83	60	·14	Cloudy
,, 14	29·99	S.W.	64	60	121	75	56	..	Cloudy
,, 15	29·94	S.W.	66	61	112	73	58	..	Raining
,, 16	29·67	S.W.	65	63	112	72	62	·14	Raining
,, 17	29·76	W.	64	59	105	69	55	..	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or notes paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

PROVIDENT DISPENSARIES.

IT is gratifying to know that the Coventry Provident Dispensary continues to prosper. The report of medical work is too general to enable us to say how adequately the medical men were paid, but we learn that they received the following sums respectively: Mr. McVeagh, £334 10*s* 2*d*.; Dr. Fenton, £331 8*s*. 11*d*.; Dr. Davidson, £326 18*s*. 9*d*.; Mr. Pickup, M.B., £518 9*s*. 9*d*.—The report of the Victoria Dock District Provident Dispensary is well drawn up. The impression conveyed is that a good deal of work is obtained from the medical officer and his assistant, and that they get too little for it. They attend the *employés* of many and wealthy firms. They have a total admission of 7455 persons, they pay 5640 visits, and receive respectively £258 1*s*. 6*d*. and £137 10*s*. Such remuneration is not worthy either of the firms or their *employés*. Of the £1980 received for medical purposes only £375 reach the medical men.

A.M.D.—Lyon Médical, vol. 1, 1884.

A TEST FOR ABNORMAL TEMPERATURE OF THE BODY.

To the Editor of THE LANCET.

SIR,—I have recently observed that the organic base triethylamine varies as remarkably according to temperature as to its solubility in water. I must refer those of your readers who are interested in the purely physical aspect of the matter to the July number of the *Philosophical Magazine*. As, however, the property referred to may be of use in the diagnosis of fever, I am bound to make it as widely known as possible. Solutions of triethylamine in water are made of various strengths of from 5 to 12 per cent. of the alkali by weight. These are enclosed in glass bulbs hermetically sealed. All of these bulbs become turbid on being heated, but those containing most alkali require heating least. The turbidity consists in the separation of two liquids—one a solution of water in triethylamine, and the other a solution of triethylamine in water. The 10 per cent. solution becomes turbid at 72° F., the 8 per cent. at 76°; the 4 per cent. requires a temperature of about 107 6°. This range of temperature includes the limits of the possible range of temperature of the human body. In a series of bulbs so constructed, I find, for instance, that No. 6 becomes turbid at 91·4°, while No. 7 requires 98·6°, No. 8 requires 105·2°, and so on. Hence we have a form of heat or fever indicator which may be of use. The remarkable circumstance is that mixture is here undone by accession of heat, and that the minutest change of temperature gives a large separation.

I am, Sir, your obedient servant,

FRED. GUTHRIE.

Science Schools, South Kensington, July 9th, 1884.

SUCCESSFUL VACCINATION WITH FOURTEEN-YEAR-OLD LYMPH.

DR. GOSSET-BROWN sends us the following particulars:—In the year 1870 Mr. Harvey Gosset-Brown, then a student of the London Hospital, vaccinated E. S——. When taking lymph on the eighth day he presented the mother with a well-charged tube, which she carefully preserved. Anxious about her family during the present outbreak of small-pox, Mrs. S—— asked Dr. Newbury Gosset-Brown to revaccinate her husband and three sons. With a view to test the efficacy of the lymph taken in 1870 Dr. N. Gosset-Brown vaccinated the youngest boy, aged nine years, with it. The father and two other sons were vaccinated with calf lymph. In all the effect was satisfactory, and certainly not less so in the youngest boy, upon whom, as before stated, lymph taken fourteen years ago was used.

Incognito.—The questions are very vague; but so far as we understand them, we should be inclined to reply in the negative to both.

THE THAMES AS AN OPEN SEWER.

To the Editor of THE LANCET.

SIR,—The state of the Thames at present is very unsatisfactory; and with the prospect of a considerable period of warm weather presenting itself as not unlikely, it is quite time that some remedy should be attempted. I have been informed that benefit resulted formerly by emptying barge-loads of chloride of lime into the stream; and with some such immediate remedy should be combined the addition to the sewage poured in daily of some chemicals to arrest decomposition. For some weeks past the sewage smell has been steadily increasing, apparently from the hot weather promoting decomposition of the organic matter deposited in the river bed from the sewage as it is carried up and down the river by the tide. For a distance of some miles above East Greenwich and below Crossness sewage outfall, the part with which I am personally acquainted, the water is of a dark opaque grey, and when stirred up by the river steamers gives out a well-marked sewage smell, strong enough to nauseate some persons.

It is not clear that such a state of affairs has any injurious effect on those spending much time on the river, by producing severe diarrhœa or any other form of illness; but it is the duty of every believer in the importance of sanitary reform to try to get rid of "matter in the wrong place," and certainly we have it in the present case. It is to be hoped that the greatest and wealthiest city in the world will not long permit a vast open sewer to run through it, polluting the air and exciting disgust both to sight and smell.

I am, Sir, your obedient servant,

Rotherhithe, S.E. J. A. PHILIP, M.D.

A Young Practitioner.—Excluding grounds of humanity, a medical man is not bound to attend every case to which he is summoned, even where a fee is tendered. To the case described in our correspondent's third question our answer will equally apply; though it might be a serious matter to assume neglect, and refuse on that ground to see a case of advanced disease.

Mr. Laxton.—We know nothing of the work.

"SHOULD ENTERIC FEVER CASES BE ISOLATED?"

To the Editor of THE LANCET.

SIR,—To the above question I answer, Yes. Following the Egyptian campaign (and, indeed, continuing to a less extent up to date) a very large number of cases of this disease occurred among the troops who formed part of the expedition. Many such cases were admitted to the Citadel Hospital at Cairo, and experience soon proved that there was risk to nurses and attendants employed in the hospital, as well as to patients under treatment for other diseases. It then became the rule to treat all cases of enteric fever in separate wards, and this facilitated nursing and enabled the hospital authorities to allot old and seasoned attendants for the management of those cases. We can, I think, easily understand the cause of the danger. We know that patients ill from enteric fever frequently soil their beds and clothing with dejecta from the bowels; and certainly the attendants who have to remove these articles, and even patients in neighbouring beds, must incur some risk from the exhalations from them. I think it is now generally conceded that the poison of enteric fever, or whatever it may be called, can reach the system through the air as well as through fluids &c. swallowed.

I am, Sir, yours truly,

T. F. O'DWYER, M.D.,

Surgeon-Major, Army Medical Department.

Junior United Service Club, July, 1884.

W. A. McNaughten, M.D.—We think our correspondent could have no claim after the lapse of so long a time.

"BOILED LETTUCES."

To the Editor of THE LANCET.

SIR,—It is not plain to many of your readers why spinach should be excluded from the diet of oxaluric patients. I have even ordered sorrel with advantage. Nor is it obvious to me why stewed rhubarb is wrong. The oxalates in these vegetables are soon either voided or decomposed after being taken, and many of the crystals found in them are too large to be absorbed.

I am, Sir, yours truly,

Orchard-street, W., July 15th, 1884. WILLIAM SQUIRE, M.D.

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ADVERTISING SHEETS.

OUR attention has been called to an advertising sheet which professes to be sent to every member of the medical profession in the United Kingdom. Our correspondent remarks: "I should like to express in your columns my regret at the issue of such a paper. I regard it as very degrading and mischievous to the profession. It would seem that the tendency is now greatly in the direction of making our calling a 'business,' and, as such, to be promoted by advertisement in every form. This modern and American introduction must be firmly resisted if we are to retain the little respect still left to us as a profession in this country."

Mr. McKoll.—Yes; micro-organisms have been discovered in connexion with syphilis and many other affections of a contagious nature.

Mr. Joseph Balfour—The figures quoted are unintelligible.

Mr. Welsham.—The paper has not been overlooked.

ACTION OF BORACIC ACID ON THE URINE.

To the Editor of THE LANCET.

SIR,—Having seen in a medical journal an extract from a communication of some cases which Professor Rosenthal had made to *Allg. Wien. Med. Wochensch.*, Jan. 15th, and in which he had employed boracic acid internally, with a view of checking the formation of ammoniacal urine, I determined to try it when an opportunity arose. The patient on whom I first tried it was suffering from a bad stricture of the urethra, perineal abscess, &c., and on whom perineal section had been performed two or three years ago. His urine on admission was strongly ammoniacal, with flakes of mucus in it. Boracic acid was administered in ten-grain doses every three hours a few days after admission. In about twenty-four hours the urine changed in reaction, and when passing through the fistula recently formed did not scald him nearly so much. Although the boracic acid was continued for a fortnight, no harm resulted from its continuous administration. The urine passed was kept in a vessel for several days without its undergoing decomposition; it also kept its acid reaction. I may add that previous to the administration of the boracic acid the perineal abscess was opened, and the stricture dilated. The man would not submit to any operation for the permanent cure of the stricture.

The other patient is an old woman, who had suffered from cystitis of doubtful origin (no stone) for seven months previous to her admission in this hospital under the care of DR. VINTRAS. Urine was passed every quarter of an hour day and night when she came in. There was much irritation of the labia and inner aspect of the thighs and much scalding on micturition. After trying several remedies with slight success, and the urine being distinctly alkaline and fetid, the boracic acid in ten-grain doses twice a day was ordered. As in the previous cases, the reaction of the urine changed after the first day of taking the mixture, and has continued acid since. The symptoms, too, have been much relieved. In the night now she passes urine six times instead of thirty or even forty times, which she did before. The inflammation between the labia has disappeared, as well as the itching and scalding.

Through the courtesy of Mr. MacKellar and Dr. Vintras, who kindly allowed me to order boracic acid internally in their respective patients above-mentioned, I am allowed to send you these lines, written in the belief that this property of boracic acid is a remarkable and very important one in practice.—I am, Sir, your obedient servant,

GEORGE VICTOR PEREZ, M.B.Lond.
Res. Med. Officer.

Hôpital et Dispensaire Française, London, July 12th, 1884.

H.—1. In most of the States the holder of a respectable qualification is allowed to practise.—2. In Australia and New Zealand registration is required for the recovery of fees, and may be effected on proof of the possession of a British degree or diploma.—3. For an answer to this question we must refer our correspondent to letters which have appeared now and again in our columns.

NECROSIS OF THE MASTOID PROCESS FROM SUPPURATION OF THE EAR FOLLOWING SCARLET FEVER.

To the Editor of THE LANCET.

SIR,—On July 5th, A. B——, aged four, was brought to me on account of the parents having observed that a very offensive discharge was issuing from behind the ear. The child had had scarlet fever rather severely in January, and early in the following month the discharge from the ear commenced, which had continued ever since, being copious and during the last two months offensive; but she had at no time complained of much pain in the ear, nor seemed to suffer much in any way. On examination I found a small opening behind the left ear, with a point of bone protruding, which, it was easily ascertained with a probe, was part of a considerable portion of the mastoid process, and seemed to be quite loose. I enlarged the wound and removed a piece of bone measuring an inch in length and half an inch at the widest part. The discharge from the wound and from the external meatus was free and offensive, but the hearing was very little impaired, nor did the child appear to have suffered much in health. I saw her again four days afterwards, when the wound had nearly healed, and the discharge, which was no longer offensive, had almost ceased.

I have reported this case, thinking it must be an unusual occurrence for the ear to sustain such serious injury and yet recover with so little impairment of function.—I am, Sir, yours obediently,

Congleton, July, 1884. W. M. DAVIDSON.

SANITATION IN CLERKENWELL.

WITH reference to the strictures recently passed in the House of Commons upon the Clerkenwell Vestry by Sir Charles Dilke, and which we reported in our issue of the 12th inst., we have received a letter from Mr. Robert Paget, vestry clerk, containing an emphatic denial of the charges made by the President of the Local Government Board against the sanitary committee. The committee trust that the imputation that the sanitary condition of Clerkenwell is "not only a disgrace, but a danger to the town, and that the vestry is not fit to be trusted with such a position," may be removed as altogether opposed to facts.

M.R.C.S.E., L.M., & L.S.A.—We cannot undertake to say whom the Association should exclude. But the gentleman who certainly does such things as our correspondent describes is not worthy of medical society.

THE PINK FUND.

To the Editor of THE LANCET.

SIR,—Will you kindly publish the subjoined list of gentlemen who have forwarded moneys to me in aid of this aged ex-Poor-law medical officer; and would you permit me to add that, having learned that his friends have raised a sufficiency to keep him from want, it will not be necessary to try the generosity of the profession for any further assistance.

I am, Sir, yours obediently,

32, Soho-square, July 16th, 1884. JOSEPH ROGERS.

Lennox Browne, Esq., Weymouth-street, W., £1 1s.; Dr. Matthews Duncan, Brook-street, W., £2 2s.; S. H. S., £1 1s.; W. Morrant Baker, Esq., Wimpole-street, £2 2s.; J. Smart, Esq., Stamford-hill, N., £1 1s.; Henry Kennedy, Esq., M.B. (Dublin), 5s.; Arthur Eversfield, Esq., Hampstead, N.W., £1 1s.; Sir Erasmus Wilson, Bt. (Westgate-on-Sea), £5; E. B., £1 1s.; R. B. Ruddock, Esq. (Clifton), £1 1s.; R. Mayman, Esq. (Oxford), £1; James Crocker, Esq. (Bingley), 5s.; W. L. Hunter, Esq. (Pudsey), 10s.; W. W. Morgan, Esq. (Newport), 10s.; W. J. Mackie, Esq. (Bedford), £1 1s.; J. Bridger, Esq. (Cottenham), 5s.; H. de V. Balbirnie, Esq. (Sheffield), £1; J. L. Jardine, Esq. (Dorking), 5s.; R. P. Simpson, Esq. (Weymouth), 10s.

Dr. W. O'Keefe.—The question is a legal one. We suspect the legal view might be adverse to our correspondent, but cannot speak with confidence.

J. D, B. should apply to the sanitary authority of his district.

"MIDWIFERY."

To the Editor of THE LANCET.

SIR,—I find from my midwifery case book that Sunday has not been a favourite day for my patients to bring forth. I have taken four years of a country practice in Cambridgeshire, and I find that from 1879 to 1882 the births have been as follows:—1879: Sunday, 16; Monday, 7; Tuesday, 19; Wednesday, 16; Thursday, 23; Friday, 17; Saturday, 22. 1880: Sunday, 17; Monday, 11; Tuesday, 16; Wednesday, 22; Thursday, 16; Friday, 20; Saturday, 25. 1881: Sunday, 25; Monday, 16; Tuesday, 17; Wednesday, 17; Thursday, 31; Friday, 12; Saturday, 19. 1882: Sunday, 10; Monday, 20; Tuesday, 18; Wednesday, 20; Thursday, 25; Friday, 18; Saturday, 21.

In three out of the four years it will be seen that Thursday was the favourite day. In going over the above figures I have been struck with this fact—that whenever I have had three cases in one day it has been a Sunday.

I am, Sir, yours truly,

Bolingbroke-grove, S.W., July, 1884. W. EASBY, M.D.

House-Surgeon.—In the absence of any agreement or custom to the contrary, we think the proposal is reasonable.

M.R.C.S. should bring the advertisement under the notice of the colleges from which the advertising practitioner derives his diplomas.

A Twenty-five Years' Subscriber may apply to Mr. Nock, Bloomsbury-street.

ERGOT AND QUININE IN MIDWIFERY.

To the Editor of THE LANCET.

SIR,—There being a divided opinion as to the value of ergot in midwifery, I would suggest the use of quinine as its substitute. I have always been pleased with its effect. It is not a toxic drug, and it is our best preventive of pelvic septicæmia.—Yours faithfully,

Newhaven, July, 1884. FRED. DALTON, L.R.C.P.Lond., M.R.C.S.

Associate of King's College.—The nurse cannot be punished. Our correspondent can claim his fee from the patient's husband.

Observer's views were set forth in a letter which we published last week.

THE CAMBRIDGE SANITARY CERTIFICATE.

To the Editor of THE LANCET.

SIR,—I should like to suggest to the authorities at Cambridge the issue of a syllabus for the above examination, after the pattern of those published by the Science and Art Department (subject "Hygiene"). The present regulations convey a most indefinite notion of what is wanted.

I am, Sir, yours truly,

July 16th, 1884. CANDIDATE.

ERRATA.—In our Paris letter last week Dr. Rochard is represented as saying that the number of "cases" of cholera had been extraordinarily great. The context will show that the word quoted was a misprint for cases. The name "Lamballe" should have been *Liouville*.

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COMMUNICATIONS, LETTERS, &c., have been received from—Mr. W. M. Anderson, London; Dr. Squire, London; Mr. Howson, Suenton; Dr. Easby, London; Mr. F. E. Cane, Leeds; Dr. Clement Dukes, Rugby; Mr. H. C. Male, Leith; Mr. Orchard, Kingussie; Dr. W. Oldright, Toronto; Dr. Heron, London; Dr. Dyce Duckworth, London; Dr. Gosset Brown; Mr. G. V. Percy, London; Mr. MacKoll; Mr. Davidson, Congleton; Messrs. Mayer and Meltzer, London; Mr. J. Furley; Dr. De Renzy, Bray; Mr. E. F. Neve, Edinburgh; Dr. Whitson, Glasgow; Dr. Robertson, Kimberley; Dr. Macdougall, Carlisle; Dr. Ward Cousins, Southsea; Mr. Ormsby, Dublin; Mr. T. S. Ellis, Gloucester; Dr. Lloyd, Barmouth; Dr. Hunter Mackenzie, Edinburgh; Mr. Woodman, London; Dr. Cartwright Reed, Basutoland; Mr. Grosholz, Towyn; Mr. Dalton, Newhaven; Mr. Joye, Dartmouth; Mr. Field; Mr. Willis, London; Mr. Pearse, London; Dr. C. F. Knight, Dublin; Mr. Walsham, London; Mr. Blackett, London; Mr. P. H. Kidd, West Hartlepool; Dr. O'Keefe, Bury St. Edmunds; Mr. Watson Cheyne, London; Mr. E. A. Campbell, London; Mr. Romary, Tunbridge Wells; Dr. J. A. Philip, London; Mr. Bourne, London; Dr. O'Dwyer, London; Dr. C. S. Taylor, London; Dr. Hicks, Hendon; Messrs. Goddard and Massey, Nottingham; Messrs. Robertson and Scott, Edinburgh; Mr. Fenwick, Dunsford; Mr. Bully, London; Dr. Ashdown, Tetbury; Mr. McDonald, Hadfield; Mr. McLee, Leatherhead; Mr. Lamb, Brighton; Mr. Dowse, London; Mr. Cowland, Lancaster Infirmary; Messrs. Turnbull and Wood, Newcastle; Messrs. Lumley and Co., London; Mr. Pollard, Edinburgh; Messrs. Brown and Sons, Hull; Dr. Ashdown, Berlin; Mr. Armstrong, Manchester; Messrs. Wright and Co., Birmingham; Mr. Shirtliff, Kingston-on-Thames; Mr. Ingle, London; Mr. Anderson; Mr. Toogood; Mr. Motherwell, Glasgow; Mr. Gordon Holmes, London; Dr. Seamen, London; Beta, Finsbury; H. H., Bury; H.; Omega, Birmingham; W. K., Manchester; Surgeon, Cambridge; Marcus; W. W. P., Plymouth; A.M.D.; House-Surgeon; Incognito; W. W. W.; Candidate; M.R.C.S.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Stott, Adlington; Mr. Elliott, Whitstable; Mrs. Theobald, Leicester; Mr. Stock, Bristol; Mrs. Lloyd, Jersey; Mr. Whittle, Edinburgh; Dr. Tate, Nottingham; Mr. Allen, Liverpool; Dr. Clark, Tunbridge Wells; Mrs. Hartley, Worcester; Dr. Moriarty, Cork; Mr. Hart, Corby; Mr. Mercier, London; Mr. Rowley, Barnsley; Mr. Jones, Dowlais; Mr. Law, Sheffield; Mr. Herder, Cardiff; Mr. Blore, Leeds; Dr. Brown, Bryanmawr; Mr. Kinder, Leicester; Mr. Bigg, London; Mr. Townley, Tarporley; Mr. Bush, Beverley; Mr. Watson, Scarboro'; Mr. Leggatt, Sandwich; Messrs. Brown and Sons, Hull; Mr. Witham, Adlington; Miss Hunter; Mr. Gutteridge; Mr. Nash, London; Mr. Whitley, Halifax; Mr. Nason, Bampton; Mr. Forbes, Drumlithie; Mr. Dickenson, Stalybridge; Messrs. Keith and Co., Edinburgh; Mr. White, Reading; Mr. Priestley, Clapham Junction; Mr. Hurley, Euston-square; Mr. Shaw; Mr. Harland, Tunbridge Wells; Dr. Rayner, Hanwell; Mr. Morris, London; Messrs. Atkinson and Co., Kendal; Mr. Jeffrey, Epsom; Mr. Birch, Newbury; Lindsey, Notting-hill; H., Guildford; Zeta; H. S., Limehouse; Mercury; Medicus, Southsea; Medicus, Liverpool; Sigma, Edinburgh; H. G., Cheltenham; A. W. H., Barnsley; Medicus, Southport; B., Sheffield; Galen; Mrs. B., Leatherhead; M.B.; Drove; Medicus, York; Rex, Barnsbury; M. F.; J. P.; X., St. Helens; X. F.; A. B., Salisbury; W. S., London; Medicus, Leamington; Alpha, Lower Gornal; T.G.D.; W. W. P., Plymouth; D. T.; Sigma; Vendor; Truth, Camberwell; Locum Tenens; S., Gipsy-hill.

Cambridge Observer, Carmarthen Weekly Reporter, New York Herald, Tyneside Echo, Musical Opinion, Bury Times, Bristol Mercury. &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, July 22.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, July 23.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, July 24.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, July 25.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, July 26.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom, and all other Advertising Agents.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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Remarks
ON THE
PATHOLOGY OF PNEUMONIA AND PLEURO-PNEUMONIA;
WITH NOTES OF EIGHTY-FIVE CASES.

Read before the Liverpool Medical Institution,

BY RICHARD CATON, M.D., M.R.C.P.,
HONORARY PHYSICIAN TO THE NORTHERN HOSPITAL, LIVERPOOL.

PNEUMONIA is so trite and familiar a subject, and in one form or other has been so often brought before this Society, that I can only excuse myself for introducing it again, partly on the ground of the great interest that has always attached to its treatment, but chiefly on that of the new and interesting questions which at the present time are awaiting solution in reference to its pathology—questions which, if decided in the affirmative, will cause us to class pneumonia among the zymotic diseases. For generations this disease has been the chosen battle-field of therapeutists. The bleeders, the givers of mercury, of tartar emetic, and of alcohol, and the disciples of the expectant method have all appeared in turn, and each has claimed a decisive victory. The wide discrepancy of their results has been explained by the well-known theory of a change of type in disease in general. Whether that be true or not, there can be little doubt that there have been many changes of type in pneumonia; that for long periods the disease has presented a mild sporadic form, which, when uncomplicated, terminated in recovery under almost any form of simple treatment. At other times, again, the disease presented a much severer type, which was believed to demand and to be benefited by bleeding and other heroic measures, and to be very fatal if they were withheld; while in other instances the disease has assumed so malignant a type that treatment of any kind seemed of small value. This remarkable variability of pneumonia, while rendering it unsuitable as a test disease for comparison of the results of different methods of treatment, adds greatly to its pathological interest. The resemblance which, in its sudden onset, initial rigor, and rapid defervescence, it has to the class of fevers is rendered much closer, where we find it varying greatly in severity at different times, and occasionally becoming epidemic, and even infectious.

Probably for nearly a century croupous pneumonia in England has been mainly of a mild and sporadic type. Most of our text-books describe this form of the disease; it is unquestionably the one which we usually meet with. Consequently we are rather apt to forget that other forms of pneumonia exist, and if examples of any other type present themselves perhaps we are rather slow to recognise them. The evidence is nevertheless conclusive, that an epidemic pneumonia does occasionally occur in the human subject, and an epizootic form in the lower animals, and that it is occasionally infectious. Among cattle it is perfectly clear that two forms of pleuro-pneumonia exist, the one sporadic, the other epizootic, symptoms, treatment, and ratio of mortality of which have long been known with considerable accuracy; the latter an epizootic form, highly infectious, having a mortality three or four fold as great as that of the sporadic form. It is a remarkable fact that the infectious epizootic form was unknown to English veterinary surgeons until the year 1839, when it suddenly appeared in England and spread rapidly from county to county.[1]

The evidence of similar epidemic pneumonias and pleuro-pneumonias affecting the human subject is very strong. It would be easy to fill pages with accounts of the various epidemics described by Ozanam and other writers, beginning even as early as 430 B.C. with the fatal outbreak of gangrenous pneumonia at Athens described by Thucydides. But I will merely mention with great brevity two, which are quoted from older authors in *Dr.* Sturge's work on Pneumonia, and then pass on to speak of recent epidemics which have been observed by men who studied and described them in the light of modern pathological knowledge. The Belgian epidemic in 1557 was characterised by "vehement cough and fever, pain in the side, and difficult respiration; bloody expectoration occurred on the third day, and death on the fifth to the eighth, unless bleeding was performed on the first or second day," bleeding at a later stage was held to be useless. The Philisbourg epidemic of 1688 was characterised by "stitch" in the side and chest oppression; the disease terminated, in fatal cases, about the eighth day, in delirium, convulsions, or diarrhœa. The lungs were found "actively inflamed and hepatised, in many parts purulent, the chest and pericardium filled with bloody serum." In most of these reports of ancient epidemics of pneumonia it is to be noted that when post-mortem appearances are described, there was fluid in the pleuræ and pericardium.

Among the modern epidemics is that which occurred in the Mediterranean Fleet in 1860, and which Dr. Bryson describes in THE LANCET for Jan. 9th, 1864. It was a fatal form of typhoid pneumonia, often accompanied by effusion into the pleuræ and by diarrhœa and dysentery. Its resemblance to the pleuro-pneumonia of cattle was specially remarked. It was believed that the sick landed at Malta gave the disease to other inmates of the hospitals.

The Iceland epidemic of 1863 is interesting. My old friend Dr. Hjaltelin has often mentioned it to me. He describes it fully in the *Edinburgh Medical Journal* for April, 1864. Pneumonia, like all chest diseases, except hydatids of the lung, is rare in Iceland; but when it does occur it is in a most fatal epidemic from. In 1863 the disease prevailed to a frightful extent among the Icelanders. The main lesions found after death were extensive hepatisation and quantities of lymph and serum in the pleural cavities. Dr. Hjaltelin was in the main an opponent of bloodletting, but in this epidemic he came to the conclusion that it was necessary; he found that if it were omitted the patient generally died on the second or third day. There were at that time only eight medical practitioners in the whole of the island, consequently numbers of the sick had no professional attendance; and amongst them Dr. Hjaltelin describes the mortality as being very high; for example, in one parish out of twenty-four cases seventeen deaths occurred. Knowing from experience the extreme severity of the climate and the miserable huts in which the Icelanders live during their nine-months' winter, it is a matter of much surprise to me that sporadic pneumonia is so rare.

Dr. Kühn of Moringen, in Hanover, reports an outbreak which occurred in that town in 1878. Forty-five cases occurred. The disease was marked by great prostration, enlargement of spleen, and albuminuria; there was almost always pleuritic effusion. Pericarditis occurred in one-fourth of the cases, meningitis in one-ninth, and diarrhœa in two-thirds. It was distinctly infectious. In addition to the lesions named above, parenchymatous nephritis and fatty degeneration of the heart were frequently found at the autopsies.[2]

In the year 1881 an outbreak occurred at Lustnau, near Tübingen. Among a population of only 1600 forty-four cases occurred, and of these ten were fatal. If time and space permitted many other instances might be quoted, as for instance, the Christiania epidemics of 1847 and 1866, also that recorded by Dr. F. H. Daly in THE LANCET for Nov. 12th and Dec. 24th, 1881, where six persons in one house to all appearance contracted pneumonia from one another, just as they might scarlatina or typhus. In many of these epidemic outbreaks there is evidence of the prevalence of cold winds and severe weather at the time, in other cases no such exciting cause appears to have existed.

Passing from the subject of the epidemic and infectious forms of pneumonia, I wish next to speak of the pathological problem referred to in the opening paragraph—viz., the supposed origin of pneumonia from a specific micro-organism.

In the year 1875 Professor Klebs of Zurich described in the fourth volume of the Archives of Experimental Pathology certain micro-organisms which he had observed in inflamed lung, and which he named "monas pneumoniæ." A little later Eberth saw the organisms in the lung and in the pleural effusions of a case of pneumonia, and described them in the twenty-eighth volume of the Archives of Clinical Medicine. Koch also gives an account of them in the Reports of the Imperial Health Department for 1881. Dr.

1 Sturge's Lecture on Cattle Diseases.

2 THE LANCET, August 24th, 1878.

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Friedlander, Privat Docent in Pathological Anatomy in Berlin, and Dr. Frobenius likewise publish detailed accounts of cases of a severe form of pleuro-pneumonia in which in the lungs pleural effusion and lymphatics were found quantities of an elongated micrococcus, the organism being often seen in pairs or chains, and enclosed in a mucigenous envelope. Friedlander and Frobenius succeeded in cultivating these organisms in blood, serum, and in other fluids, and they then proceeded to inject the micrococcus into the lungs of various animals. Five dogs were experimented upon; one of them died of pleuro-pneumonia. Several rabbits had the injection made into the lung, but without result. Guinea-pigs were tried, and about half the number were seized with pneumonia. A large number of mice were inoculated, and in every instance fatal pleuro-pneumonia followed; the consolidated lungs and the pleural effusion were found full of the micrococci. Mice were placed in an atmosphere into which the micrococci were thrown by a spray producer, half of those inhaling this atmosphere contracted pleuro-pneumonia.

There thus exists a certain amount of evidence that some or all cases of pneumonia depend upon the presence of a micrococcus, but the evidence cannot as yet be regarded as conclusive. The problem is a very important one, and one which it may be hoped physicians and pathologists will speedily solve. Many of the cases in the annexed table would have afforded an excellent opportunity for investigation, but most of them occurred at a time when little or nothing was known of a pneumonia micrococcus. The sputum of Cases 84 and 85 was found, when treated with gentian violet and iodine, to contain multitudes of micrococci, but whether or not they were the true specific organisms of pneumonia it is not possible to say. The series of cases given includes every case, complicated or uncomplicated, which I have had during the past seven years, with one exception. Owing to imperfection of records, the details are not quite complete. In some of the fatal cases either an autopsy was refused or no notes of it were preserved. It need hardly be remarked that I do not bring these cases forward as an example of a low mortality and successful treatment, though I believe the treatment was as successful as we could anticipate in the class of cases treated. The chief interest of the table consists in the extremely high mortality which prevailed at certain times, and in the remarkable variation in type which the disease presented in different years.

Before passing on to the principal deduction which I propose to draw from these cases, there are one or two minor points to be mentioned, and the first is this. Most of our pneumonia cases at the Northern Hospital are sailors or dock labourers. Many of them are habitually intemperate; where the patient confesses intemperance his testimony may generally be accepted; when he denies it his evidence cannot, perhaps, be always taken so unreservedly, as was made manifest by a patient of mine who did not regard himself as by any means a drunkard, but who was found, on careful cross-examination, to have habitually taken three quarts of rum or whisky daily. It will be seen, on referring to the table, that almost every confessedly intemperate man either died or suffered some complication. The second point is this. At the Northern Hospital we receive a great many drowning cases, and many of them take pneumonia. In fact, it is a routine practice with us to keep these people in bed for at least four days. It will be seen that my list includes twelve of these cases. They are nearly always intoxicated at the time of the accident, and in many the immersion was a prolonged one. The chief point of interest in these cases is that we are able to watch the physical signs from the beginning of the disease, and the first indication is diminished respiratory murmur on the side which is about to be attacked, this is followed by slight harshness, and then later come the crepitation and dulness. Thirdly, many of the deaths—as, for example, Nos. 15, 21, 52, 53, and 79—may be put down quite as much to antecedent disease of other kinds as to pneumonia; also many of the cases came in late in the course of the disease, and had been under very unfavourable conditions prior to admission. Still, making allowance for all these special causes of mortality, the death-rate remains very high.

Now, I come to the chief point to which I desire to direct your attention. During certain periods of the seven years over which the table extends I was much struck with the malignant form which the disease presented: Case 8 was the first of the kind. Both lung and pleura were involved. There were diarrhœa and extreme prostration, and after death we found the lung in a softened and almost rotten condition, and the serum in the pleural cavity putrid and offensive. After this no specially malignant case occurred until 1879, when seven cases of pleuro-pneumonia were admitted among a total of thirteen cases, and of these seven died. During the succeeding twelve months the cases were of a milder kind and only two deaths occurred, but from the end of December, 1880, throughout 1881, and up to January, 1882, nearly every case admitted was of a most severe type. Out of a total of seventeen cases ten were pleuro-pneumonia, and out of the whole number of seventeen only four recovered, notwithstanding our utmost care. I need scarcely say that so frightful a mortality occasioned great concern in the minds of all who had to do with these cases, and that we used every endeavour to save them. Subsequently to January, 1882, the disease became much milder in type, the pleura being rarely involved, and during the two years and a quarter that have succeeded I have had only two deaths—viz., Case 69, a poor girl who died after a premature confinement; and Case 79, a drunken publican who was brought in almost dead after long immersion, and, in addition, comatose from a head injury. These, strictly speaking, are not pneumonia deaths at all. During 1879 and 1881 I was fully convinced that we had to do with a malignant and septic form of pneumonia, for the following reasons—(1) the extreme prostration of the patients, (2) the frequency of pleurisy—out of twenty-nine cases the pleura was involved in sixteen; (3) in three cases meningitis occurred, and in two pericarditis. Albuminuria, delirium, and diarrhœa were also common. How abnormally frequent these complications were may be seen if we take as a basis of comparison 8000 consecutive cases of pneumonia tabulated from the Reports of the *Allgemeine Krankenhaus* in Vienna. Among these pleurisy occurred in 5 per cent., meningitis in 1 per cent., and pericarditis in 1 per cent. In many respects the severe cases occurring in the years 1879 and 1881 resemble those described during epidemics of pneumonia, but I saw no clear evidence of infection. Selecting twenty-nine of the severest cases I found that five came direct from ships in the docks; that the residences of eight were widely scattered at long distances from one another, in different parts of the city; that a group of six cases all came from one very limited area within a radius of a hundred yards, that another group of five cases came from another still more limited area, while the remainder lived near the two last-named centres. The following table of the pneumonia deaths in the Liverpool Hospitals, taken from the return of the medical officer of health, shows that the years 1879 and 1881 were years of great mortality:—

Year.	Workhouse.	Infirm.	Northern.	Stanley.	W. Derby	Southn.	Total.
1876	38	7	3	...	5	10	63
1877	54	9	4	...	4	8	79
1878	85	12	7	3	4	7	118
1879	86	9	11	...	16	12	134
1880	...	...	No return		...	...	...
1881	114	8	9	2	22	17	172
1882	94	9	9	2	17	4	135

The pneumonia deaths rose from 63 in 1876 and 79 in 1877 to 134 in 1879 and 172 in 1881, and after that diminished. Dr. Robertson, physician to the workhouse, tells me the returns from that institution are not to be entirely depended upon; but even if we omit them altogether, the death-rate of the other hospitals is still found very high in 1879 and 1881. I do not know how to account for the great fatality of pneumonia during these years. It is true that Niemeyer has remarked that the disease is always more severe during the existence of an epidemic of typhus, and typhus was prevalent in Liverpool at this time. Whether we are entitled to say that pneumonia was epidemic during those two years may be open to question—personally I think it was; but as a matter of fact there is no doubt it was severe in type and very fatal.

In conclusion, I should like to say a word or two as to the treatment of these cases in the hospital. In the first place the patient is put into a comfortable bed in a warm part of the ward; he is carefully nursed by night and by day, visited once daily by the honorary physician and four or more times daily by the house-physician. His temperature, pulse, and respiration are noted twice daily during the acute stage. In

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CASES OF ACUTE PNEUMONIA AND PLEURO-PNEUMONIA TREATED BY DR. CATON AT THE NORTHERN HOSPITAL.

No.	Initials.	Age.	Occupation.	Habits.	Days in hosp.	Cause (if known).	Amount of lung involved.	Complications.	Result.	Notes of autopsy in fatal cases.
1	O. H.	..	Sailor	..	11	..	½, right	Diarrhœa	Rec.	—
2	D. H.	19	Miner	..	27	..	½, right	..	,,	—
3	E. S.	18	..	..	30	..	½, right	Albuminuria	,,	—
4	N. B.	35	Sailor	..	38	..	Entire, left	Diarr.; delirium	,,	—
5	N. M.	29	Labourer	..	20	..	Whole, right	..	,,	—
6	H. McC.	37	Sailor	..	6	..	Whole, left	Adv. on adm.; ac. del.; diarr.	Died	—
7	M. H.	30	Horsekeeper	..	23	..	Whole, left	Diarrhœa	Rec.	—
8	H. M.	59	Labourer	..	11	..	Rt., pleuro-pneu.	Do.	Died	Grey hepat.; thickened pleura; putrid serum.
9	H. C. H.	39	Sailor	..	14	..	½, right	..	Rec.	—
10	J. W. M.	23	Labourer	..	55	..	½, left, & pleurisy	..	,,	—
11	W. R.	36	Do.	..	19	Immersion	Double	..	,,	—
12	P. G.	18	Do.	Temperate	30	Exposure	⅔, right	..	,,	—
13	J. C.	43	Do.	Do.	36	Do.	⅔, right	..	,,	—
14	T. T.	38	Do.	Intemp.	23	..	½, left	Œdema of legs	,,	—
15	R. F.	52	..	..	1	Immersion	Early pneum.	Aortic & tric. dis.	Died	Card. hypert.; atheroma; enl. liver.
16	T. S.	4	Boy	..	20	..	Pneumonia	..	Rec.	—
17	J. M.	43	Fireman	..	8	..	Pneumonia	..	Died	—
18	W. S.	50	Packer	..	12	..	½, right	Diarrhœa	,,	—
19	T. S.	10	Boy	..	19	Immersion	Pneumonia	..	Rec.	—
20	J. McC.	42	Labourer	..	33	..	½, left	..	,,	—
21	L. N.	42	Sailor	..	9	..	Whole, right	Diarrhœa	Died	Grey hepat.; waxy kidney and liver.
22	J. McC.	46	Labourer	..	4	Exposure	Dble. pleuro-pn.	..	,,	Grey hepat.; pleurisy.
23	C. J.	25	Do.	..	18	..	½, right	..	Rec.	—
24	H. S.	21	Sailor	..	12	..	Left, pleuro-pn.	..	,,	—
25	B. G.	21	Labourer	..	10	..	Right, pleuro-pn.	..	,,	—
26	R. McW.	18	Sailor	Intemp.	11	Immersion	Double, and right pleurisy	Acute delirium	Died	Grey hepat.; pleural adhesion; large fatty liver.
27	W. E.	44	Do.	..	3	..	Pleuro-pneum.	Meningitis	,,	Red hepat.; lymph; large fatty liver; lymph under pia mater.
28	E. C.	45	Do.	..	11	..	Pleuro-pneum.	..	Rec.	—
29	M. Q.	27	..	..	1	..	½, left	Pericarditis	Died	Red hepat.; lymph and 20oz. of fluid in pericardium.
30	J. J.	43	..	..	27	..	½, left	..	Rec.	—
31	E. M.	45	Sailor	..	42	..	½, left	..	,,	—
32	C. J.	44	Do.	..	7	..	⅔, right	Meningitis	Died	Grey hepat.; contracted kidney; effused lymph in brain membranes.
33	J. G.	42	..	..	7	..	Pleuro-pneum.	..	,,	Grey hepat.; lymph; enlarged liver.
34	W. B.	45	Sailor	..	28	Immersion	Pneumonia	..	Rec.	—
35	M. G.	35	Labourer	Temperate	31	..	Whole, right	..	,,	—
36	G. M.	27	Sailor	..	5	..	Pneumonia	..	Died	—
37	S. C.	26	Do.	..	21	..	Pleuro-pneum.	..	Rec.	—
38	P. G.	60	Labourer	..	42	Immersion	Pneumonia	Fractured ribs	,,	—
39	W. G.	54	Fireman	..	1	..	Whole, right, and pleurisy	Meningitis	Died	Grey hepat.; lymph; brain membranes thickened.
40	A. E.	40	Sailor	..	23	..	Pneumonia	..	Rec.	—
41	J. S.	29	Labourer	Intemp.	37	Immersion	½, right	Albuminur.; delir.	,,	—
42	J. B.	56	Boatman	..	38	Do.	Double	..	,,	—
43	A. McT.	45	Sailor	Free drinker	54	..	Whole, left, and pleurisy	Albuminur.; casts	,,	Died subsequently from Bright's disease, Feb. 24th.
44	P. M.	52	Hawker	..	57	..	..	..	,,	—
45	C. S.	45	Labourer	..	8	..	Whole, right, and pleurisy	..	Died	Grey hepat.; card. hypert.; cirrhosis of kidneys; liver enlarged.
46	P. S.	45	Do.	Intemp.	7	..	Rt., pleuro-pneu.	Delirium tremens	,,	—
47	T. V.	44	Sailor	..	40	Exposure	Double.	Albumin. (slight)	Rec.	—
48	T. F.	41	Labourer	Intemp.	6	..	⅔, right, and pleurisy	Dil. heart; diarr.	Died	Red and grey hepat.; heart hyper. and dil.; fatty liver; kid. congested.
49	J. G.	48	Sailor	..	3	Immersion	..	..	,,	—
50	W. S.	39	Do.	Temperate	5	..	Dble. pleuro-pn.	..	,,	Red and grey hepat. and lymph; cirr. of liver; gran. k.; atheroma.
51	T. W.	40	Plasterer	Do.	26	..	Right, pleuro-pn.	..	Rec.	—
52	G. L.	36	Sailor	Intemp.	1	..	Pneumonia	Delirium tremens	Died	—
53	T. G.	38	Labourer	..	4	..	Right apex	Came in on 6th day	,,	—
54	W. S.	34	Do.	..	5	..	Double pneum.	Maniacal delir.	,,	Red hepat.; k. cong.; blood uncoag.
55	G. H.	38	Cooper	..	9	..	Right apex	Dilated heart	,,	Grey hepat.; fatty heart; nutmeg liver, 70oz.
56	R. C.	26	Labourer	..	19	..	Left, pleuro-pn.	Hepatitis	Rec.	—
57	J. L.	52	Coalheaver	..	3	..	Left, pleuro-pn.	..	Died	Red hepat.; lymph; atheroma; enlarged liver, 86oz.
58	J. M.	21	Shopman	..	17	..	⅔, right	..	Rec.	—
59	J. B. S.	33	Sailor	..	2	..	Left, pleuro-pn.	Pericarditis	Died	Red hepat.; lymph; atheroma; sago spleen.
60	L. O.	44	Do.	..	24	..	⅔, left, & ½, right	Empyema	,,	Red hepat. and traces of pleurisy.
61	J. J.	27	Do.	..	5	..	Right, pleuro-pn.	..	,,	Red hepat.; lymph.
62	P. T.	33	Labourer	Intemp.	24	..	⅔ right, pleuro-pn.	Delirium	Rec.	—
63	J. D.	12	..	..	10	..	Pleuro-pneum.	..	,,	—
64	T. T.	23	Sailor	..	21	..	Whole, right.	..	,,	—
65	J. P.	33	Do.	..	29	..	½, right, ½, left	Maniacal delir.	,,	—
66	M. C.	18	..	..	38	..	Left, pleuro-pn.	..	,,	—
67	C. L.	22	Sailor	..	38	..	⅔, right. pleuro-pn.	..	,,	—
68	A. H. H.	27	Do.	..	17	..	½, right	Diarrhœa	,,	—
69	M. McG.	19	Servant	..	5	..	⅔, right, ½, left	Prem. deliv.; delir.	Died	Hepat. of both bases.
70	F. McC.	28	Labourer	..	33	..	½, left, pleuro-pn.	..	Rec.	—
71	G. B.	16	Steward	..	14	..	½, right	..	,,	—
72	H. F.	40	Sailor	..	21	..	½, left	Mitral regurg.	,,	—
73	P. B. C.	63	Porter	..	27	..	Pneumonia	..	,,	—
74	M. C.	49	Labourer	..	11	Immersion	½, left	..	,,	—
75	L. M.	30	Sailor	..	24	Exposure	½, right	..	,,	—
76	M. M.	44	..	..	99	..	Pneumonia	..	,,	—
77	R. L.	38	Sailmaker	..	63	..	⅔, left	..	,,	—
78	J. M.	37	Labourer	..	20	Exposure	⅔, right	..	,,	—
79	M. O'B.	38	Innkeeper	Intemp.	9	Immersion	Whole, left, ½ right	Head injury; comatose on admission	Died	Grey hepat. in entire left and ½ right.
80	J. O'N.	39	Watchman	..	19	..	½, right	..	Rec.	—
81	J. McC.	29	Sailor	Intemp.	34	..	Whole, right	Nearly died on 30th	,,	—
82	M. G.	27	Labourer	Do.	12	Immersion	½, left	..	,,	—
83	L. K.	37	Sailor	..	50	..	Whole, right	..	,,	—
84	H. A.	31	Do.	..	..	..	Whole, right	Diarrhœa	,,	—
85	F. J.	36	Bricklayer	Intemp.	..	..	½, left	Delir.; pleurisy	,,	—

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the few instances in which the case is seen at the onset of the disease, mustard poultices and the internal use of aconite and spirit of nitre, or other remedies having a like action, are given with the view of checking if possible the severity of the attack. In general, however, acute fever and consolidation of lung are present when the patient is admitted. Great care is taken to avoid chill during the first and all subsequent examinations of the chest. The state of the lung having been ascertained, a jacket poultice is applied to the side affected, and this is renewed every four hours. A milk diet is given during the acute stage. If the heart's action be feeble, and particularly if the first sound be indistinct, stimulants are given, the amount and frequency being determined by the special needs of the patient. In cases of great feebleness brandy is given every two hours, every hour, or even every half hour. Carbonate of ammonia is given in five-grain doses about every four hours, along with senega, spirits of nitre, or other drug that special symptoms may render suitable. If the cough is very irritating and pain is severe, while there is no evidence of accumulating fluid in the air-passages or of kidney complication, small doses of opium are given. I have rarely employed bleeding. Case 47, however, was an exception. The patient was a robust man, attacked with a double pneumonia, who came in much cyanosed and gasping for breath, with fifty respirations per minute; the veins of the head and neck were much distended, and he was scarcely able to speak. During the next half hour he continued to get worse. Eight ounces of blood were taken from the left median basilic vein. Great relief followed, respiration slowed, and the patient became able to speak easily and comfortably. In a few hours his respirations fell to twenty-eight. In sthenic cases considerable danger may arise from the over-distension of the venous system and of the right heart, due to the great obstruction which the blood meets in its passage through the lungs. Moderate bleeding under these circumstances lowers tension to a slight extent in the venous system, and enables the right heart to overtake its arrears. In some epidemics of pneumonia, notably in the Icelandic outbreak described above, this condition was probably very common, and doubtless Dr. Hjaltelin was perfectly correct in saying that those in whom this venous congestion was relieved by an early bleeding recovered, whereas if it were not relieved the embarrassed condition of the heart added greatly to the peril of the attack.

I am fully convinced that it is a mistake to lay down any one special course of treatment as the right and true one for all cases of pneumonia, or to suppose that such treatment if wisely directed must always succeed. In ordinary uncomplicated cases of sporadic pneumonia the course of treatment described above is most successful, and the death-rate is very low, as shown by the excellent results of Professor Bennett, of Dr. Waters, and of many other physicians; but let pneumonia appear in an acute epidemic form among a full-blooded country population, and be ushered in by such intense venous congestion as we had in Case 47, then doubtless bleeding at the onset is the right treatment, and probably of more avail than anything else we can do. Or again, let a severe form of epidemic pneumonia occur in a town population and be accompanied by effusion into pleura and pericardium and by meningitis and the other complications I have described, then the treatment described may be the right one; at any rate I fear we do not at present know of any that is better, but it will not prevent the death of a large proportion of the sick, however wisely and carefully we conduct it.

METEOROLOGY IN RELATION TO HEALTH.—At a conference on this subject held recently at the International Health Exhibition, Dr. Tripe gave a number of statistics derived from his own observations dating from 1847, showing the relation between changes of temperature and certain specific diseases, such as scarlet fever, which seemed to be checked by a low temperature, while a sudden fall of the thermometer was connected with an increase of deaths from lung diseases. Mr. G. J. Symons read a paper on English Climatological Stations, in which he described the apparatus required for making meteorological observations. At an adjourned meeting of the conference, papers on "Equinoctial Gales—do they occur in the British Isles?" and on "Some Occasional Winds and their Influence on Health," were read by Mr. R. H. Scott and Mr. W. Marriott respectively.

ACUTE TRAUMATIC MALIGNANCY.[1]

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THE predisposing and exciting causes of carcinoma, sarcoma, and other species of malignant disease, and the rapidity of their growth, have always been a subject of the deepest interest to the practical surgeon. Theory after theory has been promulgated, cause after cause named as the exciting agent in the production of this diseased condition. However, little has been added to our state of knowledge of recent years, notwithstanding the advances made in pathological research, to account more definitely or more accurately for its production and commencement in the bodies of certain constitutions. The doubt as to whether it is altogether a constitutional malady, or whether it is a disease assisted and encouraged by local effects, having at the same time a hereditary constitutional origin, being a combination of the two factors, seems to me still to exercise the minds of modern surgeons as it did in the past.

Some two years ago I happened to read a paper[2] on this subject from the pen of Mr. Richard Barwell, senior surgeon to Charing-cross Hospital, and since then I have paid particular attention to certain clinical characters and conditions of malignant tumours of the sarcomatous and carcinomatous group which have come under my observation, and in some of these cases I certainly could distinguish a remarkable difference in the extraordinary rapidity of their growth, such development following quickly after the receipt of a blow or other injury to the part affected, so much so that I feel the title of this communication correctly denotes a class of malignant growths clearly distinguishable from the rest of the generic species by the rapidity of its development after local injury.

Mr. Barwell, in his introductory remarks in the paper alluded to, says: "The cases on which the name is founded made a great impression on my mind, leading me to think that occasionally under the stimulus of severe irritation the tissue elements, which under favourable circumstances would assume only the additional activity necessary for repair, may exhibit a more prolific cell germination, culminating in a rapid form of malignant disease in one of those forms, whether named myeloid or round-celled sarcoma or encephaloid cancer, which consists of little else than heaped-up cells and their progeny."

In the following cases it will be found that malignant tendencies rapidly developed after the receipt of local injury. I would, however, be inclined to think that, without some inherent malignant constitutional tendency, a local injury would not be followed by anything more than some slight temporary benign irritation and inflammation necessary for the healthy reparation of the part. For it would appear, according to Billroth, that the development of tumour depends upon two factors: (1) the inherent tumour-forming diathesis; (2) local irritation, which may be either inflicted suddenly or may be of long-continued duration.

As already mentioned, in healthy individuals we find local injuries, such as wounds and blows, merely go through the benign and natural processes sufficient for repair, such as inflammation, ulceration, suppuration, and cicatrisation, and such injuries produce no bad constitutional or local effects whatever. On the other hand, in patients with a constitution having a hereditary tendency to tumour diathesis, small skin wounds and other slight injuries are rapidly followed by a very fast-growing malignant tumour at the original seat of injury. From this, then, it would seem that although the tumour diathesis may be present in the body of a given individual, the condition may be harmless for a certain limited time, or for a very considerable period, as it requires another factor to complete the process of malignant development, and such factor, it would appear, is frequently contributed by a traumatism or other local irritation of one kind or another; and should the latter factor of local irritation be wanting, no malignant development takes place.

Take, for example, the lower lip, a very common situation

[1] A paper read at the Surgical Section of the Irish Academy of Medicine, May 9th, 1884. [2] British Medical Journal, Feb. 11th, 1882.

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among certain classes for epithelial cancer to make its appearance. In early stages, and up to a certain point, I would think that only the tumour diathesis was present—in fact, that it was in a pre-malignant condition. To this add the factor of continual local irritation by means of the heated stem of a short clay pipe, and you have epithelial cancer very rapidly developed. Also, in malignant tumours of the breast, the tumour-producing diathesis may be present for a considerable time, and no malignant development take place until a blow or other injury is received at the part, and rapid enlargement and growth follow. The following appear to me to illustrate the subject of my paper.

CASE 1.—B. H——, a young gentleman, aged ten, in the month of June, 1869, fell off some rocks at the sea-shore. In falling he came in contact with a large stone, which struck his right leg about two inches below the tubercle of the tibia. He felt the place rather stiff and painful for two or three days after the injury, which was treated by cold lotions, bandaging, and rest. However, the pain never altogether disappeared, and in about a fortnight the whole circumference of the limb began to swell, and the seat of the injury, on the front of the tibia below the knee, became very painful. He was unable to walk, and began rapidly to lose flesh and appetite. The limb by this time had become considerably enlarged, glazed, and tense, with large blue veins coursing over its surface. About the end of July his father consulted the late Mr. Adams, who recommended that Sir George Porter should also be consulted. At this time the nature of the case was clearly defined, being considered by the surgeons mentioned to be a rapid development of malignant disease of the tibia, at the seat of injury. Amputation at the lower third of the thigh, above the knee-joint, which was already more or less implicated, was suggested as the only means available to save the little patient's life. The father, however, would not consent, but took the child to London, where he consulted Sir James Paget and Mr. Cæsar Hawkins, who also recommended that amputation should be performed. After remaining in London some few days, the father brought the boy back to Dublin, who by this time had become very much weaker and more emaciated, being apparently worn out by the incessant pain and sleepless nights. At the request of the father the limb was amputated at the lower third of the thigh by Sir George Porter, assisted by the late Mr. Adams, Mr. William Stokes, and myself. The boy recovered the shock of the operation, but sank three weeks afterwards from sheer exhaustion. In this case the patient was apparently in the best of health up to the time of the fall, and from that period rapid development of malignant disease (fungus hæmatodes) set in, and he died within three months of the receipt of the local injury.

CASE 2.—Robert F——, aged twenty-five, was admitted to the Meath Hospital from the county Kerry on March 18th, 1884, under my care, suffering from an enormous tumour growing from the left side of the neck. His previous history was as follows:—About ten months before he received a severe blow of the fist on the left side of his neck, and from that time he felt pain and uneasiness in the part. A slight swelling soon appeared and grew rapidly till it reached its present dimensions, as depicted by photograph, which was taken while in hospital. His family history was good; none of his relatives were affected with cancer; he has had to work very hard, subjecting himself to much wet and cold. Latterly, he thought, the tumour had increased more rapidly in size, it had become very painful, and he had lost flesh. He had difficulty in swallowing owing to the encroachment and pressure of the tumour internally on the fauces. Several consultations were held with a view to decide as to the propriety of an attempt being made for its removal. He was exhibited at a meeting of this section, and several members present saw him. However, it was considered advisable not to operate, as the operation would necessitate the removal of the entire lateral aspect of the neck. The patient on hearing the decision regarding his case left the hospital about April 24th, 1884, for the country, without having any operation performed.

CASE 3.—Thomas N——, aged forty-nine, was admitted to the Meath Hospital from Roscrea on Sept. 11th, 1883, under my care, recommended by Dr. Powell of Roscrea, suffering from an obscure, doughy, tense enlargement of the lower inner third of the left thigh. In June of last year he was working as a navvy on a railway, where he received a severe blow on the inside of his left thigh, at the seat of the present swelling. The part was painful for a few days, when the uneasiness passed away. However, the limb always remained swollen at the point of injury, and slightly stiff. He received the blow in June, and about the middle of August he experienced great uneasiness, with sharp darting pains through the part. He then applied to Mr. Powell of Roscrea, who sent him up to the Meath Hospital. On admission, the man was rather debilitated, having lost much flesh lately; his left knee and lower part of the thigh were a good deal swollen, with large blue veins distinctly visible over the surface. As the swelling was rather obscure at first, rest, tonics, and strapping the enlargement with compound mercurial ointment were tried, but with no effect. He complained of the bursting tense pain of the tumour, and thinking there might be some fluid present I accordingly, on Oct. 9th, 1883, made an exploratory puncture with trocar and cannula, and removed a large quantity of dark-coloured bloody fluid, which gave him great relief. But the tumour continued to enlarge rapidly, and the clinical characters of the tumour were becoming manifest, as was verified afterwards by a careful microscopical examination by Mr. Abraham, that it was an ossifying sarcoma. A consultation of my colleagues was held, at which consultation Mr. Wm. Stokes was present, when it was decided to recommend amputation at the upper third of the thigh. The patient on hearing this said he would rather die than allow the limb to be removed. He accordingly left the hospital for the country about Oct. 20th, 1883.

On Jan. 3rd, 1884, the man returned to Dublin, and was admitted again to the Meath Hospital in a very much worse state. He seemed greatly worn out with pain. He said that he was now quite determined to allow the limb to be amputated, as he could no longer endure the pain. The tumour had increased considerably, and its clinical appearances were well-marked. Accordingly, on Jan. 7th, 1884, I amputated the limb by the circular method at the upper third of the thigh, with full antiseptic precautions, and the man made a rapid recovery, and left the hospital at the end of February last. It was remarkable how quickly he recovered health and strength after the limb was amputated, no doubt owing to the removal of the excruciating pain he experienced in the limb before its removal. He had been perfectly healthy up to June, 1883, when he received the local injury, and from that time the malignant character of the tumour was clearly defined in the course of three months.

CASE 4. — Francis J——, aged fifty-eight, a farmer from Kesh, was admitted to the Meath Hospital, under my care, on Sept. 24th, 1883. On Dec. 10th, 1882, during the hard frost, he fell with great force on the point of his left shoulder. It was a little sore at the time, but gave him no trouble till five weeks after the accident, when the shoulder began to swell and grew very painful. He then went to the local practitioner, Dr. Geo. Leeper, who applied anodyne liniments, followed by blistering. This gave him some slight relief, and, acting on his advice, the man went into the County Infirmary at Enniskillen, where he was poulticed and afterwards blistered. He, however, did not improve, and left the infirmary, after remaining there for seven weeks, to return to his home. He then, by the advice of his friends, applied poultices of herbs to his shoulder, which produced suppuration at the part. At this stage Dr. Leeper was sent for, who made an incision in the tumour and gave free exit to a quantity of very offensive pus, after which the swelling in the shoulder went down considerably, and he felt better in every way. While under Dr. Leeper's care a piece of diseased bone found its way to the surface. Dr. Bagot of Enniskillen saw the man at this time, and recommended him to seek admission to a Dublin hospital.

On examination, the contour of the shoulder was found very much changed, presenting an immense lobular malignant-looking enlargement (probably sarcoma), with a tense, semi-elastic surface, resembling a boiled leg of mutton, with large veins coursing over it. The glands in the axilla were also implicated, and became merged into the swelling. There was also a constant discharge of thin sanious pus, from two small openings where the piece of bone was removed. The disease and enlargement extended from the insertion of the deltoid along the clavicle and down the great pectoral muscle, across the anterior fold of the axilla, round the arm, to the posterior fold of the axilla and scapula as far as the attachment of the deltoid to the spine of that bone. On September 26th, 1883, two days after admission to the Meath Hospital, a full consultation was held on the man's case. The only operation that could have been performed was amputation at the shoulder-joint,

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but as the disease had extended to the pectoral muscle on the front of the chest wall, as well as implicating the scapular muscles behind, it was thought such an operation would fall short of removing the entire disease, and further, as the patient was so reduced in strength and emaciated by the constant pain, it was considered that he would not be able to undergo such an operation. Tonics were administered and the shoulder poulticed, and on October 15th, 1883, he returned home to the country, where he died a fortnight afterwards quite suddenly, probably from an embolism. In this case the man was in the best of health up to the time of injury, on December 10th, 1882, and he died a little over ten months after the accident, of undoubted malignant disease.

In the foregoing cases it will be seen that in each instance there must have been the tumour-forming diathesis present when the injury supplying the local irritation was followed almost immediately not merely by a slow chronic growth of tumour, but by a rapid development of local malignancy. And in bringing this subject before the members of the Academy present, I am anxious to elicit their opinion as to what part the factor of social injury or irritation plays in the rapid production of malignant disease.

THE ETIOLOGY OF TETANUS, AND THE OCCASIONAL VALUE OF NEURECTOMY IN ITS TREATMENT.

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(*Concluded from page 100.*)

THAT many experiments have failed to induce tetanus in animals is deservedly regarded in the light of a result markedly antagonistic to the theory of its nervous origin; but still, considering how rare a sequel it is when one contemplates the very large number of traumatisms arising from day to day, and that the animals experimented upon must have been comparatively few in number, and with nerve centres, even spinal, somewhat differently constituted from those of man, the success which Brown-Séquard, Weber, and Heidenhain have obtained by different methods in inducing it serves to demonstrate that certain forms of irritation may undoubtedly give rise to the disease. In connexion with this nervous theory of tetanus there is one matter which to me seems difficult of explanation. No organ is more sensitive, none more rich in nervous supply, than the eye; and in none is lesion, if happening in one particular region, so certain to be followed by nerve harm. The possibility of the occurrence of sympathetic ophthalmia is ever and again a source of anxiety to the ophthalmic surgeon. How comes it, then, that tetanus, either in connexion with injury to or operation on this special organ, is so rare that, after somewhat diligent search, I have quite failed to find any reference to it? There seems nothing in the anatomical constitution or relations of the ciliary nerves rendering them less susceptible of originating such harm than those having their distribution, say, in the mucous lining of the nose. Impossible, then, as it seems to accept any one theory as explaining every case of tetanus, and yet obviously of the highest moment as regards our treatment that the probable source should be carefully sought after, and, if found in peripheral irritation, dealt with, if possible, by surgical procedure, I record as of interest the following cases.

CASE 1.—In the spring of 1878 a patient came to me from the neighbourhood of Keswick complaining of severe pain in the front of the right leg, with a certain numbness and inability to use the limb. Examination revealed, about an inch and a half below the tuberosity of the tibia and to its outer side, a distinct enlargement, firm in consistence, limited in size, and exquisitely painful when pressed upon. The pain thus created was the same, the patient stated, that interfered with her walking. Its situation, the history she gave, and the characters it presented, all led me to believe it was a neuroma, and she was advised to have it removed. This was done on the following day, and a tumour, the size of a small pigeon's egg, was removed along with about half an inch of the anterior tibial nerve, from which it sprang. The artery which lay behind and in very close relation to the tumour was unfortunately wounded, and, as one or two primary attempts to secure it failed (for it lay in the floor of a deep wound), the suspicion rested with me that the extremity of the divided nerve might have been subjected to irritation. The wound was treated antiseptically. For a week she did well; the incision had almost healed, and she was quite free from all suffering. Then came a sense of stiffness in the jaws and neck, epigastric pain, rise in pulse and temperature, rigidity of muscles, and ultimately severe tetanic spasms. She was treated with chloral and bromide of potassium in very full doses, but with little effect; and so rapidly and acutely did the disease develop, that it was evident unless something could be done the end was not far distant. I therefore divided the external popliteal nerve in the ham. For thirty-six hours after she improved; her spasms were less severe and came at longer intervals, and a hope was cherished that she might yet do well. But unhappily, in spite of undoubted amendment, there came one spasm either more severe than those which had preceded it, or affecting more than they had done the especial muscles of respiration; at all events, she died suddenly, apnœa being the immediate cause of death.

CASE 2.—Little more than a year after the death of Case 1 I saw, with another surgeon, a lad who had a few days before my visit received a lacerated wound on the posterior aspect of the radial side of the wrist, in the region of the distribution of the radial nerve. What had struck his medical attendant from the beginning was the pain he suffered each time the wound was dressed. On the morning of our visit he complained of stiffness of his jaws, and he had undoubtedly stiffness of the muscle of his neck. He had also a slight rise in temperature with a little quickening of pulse, and the expression of his face was drawn and rigid. The dressings were undone, and although they were removed with great gentleness, the pain darting up the arm from the injured point made him scream. Examination with a probe detected in the floor of the wound one spot where when pressure was applied the spasm and the pain became intense. Closer inspection revealed a nerve, probably one of those passing to the thumb, lacerated and well-nigh divided. The injured portion was exsected and the dressing reapplied. The sufferings of the boy ceased at once. Within twenty-four hours the stiffness of the neck and the jaws disappeared, and when I saw him again the very brightness of his face told how much suffering and peril had, on the occasion of my former visit, been his. With the exception of an aperient, he had no medicinal treatment.

CASE 3. (This case is related, as will be more fully explained in the context, very reservedly as one of tetanus.) Not many weeks ago a table-maid consulted me in these circumstances. Two days before her visit she had been seized with sudden and painful spasm in the hand, the spasm beginning by extreme flexion of the ring and little fingers. This had extended to the arm; and so severe and uncontrollable had it become, that on the day I saw her she had upon two occasions dropped the tray she was carrying. On questioning her this was her story:—A week or ten days before I was consulted a needle pierced deeply the mass of the muscles forming the hypothenar prominence, and she believed that in the attempt to withdraw it, an attempt so far successful, a part of it broke off. She certainly had in one spot severe pain on pressure, a pain which at once gave rise to more or less spasm. Under chloroform, and guided by this painful spot and by a certain hard feeling in it, I made a search for the needle point, but failed to find it. Confident, however, that by irritation of some nerve filament it was occasioning the spasm she described, and might lead to more serious consequences, I turned the knife transversely in the wound and divided deeply all the textures in its line. From the moment this little operation was performed she was well, and it is only within the last few days that I have been able to assure myself that she never had afterwards, in any way, the smallest discomfort.

The improvement in Case 1 after the operation was notable and decided; and although it terminated fatally, it terminated, as I once heard remarked by a distinguished surgeon with reference to a case of tetanus under his own care, "when it was getting well." And such a result is not difficult to understand, for we know that the ordinary recovery from tetanus is slow and gradual, and that it is marked by the very conditions this patient presented, lengthening intervals between the spasms and less violence in their attack. Nor can we expect the disease, if fully developed,

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and developed in its highest manifestations, to yield at once in every case even when the source of excentric irritation has been cut off. Impossible as some have found it to verify the observations of Clark and Coats, the accuracy and the skill of these investigators are so well recognised and so indisputable that we cannot but believe that the lesions they have described had the fullest existence. Given, then, such structural changes as the direct result of excessive activity of the spinal nerve-cells, there seems a fair presumption that a reflex excitability once established in so uncontrollable and exaggerated a degree, and possibly perpetuated by the anatomical changes which it has induced, will of necessity take a certain length of time to pass away. During this slowly advancing period of recovery spasms will occur, and so occurring, may unhappily terminate the life of the patient. I am not sure that in some cases of puerperal eclampsia we have not a very similar condition. The nervous system of the pregnant woman is in a high state of reflex excitability, so much so that, after excluding by careful examination all evidence of renal harm, it is difficult in some instances to explain the occurrence of convulsion upon any other supposition than that labour, acting as a source of irritation, gives rise directly to such nervous phenomena. And in these cases the convulsions often do not end with the labour; they continue for some hours, perhaps days, until lengthening intervals and feebler attacks point to their gradual cessation. But they do not all end thus. Death may seize the patient even after the primary source of the excitation has, hours previously, been successfully terminated.

Case 2 was, as regarded the result, happily very different. It was a case of trismus some might say, but it was trismus arising in connexion with a notable injury to a nerve, and occurring as the first symptom of a general disorder. The lad was well housed, well clothed, and well nursed, so that any suspicion of exposure to the exciting causes of muscular rheumatism was readily excluded. Moreover, the relief afforded by the operation was marked and unmistakable.

As regards the case of the table-maid, I make no assertion that it was one of true tetanus. Possibly it was one of those, such as are described by Swan, in connexion chiefly with nerve wounds inflicted during venesection, but it had a very suspicious resemblance to the cases beginning, as Follin characterises them, by "secondary traumatic spasm." That tetanus has two distinct modes of onset is pretty well established—the one by trismus, the other by traumatic spasm, and the leading symptoms of this case were not unlike those observed in one recorded by Mr. Morgan.[1] In that instance a boy received from his master a blow on the hand with a cane. Pain and spasm commenced in the injured part, the first true symptom being a gradual spasmodic contraction of the flexor muscles of the hand, by which the fingers were drawn into the palm. The cramp gradually extended, and the lad died. But, be my case what it might, the lesson it taught was not an unimportant one, that by simple nerve section we may at times relieve very distressing reflex symptoms. And in so fatal a malady as traumatic tetanus, rare as the recoveries have been even after the performance of neurectomy, they have, I again submit, been sufficiently numerous to encourage its performance in fitting cases. A serious proceeding it doubtless is to sever a nerve trunk, and so perhaps condemn certain parts beyond to hopeless inactivity, but experiments and experience have shown that nerve suture can be performed with every fair prospects of success, and that the earlier the date at which it is carried out after the nerve has been divided the greater is the hope of recovery. Weir Mitchell[2] has shown that primary union after division is, except in early young subjects, almost unknown, and that the [illegible] the occurrence is due to the fact that degenera- [illegible] manifest themselves with great rapidity in the [illegible] extremities. A week, however, usually elapses [illegible] set in, and it is some little time before they are fully developed. It seems, then, that if in the early days after division the parts are kept in a state of relaxation so as to avoid what is so marked in the cases of severed nerve trunks, their tendency to retraction, that within a limited time, say a month after its division, the cut nerve might be [illegible] dealt with successfully. This as regards one

[illegible], Holmes's Surgery, vol. 2, p. 314.
[illegible] Injuries of Nerves, p. 235.

trunk. When, however, as in some injuries, it becomes necessary to deal with a whole plexus, the importance of and the anxiety attending the procedure are largely added to. Tripier speaks without hesitation in the matter, and advocates, if need be, "true nervous amputation" of the limb, expressing further the belief that within six months all harm following it would be gone. This is too sanguine an estimate; and in cases where many large and important nerves would require division amputation is, I believe, preferable. That even this extreme measure is not often attended by success is well known, and the personal experience I have had of it in four cases has not been encouraging. True, in one where half the hand was removed five days after the symptoms of tetanus were developed, there was for twelve hours marked benefit, but the spasms returned, unmitigated in their severity, and the boy died. Curling, however, in his well-known brochure tabulates a number of cases treated by amputation, of which, if memory serve me aright, he states that seven recovered. Have we when considering the propriety of nerve-section any canons to guide us as to the cases best suited for it, as to the special trunk or trunks which should be divided, and as to the best method of dealing with them after their division?

In all cases of traumatic tetanus, especially when attended by breach of surface, careful inquiry and examination should be made as to the existence of pain at the point of injury, as to tenderness in the course of the nerve trunks leading to it, and as to the part in which the spasm commences. Doubtless in many cases beginning with trismus these points are overlooked, and I am of opinion that by more careful search they may not unfrequently be discovered.

Knowledge of anatomy, as regards nervous distribution, of the existence of pain, of the starting-point of the spasm, of marked tenderness in the line of the nerves, and of the presence of Wood's symptom, "the manifestation of pain in the wound at the moment that pressure is made upon one of the nerve trunks which terminate in it," will all guide us as to the nerve or nerves to be divided.

It is quite possible that, in certain circumstances, after the neurectomy has been completed it may be well to take means to prevent the occurrence of primary union, and this will be carried out in the safest way by the method of Malgaigne, the doubling back upon itself of the peripheral section. This can in no way render more difficult the future operation of suture. Of nerve stretching I have not ventured to speak, as I have had no experience of it in tetanus, and the records, so far as I have read them, of the measure of success attending it have not been very favourable. The successful case of Vernetil is well known, as is one recorded by Mr. Wheelhouse[3] of Leeds; but apart from these and one occurring in the practice of Prof. Railton of Madras, I know of no others. As between stretching a mass of important nerves like the brachial plexus in a disease in which spinal polarity is extraordinarily increased or amputating the limb, I should prefer the latter.

Carlisle.

THE COMPLETE DESTRUCTION OF DISSEMINATED PATCHES OF LUPUS VULGARIS BY A NEW DOUBLE-SCREW EXCAVATOR.

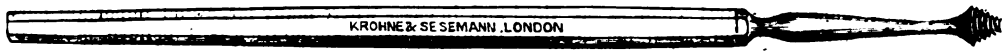
BY MALCOLM MORRIS, F.R.C.S., EDIN.,
SURGEON TO THE SKIN DEPARTMENT OF ST. MARY'S HOSPITAL.

IT is generally admitted that surgical treatment alone is successful in this obstinate malady. Those surgeons, however, who have practised either scraping, or scarification, or both, will have been disappointed to find small isolated tubercles reappearing in the substance of the scar, or in the margin of the original patch. The truth is these little tubercles are difficult to remove by scraping or scarification. Yet it is absolutely essential that they should be completely destroyed, as otherwise they will become centres for the spread of the disease. To accomplish this end it is necessary, first, that the instrument should be somewhat larger than the tubercle, so that when inserted it may firmly grip the surrounding tissue; secondly, that it should possess many lacerating edges, whereby the nodule may be

[3] Medical Times and Gazette, 1880, p. 716.

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thoroughly ploughed up; and lastly, that it should be capable of rapidly penetrating to the bottom of the nodule. Finding it impossible to comply with these conditions with the ordinary scoop, I devised an instrument, which has been made with much skill for me by Messrs. Krohne and Sesemann of Duke-street, and which, I think, fairly meets all the requirements mentioned—that is to say, in its size and in the number of its edges it fulfils the first two essentials, and a few words will suffice to demonstrate its still greater advantage of rapid penetration. In a single-threaded screw of, say, six edges, it is clear that six complete turns of the instrument will be required in order to insert the cone to its full depth. Now, the speed of entry is known to be in direct proportion to the "pitch" or distance apart of the threads of the screw. My plan has therefore been to arrange the lacerating edges round the cone in the form of two spirals, parallel to each other, in technical language, a double-threaded screw. By this means, as the pitch of each spiral, considered separately, is double that of the single-



threaded screw, it is obvious that the cone can be inserted to its full depth with but three turns of the instrument, the net result being to reduce the duration of the operation, and therefore the sufferings of the patient, by fully one-half. In withdrawing the instrument the soft new growth is removed and the resulting scar is flat, pale, and satisfactory.

Montagu-square, W.

NOTES OF

THREE FATAL CASES OF HEAT FEVER ("HEAT APOPLEXY"), WITH REMARKS.

By J. ALEXANDER WILLIAMS, M.B., M.R.C.S.,
SURGEON TO H.B.M. AGENCY, ZANZIBAR, AND FORMERLY HOUSE-SURGEON AND HOUSE-PHYSICIAN TO THE LONDON AND ROYAL PORTSMOUTH HOSPITALS.

THESE cases have recently occurred in Zanzibar. They were all natives of the coast; two were members of a gang of eight prisoners who had been brought from Mombassa, a town on the mainland not far distant, to Zanzibar for their trial on charges of murder; the third was imprisoned for some local offence. They had been here only three days, and during this time were confined in the Sultan's prison or fort; and I may perhaps as well here premise that with the management of the Sultan's prisons I have nothing to do, and my attention was drawn to what occurred through the British Consul (Sir John Kirk) taking an interest in the welfare of some of these particular prisoners. The prisoners were placed in a room on the basement of the fort, where were also confined from seventy to eighty other prisoners. The place in which they were confined measured, roughly, 25 ft. to 30 ft. long, by 15 ft. in height and 15 ft. broad. Absolutely no means existed for ventilating or lighting the cell except by way of the door, which was kept constantly closed, while the walls and roof being of solid stone and lime, in the form of concrete, prevented all possible percolation of air. Here the prisoners took food, slept, and performed all the natural excretory functions; no latrines existed. On March 15th at 4 P.M. the temperature of Zanzibar, as noted by the Indian Government meteorologist, was as follows:—In the sun the black bulb registered 149° F.; in the shade the temperature was 89·4°, the barometer standing at 29·98. This day at about 3.30 P.M. I was requested by Sir John Kirk to inspect the body of one of the prisoners, who was reported to have died suddenly in prison, and report as to the cause of death. On my arrival I found two of the Mombassa gang (Cases 1 and 2) dead. The condition of the cell from which these bodies had to be removed was shocking, and almost surpasses description. The entire absence of any ventilation, the extreme heat, the overcrowding of the prisoners, the effluvium arising from their excretions and from the damp and dirty walls, had produced an atmosphere so foul and pestilential that it was difficult to understand how life could possibly be sustained by it. On arriving at the cell I made three attempts to enter, but succeeded only in penetrating a few yards; the intense heat and foul atmosphere were too much for me, and I was compelled to retire and have the bodies brought into the open air for examination. When the cell door was first opened a rush of steaming, superheated, and horribly smelling air escaped like steam from a heated boiler. It was so saturated with aqueous vapour as almost to equal in density the air of a London fog, and spectacles were at once dimmed and rendered useless by it. The heat of the cell was intense; estimating it roughly, I should say certainly not less than 115° to 120°, and probably much higher. The stench was exceedingly foul and horrible, an indescribable odour peculiar to the place, and unlike any I had previously experienced or conceived possible. Huddled together on the floor of this vile den were the unfortunate prisoners, their skins reeking with perspiration, and their parched lips crying out, "Magi! magi!" ("Water! water!"). Many of them were very ill and feverish, totally uncared-for, and barbarously treated by their Arab gaolers.

After inspecting the bodies and noting down the post-mortem appearances, which were those indicative of death from asphyxia, and having unavailingly remonstrated with the Arab governor, urging him at once to remove the remaining prisoners from the cell, I hastened to report what I had seen to the Consul-General, Sir John Kirk, who at once accompanied me to the fort. This time, however, we were refused admittance, and it was only after Sir John had procured a special order from the Sultan that we were allowed to enter. We then found that during my short absence the doors had again been closed on the wretched prisoners, and on being opened another inmate of the cell, Case 3, whose name and history seemed unknown to the gaolers, was brought out comatose, in a dying condition; the body temperature was 106°, and the pulse and respiration almost stopped. The veins of the neck, face, and eyes were intensely congested, the symptoms presented closely coinciding with those already observed in the bodies of the two previous cases. He was evidently suffering from heat fever ("heat apoplexy"), due to the excessive heat and foulness of the atmosphere of the den from which he had been removed. A few minutes' artificial respiration, aided by two drachms of brandy administered hypodermically, soon caused the pulse and respiration to increase in force, frequency, and regularity. As it was certain he would receive no help or attention from the Sultan's officials, Sir John Kirk ordered him to be removed to my house for treatment, and here at one time he was so far revived that hopes were entertained of his recovery; but a relapse occurring, he died exhausted by the severity of the shock to which he had been exposed.

The following is an account of these cases as they were presented to me:—

CASE 1.—A man aged about thirty. When seen at 4 P.M. he had probably been dead from two to three hours. He appeared to have been taken ill about 1.30 P.M., when his comrades say he cried out and fell on the prison floor, foaming at the mouth. His arms and legs were seen to twitch violently for a short period; but soon ceasing, he lay quietly on the floor, so that he was thought to be asleep. A comrade examined him about 3 P.M., and found him dead; notice being given at the consulate, I was sent to examine the body. When the body was removed from the cell it was noticed that urine and fæces had been passed before death, probably during the convulsive seizure. There were no marks of external violence anywhere apparent, but there was intense venous congestion of the conjunctivæ, lips, and gums. The cervical veins were also engorged and distended, and a frothy foam escaped from the mouth. The body temperature was 107°. Rigor mortis had commenced in the lower jaw only.

CASE 2.—A man aged about thirty. When seen at 4.15 P.M. he had probably been dead about one hour. He appeared to have been ailing in the cell for some hours, and had complained of feeling ill to his fellow prisoners, who were said to have reported the fact to the gaoler, but no steps appear to have been taken in the matter till I arrived to examine the dead body of Case 1. Then this prisoner was reported t me as being very ill; he was at once re-

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moved from the cell, and was then seen to be dead also. The natural appearances of the body were in all respects similar to those noted in Case 1, excepting that fæces and urine did not appear to have been voided. Thus there was intense lividity of the mucous membranes of the eyes, mouth, and lips; the cervical veins were turgid and distended; the lower jaw was wide open, and a frothy foam issued from the mouth; the pupils were contracted. Rigor mortis had not yet set in. Temperature of the body in the axilla was 107°. There were no external marks of violence anywhere apparent.

CASE 3.—A man aged about twenty-five was brought from the prison cell about 5.15 P.M., on my second visit to the prison, in a dying condition, having been seized with his illness in the interval which elapsed between my first and second visits to the cell. When brought out he was comatose; the pupils were contracted; frothy saliva was issuing from the mouth; the veins of the eyes, lips, mouth, and neck were intensely congested and engorged; pulse about 140, very small and flickering; respiration had almost ceased. He lay where he was placed like a log, perfectly motionless. Cold water dashed on face, chest, and abdomen, combined with artificial respiration, for a few minutes improved the respiration and lessened the lividity of the face and neck, and two drachms of brandy administered hypodermically soon caused a marked improvement in the pulse. The temperature in the axilla registered 106°. As it was certain he would receive no help or attention from the Sultan's officials, and there being no other place, Sir John Kirk ordered him to be at once carried to my house for treatment. When placed in bed a large ice-bag was applied to the head and back of the neck, and about half a pint of strong beef-tea with two ounces of brandy was introduced by the nasal tube into the stomach, where it was retained. At 7 P.M. the temperature still registered 106°; the pulse had increased in volume and was less quick. The lungs were perfectly clear and healthy. The nasal tube was again passed, and half an ounce more beef-tea, with twenty grains of quinine and two minims of croton oil, was administered; this also was retained. Ice was kept continuously applied to the head. As he lay on his back in bed, the eyes wide open and the pupils contracted, occasional slight twitching of the lips and arms were noticed; these extended to other parts, and increased in severity, so that at 1 P.M., when I was called up to see him, he was in a general epileptiform convulsion, and jerking the body so violently that it was difficult to keep him in bed. The eyes were wide open, and the globes jerked convulsively upwards and to the right; frothy saliva was issuing from the lips. The bowels had been opened, with copious watery evacuations, and the bladder emptied. The temperature in the axilla was 103°. Chloroform was cautiously administered, so as to produce complete anæsthesia, which was maintained for about fifteen minutes; this had the desired effect of completely arresting the convulsions, which did not return, only a few faint twitchings of the fingers, lips, and eyes being subsequently noticed. During the remainder of the night and next day he lay comatose and motionless in bed, breathing comfortably, the chief cause for anxiety being the exceedingly feeble action of the heart.—March 17th: During the day he lay in bed on his back, motionless; bowels opened thrice, and urine voided naturally. The pulse was still very feeble, but had improved in force and volume somewhat since the previous day. Temperature at 10 P.M. 102°; still fed by tube every four hours. Five grains of quinine were administered at night.—18th: Temperature at 10 A.M. 102°. He appeared weaker, although at times he seemed semi-conscious, and partially opened his mouth when the stomach tube was passed. At 4 P.M. the temperature was 104·4°; at 7 P.M. it was 105°; pulse very feeble; lungs healthy; skin hot and dry; tongue parched. Twenty grains of quinine were administered, with beef-tea and three ounces of brandy. At 11 P.M. the temperature was 106·2°. During the night the pulse became weaker and weaker, and he gradually sank, and died quietly at 3 A.M., the temperature in axilla after death being 106°.

Necropsy, four hours after death.—The head was first examined, and on removing the skull-cap, the venous sinuses of the brain and its membranes were seen to be intensely congested and engorged with fluid venous blood. The ventricles contained a few ounces of serum, but not in excess; no other pathological change was noted in the brain. The heart, left ventricle, was firmly contracted and empty; the right side and the large veins were distended with dark fluid blood, which, on escaping from the vessels, coagulated into a soft dark clot. The lungs were perfectly healthy, but very little congested. The kidneys were small, pale, and healthy. The spleen was small, dark in colour, normal. The liver and intestines were healthy. The muscles were well developed and of dark colour, and the body was healthy and well formed in all respects. Rigor mortis had set in in the lower jaw and arms only. Putrefaction had not commenced.

Remarks.—One of the most important and interesting features presented by these cases arose in connexion with the determination of the cause of death. Inspection of the bodies of Cases 1 and 2 afforded strong evidence that the ultimate cause of death had been asphyxia. In what way had this been induced? The fact that the patients were all members of the Mombassa gang, and had been in the prison only two or three days, raised a suspicion of foul play; but this was negatived by the absence of marks of violence on the bodies, by the testimony of their fellow prisoners, and by the absence of any history of a quarrel. The mode of onset of illness in Case 1 suggested death during an epileptic seizure, and with this the appearance of the body was quite consistent. A striking feature noticed on examining the bodies of Cases 1 and 2 was the excessively high body temperature, 107° being observed in each case; and this directed attention to the nervous system as being the one primarily at fault, for in cases of nerve lesion it is common to find a high post-mortem temperature, which, on the other hand, would be necessarily rare in cases of simple asphyxia. After seeing Case 3 the diagnosis at once became apparent, for in this case there could be no doubt that he was suffering from the effects of excessive heat, "heat apoplexy," producing complete coma and great depression of the cardiac and pulmonary functions. The term "heat apoplexy," as applied to such cases, is derived from the resemblance which the sudden onset and completeness of the coma bear to cases of ordinary apoplexy dependent upon diseased vessels. From it, however, it may readily be distinguished by the symmetry of the symptoms. The muscular paralysis is complete and general, not unilateral or localised to certain groups of muscles, as is common in ordinary apoplexies. Again, the pathology of the two diseases is entirely different, for although it is popularly believed that the symptoms of heat apoplexies are produced from an intense venous engorgement of the brain and its membranes, leading to an effusion of serum into the ventricles and meninges, yet this is not supported by the accounts of the post-mortem examinations of these cases; for, as a rule, as in Case 3, nothing beyond slight cerebral congestion can be found, the cerebral fluid is not in excess, nor are there any signs of pressure having been exerted on the brain. A more rational pathology is that at present taught in most hospital schools, that the symptoms result from the circulation of the over-heated blood through the cerebral vessels; as a result profound disturbances are set up in the nerve centres, and reflected thence to the vaso-motor nerves of the body generally, leading to increased production and retention of heat and hyperpyrexia. The changes thus induced in the nerve centres, and especially the respiratory, are at first those resulting from over-stimulation, rapidly followed by those indicative of exhaustion. The local and atmospheric conditions by which these prisoners were surrounded were exceedingly favourable for the development of heat fever. It is a well-known fact that in a dry atmosphere, where free evaporation and radiation of heat from the surface of the body are possible, the human body can bear with impunity very high degrees of heat, and the body temperature remains constant. If, however, radiation and evaporation be prevented by deficiency of ventilation, or by excess of moisture in the atmosphere, then exposure to a temperature but a few degrees above the normal will rapidly prove fatal, and a high body temperature will be developed. A point I have hitherto purposely avoided now comes for consideration: Were these the only fatal cases that occurred? Upon this point I have no positive information. With these cases alone I was concerned; but, judging from the miserable condition of those I saw in the cell and the filthy condition of the den in which they were incarcerated, I am inclined to think not; and the result of Sir John Kirk's inquiries consequent upon these disclosures as to the fearful state of the Sultan's prisons goes to show that deaths had been of daily occurrence, of which no notice was taken; and also that small-pox is endemic in the fort. The people, when removing these bodies, appeared

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to be performing no unfamiliar task. Many prisoners in the cell looked extremely ill, but, being entirely under Arab jurisdiction, they might die or not without Europeans becoming acquainted with the fact. The strong representations made to the Sultan by Sir John Kirk immediately he became cognisant of the facts were so far successful that this and other dens of a like description were cleared the same evening, and orders were given to have windows placed in them for ventilating purposes. Such a remedy, however, can only be palliative. The cells are incapable of proper ventilation, and the only real and effective remedy to prevent the recurrence of such scandalous barbarities is to have the fort demolished and a proper prison built in its stead. This has been strongly but unavailingly urged upon the Sultan, and nothing short of a strong expression of public opinion, combined with firm diplomatic pressure, can avail to prevent the possibility of the constant recurrence of such horrible tragedies.

Zanzibar.

CASES OF SUNSTROKE WITH HIGH BODILY TEMPERATURE.

By T. F. O'DWYER, M.D.,
SURGEON MAJOR, ARMY MEDICAL DEPARTMENT.

CASE 1.—Private W. T—— (Highlanders), walked to hospital on July 29th; he complained of dizziness in his head. His skin felt very hot; the pulse was quick and weak. He was stripped to the waist, and buckets of cold water were dashed over his head and back. He said he felt much better, and laughed at the idea of being carried upstairs on a stretcher. Before he arrived at the ward, however, he became insensible. His breathing was oppressed; carotids throbbed visibly; pulse weak and quick; pupils contracted; temperature, carefully taken in axilla, 110° F. He was at once stripped and placed in a bath, to which large pieces of ice had been added. An icebag was placed on his head and a large piece of ice was held to his neck and back of the head. A lump of ice was placed in his mouth to melt. After being ten minutes in the bath he became conscious and looked about him, but his pulse was very weak and flickering. A draught of aromatic spirits of ammonia was now administered. He was removed from the bath, when his temperature was found to be 105°. He became unconscious, and the temperature began to rise. He was again put into the cold bath, and in ten minutes the temperature of the body fell to 99·5°, and he became conscious. He was removed from the bath and an enema of sulphate of magnesia (B.P.) was administered cold. The temperature did not again rise and he made a rapid recovery, but remained weak and suffered from headache for some days.

CASE 2.—Private B——, (Highlanders) was brought to hospital on July 28th, 1883, in a state of insensibility. Pupils contracted; breathing oppressed; pulse feeble and rapid; temperature 109° in axilla. He was treated as in Case 1, but his pulse became so feeble after removal from the bath that fifteen minims of sulphuric ether were administered hypodermically, and he revived at once. Temperature fell after the bath to 100·6°, and did not rise afterwards. He made a quick recovery.

CASE 3.—Private —— (Highlanders), employed in the regimental transport and much exposed to the sun, was brought to hospital on July 28th, insensible. Temperature in axilla 108°; pupils contracted; heart's action weak. This patient was treated as Cases 1 and 2. Temperature reduced to 101° by the cold bath, after which his pulse was so weak that he required half an ounce of brandy and two drachms of aromatic spirit of ammonia, repeated at short intervals for three doses. He made a good recovery. These cases are typical of some that took place about the same time, and are remarkable for the high bodily temperature, the feeble condition of the heart from the same cause, and the satisfactory termination in every instance, as we were able to deal with them at once. All took place at a time when the sun's rays were very powerful, and when cholera prevailed at Cairo.

Citadel Station Hospital, Cairo, Aug. 1883.

THE annual prize festival in connexion with the Royal Normal College for the Blind, Upper Norwood, was held at the Crystal Palace on the 19th inst.

LITHOTRITY AFTER BIGELOW'S METHOD.

By C. R. GRAHAM, L.R.C.P. ED., M.R.C.S.,
HON. MEDICAL OFFICER, ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

MR. C——, aged sixty-two, an architect, of active and temperate habits, came under my care in private, in October, 1883. Eight years ago he passed a large quantity of minute calculi, some of the largest being about the size of a small pea. Ever since he has been troubled with frequent micturition, pain in the penis, and retention, having occasionally to seek relief from catheterisation. It was on account of this last symptom that I was at first summoned. At a subsequent examination I sounded him, detected several calculi, and also found that the prostate was enlarged, particularly the middle lobe, the sound winding to the left side immediately before passing into the bladder. This caused a little difficulty in passing the lithotrite. The urine contained a small quantity of albumen, and there was an abundant deposit of muco-pus. Operation was recommended, but the patient delayed it on account of some business engagements. In the meantime, however, he had several attacks of cystitis, causing him intense suffering and preventing sleep. His general health began to fail, and in December he was only too glad to seek relief. For a fortnight before the operation I kept the patient in-doors, and for a week prior, finding that there was a certain amount of residual urine, I passed a catheter daily. This treatment produced a marked improvement in his condition. Three days before operation the patient was confined to bed. On Dec. 20th the operation was performed; it lasted an hour and a quarter. The largest calculus was about the size of an almond. A medium-sized, non-fenestrated lithotrite was used, a No. 16 evacuator. CbC'_3 was at first administered, and anæsthesia was kept up with ether. After the operation there was no reaction, and the patient suffered very little pain. About an ounce of bloody urine was passed every hour for the first day; this gradually became clear, and micturition less frequent. On the second day after operation the urine became purulent, and the bladder was washed out daily for a week, at first with a weak solution of boracic acid, afterwards of nitric acid. The urine was especially bad on the third day, and an ounce of the decoction of couchgrass was ordered every four hours. A small quantity of detritus came away the first few days, when the bladder was injected. On the eighth day there was no pus in the urine, and the quantity passed in twenty-four hours varied from two to four pints. After this time he was practically well. He got up on the thirteenth day. With regard to diet, the first week it consisted of milk and barley water, after which he took solid food. Owing to the enlarged prostate I directed him to pass a catheter daily so that the bladder might be properly emptied, and this he continues to do. He is now, four months after the operation, in perfect health, has gained flesh, and follows his usual work. The detritus weighed between four and five drachms. The stones consisted of phosphates, with small uric acid nuclei about the size of a lentil. Of these there were four.

Wigan.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nullamatem estalia pro certo nescendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

CASE OF CONICAL CORNEA OF BOTH EYES.

(Under the care of Mr. C. HIGGENS.)

FOR the following notes we are indebted to Mr. C. Y. Shuter, dresser in the eye wards:—

Caroline J——, aged eighteen, was admitted on March 3rd, 1884. Three years ago she first noticed that her sight was failing, both for near and distant objects; the vision got gradually worse up to the time of admission.

On admission there was well-marked conical cornea in

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both eyes, the right being the worse. The right eye could not read any letters with or without a lens; the left eye could read large type (Jaeger 19) at ten inches. On the day of admission (the pupil being well contracted by eserine, which had been used for two days previously), the patient having been anæsthetised, a small elliptical portion of the right cornea, including the whole thickness, was excised from the apex of the cone; the eyelids of both eyes were closed by strapping and covered with a wet pad and bandage.

On March 10th, or one week after the operation, the eye was examined for the first time; the wound had healed, and the pupil was circular.

On April 28th the left eye was operated on and treated in the same manner as the right. A week later the aqueous was retained, and the pupil was circular.

On May 12th the wound had probably reopened, and an anterior synechia had formed; a four-grain solution of sulphate of atropine was ordered to be used three times a day, in the hope that its action might detach the adhesion. On the 16th the adhesion had stretched, but had not given way; atropine was then used six times a day.

On June 6th, the atropine having had no further effect upon the anterior synechia, it was discontinued. In each eye there was a small central corneal opacity, together with the synechia in the left. The right cornea was still rather conical, the curvature in the left to the naked eye looked about normal. The left eye could read Jaeger No. 2 at twelve inches, and had vision for distance = $\frac{6}{24}$, without assistance. The right eye could read Jaeger No. 16 at eight inches, and had vision for distance = $\frac{6}{36}$. It was not improved by lenses.

YORK COUNTY HOSPITAL.

SIX CASES OF EXCISION OF THE KNEE-JOINT.

(Under the care of Mr. JALLAND.)

FOR the following notes we are indebted to Mr. A. Jefferson, house-surgeon.

CASE 1. *Synovitis following a Fall; Abscess; Rest in bed for eighteen months; Excision; Recovery with good Limb.*—J. M——, a boy aged eight. The parents stated that when he was four years old he fell and injured his knee. The joint was not at once very painful, but a few weeks after the accident it began to swell and to be very tender. Gradually it got worse, the boy being confined to bed. At length an abscess opened at the inner side of the joint, and after discharging for some months it healed up. The swelling of the joint and the concomitant pain had by this time disappeared, and he was able to get up and move about on crutches, having been confined to bed about eighteen months. There was now much deformity on the affected side, and the child had to use the crutches always. On admission he walked with his diseased limb twisted round the back of his crutch, the knee being drawn up on the inner side and the foot twisting round to the outer, the toes being about three inches off the ground. The muscles on this side were somewhat atrophied, the tibia was dislocated backwards and rotated inwards, and there was a large cicatrix at the inner and back part of the joint, with slight movement. The patient being fairly healthy, the knee was excised on March 14th, with antiseptic precautions. The limb having been exsanguinated and a tourniquet applied, the usual semilunar incision in front of the joint was made; the patella, being firmly adherent to the anterior surface of the lower end of the femur, was treated as part of that bone. Before the limb could be got straight half an inch of bone had to be removed from the lower end of the femur and the same amount from the tibia. The pieces were taken away wedge-wise, with the base of the wedge forward, the cut surfaces were brought in apposition, and the straight limb was placed on a back-splint, interrupted at the knee-joint by a large quadrilateral iron bracket, sufficiently broad transversely to allow of a thick bandage being passed between it and the knee. This splint was provided with a foot-piece, and it extended as high as the gluteal fold; the padding of it, except the foot-piece, was covered with a strip of carbolised bees-wax bandage. Similar bandaging was employed in the turns taken round the limb and splint immediately above and below the excised joint, the rest of the bandaging being done with plaster-of-Paris bandages, which were continued on as a spica round the pelvis, and strengthened opposite the hip-joint with strips of saturated house-flannel. A pad of salicylic silk, with the usual gauze dressing, was applied to the wound. On the day after the operation the wound was dressed. On the evening of the same day the temperature was 100·4°. On the following day the evening temperature was 99·8°. After this at no time did the temperature rise higher than 99·6°. A week after the operation the wound was again dressed; there was scarcely a trace of pus, and the drainage-tube was removed. The next dressing was applied three weeks after the operation, when the wound was found to be quite healed and firm, except at its extremities. Finally, four weeks after the operation the antiseptics were discontinued, and the limb was taken for the first time off the splint, being apparently quite firm to moderate pressure. It was put up in plaster from above the ankle upwards, round the pelvis, a "window" being left over the wound. On the following day the patient got up, having been in bed exactly four weeks. For two weeks this plaster splint was kept on; it was then removed, and the joint found to be quite firm. A short plaster splint, extending a few inches above and below the joint, was then applied and the patient, being provided with a thick-soled boot, was allowed to put a little pressure on his leg. In another week he left the hospital and returned home. At the end of a month the boy presented himself for inspection; he could then put all his weight on the leg and walk about the house without his crutches. The splint was now taken off, and his father was told to at once bring him to the hospital should any pain in the wound return. Some months afterwards, a patient living in the same village as the boy stated that he was running about "like the rest."

CASE 2. *Chronic Synovitis; Persistent Pyrexia and Emaciation; Excision; Rapid Subsidence of Constitutional Symptoms, and Recovery with good Limb.*—M. F——, a female aged twenty-two. The patient had been under observation at the hospital about six months. When first seen her left knee-joint was slightly flexed and swollen, and was evidently in a somewhat early stage of femoral fungous synovitis. Under ether the joint was straightened and put up in plaster. The pain having subsided, she was sent home, under strict injunctions not to put her foot to the ground. Finally she went to the seaside, and there took her splint off. Although not putting her foot to the ground, the pain gradually returned in all its acuteness, the swelling increased, and she again applied at the hospital nine months from the time she was first seen. On admission she was much exhausted and emaciated, having had constant pain and sleepless nights. The condition of the joint was serious; it was much swollen, exceedingly hot, tender, and painful, with frequent jumping, which rendered sleep impossible. There was also pyrexia, her temperature rising three and sometimes four degrees above normal at night. She had also prolonged expiration and occasional rhonchus at the right apex. After about a fortnight's treatment, the joint was excised on July 18th, 1882. The operation was performed in exactly the same way as the preceding, except that the patella was removed; the cartilage on the outer condyle of the femur and tibia was much eroded. A similar splint and dressing was applied as in the preceding case. On the following day the patient expressed herself as feeling much relieved. She had had a good night, and there was very little pain in the wound; a little blood having oozed out, it was dressed. In the evening the temperature was 100·4°. For the next eight days the wound was dressed daily. For seven days after the operation the evening temperature ranged from 100·4° to 101·6°, being only a little above normal in the mornings; afterwards the temperature never rose above 99·2°. On the fourteenth day the wound was again dressed and the drainage-tube removed; it was now left until the thirty-fourth day after the operation, when it was again dressed, and found to be quite healed, except at one extremity. On the forty-first day the antiseptic dressing was discontinued; the limb was taken off its splint for the first time and put up in plaster as in the preceding case. On the following day the patient returned to her crutches, it being exactly six weeks after the operation. Being much improved in general health she now got on rapidly. At the expiration of eight weeks the plaster was taken off and a short gutta-percha splint applied. The wound was quite firm and she was sent to the seaside. For two months longer she wore a laced-up splint. At the end of this time she could walk quite well without any support; it was now four months since the operation. When last seen she had left off her splint and was working at a confectioner's.

CASE 3. *Acute Fungous Synovitis; Great Pain in Joint; Pyrexia and Lung Symptoms; Excision; Recovery with good Limb.*—M. S——, a female aged twenty-four, pre-

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sented herself in May, 1882, suffering from intense pain in the right knee-joint, which had commenced to be painful and then to swell six weeks before. The pain and jumping in the joint prevented sleep. She had been in bed for three weeks. On examination she was found to have a much enlarged and exceedingly tender joint, evidently the seat of a fungous synovitis. There was considerable pyrexia; a temperature of over 99° in the morning and between 101·5° and 102·5° in the evening. For a fortnight after her admission, notwithstanding the local application of ice with rest and general treatment, the temperature continued high; it then began to subside, and for the following month remained fairly normal, with only occasional nocturnal jumps. The pain, however, remained constant and the fungous proliferation increased; at the same time crepitation appeared at the apex of the left lung, together with night-sweats, both of which were absent on her admission. Under these circumstances it was resolved to excise the joint. This was done on June 13th, 1882, in a manner similar to that in the last case. There was on the external tuberosity of the tibia a portion of cartilage, eroded, the size of a two-shilling piece. On the day after the operation the wound was dressed; the patient expressed herself as feeling less pain than before; in the evening her temperature was 100°. Henceforth only on three occasions did it rise above 99°, and of these three the highest temperature was 100·2° only. The wound was again dressed on the following day; it was then left until the ninth day after the operation, when it was dressed and the drainage-tube taken out; the next dressing was applied on the twenty-first day after the operation, the wound, except, at the two extremities, being healed. Finally, twenty-seven days after the excision the antiseptics were discontinued, the limb, for the first time, taken off the splint and a plaster splint applied, as in the preceding cases. The next day she got up and moved about on crutches, it being exactly four weeks since the operation. The further progress of the case was almost the same as in the preceding. The patient is now earning her own living, her lung symptoms having quite disappeared.

CASE 4. *Chronic Synovitis; Joint opened, and Fungating Synovial Membrane removed; Persistence of Symptoms; Excision; Suppuration of Wound; ultimate Recovery with good Limb.*—S. M——, a female aged fourteen, was admitted early in March, 1882. She had a bad family history. Her present illness had commenced three years ago with pain and swelling in the right knee-joint. On examination this joint was found to be much swollen and very tender. She had great pain in it, much aggravated for the last three months, during which time she had emaciated somewhat. There was no jumping of the joint. The patient's nocturnal temperature varied from 101° to 102°. After she had been under treatment about a week the pain had increased, as also had the swelling; the skin over the joint, too, became red, and mixed with the boggy semi-fluctuation of the proliferant synovial membrane appeared some true fluid fluctuation. It was resolved to open the joint to examine it and let the fluid out; accordingly, on March 21st, two longitudinal incisions were made, one on each side of the joint, and so placed that they could, if necessary, be run one into the other, as an excision flap. Through these incisions about half an ounce of pus escaped. The cartilages being apparently sound, as much of the fungous membrane was taken away as could be got at, and the joint was thoroughly syringed out; the limb was then put up in a similar way as in the former cases. The temperature still remained as high as before, and the joint after a few days began to jump. As the pain got worse, excision was performed under the carbolised spray three weeks after the joint had been opened. There was found to be a good deal of erosion of cartilage and a very large quantity of fungous membrane, which was sliced off. The limb was put up as before. On the following day the patient said she had less pain; the evening temperature was 101·8°. After this only once was 101° exceeded. For the next eight days the wound was dressed every other day; the discharge then increased and the dressings were applied daily. Finally, eighteen days after the operation, the wound was no longer aseptic. Pus also had run up the splint; a fresh one was therefore put on, ether being given. From this time the discharge continued with great profusion, a counter-opening having to be made into the popliteal space. The wound healed but slowly, there being many obstinate sinuses in the course of the line of incision. Gradually, however, firmness was acquired and the discharge lessened, syringing with dilute red wash and the application of a Martin's bandage outside the ordinary dressings being employed; the splint had to be frequently changed. About four months after the operation there was considerable firmness of the bones. The discharge from the popliteal opening continuing, and the sinuses in front not being healed, a plaster splint could not be applied, so the patient was kept in bed. It was not until six months after the operation that the popliteal sinus closed; the limb was now put up in plaster, the wound being syringed and dressed through a window in the splint, the patient being allowed to get about on crutches. In the following spring she went to the seaside, a year having elapsed since the operation. On her return at the end of a month she could bear a certain amount of weight on the foot, the sinuses now discharged but little. The long splint was taken off and a short, laced-up, gutta-percha one applied. Finally, fifteen months after the operation she could walk; she was then at a charity school and her sinuses were still discharging, though but little. Since then she had been heard of and was said to be walking about quite well.

CASE 5. *Synovitis following a Fall; Excision; Vomiting; Albuminuria; Coma; Death; Acute Nephritis.*—T. W——, a male aged three, was brought to the hospital in Nov. 1882. His right knee-joint had been swollen and painful for six months. His family history was good, and the joint affection was apparently the result of a fall. On admission the child was found to be suffering from fungous synovitis of the joint; he was evidently suffering much pain, and his sleep was greatly disturbed by jumping of the limb. Extension was applied, together with ice, &c., but his condition did not improve; his temperature remained high, and he got thinner. After a month's treatment, his symptoms being worse, excision was performed on Dec. 6th, 1882. The tibial cartilages were much eroded. The operation was carried out as in the preceding cases, and the dressings, &c., were the same. On the day after the operation the patient volunteered the statement that he was much better. The wound was then dressed. The evening temperature was 100·4°. Seven days after the operation the wound was again dressed, for the purpose of getting out the drainage-tube; there was found to be scarcely any pus. On the eleventh day after the operation the evening temperature was 102·6°, the highest previous temperature being 100·4°. On the following day the wound was dressed; it appeared quite healthy, and was healing well, there being but very little discharge on the dressings; in the evening the temperature was normal. On the two succeeding nights the temperature was also normal. It then rose again, and on the fifteenth and sixteenth nights after the operation it reached 101·8° and 102·4° respectively. No cause for this rise could be detected; the child did not complain of any pain in the wound—indeed, ever since the operation he had had comparatively no pain in it. For the next six days the evening temperature was lower, 100·4° being the highest, but the child was looking pale, although he complained of nothing. The wound was now dressed for the fourth time after the operation; it had healed nearly entirely, and the cicatrix was firm; the excised part could be moved laterally on the splint without giving rise to pain. On the evening of this day, the twenty-third after the operation, his temperature was 101°, and he began to vomit; his urine contained albumen, but no blood or carbolic; the vomiting continued, notwithstanding treatment, and on the twenty-fifth night after the operation his temperature was 102·6°. For two more days the vomiting and temperature persisted, and the amount of albumen in the urine increased up to nearly one-half; there was a trace of blood, but never any carbolic. Finally, on the twenty-eighth day after the operation, his temperature became subnormal, 97·2°; he was semi-comatose, and early on the following morning he had a convulsion and died. A post-mortem examination could not be obtained, but it appears evident that the child died of acute nephritis, probably induced by chill at the time of one of the dressings (before the operation there was no trace of any albumen in the urine), and evidently increased at the time of the last dressing. It is impossible to say when the disease really started, as the child complained of no subjective symptoms until the nausea began, and the urine was not examined for three weeks—viz., from before the operation until the evening after the last dressing.

CASE 6. *Chronic Synovitis following a Blow with a Cricket-Ball; Excision and Suppuration of Joint; Amputation eight months after Excision; Recovery.*—E. B——, male

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aged thirty-four, came to the hospital in May, 1882. As in the preceding cases, his knee was the seat of a fungous synovitis, the left joint being the affected one. The previous history of the disease was that eight years before his admission he had been struck on the left knee by a cricket-ball. For a few days after there were swelling, pain, and lameness. These symptoms recurred during the ensuing six years with more or less frequency, there being intervals in which there was entire cessation of pain and entire disappearance of the swelling. Two years before his coming to the hospital, however, the joint appeared to get worse; it became swollen and the swelling persisted. The pain also increased, and for the last six months had been almost continuous. On admission there was much pulpy swelling of the joint, together with grating, as of eroded cartilages. Having had the patient under observation about two weeks, in which period pain, pyrexia, and sleeplessness were constant, it was resolved, the patient's lungs and kidneys being apparently healthy, to perform excision. This was done on June 20th. A good thickness of bone had to be removed, the cartilage, being completely absorbed and much of the underlying bone carious. The operation, &c. was conducted in the same manner as in the preceding cases. For a few days after the excision had been performed the patient expressed himself as being much improved; his nocturnal temperatures were, however, high—102° to 103°—and the wound had to be dressed daily, there being at first a good deal of hæmorrhagic oozing and afterwards much pus. At the end of about ten days the patient began to have a good deal of pain, which necessitated the hypodermic use of morphia; the discharge further increased, and at the end of the third week the wound was no longer aseptic. The splint was now changed, ether being administered, and was replaced by a fresh one. The wound, which had healed in front, was dressed with carbolic water dressing. In about another three weeks the discharge had lessened and a fairly firm cicatrix had formed, intersected, however, by numerous sinuses. The splint was now again changed, and a thick bees wax apparatus adjusted. This was done under ether, and the joint appeared fairly firm. The wound was now dressed with red wash, the sinuses irrigated with weak carbolised red wash, and elastic pressure kept up by means of a Martin's bandage over the dressings. The patient now began to improve. His morning temperatures were always normal, and his evening temperature only one or two degrees above normal. At the end of the eleventh week he had so far improved, and the discharge had so much lessened, that his splint was taken off and a plaster one applied from above his ankle below to his pelvis above, a window being cut over the wound. This was done without anæsthesia, and, so far as it was deemed expedient to test, the union of the bones was perfect. In his plaster splint the patient expressed himself as being much more comfortable, and after he had had it on for a week he was moved from his bed to a couch in the ward; and, this causing him no pain, after a few days he was allowed to get about on crutches. After walking about some ten days he received a jar in the affected limb from the slipping of his crutch, and at once there was a return of the former pain. He was again confined to his bed, his evening temperature once more rose to two or three degrees above normal, and an increase in the discharge took place. Henceforth he remained in bed, suffering at times much pain; occasionally the discharge decreased, the sinuses appeared to be healing up, and the pain and pyrexia almost left him, but these hopeful symptoms never lasted more than a week or ten days together. At length, eight months after the excision, the patient himself wishing to get rid of the limb, and there being apparently no hope of its ever being of any use to him, Mr. Jalland amputated through the thigh. On examining the excised ends of the bone they were found to be united together by ossified patches, while between these patches wandered carious discharging sinuses; what adhesions there were were not firm, but broke down readily under the handle of the scalpel; and on the exertion of only a slight amount of force, the soft parts being cut through, the ends of the bones were bent apart. After the amputation the patient made an excellent recovery, and soon returned to his work as a carpet-maker.

Remarks.—The above cases show that if, in the treatment of excised knees, almost absolute rest be given to the wound, healing will be rapid and the patient able to leave his bed at the end of a few weeks. In all the six patients the affected limb was put on the splint with plaster spica, as described in the case of J. M—— (Case 1). It will be noticed that only in the two patients, S. M—— (Case 4), and E. B—— (Case 6), was it necessary to change this splint, the close packing of salicylic wool saturated with carbolised wax between the limb and the splint, together with the waxed bandages, effectually prevented the discharges on the one hand from running up or down the leg, and on the other from soaking into the splint, the waxed surface at once turning off the fluids into the dressings. The number of antiseptic dressings applied is also noteworthy. In the first case only three dressings were put on; in the second the wound was dressed daily for eight days, after which it was only dressed twice; in the third it was only necessary to renew the dressings four times; and in the fifth the wound was dressed four times in twenty-eight days, at the end of which time the patient died. This infrequency of dressing was, no doubt, in great measure due to the absorbent salicylic silk used as a thickish pad next the wound. In the two remaining cases, Cases 4 and 6, dressings were applied almost daily for eighteen and twenty-one days respectively, after which their wounds became septic. In Case 4 the joint had contained pus, and had been washed out three weeks before it was excised. The antiseptics were therefore much handicapped. Practically, failure to keep the wound aseptic may be said only to have occurred in Case 6. With regard to the times of application of these dressings, it may be remarked that they were not renewed on each occurrence of oozing; such a procedure by which a wound may be disturbed many times in the twenty-four hours, not only causes much pain to the patient, but seems to be disregardful of the great principle of rest in the treatment of wounds. Instead, therefore, of each appearance of discharge through the dressings being followed by a change of dressings, the area of penetrating fluid was immediately covered with a pad of salicylic silk bound on with a gauze bandage. The splints not having to be taken off and the wounds not being disturbed often by change of dressings in each of the first three cases recorded, healing took place, and the patients were able to leave their beds and go about on crutches, four weeks, six weeks, and four weeks respectively, after the operation. In some of the patients the temperature was lower after the operation than before, and in most the pain was afterwards decidedly less, although excision should never be performed until a very patient trial has been given to perfect rest in acute cases, or in exacerbations in the form of rest on a back splint, with the addition of the local application of ice; in more chronic conditions (the joint having been, if necessary, straightened) in the shape of plaster-of-Paris splint, with crutches and a sling for the leg. Still, should the disease persist in being aggressive, and the consequent exhaustion, with its tendency to phthisis and its receptivity to tubercle, ensue, one should not hesitate to excise, for there appears to be every reason for us to regard the result of such excision hopefully. In two of the cases the chest symptoms entirely disappeared after excision.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of the above Society was held on Wednesday, July 2nd, Dr. Henry Gervis, President, in the chair.

The following specimens were shown:—Phosphatic Calculus which caused a Vesico-vaginal Fistula, by Dr. Godson; Transfusion Apparatus, by Dr. Walter (Manchester); Double Uterus with Single Cervix, and a deciduous substance expelled after labour for the fifth time, by Dr. Cleveland; Pedunculated Fibroid removed from a Prolapsed Uterus, by Dr. William Duncan. A report of the committee on Dr. Neugebauer's specimens of Spondylolisthesis was read. The committee consider that the specimens bear out Dr. Neugebauer's views, which are essentially that the anterior half of the vertebra (typically the fifth lumbar) glides away from the posterior half owing to congenital deficiency or fracture. Such predisposing causes may not result in spondylolisthesis without the operation of overweighting. Dr. Neugebauer states that Professor Lambl has withdrawn his theory of hydrorachis as a cause of spondylolisthesis. Mr. Noble Smith's appendix to the report was read; he describes specimens showing caries as probably a consequence of displacement.

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The following papers were read:—

On Fibro-cystic Myoma of Uterus—Septicæmia, by Dr. H. A. LEDIARD (Carlisle).—The symptoms dated twelve months back, and included pain, bleeding, vomiting, and anæmia. The tumour felt cystic in parts and a bruit was heard over it. It reached two inches and a half above the navel. Afterwards diarrhœa set in, and the temperature rose. After an examination by the sound severe symptoms began, including the usual signs of peritonitis, and death occurred on the ninth day. The tumour grew chiefly from the posterior wall, and was partly cystic, as were both ovaries. The kidneys contained miliary abscesses. The spleen was enlarged and soft, containing several recent infarcts. Liver fatty. Lungs œdematous and congested. No trace of peritonitis was found, but no examination of the veins was made. The uterine mucous membrane was nowhere abraded. The case was brought forward chiefly to ascertain the opinion of the Society as to the cause of death. —The PRESIDENT said that Dr. Lediard was not singular in his experience. A small abrasion was sometimes fatal.

Note on the Condition observed in the Navel Cord of a Young Infant, by Dr. JOHN WILLIAMS.—The cord at birth appeared natural. On the second day the distal two inches had dried, while the proximal inch was succulent as at birth. In the next few days it broke down and became stinking. There was some bleeding on the fifth day; the cord did not fall off till the ninth day, when it left a somewhat conical stump with an ash-grey surface and a small red central depression. A thin sheath sloughed off the stump. Sir J. Paget, who saw the child, advised its removal (if it remained) by ligature, as in the case of common wart of the umbilicus. It disappeared altogether on the fourteenth day. The early appearance of the wart was remarkable; it had not been observed before the eighth day.—Remarks were made by the PRESIDENT, Drs. EDIS, WILLIAMS, and HERMAN.

Note on the Involution of the Puerperal Uterus in the absence of the Ovaries, by Dr. JOHN WILLIAMS. — The patient had had her left ovary removed in 1879, and her right was removed during labour in 1883 for cystic disease. Recovery was uninterrupted. The involution was decidedly delayed, and on the twenty-eighth day it was still above the brim; the sound passed four inches. Seven weeks after delivery the uterus was of the size usual in the fourth week. Seven months after delivery it was smaller than the virgin organ, sharply anteflexed, and the cavity was only two inches long. In this case the immediate effect of removal of the ovaries was retardation of involution, but the changes in the peritoneum caused by ovariotomy must be remembered. The ultimate result was exaggeration of the uterine involution, like senile atrophy. The PRESIDENT endorsed Dr. Williams's view of the case.—Dr. CARTER remarked on the rarity of super-involution. There exists, without doubt, a condition of atrophy of the ovaries in such cases, and their removal produced the effect which he should have expected.

On Fœtal Extensions or Retroflexions during Pregnancy, by Drs. MATTHEWS DUNCAN and HURRY.—The authors have collected all examples of extension of the limbs or body of the fœtus occurring during pregnancy, and have tried to throw light on their causation. These extensions may be of a leg, or of both legs, or of the whole body. They may be caused by malformation, goitre, amniotic bands, exomphalos, shortness of cord, and morbid conditions of the mother.—The PRESIDENT remarked on the special value of the paper as throwing light on some of the causes of face presentations.—Dr. CHAMPNEYS said that the only variety he had himself observed was the "siége décomplété" (Lefour). In this, when primary, the legs after birth at once resume the fœtal attitude and fly up over the shoulders in a most striking manner.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

AT the ordinary meeting of this Society, held on June 7th, Dr. Thudichum, President, in the chair,

Dr. H. CAMPBELL POPE read a case of Littré's Operation of Inguinal Colotomy for Congenital Deficiency of Rectum. The child when first seen, two days after birth, was vomiting a greenish-coloured watery fluid; it was dusky in appearance. The abdomen was immensely [illegible]nded with flatus, especially in the course of the c[illegible]mina-tion per anum the finger entered a cul-de-sac about one inch in depth, and of the o dinary calibre of an infant's bowel. No upper sac or protrusion could be felt, but when the child strained a general bulging could be distinguished. Fifty hours after birth a trocar was passed from the extremity of the cul-de-sac into the pelvis in the usual direction of the rectum. This proceeding was followed by the escape of about two drachms of straw-coloured odourless fluid, and on introducing the trocar still further a little meconium escaped. As the fluid was apparently from the peritoneal cavity, it was decided to open the sigmoid flexure of the colon after Littré's method. An incision about an inch and a half in length was made above and parallel to Poupart's ligament, and on opening the peritoneal cavity six drachms of straw-coloured fluid escaped. The large bowel was seen to end in a free floating extremity. It was opened by an incision in its long axis and fastened to the external opening by four sutures. No further vomiting occurred after the operation. The child did well for the first fortnight and the wound healed; but after this time the gut began to evert, and a large portion, three inches long, became constricted and ultimately sloughed off. This process again recurred and a further portion, two inches in length, sloughed off. After this the progress was entirely satisfactory, and twelve months after birth a perfect artificial anus, capable of retaining fæces, resulted. Ultimately, the child died of hæmorrhagic measles when thirteen months old. Dr. Pope recommended in cases where the bowel could not be satisfactorily reached from the anal cul-de-sac that an exploratory abdominal incision should be made (as for inguinal colotomy) and the end of the bowel examined. If feasible, it should be brought down to the anal cul-de-sac and fastened to it, an incision having been made in the upper extremity of the cul-de-sac. If this could not be done, Littré's operation might be concluded.—Dr. TRAVERS did not advocate the use of the trocar but careful dissection from the anus, keeping close to the sacrum. Where the gut could not be reached thus, he would perform Littré's operation.—Dr. THUDICHUM agreed with the suggestion as to an exploratory abdominal incision.—Dr. ALDERSON had a case in which, after a prolonged operation from the anus, the child died from collapse two hours after.—Dr. POPE, in reply, agreed with avoiding the use of the trocar, and condemned very prolonged operations from the anus.

Surgeon-Major T. H. HENDLEY read a paper on the Van Ryselberghe Meteorograph, which had been installed under his superintendence in the meteorological observatory of H. H. the Maharajah of Jeepore, in India. In reply to Dr. Thudichum, Surgeon-Major Hendley said that there was a special department in India under Mr. Blandford, F.R.S., meteorological reporter to the Government of India. The relation of meteorology to medicine was not lost sight of, but it would of course require time and labour to obtain valuable results.

Dr. KILNER read a paper on Peripheral Lesions as the Exciting Cause of Chorea. Seven cases were quoted in support of the theory. The lesions in these cases being due to rheumatism, dentition, ovarian and uterine disease, masturbation in the male, and various causes in one case. Afterwards it was stated that it was extremely probable that in nearly every instance an exciting peripheral lesion could be found as well as a central derangement. For shortness' sake, the central derangement, whatever it may be, was called hyperkinesis, and the peripheral lesion the excitor. It was considered that if the hyperkinesis was not very great the excitor must necessarily be powerful; on the other hand, if the hyperkinesis be intense the excitor need only be mild; and when both the hyperkinesis and the excitor were intense a severe attack of chorea may be expected. It is also extremely unlikely that the hyperkinesis of itself produces chorea, because before it becomes sufficiently great to cause an attack an excitor will arise, as the system can hardly be considered in a perfect state of health, but this excitor may be so slight as to be easily overlooked. In one of the cases quoted the natural functions of menstruation was sufficient to determine an attack.—Dr. THUDICHUM said the commonest cause of irritability was some chemical change in the nervous system.

Mr. H. H. TAYLOR showed Two Kidneys affected with Cystic Disease. They each weighed about four pounds. They consisted of congeries of cysts, varying from the size of a marble to an orange. None of the cysts were within other cysts. They contained, some a clear fluid, others milky, some dark but clear, others dark and thick. No renal tissue could be found.

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MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE annual meeting of the Medico-Psychological Association was held on Wednesday, July 23rd, at the Royal College of Physicians, London; Dr. Rayner, the President, in the chair. Among other business, Dr. J. A. Eames was elected to be President for the ensuing year, and it was agreed that the next annual meeting should be held in Ireland.

The PRESIDENT, in his opening address, dwelt on the delays to treatment by the present system of certification of the insane, and asserted that loss of chance of recovery, suicide, and other lamentable occurrences, resulted directly or indirectly from it. He deprecated any increase of the obstructions to placing an insane person under treatment, and advocated that every patient should be examined by a State medical official as soon as possible afterwards. He took the view that to abolish private asylums would logically involve the abolition of the care of single patients, which was regarded by many authorities as the most satisfactory mode of treatment. He recommended the addition of at least four medical commissioners to the present Lunacy Board, and an increase of the pay of the Commissioners in Lunacy. After alluding to various causes which might tend to reduce the development of insanity, and giving a summary of the progress in treatment, he suggested that any additional accommodation for the insane hereafter provided should be specially adapted to recent insanity. In conclusion, he expressed the expectation that at no distant date an arrest would occur in the present rate of development of insanity.

It was announced that the adjudicators had awarded the Association medal and money prize (which is open to competition to assistant medical officers of asylums) to Dr. Macphail of Garlands Asylum, Carlisle, an asylum from which good work has already emanated. This essay is entitled "Clinical Observations on the Blood of the Insane." We shall hope to touch further on it when it is published, which no doubt it will be shortly, as it becomes the property of the Association. The adjudicators were Prof. Gairdner and Drs. Orange and Rayner, the present president and his two immediate predecessors.

The members of the Association afterwards dined together at the "Ship" at Greenwich.

Reviews and Notices of Books.

The Guide to the Study of Ear Disease. By P. M'BRIDE, M.D. Edinburgh: W. and A. K. Johnstone.
Manual of Diseases of the Ear. By THOMAS BARR, M.D. &c. Glasgow: Maclehose and Sons.

THE first of these works, the author states, is intended to meet the requirements of the student and of the general practitioner who have not the advantage of studying otology under the guidance of a teacher. If it were said that an account is given of the various methods of treatment which are to be found in the text-books, to which reference is freely given—and the reader is left in some doubt how to choose between them,—it would, we think, more accurately describe the impression which is left after a perusal of this little book. To give one example. When speaking of the large subject of perforations of the tympanum, all the numerous applications which are in use and have been employed are mentioned, but the local conditions, appearances, symptoms, &c., for which each application is especially suited, are left to the student to discover for himself; and when it is said of the "artificial tympanum" that that of the late Mr. Toynbee is the one "most commonly used," a scarcely correct idea is conveyed of what is the practice with the chief aurists in this country or abroad. The record of symptoms which should make necessary an opening of the mastoid cells is most meagre, and the directions given are simply that a chisel or small trephine may be used, and the instrument directed forwards rather than backwards. The illustrations, however, are very well executed, and a very fair summary is given of the different operations on the membrana which have from time to time been suggested and practised.

The ordinary diseases of the ear are well described in Dr. Barr's manual, and whilst each disorder is under discussion, very full references are made to the writings of Continental aurists. The account which is given of the methods of examination is especially clear, as is also that portion of the book which deals with operations on the membrana tympani, a subject that is fairly discussed, and one on which it is most desirable that the general opinion entertained by those competent to judge should be freely diffused. As a manual the book is unusually large, containing nearly five hundred pages, but this may be excused in consideration of the fact that so few details of the subject have been omitted.

An Elementary Course of Botany. By the late Professor HENFREY, F.R.S. Fourth Edition, by M. T. MASTERS, M.D., F.R.S., and A. W. BENNETT, M.A., B.Sc. Pp. 724. London: Van Voorst. 1884.
The Student's Guide to Systematic Botany. By ROBERT BENTLEY, F.L.S. Pp. 178. London: J. and A. Churchill. 1884.
Aids to Botany. By ARMAND SEMPLE. Second Edition. Pp. 103. London: Baillière, Tindall, and Cox. 1883.

THE fourth edition of Henfrey's well-known and justly esteemed work, while not occupying more space than heretofore, contains a large amount of new matter, especially in the morphological, histological, and physiological sections. It has evidently undergone careful revision at the hands of the editors, some passages of less importance having been omitted to make room for newer or more useful information. In the systematic portion of the work the natural orders have been arranged in accordance with Bentham and Hooker's "Genera Plantarum," although the editors have not hesitated to point out cases in which they differ in opinion from those veteran botanists. It must be a matter of no small difficulty to condense, as is done in the present work, the immense amount of botanical information yearly issuing from the press in such a manner as to render it available for the use of students, and to duly weigh results which appear contradictory, while endeavouring at the same time to keep up to date with the progress of botanical science. For the benefit of those who are unacquainted with Henfrey's "Elementary Course of Botany," it may be stated that the plan of the book is to lead the student by easy stages from a consideration of the various organs of plants, and the method of describing them, to a knowledge of their classification, the more difficult details of microscopical structure and of the physiology of plant life being subsequently described; while geographical and geological botany are reserved to the last. The subject matter is rendered easily comprehensible by typographical devices, certain necessary digressions, and additional or explanatory notes being printed in smaller type, and the more important matter and the larger natural orders of plants being indicated by large type. The explanatory notes on the affinities of the natural orders form an important feature in this work, and tend to give a much clearer idea of the classification of plants than could be obtained from a bare description of the botanical characters of each order. The prominence given to facts rather than to botanical terms is another advantage which the student will not be slow to appreciate. Exception might perhaps be taken to one or two points in the cryptogamic section, such as the retention of Phascaceæ (p. 404) as a distinct group of mosses, these plants being now more correctly distributed by bryologists amongst the various families of Bryaceæ, to which their structure indicates that they rightly belong, and of which there can be little doubt that they are degenerate or undeveloped forms. The Ricciaceæ (p. 407) have no more claim to be considered as exclusively aquatic plants than the Ranunculaceæ. Nor can we agree with Mr. Bennett in the statement that the compound nature of lichens has been completely established,

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seeing that the Schwendenerian theory is not yet accepted by the majority of lichenologists. But, these are minor matters of comparatively little importance to the student of medicine, and in no way detract from the usefulness of a book which may be considered one of the best of the manuals of botany that can be placed in the hands of a student of any branch of the science, and of which every botanist ought to have a copy in his library.

Those who have been accustomed to carry to and fro from botanical gardens Bentley's well-known "Manual of Botany," by the same author, will feel grateful to him for providing this portable little guide. It is of a convenient size for the pocket, and contains the whole of the descriptions of the natural orders of plants, as given in his larger work. This condensation has been effected by omitting all details relating to the economic uses of the plants of each order. A very useful feature in the book is a chapter on descriptive botany, with illustrative descriptions of several medicinal plants. As a pocket companion, to be used when studying practical botany, the book will be invaluable both to the student and to the more advanced botanist. The only subject of regret is that the author has not followed the mode of classification adopted in Bentham and Hooker's "Genera Plantarum," which will undoubtedly be the standard work used by British systematic botanists both at home and abroad for many years to come. In a future edition, which we hope may soon be called for, this point might be easily remedied. The addition of a few notes conveying some idea of the alliances of the different natural orders to each other would not add much to the bulk of the work, and would be very useful to more advanced students.

The second edition of Mr. Semple's little work, according to the statement in the preface, has been almost entirely rewritten and a considerable amount of new matter added. Its object is to place before the student the leading points of the science in the plainest language possible. At the present day, owing to the rapid strides made in all branches of medical science, there is a tendency to consider botany as one of the least important of the sciences with which the medical student must be acquainted, and hence probably the attempt to make it as simple as possible. The plainness of the language adopted throughout the book is in some cases at the expense of accuracy. Looked at from a purely botanical point of view, it cannot be used with advantage as an introduction to a more extensive study of botany, for the student would have to unlearn many of the statements contained in it, and unless its perusal is accompanied by a practical study of plants in the living state, it can only serve as a means of "cramming" the subject. It used to remind the student of the meaning of the principal botanical terms before going up for an examination, care should be taken to correct, by a reference to the Pharmacopœia, such statements as the following—viz., that arnica, jalap, and serpentary are roots (p. 7), that the leaves of Uncaria Gambir, the flowers of ammoniacum (p. 23), and the fruit of rue (p. 35), are the officinal parts, or that ergot is a seed (p. 67). The index is an excellent one, and the chief advantages that the brochure appears to possess over works of a similar character are that it gives a list of the parts of the plants officinal in the British Pharmacopœia under the different organs of plants, and that it contains a synopsis of the characters of the principal natural orders affording medicinal plants.

ON the 23rd inst., certificates of efficiency were presented to those members of the Edinburgh Ambulance Corps who had passed the examinations. The number of certificates presented was 285. At the close of the proceedings, a number of persons enrolled themselves to form the nucleus of a Volunteer Artisan Ambulance Corps.

THE RIGHT USE OF REFUSE.

THIS was the title of a lecture given by Dr. Poore at the Health Exhibition on Tuesday last, Professor Tyndall occupying the chair. There was a large and most attentive audience. Dr. Poore remarked that nowadays sewer air or sewer gas was one of the staples of conversation in all society, and the elders of the present generation often wondered why it was that in their young days this subject was comparatively unknown. The reason was not far to seek, and lay in the fact that the present generation had been engaged for some years in the wholesale manufacture of sewer gas, which was a product of sewers and water-carried sewage, whereas our parents dealt with their refuse in a less wholesale fashion, and had not, as we have, sewers laid on to the very interior of their houses. The particulate and organic nature of the poison of some of the zymotic diseases had been definitely proved, and with regard to others it was a matter of the very highest probability. After giving the life history of the bacillus anthracis, and showing how it might be propagated artificially, and what were the conditions (moisture, warmth, darkness) which were favourable to its growth, the lecturer said we could hardly escape from the conviction that bacilli and allied organisms might grow in sewage, and especially in warm, dark sewers or cesspools. Apart from this fact, the knowledge that these poisons were particulate, and that each particle was alive and capable of infinite increase, made it very undesirable to disseminate these poisons in a great volume of water and allow them to trickle, nobody knew where, until an outburst of epidemic disease disclosed the unforeseen track which the poison had taken. Bacilli, it was well known, were killed by dryness, and in times of panic, like the present, dry methods of treating excreta were recommended. If dry methods were good in times of panic they must be good always, and it was well known that no spread of disease had been traced to the dry earth method or to the other dry methods (like that in use at Manchester) of treating excreta. Great sewerage schemes were seldom an unmixed good. They encouraged overcrowding by enabling houses to be built without any curtilage whatever, and without any outlet for filth except by the sewer. The density of population in London had increased in many parts, and with the result that those diseases which were propagated by aerial infection, such as measles and whooping-cough, to say the least, had not decreased. If a great sewerage scheme were carried out in the Valley of the Thames, that district would soon be overcrowded, and the amount of sewage to be dealt with would steadily increase. It must be borne in mind that although it was comparatively easy to lay pipes, the question of how to treat a great mass of sewage when it had been collected had not yet been settled. Nobody contended that chemical methods would render sewage wholesome, although they might clarify it to some extent. If a great outfall were established at Mortlake, it certainly would not be advisable to drink the water or to bathe in its neighbourhood. The great difficulty and expense being the treatment of sewage when collected, it was clearly to the interest of sanitary authorities to encourage the inhabitants to send as little sewage to the outfall as possible. In a district of villas and market gardens there should be no difficulty in treating sewage, and it could be done more efficiently and economically close to the house than elsewhere. The villa holder should be encouraged to deal with his own refuse on his own premises, and the way to encourage him was to have an equitable adjustment of sanitary rates so that the householder who dealt efficiently with his own refuse should pay less than he who left his refuse and filth to be dealt with by the public authority. The reverse was too often the case. A house to be securely healthy should have no collections of putrescible matter near it, and to avoid this it was necessary to use earth closets and apply the slops directly to the soil.—Professor Tyndall, in moving a vote of thanks, expressed his general concurrence with the lecturer, and dwelt upon the importance, under existing circumstances, of thoroughly disinfecting the excreta of cholera patients before allowing them to pass into the sewer.

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THE LANCET.

LONDON: SATURDAY, JULY 26, 1884.

THERE is yet time for all parties to save their credit in the matter of the Medical Bill. If this short period is misused very serious discredit will accrue. Many of the existing authorities may be beginning now to congratulate themselves on the prospect of another lease of present privileges. It is very easy to defeat legislation. Parliament, with its interminable talk, its party exigencies, and its iron rules, is a very poor business instrument. But to defeat legislation is not to re-establish credit. The great universities of Scotland may yet show themselves not afraid of an independent test of the work they do. The great corporations of England and Ireland may yet take their proper place in a system which will abolish the half diplomas in which they chiefly deal, leaving to the joint corporations of Scotland an easy and lucrative trade in double qualifications. It is lamentable to think that, by the failure of the present attempts at legislation, the great Colleges of Surgeons of England and of Ireland—to say nothing of the Colleges of Physicians—may be doomed to years of legal incompetence to grant other than half diplomas. But this is the meaning of the miscarriage of the Government Bill. The authors of the series of amendments may yet escape the charge of wholesale and deliberate obstruction. The medical members of Parliament may yet show some sympathy with their brethren of the profession and share the honour of legislation demanded by medical men and required for the public advantage.

There remain two parties to the success of the Bill or to its failure, to the gratification of the profession or to its disappointment. One of these is the Government itself. No Government has ever shown more earnestness or taken more trouble to promote legislation on a sound basis than this one. Mr. GLADSTONE himself, in one or two sentences, has indicated his large conception of what is needed to make the profession one—to make it self-respecting and respected by the public. Lord CARLINGFORD and Mr. MUNDELLA have respectively taken unprecedented pains to place the subject fairly before Parliament and to get the best result possible. It will be regrettable if at the last moment the Government lacks faith either in its own Bill or in its power to pass it. It is not the fault of the medical schools or the medical profession that it has been postponed to the end of July; neither, perhaps, is it altogether the fault of the Government that night after night, instead of appearing in its promised place on the order list, it appears last, or is compelled by its absence. We implored the Government to pass the Bill and to adhere to the original principle of it, as embodied in the Report of the Commissioners, including an independent Final Board. There are always troublesome outsiders of their own party who exact from a Government unreasonable terms in exchange for their support. On this occasion Sir LEON PLAYFAIR is doing so. In a speech the fullness of which we have cited to-day, he has done more harm to the Bill by faint praise than good by his approval. He has proposed an amendment which in our opinion is not an improvement. He proposes to require the Council to accept, in lieu of a final and conjoint examination arranged by the divisional boards, the admission of assessors in the various examinations of the existing licensing authorities. He must know that this change is not acceptable to the body of the profession, though doubtless he hopes by it to conciliate his supporters in Scotland. It is the weakness of Sir LEON PLAYFAIR'S position at this juncture that he is between two fires—very hot ones too—those of the corporations on the one hand and those of the universities on the other. He does not seem to see that the way to make the universities of Scotland greater still is to regard them as imperial institutions doing imperial work, and bound therefore not to shirk imperial tests. We trust that he will not be too exacting on the Government, and that he will not paralyse the future Medical Council. There is only one condition upon which we can agree to his amendment, and that is, that he shall give the Council discretionary power in any given case to dispense with a Final Board. To compel it to do so is to tie its hands and to make it impotent for good.

LAST week the grievances of the Indian Medical Service were brought under the consideration of the House of Commons by Mr. GIBSON, in a very temperate speech, concluding with a motion, "That the condition of the East Indian Medical Service calls for the early attention of Her Majesty's Government, and this House trusts that steps will soon be taken to lessen the block in promotion and the disappointment at the methods of employment and pay which exist in its ranks." After a well-merited compliment to the service, which "has in its ranks now, and has had in the past, many distinguished men, and has always in times of cholera and danger been loyal to its duties," Mr. GIBSON proceeded to point out the grievances complained of by its members under two heads—those of the *senior* medical officers, and the grievances and disappointments of the juniors. Under the former, he adduced the reduction of the number of administrative appointments and the abolition of the privileges guaranteed to the service at the time they entered it, under the Government of India Act. While the strength of the medical service had been reduced by 20 per cent., the number of administrative appointments had been diminished by 33 per cent. The system of promotion by seniority had been modified, and that of selection for the administrative appointments introduced, without any compensation being awarded to the officers who were thus passed over; and a rule had been introduced by which officers who declined promotion when offered would be permanently passed over. These appeared to be the grievances of the senior officers. Those of the junior were of a different nature. They complained that by the terms of the Government circular, under the conditions of which they had entered the service, they understood that as soon as they passed the examination in Hindustani they would become entitled to a higher rate of pay, however employed; while the Government held that they were entitled to this increase only when employed in certain appointments. They also complained that the rate of pay—absurdly called *unemployed* pay,—which was to be temporary and exceptional, had of late been so much the rule that in many instances officers

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did not get the increase to which they conceived they were entitled until they had served five or even six years in India. The motion was seconded by Sir LYON PLAYFAIR, who adduced several instances known to himself in which the system in operation had inflicted great hardship. But we were surprised to see that he talked about the young officers just arrived from Netley being put under the charge of their seniors, "whose special qualifications were not equal to those of the students placed under them," as being the practice "of placing the superior under the command of the inferior"; and quoted Professor MACLEAN of Netley as the author of this sage remark.

Mr. CROSS, with great justice, congratulated the Indian medical officers on the ability and moderation with which their case had been stated; but he contended that it was impossible, in the interests of the public, to argue that there should be no reduction in the number of administrative appointments if the Government should consider it advisable. With regard to the complaints of the junior medical officers, he pointed out that the slowness of promotion was an unavoidable result of the necessity for increasing the numbers of medical officers during the Afghan war, but that this stagnation was apparently now approaching an end, and he quoted figures to show that the number on unemployed pay was rapidly diminishing. With regard to the charge that the Government had not kept faith in the matter of increase of pay after the Hindustani examination had been passed, he maintained that the conditions had been faithfully observed, and that the charge was founded on an erroneous interpretation of the obvious meaning of the paragraph, which was restrictive, and not declaratory, of the persons entitled to draw the increase. He also pointed out that the regulations as to *officiating* pay, of which complaint had been made, were applicable to all branches of the Indian Service, and were necessary to enable the Government to keep up such a reserve of officers as would permit them to grant furloughs without involving a large addition to the expenses of the different departments. Mr. CROSS then showed that although in some respects the Indian medical officers were not so well situated as those of the Army Medical Department at the commencement of their career, their prospects were much better after a few years' service, and also as regarded their pensions. After a discussion, in which several members took part, the motion was negatived without a division.

From a careful study of the whole subject, we see no reason to alter the conclusions at which we arrived when the Indian Medical Warrant was issued: that the changes involved in it were necessary in view of the altered condition of the army, and that, as far as regards the senior officers, the arrangements ought to be deemed satisfactory. With regard to the grievances of the junior officers, we are still of opinion that a revision of the system of so-called unemployed pay is urgently needed, that it may, to use Mr. GIBSON'S words, "be put on something like a rational basis." Dr. FARQUHARSON observed that, "as to unemployed pay, he did not see why such an unmeaning term should not be abolished, and why some general arrangement should not be come to by which pay might be given for admitted employment on different scales." The modifications consequent upon the changes introduced into the hospital system seem imperatively to require a reconsideration of the whole system of charge pay and allowances. On another point a change seems called for—that of compelling officers to "pay their way to all appointments in which they draw higher pay." We believe that in many instances, especially of officiating appointments, this rule inflicts a grievous injustice upon the officer, who may not be able, from circumstances not under his control, to hold the appointment long enough to recoup him the expense to which he is thus put. Except in cases where the change is made at the officer's own request and for his convenience, the expense of the removal should be borne by the Government. Mr. CROSS has promised to bring Mr. GIBSON'S statement of the grievances of the medical officers to the notice of the Government of India, and we trust he will back it up with a strong recommendation in favour of the amelioration of the service in these important points.

THE statement made in the House of Commons last week by Sir CHARLES DILKE shows that the action of the Select Committee in throwing out the Lower Thames Valley Main Drainage Scheme, which had been unanimously approved by the Main Sewerage Board, and confirmed, after a careful inquiry, by the Local Government Board, was a gross and unwarrantable blunder, likely to be followed by the most disastrous consequences. If the scheme had been approved by the Committee, Parliamentary powers would have been conferred upon the Main Sewerage Board which would have enabled them to carry the sewage of the whole area to a single spot near Mortlake, purify it by precipitation, and also, we believe, by land filtration, throw into the river a tolerably clear and practically harmless effluent, instead of the raw sewage which now defiles it. We do not pretend that the scheme is perfect. Whatever precipitating process is used, the effluent water is never pure, and the solid portion is always to some extent offensive. The process selected by the Board was that of the Rivers Purification Association now in use at Coventry and elsewhere. The sewage is mixed with lime and the sulphates of iron and alumina, which precipitate the solids, and, if the subsidence reservoirs are large enough, gives a clear and by no means objectionable effluent. The solids are partially dried by a filter press, and form a manure which has a certain value, though not a great one. The Main Sewerage Board proposed to carry this sewage-cake in barges to a spot near Rainham in Essex, where, according to scientific evidence, it would cause no nuisance. The defects of the system are obvious, and it may furthermore be conceded that it would be difficult, if not impossible, to turn out a satisfactory effluent in times of flood; that we take to be the greatest objection to the system as at present worked.

But the reply to all such objections are the obvious questions—What else can be done? What better scheme is offered? The sewage of more than a hundred thousand persons is to be disposed of, and it is admitted by nearly everyone that it must, under existing conditions, go into the river. The system indicated in the attractive motto, "The sewage to the soil, the rainfall to the river," is for the present impracticable, and the task of practical administrators is limited to the purification of the sewage as much

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as possible before it joins the rainfall in the inevitable river. Experience has shown that the system now under consideration is capable of effecting a fair purification of sewage without perceptible nuisance, and at moderate cost. We do not say that it is the best of all possible systems, but we hold that the immediate adoption of some system is absolutely necessary, and that no other is at present proposed. As for the objections of individuals, it is impossible to imagine any method of treatment which would not inflict injury, real or imaginary, on someone. If anyone is injured, he must be compensated—that is all.

The conduct of the Committee in regard to this carefully prepared scheme has been so extraordinary that we will not attempt to account for it. Not only have they rejected the scheme, but they have recommended the rejection of an unopposed order which would have protected the Main Sewerage Board and the ratepayers from the liability which under the Thames Conservancy Act they will now incur after September next. They rejected the scheme almost contemptuously. They heard the evidence of only two out of the eleven constituent authorities, they did not even listen to the Main Sewerage Board appointed to find a remedy for the evils so long complained of, and, as far as we can understand, found no fault with the suggested system. The essence of their report is the general suggestion which we noticed last week, that the district should be divided into four or five smaller districts, each of which should undertake the purification of its own sewage, and this suggestion appears to us a most unwise one.

In favour of the proposal one argument may fairly be urged. To ensure the most rapid oxidation it would, no doubt, be better that the sewage effluent should enter the river at several places instead of at one, and it is open to question whether, if the scheme of the Board had been carried, it might not have been found possible to discharge the effluent at several points not too near together. But the rejection of the whole scheme on this ground will, it appears to us, lead to a waste of time and money utterly out of proportion to the defect alleged as excuse. The long-continued pollution of the river in the Richmond and Kew districts has been caused mainly by the opposition which each sanitary authority has met with in its attempts to gain sanction for its pet scheme. If four or five small boards are now turned loose to deal independently with their sewage difficulties, they will meet at once with the old opposition, strengthened and encouraged by previous victory. In the most favourable case the purification of the river could not be attempted before 1886, and there is but too much reason to fear that it will be indefinitely delayed. That would be a terrible risk. An imperfect remedy is better than none, and it is, above all, necessary that some remedy shall be applied without further delay.

As for the condition of the Thames below London, all that can be said is that it is about as bad as it can be. It is literally dangerous to breathe its air; and we have heard of cases of sickness and diarrhœa obviously traceable to its noxious exhalations. The Metropolitan Board of Works, who have expended large sums of money in demonstrating its purity, seem at last to have awakened from their delusion, and are making efforts as futile as frantic to disinfect the sewage. We can hardly believe it to be true, but a report reaches us that they actually contemplate the manufacture of chemicals for the disinfection of the sewage of all London. The public who pay for it ought to know how much the so-called disinfection is costing per diem.

Two matters of especial interest in connexion with the question of Lunacy Law Reform are always before the public, and we cannot doubt that it is mainly because of this very persistence of their appeal, whether mute or clamorous, for prompt consideration, the claim is disregarded. Consciously or unconsciously, public opinion grows obdurate to the demands of a continuous need; and "burning questions," unless they can be artificially, or are fortuitously, blown into a flame every now and again, are, for the most part, left to burn themselves out. It is so with this question of Lunacy Law Reform. The two matters of especial interest to which we allude are the farcical character of the Commissioners' inspection and control of asylums and the system of private or "licensed" houses. We scarcely know which of these scandals—for such they unquestionably are—should be regarded as the more discreditable.

It reflects seriously on the common-sense of the country that £15,159 per annum should be wasted in the maintenance of a Commission which, whatever it has been in the past, has now ceased to be anything except an effete body, giving only, now and again, a peevish kick at some unoffending individual in order to show that it is still so far alive as to be able to draw the public moneys allotted to it. As regards even the inspection of houses for the residence of the insane, the Commission is of no possible use to the community. If any proof were needed of this fact, it would be supplied by the last fearful calamity of asylum-burning, when a house notoriously unsafe was licensed and periodically inspected—save the mark!—by the oligarchy of "extinct volcanoes" at Whitehall. While as to the protection of the insane, the sort of efficiency with which the Commission does its work may be judged from the fact that whenever any question arises, the noble chairman—whom everybody personally respects—is put up to say that the "certificates" given are carefully examined and found correct, and that no grave breaches of the Lunacy Law are known to the Commissioners; whereas everybody is well aware that the correctness of the certificates simply relates to the technical filling in of the forms, without the most distant reference to their truthfulness.

As regards breaches of the Lunacy Law, the Commissioners seem to become aware of what is being done, if we may judge from the inquiries they make from time to time, about two years after its occurrence! Probably few things in public business are so "ripe" as the agenda of the Commission in Lunacy, except it be the information received or acquired by the Lord Chancellor as to what is going on in the lunacy department under his jurisdiction. It will be within the recollection of our readers how the noble lord on the Woolsack, when the Earl of MILLTOWN raised a very useful discussion in the House of Lords some time since, had to send to the library for books to give him a few facts for his speech in defence of the *status quo*, and how it was evident from what the Lord Chancellor cited and said on the subject that he knew nothing whatever about what had been going on during the last few years, and was barely

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aware that the question of reform had been mooted Indeed nothing so comic has occurred in connexion with any debate in either House of Parliament on a grave question within our memory as the noble lord's *naïf* betrayal of ignorance of the subject. His production of fossil figures and facts with much solemnity calls to mind the story of the unhappy parson in a civic pulpit, who, having forgotten his sermon, was fain to read one chained to the desk, which happened to have been written in the time of the Great Plague. Lord SELBORNE'S information on the subject was many years old.

The private asylum system, and all it implies and involves, is again thrust upon public attention by criticisms in the House of Commons and by proceedings before courts of law. It is not on individual cases and complainings this question should be made to rest. A most grievous facility for wrong-doing undoubtedly exists It is not necessary to prove that wrong has actually been done. We would be willing to admit, for the sake of argument, that no single case against a private asylum proprietor has ever been clearly made out; nevertheless, we must contend that a system so utterly unsafe, and obviously inexpedient and indefensible as that which makes the retention of lunatics in asylums a matter of trade policy, ought not for a single instant to be tolerated. We have compared the private asylum system to that of the old "sponging houses," and the comparison has been resented. It is, however, accurately apposite and complete. Both as regards the mode of incarceration and the power and manner of detention the two sets of houses are on all fours. We are prepared to demonstrate the analogy at all points if anyone cares or dares again to challenge it. We repeat, and shall continue to reiterate until reform is conceded, that the laws which govern the custody — we will not say the medical treatment—of the insane are a scandal to the country.

THE doctrine of the infectivity of tubercle is mainly based upon the results of experimental inoculation, and the belief in the transference of the tubercular virus by inhalation is grounded on similar experience. It was to test the value of such observations that Dr. WARGUNIN has been conducting experiments in Prof. RAJEWSKY'S laboratory at St. Petersburg, which are recorded in the current number of VIRCHOW'S *Archiv*. The experiments were made upon dogs, and consisted of three series. In the first series the animal was caused to inhale an atmosphere charged with products of phthisical sputum, in the second with similar material after disinfection by carbolic acid and by heat, and in the third with indifferent substances, as particles of flour, cheese, and the dried products of bronchitic sputum. In all the dogs submitted to the first process the lungs became the seat of changes having the macroscopical characters of miliary tubercle, and this whether the "dust" was inhaled in the dry state or with vapour. It appeared, however, that when an animal was placed under better hygienic conditions, it could recover from the effects so produced—effects all the more striking, since tubercular affections are rare among the canine species. These results are in harmony with those previously obtained by TAPPEINER and others, and at first sight would seem to confirm the doctrine of the infectivity of tubercle. But it was found that the same effects were produced in one out of three cases by the inhalation of previously disinfected sputum; and the question arose whether, after all, such effects could be attributed to specific infection rather than to merely mechanical irritation of the lung by the finely divided particles. At the same time, admitting the infective view, it was conceivable that the disinfecting process had not been thorough enough, and that the virus still remained operative. It was with a view of testing this point that the third series of experiments was undertaken. Here the material employed was destitute of any specific qualities, and yet the lungs became the seat of changes indistinguishable from those set up by the inhalation of phthisical products.

It now became necessary to ascertain whether the nodules which bore a general similarity to tubercle were really of that nature, or whether they essentially consisted in inflammatory material excited by the presence of foreign bodies. It is unfortunate that this research was mainly completed before KOCH'S discovery of a bacillus was known to the observer, so that the detection of this micro-organism as a test of the tubercular nature of a morbid process could not be utilised. This fact deprives WARGUNIN'S research of some of its importance, and must necessitate a repetition of these experiments. Apart, however, from the presence or absence of the bacillus, histological examination pointed to a simple inflammatory rather than a tubercular change; for the process appeared to commence as a cell growth within the smaller bronchioles, leading to their occlusion. In some parts this change was limited to the mucosa, in others it spread to the adventitia. The cells which blocked the lumen of the bronchiole were spindle-shaped, the deeper ones lying nearest the wall being spherical; but as the new tissue contained no bloodvessels, it speedily underwent fatty degeneration. It would appear, then, to be something more than a mere catarrhal process, since the cells showed a tendency to become organised; the lack of vascular supply, however, arresting the process. In the alveoli there was a large production of young cells, apparently from the epithelium, and the nodules thus formed underwent fatty degeneration. Similar nodules, but undergoing casation more rapidly, and presenting fewer features of granulation tissue, were produced in the rabbits long after the inhalation of the products of phthisical sputum. It would seem as if in the rabbit the irritant produced changes more rapidly than in the dog. Anatomically, then, the lesions did not conform to the typical structure of tubercle; and the limitation of the process to the lungs, the absence of general symptoms, and the fact that those animals which, after the inhalation were placed in good hygienic conditions, recovered, pointed to the conclusion that the induced disease was not tuberculosis, but a local inflammatory process—a broncho-pneumonia excited by the contact of foreign solid particles.

It is interesting to turn from the perusal of these researches to the statements by KOCH in his elaborate report on the Etiology of Tuberculosis ("Mitth. aus d. Kais. Gesundh.," Bd. ii.) KOCH employed for his inhalation experiments the cultures of bacilli obtained from phthisical cavities, and submitted rabbits, guinea-pigs, rats, and mice to an atmosphere charged with these products suspended in water, the inhalation being conducted for the space of half an hour on three successive days; the animals being then placed in separate

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and spacious cages. Three rabbits and four guinea-pigs died within fourteen to twenty-five days, and the remainder were killed twenty-eight days after the last inhalation. In all of the rabbits and guinea-pigs the lungs contained numerous tubercles, which were also present in the liver and spleen of those that survived longest. These tubercles when of large size extended into the alveoli of a whole lobule, and thus formed nodules of considerable size, studded with yellowish points corresponding to the caseated alveolar contents. In fact the larger masses reproduced the characters of caseous broncho-pneumonia, just as in the spontaneous tuberculosis of these rodents. The only differences from the above in the case of rats and mice lay in the less abundance and smaller size of the tubercular nodules. In all the instances the tubercles presented the typical character of the growth in the presence and disposition of epithelioid giant cells and of bacilli. Moreover, KOCH transmitted the disease from these animals by inoculation.

From these explicit statements of KOCH we turn to WARGUNIN'S paper in the hope that some means of reconciling the different results may there be found. Instead of this we only meet with the assertion that the etiology of tubercle is not so simple as KOCH asserts. For if it be so, says WARGUNIN, and if all that is necessary to develop pulmonary tubercle is exposure of the lung to the virus, especially if the protective epithelium be injured, then every bronchitic subject should be in danger of becoming phthisical. Moreover, he is not satisfied with any of the numerous inhalation experiments hitherto conducted, averring that more attention has been paid to the general macroscopical features of the lesion than to its histological characters; and that account has not been taken of the occurrence of antecedent pathological processes, or of the famous dictum of BUHL as to caseation inducing tuberculosis. SCHOTTELIUS appears to be the only observer who has regarded the effects of the inhalation experiments in the light here expressed by WARGUNIN,—with this difference, that SCHOTTELIUS considers the first effect to be upon the alveoli, the bronchial change being secondary.

We have thought it well to direct attention to this paper, which is unfortunately defective in several points (and chiefly in the scanty attention paid to KOCH'S experiments), because the main significance of the subject rests in the solution of the question raised within it. That tubercle is transmissible by inhalation is the foremost question of all, for it lies at the root of the alleged contagiousness of phthisis. It is in this direction that the medical world must look for definite and conclusive statements from experimental pathologists, based on thorough investigations undertaken without bias or prejudice.

MANY points of great public interest were raised in the recent Conference on Adulteration at the Health Exhibition. Dr. BUEL, whose address, presented in abstract in our last number, opened the proceedings, spoke, in language the strength for its impartiality and moderation, of some of the defects of the present Acts. Dr. ODLING, who, as President of the Institute of Chemistry, presided, confined himself to a summary of the subjects requiring consideration; but many of these subjects were discussed by subsequent speakers, many of whom, though not all, were well-known public analysts. The speeches by Dr. DUPRÉ, Mr. WIGNER, Dr. MUTER, Dr. STEVENSON, and Mr. HEHNER were among the most important, but some others contained valuable suggestions.

It is admitted on all sides that great benefit has resulted from the Act of 1875. The use of adulterants injurious to health has practically ceased, and fraudulent adulteration, although still common in respect to a few articles, has been reduced and made more dangerous to the trader. This is much to have attained, and naturally suggests the question, which occupied a prominent place at the Conference, Whether legislation having done so much, it may not, by increased stringency, be made to do more. If so, it is clearly a part of the public duty of the medical profession to promote an early reform. A full consideration of the matter cannot be attempted in a single article, but a few general remarks seem necessary, and ought not to be delayed.

In the first place it is an important defect in the present law that too much option is left to local authorities. To this defect we have recently drawn attention. The Local Government Board has power to compel sanitary authorities to appoint public analysts, but cannot compel them to find work for them, or pay them properly. It sometimes happens that a local authority obstinately refuses to carry the law into effect. Whether this be due to false economy, interested motives, or sheer stupidity, the effect on the public is the same. Analysts are appointed, but they analyse nothing, and fraudulent tradesmen have it all their own way, to the injury of their honest competitors in trade, as well as of the public. In this, and in several other respects, no blame attaches to the public analyst. It ought to be more generally understood that the analyst has no control over the collection of samples or the prosecution of tradesmen, and does not, in the great majority of cases, know the names of the vendors. His duty is limited to the analysis of the samples sent to him and to the framing of certificates based upon these analyses. If legal action follows, it is not undertaken at his instance. The insufficient and often injudicious collection of samples is the one chief cause of the survival of adulteration. The inspector is generally well known, and his visits are apt to be made at too long intervals and to too few shops to exercise a sufficient influence on the trader. When we add that the penalties on conviction are often ludicrously small, that all kinds of legal quibbles can be used successfully to escape them, and particularly that the analyst is tied to a form of certificate so narrow as sometimes to be quite inapplicable, it will not be thought wonderful that adulteration lingers in the land. One fact, moreover, seems now to be certain: no important help can be looked for from the general public. It is, we presume, well known that any individual can, for a small fee, and sometimes for no fee at all, procure an analysis of any article of food or drugs, provided he has complied with certain conditions intended for the protection of the trader, and that, without cost to himself, the fraudulent trader may thereby be punished. But, as might perhaps have been expected, the public will not take the necessary trouble, and this part of the Act has but little practical effect.

The question of standards, or, as they are more properly called, limits, of purity was keenly debated at the Conference, and very different opinions were expressed in regard

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to them. It is most important, and unfortunately most difficult, in the case of milk, which is more frequently adulterated than any other article of food. If the analyst is of opinion that a sample of milk has been sophisticated, either by skimming or by the addition of water, the law compels him to state the amount of such sophistication. Genuine milk differs so much in composition, and is occasionally so very poor, that it is impossible to say in any given case how much cream has been removed, or how much water added. The analyst protects himself as far as possible by stating that "not less" than so much cream has been removed or water added, but unless he takes the very worst milk as his standard—the milk of some half-starved cow, quite unfit for food—he must sometimes run the risk of reporting milk as skimmed or watered which came straight from the cow. The difficulty here is due to the wording of the Act, and might, we think, be easily overcome. The law ought to fix a reasonable limit of strength for milk, as it does already for spirits, and the selling of milk below this strength ought to constitute an offence. It is urged against the fixation of such a limit that it would encourage dealers to skim or water their milk down to the limit. But unfortunately that encouragement is already afforded, and we do not see how it can be avoided. Every milkman knows the limits adopted by public analysts and by the chemists of Somerset House, and knows that as long as he keeps the solids, not fat, up to 8·5 per cent. and the fat to 2·5 per cent., he may skim and water as much as he likes. Somewhat higher limits than these might, we think, be prescribed by Act of Parliament without injustice, and the public would really gain. The milkman who sold a better milk would get a better price for it, and if he guaranteed a certain quality, would of course be judged by that guarantee. Many other important points press for notice, but we must for the present leave them unconsidered.

THE slow rate at which the cholera epidemic progresses gives some hope that the outbreak may, after all, be more limited in character than was the case when Marseilles was last attacked. Both at Toulon and Marseilles the daily number of deaths has been much the same as during the previous week, and some additional towns have been attacked, the most marked importation having taken place at Arles; but, notwithstanding occasional rumours to the contrary, Paris seems not yet to have suffered from any appearance of the Asiatic disease. When the extreme heat which has prevailed is taken into consideration, this result may be regarded as hopeful; and it is by no means impossible that the reduction of temperature which has commenced may tend still further to limit the course of the epidemic. Extreme watchfulness is, however, still needed. The *St. Dunstan*, which arrived a few days ago in the Mersey, had had two deaths from cholera amongst her crew, and after keeping the remainder under observation for a day it was found desirable by Dr. TAYLOR, the medical officer of health for the Port of Liverpool, to remove seven others to the port sanitary hospital near Bromborough, Dr. HOPE, the assistant medical officer remaining in charge. The vessel was then thoroughly disinfected by means of carbolic acid, the ballast water was pumped into the river, and so far no further harm has happened.

Two curious instances of so-called preventive measures in countries where our system of inspection and isolation is not resorted to come under our notice together. In one instance the news is from Geneva, where impecunious people get into the train, and having given passengers an exaggerated account of the process of disinfection they will have to go through they exchange tickets, and for a substantial consideration they undergo the fumigation discomforts instead of the genuine travellers. The other comes in the form of a protest from the passengers of the homeward bound steamer *Mira* from Calcutta. Before touching at Colombo, on April 21st, one of the crew died of cholera. All necessary precautions having been taken the vessel reached Suez, and though sixteen days had elapsed, and all on board remained well, she was ordered to El Tor to perform seven days' quarantine. No proper arrangements had been made for their reception, and a few wooden huts with some disgustingly offensive privies afforded the only accommodation available for a large number of first-class passengers of both sexes. Such an arrangement is discreditable in the extreme to the Sanitary Council of Alexandria. But what follows is worse than discreditable. The death had occurred amongst the crew, who occupied an entirely distinct part of the ship to that which was reserved for passengers. And yet it was the passengers who were thus compelled to leave the ship and to go into quarantine, the crew being allowed to remain on board. Nothing but utter ignorance of the etiology of cholera can account for such a system.

Annotations.

"Ne quid nimis."

AN ENGLISH CHOLERA COMMISSION.

WE are enabled to state that the Government have directed Dr. Klein, F.R.S., and Dr. Heneage Gibbes, to proceed forthwith to India to pursue a scientific inquiry into the nature of cholera. It is understood that these gentlemen will act in conjunction with the Commission nominated a few weeks ago by the Indian Government for the same object. In the prosecution of their labours Drs. Klein and Gibbes may be assured of the hearty good wishes of all Englishmen, and the results of their mission will be awaited with great interest. The Government in arriving at this decision have only done that which ought to have been done twelve months ago; and it cannot fail to touch the national pride that the country which has the largest interest in arriving at a sound conclusion upon the nature of this disease should have allowed Germany and France to have preceded it in the research. It is better, however, to be late in the field than to ignore the value of such an inquiry altogether.

HOSPITAL FETE AT THE HEALTH EXHIBITION.

THE grand *fête* which was held under Royal auspices at the Health Exhibition on Wednesday evening last was not only in itself a brilliant success, but seems likely as its result to supplement the Hospital Sunday and Saturday Funds by several thousand pounds. It was at the kindly suggestion of the Prince of Wales that one of the two reserved Wednesday evenings was devoted to the benefit of the London hospitals, and, according to promise, his Royal Highness and the Princess of Wales honoured the occasion by their presence. The invitation which had been issued to the public to contribute flowers and fruit for sale during the evening

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was promptly and most generously responded to. As a consequence there were no less than twelve stalls picturesquely scattered in various nooks and corners of the Exhibition buildings. Many of the stalls presented the appearance of a complete arbour of flowers, and the fair stall-holders were evidently doing a capital business; indeed it was impossible to resist such pleading as, "I don't sell roses every day—and, think, it is for the hospitals." The working dairies were specially decorated, their counters being covered with flowers and fruit, in addition to which milk, cream, butter, &c., were here sold. In connexion with this it should be mentioned that exhibitors at whose stalls articles were sold devoted the profits to the hospital fund; and Messrs. Bertram and Roberts, the refreshment contractors, contributed out of their takings a sum of £100. Twenty-six large firms also sent a liberal supply of flowers and plants. Eight bands of music performed in different parts of the Exhibition. The illuminations in the Horticultural Gardens were on an unprecedented scale, and afforded the prettiest imaginable sight. Everyone connected with the undertaking must have worked hard to secure its success, which was indubitable. If exception could be taken to anything, it was to an element beyond human control—the weather,—the evening being somewhat chilly, and dark clouds at one time threatening to spoil what was a veritable glimpse of fairyland.

THE WOUNDED POLICEMEN.

FOR the following notes on the cases of the two police constables who were shot last week at Hoxton in an encounter with burglars we are indebted to Mr. Toller, house-surgeon at St. Bartholomew's Hospital:—

David Garner and William Snell were admitted into St. Bartholomew's Hospital, under the care of Mr. Morrant Baker, on Friday morning, July 18th, the former suffering from a bullet wound of the thigh, and the latter of the abdomen. In the first case the bullet had passed through the back of the thigh, penetrating the hamstring muscles, the aperture of entrance being situated about the level of the apex of Scarpa's triangle and three inches to the inner side of the femoral vessels; passing behind them, it found exit in the middle of the back of the thigh, nearly four inches below the gluteal fold. The wounds presented the usual appearance, with the exception of the wound of exit, which seemed smaller and very ragged. The hæmorrhage was free at first, but soon ceased, and has not again given trouble. Sanitas oil dressings (1 in 30) were immediately applied, a small portion of which sealed the wounds, and were not frequently changed. The constitutional symptoms and the local trouble are very slight, and up to the present the parts are looking quiet. The case of Constable Snell is much more grave—rather from the possible consequences, however, than from any present symptoms of danger. The bullet in this case entering close to the outer border of the right rectus abdominis, and slightly below the level of the lower costal cartilages, appeared about an inch and a half to the right of the spinous process of the third lumbar vertebra. No sign in the shape of superficial tenderness or bruising in the abdominal wall from the track of the bullet could be discovered, although there was much ecchymosis and tenderness around the wound of entrance. The symptoms on admission (four hours after the injury) were severe. There was considerable prostration; the aspect was pinky and of a yellow colour, as of a man suffering from shock. The pulse was 99, of fair volume; temperature 99·4° F. The hands were somewhat tremulous, and the patient complained of pain in the back and abdomen. The temperature so far has not risen above 101·4°, and is now gradually descending. The bowels act without pain, the urine is natural, and there are none of the symptoms of peritonitis or pleurisy. The treatment adopted was similar to that in Garner's case, the wounds being sealed with sanitas oil lint (1 in 30), opium was administered occasionally for the first forty-eight hours, and the diet limited to fluids, with a small quantity of brandy. The revolver was a six-chambered one, rifled; and the bullets were conical, about half the size of a Martini rifle bullet. From the appearance of the wound and the absence of any superficial tenderness or bruising, and the constitutional symptoms at the time of the man's admission into the hospital, Mr. Morrant Baker is of opinion that the bullet probably passed through the abdominal cavity. Assuming that no important blood-vessel was wounded, and that the track made by the bullet was a clean one, there is every reason to believe that the patient will recover. From the position of the wound it is difficult to imagine that the liver can have escaped altogether; it seems most likely that the track of the bullet lies somewhere about or on its diaphragmatic surface, or its course may have been deflected by the diaphragm. In the absence, however, of any leading symptom, any statement regarding the exact position of the track can only be guesswork.

HEALTH RESORTS AT HOME.

THE season of "change" is again upon us, and "where to go" is the question of the hour. Practically, and as we think *prudently*, the Continent is regarded as closed against visitors for the present year. There is no cause for regret on this score. No climate, no waters, no baths, no air, can be obtained or enjoyed on the Continent for the "cure" of any disease whatsoever—we say this advisedly—which cannot be obtained in as great, or even greater, efficiency within the limits of our own islands. For example, Strathpeffer, in Scotland, is incomparably better, so far as remedial resources are concerned, than Royat or Ems, or any other of the vaunted spas or baths across the "silver streak." Buxton, Matlock Bath, and a score of other places, are every bit as good as the health resorts to which it is *fashionable* to go at great personal trouble, and risk of contamination by dirt or blood-poisoning from the insanitary condition generally of the Continental places of concourse. It is simply because a long journey must be taken, and the language spoken is different, and because the local authorities of these places abroad are wiser in their generation than our local authorities at home, and spend more money to make their surroundings attractive, that foreign baths and spas are popular. We cannot hold the members of our own profession free from blame in the matter of crying up the "waters" and "baths" of the Continent at the expense of those of the home country. Let us hope that this year pains will be taken to search out and form a just and patriotic estimate of the facilities for *change* and recuperation which lie so close at hand that we almost systematically neglect them.

THE TREATMENT OF COMPOUND FRACTURES.

A PAPER of much practical interest was read by Dr. Fred. S. Dennis, Professor of Surgery in Belle Vue Hospital, &c., New York, at the recent meeting of the American Medical Association. Professor Dennis does not disparage the antiseptic principle in the surgery of compound fractures, but he is eminently an advocate for the adoption of cleanliness. The success of his practice will be apparent when we say that, after excluding deaths from shock &c. within forty-eight hours after admission, he is able to report 100 cases of compound fracture without a death from any cause. They are divided into cases of—1. Compound fracture of the skull: of these there were 23 cases; excluding 6, there remain 17 cases of recovery from compound fracture of the skull, in succession, with no death, 10 of which required

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trephining. 2. Compound fracture of the thigh: all of these recovered; in one amputation was required. 3. Compound fracture of the leg: of these there were 58; all the patients recovered except 2, who died from shock within forty-eight hours. Ten of the cases opened into the knee and ankle-joints. In a few the hæmorrhage was formidable. One case was a double compound fracture of both bones of the legs with alarming hæmorrhage, but the patient was out of bed and sitting in a chair on the fourteenth day without a bad symptom. Amputation was practised in 11 of these cases, generally primary; all recovered. 4. Compound fracture of the arm: 12 cases, all of a serious character, and all recovered. 5. Compound fracture of the forearm: 14 cases; all recovered but one, which was complicated with extensive burns, the patient dying of shock within twenty-four hours; of the remaining 13 cases, 3 opened into the wrist-joint and 1 into the elbow-joint. 6. Compound fractures of the jaw: all recovered. Professor Dennis says: "Deducting cases of compound fracture of the hand and foot, 14 cases of primary amputations, and 9 deaths from shock, there remain 100 consecutive and of course unselected cases, occurring in three hospitals, without a death." We congratulate Dr. Dennis on a record so creditable. The points of his treatment are (1st) absolute cleanliness; (2nd) immediate fixation; and (3rd) provision for free drainage when necessary. The patient is generally anæsthetised, and the injured part washed with soap and water, and "scrubbed well with a brush," so as to remove débris, dirt, &c. The limb is then irrigated for a few moments with a 1-40 solution of carbolic acid, or 1-2000 solution of corrosive sublimate. Care is taken to replace broken fragments, or, if necessary, to remove projecting ends. When these cannot be reduced without much violence, Dr. Dennis divides tendons subcutaneously to overcome resistance and secure muscular rest. The results speak for themselves. The details of Listerism are not practised, but its principles are not ignored; and Dr. Dennis's cases go essentially to swell the triumphs of careful cleanly surgery. The paper, with tables and temperature charts, will be found in the Journal of the American Medical Association for June 21st.

SMALL-POX AT KIMBERLEY.

IN a leading article of May 10th, 1884, whilst discussing the nature of the epidemic that had broken out in the Diamond Fields in the autumn of 1883, we used these words: "The peril to the Kimberley district has been removed for the time being, but for divers reasons it may at any moment 'develop dangerous energy.'" One ground for fearing what has since happened was the resolute denial by Drs. Jameson and Wolff that the disease was small-pox. No doubt these gentlemen recognised, as the merest tyro could not fail to do, the deadly nature of the visitation; at the same time the general public are guided in their action by the position taken by their medical advisers, and the more so when the latter are men of considerable attainments and known ability. Again, there is much in a name to stimulate to action or induce an indolent repose. Can it be denied that if the members of the French Academy of Medicine had persisted in calling the present outbreak at Marseilles and Toulon "cholera nostras," the number of victims would have been much greater. It is to be regretted that Drs. Jameson and Wolff did not see the mistake they had made, or seeing, that they did not acknowledge it. At last the local authorities of Kimberley and adjoining districts, assisted by the central executive, have awakened to a responsibility of their position. A lazaretto has been established at Dutoitspan for the reception and detention of persons suffering from the contagious disorder, which we have no hesitation in calling small-pox. Dr. Saunders, the Special Cape Town Commissioner, has reported himself satisfied with the arrangements by which Dr. Jameson is reported to have said he will "stamp out the disease in three weeks." We sincerely trust the prediction may be fulfilled; the best guarantee that it will be would be the avowal by Drs. Jameson and Wolff that their theories of "varicella" and "pemphigus" no longer hold water, whatever the vesicles and bullæ may contain. With other correspondence, we have received a printed copy of the short-hand writer's report of the cross-examination of Dr. Jameson at the late trial of Dr. Wolff for having contravened the provisions of the Public Health Act, 1883, and also photographs of two cases diagnosed by Drs. Jameson and Wolff as chicken-pox. The former will be read with amazement by those who give it an unbiased consideration; the latter would form an excellent illustration of a description of small-pox, and one worthy a place in our leading text-books.

POST-MORTEM DIFFUSION OF ARSENIC.

DRS. VAUGHAN and DAWSON, of the University of Michigan, U.S.A., have recently conducted some important experiments with the view of ascertaining if arsenious acid injected into the mouth or rectum after death would diffuse through the body. These observers not only found that such was the case, but that the diffusion was very extensive. The results of their investigations have a very important bearing on the question of arsenical poisoning. In the first place, it can no longer be contended that because arsenic is found in quantity in the fluids and tissues of the body, that therefore death was due to its administration; and in the second, a certain amount of immunity is given to the would-be murderer, inasmuch as there is the possibility of covering a homicidal act by using arsenic with the ostensible purpose of preserving or embalming the body. We say possibility, for such a procedure would almost to a certainty be defeated in its aim. At any rate, there would be no chance of success if the post-mortem examination were conducted within a short time of death, when there would be the usual signs of inflammatory action in the alimentary canal; and again, in the face of other circumstantial evidence, the fact of the accused having resorted to such a particular mode of preserving the body would rather tend to confirm suspicion than to remove it. That arsenic contained in soil may be dissolved in water and conveyed into the body has long been known. The researches of Drs. Vaughan and Dawson show what appears *a priori* as probable. During decomposition the relative humidity of different parts of the body, and of these with surrounding media, is constantly changing. Interstitial currents are passing through the tissues by osmotic action, and this liquid diffusion is naturally increased by the presence of crystalloid substances in solution; nor does it cease until the dialysis ends in an equilibrium of attraction which one fluid has for another, or presumably until post-mortem disintegration is complete.

SCHOOL HYGIENE AND OVER-PRESSURE.

THE Medical Society of London and the National Health Society are about to hold a series of very important conferences at the Health Exhibition next week. On Monday the subject of school dietaries will be discussed; Dr. de Chaumont is announced to read a paper, and Sir Andrew Clark, who presides, may be confidently expected to have much to say on this subject, upon which he can speak with great authority. The most important of the entire series of conferences, however, is that to be held on Tuesday, when the question of over-pressure in schools will be dealt with. Great pains to approach this subject in a definite and practical form seems to have been taken, and four propositions

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will be submitted to the meeting by men so well versed in the matter as Mr. Pridgin Teale, Dr. Crichton Browne, Sir Joseph Fayrer, Mr. Brudenell Carter, and Mr. Marchant Williams. Mr. Kegan Paul is to open the discussion on the other side, and in his hands the case of the educationalists is eminently safe; and already Sir Andrew Clark, Dr. Michael Foster, Dr. Gladstone, Dr. Farquharson, and others have announced their intention of taking part in the discussion. This subject is one of immense importance, and has been well chosen for debate at such a Conference. On Wednesday the questions in relation to the prevention and treatment of Infectious Diseases will be discussed, and Dr. G. Buchanan is to preside. Thursday will be devoted to a discussion on School Construction and Arrangements. On Friday Sir James Paget will preside at a discussion on Recreations and Gymnastics, and on Saturday the series will be concluded by a Conference on the needful requirements of institutions for the education of idiots, foundlings, rickety and scrofulous children, &c., at which Dr. Langdon Down is to preside.

"THE IMMORTALITY OF LIFE."

No change can be effected without a number of disturbances. The disturbances may be classifiable, and are for the most part of very different sort. If a certain statement be made there is no question but that many authors will come forward with other declarations, each assertion having more or less relationship to the statement of the original author. When bacteria were first seen and described as living organisms of a microscopic nature, views were not wanting that these bacteria were merely crystals or pieces of fibrin or dirt, or some other substance having some likeness to the alleged micro-organisms. Amongst the many revelations which were thus brought to light in accordance with this law of bye-products was an assertion by Dr. Rollin Gregg that bacilli were neither more nor less than particles of fibrin. The gentleman just named has not finished exercising his ingenuity in this field of research. The "Revelations of Fibrin," "Unexpected Proof of the Immortality of Life," serve as the startling titles to a fresh literary attempt of the enthusiastic author. The accidental occurrence which is brought forward to prove that life is imperishable was provided by experiments of the following nature, as detailed in the *Buffalo Courier*. If some fresh fibrin taken from any source be placed in distilled water and allowed plenty of time to rot, abundance of rods endowed with remarkable powers of motility are said to appear. So far the author merely states what no doubt actually takes place. But there are many ways of describing facts. Unfortunately in the transcription there is a great tendency to the introduction of inferences not wholly of a legitimate kind. Dr. Gregg professes to believe that in the crude process above-mentioned the moving particles are merely animated filaments of fibrin. It is on these grounds that the "immortality of life" is established. There seems to be not a little ambiguity in this phrase just quoted. But let us take it as meaning that there is no such thing or quality as death, and examine it from that point of view. Physicists have taught that neither matter nor force is capable of destruction, and if by death is meant an utter annihilation, then probably all things and qualities live in some form or other. But see where such speculations land us. Words are made conventionally to have definite meanings, and truly, if we go the length of our above temporary hypothesis we may be said to have knocked all the sense out of our terms. Dr. Gregg ought to be aware that his views are simply a repetition of the doctrines of spontaneous generation, and consequently are to be met by the same sort of refutations as have been brought against the teachings of generation *de novo*. Heterogenesis is the term Dr. Bastian would apply to the process by which Dr. Gregg's revivified filaments of fibrin were provided. On this gentleman's showing the bacillus of tubercle or that of cholera may arise in a dish of rotting fibrin. The reason why the bacillus of cholera, which is merely a shred of animated fibrin, does not stain with dye is because its substance has not been softened by a suppurating process like that to which the bacillus of tubercle is exposed!

THE WASTE OF THE MEDICAL PROFESSION.

AMONG the many fallacies with which Sir Lyon Playfair's speech on the second reading of the Medical Acts Amendment Bill abounded, perhaps the greatest was his statement as to what he called the waste of the profession. This was so serious that he owes it to the House of Commons either to confirm or to correct it. He said the doors of the profession must be wide enough to admit 1600 men annually, which is the waste of the profession, and he drew a startling picture of the risk of depriving the country of doctors by pitching the examinations too high. Will Sir Lyon Playfair tell us what reason he has for stating without hesitation in the House that the waste of the profession is 1600 men? The Medical Register should be some authority on that point. The Medical Registrar is a careful man, and he is supposed to have the best information as to the deaths of registered practitioners. Registrars of deaths are bound by Act of Parliament to send him notice of all deaths of registered persons. Besides, his credit is at stake in being fairly accurate in his statistics. From these statistics we gather that the number of deaths of registered medical men—in other words, the waste of the profession—is between five and six hundred. In the last three years, 1881, 1882, and 1883 respectively, it was, according to the Register, 526, 522, and 530. Here, then, is a discrepancy of more than a thousand between the official Register and Sir Lyon's statement. The numbers of deaths in the Register may not, and doubtless do not, represent the entire deaths or waste of the profession. But it is inconceivable that the official roll is not much nearer the mark than Sir Lyon Playfair, whose great argument thus falls to the ground. Besides, the Register shows a steady increase in the number of persons registering annually. Thus, in 1881, 1053 persons registered; in 1882, 1171; and in 1883, 1304—an increase which is confirmed by the competition in the profession and the obvious excess of practitioners in most places.

CHOREA AS A COMPLICATION OF PLEURISY.

A FEW years ago several cases of fatal epileptiform seizures following upon intra-pleural injections in empyema were recorded, especially in France. The subject has again been brought under notice by Dr. Weill of Lyons, who records a case where hemichorea was apparently excited in the same way (*Revue de Médecine*, July, 1884). A young man twenty-four years of age, whilst on military service was attacked with left-sided pleurisy, for which paracentesis was performed. Empyema followed, necessitating drainage and injections, and it was noticed that the left arm became weak immediately after the operation. A year later a second operation was performed, and six months afterwards M. Lépine, under whose care the patient was, deemed it necessary to have portions of the second, third, fourth, and fifth ribs resected. Two days after this operation the left upper limb became the seat of involuntary movements, and shortly after the left lower limb also. These movements were of a choreic character, and were associated with some hyperæsthesia of the hand and a certain degree of ataxy in the lower limb. The condition was attributed to the pleural irritation produced by the antiseptic injections

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acting on the spinal cord, and thence affecting in a reflex manner the limbs of the same side. This idea of reflex irritation proposed by M. Lépine seems to M. Weill a very reasonable hypothesis, and it would appear as if there were functional and pathological connexions between the innervation of the pleura and that of the limbs of the same side, especially of the upper limb. The occurrence of radiating pain in angina pectoris, and of the shoulder pain in hepatic colic, are instances of a similar kind; and the fact that besides the severe and fatal convulsions excited by intrapleural injections, there have also been recorded numerous instances of hemiplegia associated with like pleural conditions, justifies the notion that in the present case there is an example of chorea excited by the same path.

DENTAL SURGERY AT CAMBRIDGE.

A MEETING has been held at Cambridge of the Eastern Counties Branch of the British Dental Association, and the respective authorities granted the use of Merton Hall and the old anatomy theatre in the University for the various meetings. A dinner was held on the second evening in the Hall of Downing College, and Professor Humphry responded to the toast of the University of Cambridge. He said that the University and the town were glad to welcome the representatives of the dental profession and of an association for the advancement of science and the benefit of mankind. He referred to a practical point, the need of a dental surgeon on the staff of Addenbrooke's Hospital, and thought the governors would soon appoint one or more dental surgeons, and this would be a great benefit to the hospital and to the medical students. Professor Humphry also said that the Dentists Act had given a great deal of trouble to himself and his colleagues on the Medical Council. Several of the clauses were ambiguous, and, as there was a doubt, it had been found necessary to give a number of persons the benefit of the doubt, in spite of the protests of the Association. Notwithstanding these difficulties, which time would efface, Professor Humphry believed that the Dentists Act would prove of the greatest benefit to the public and the profession. He thought there could be no doubt that dental science and practice had made great advances even in the short time which had elapsed since the passing of the Act.

ELIMINATION OF IODIDE OF POTASSIUM.

A CAREFUL investigation into the modes and rate of elimination of so valuable a therapeutical agent as iodide of potassium cannot fail to be of interest, though the investigation may not be entirely novel. M. Desprez has made numerous analyses bearing on the subject, under the guidance of M. Lépine. The following facts have been ascertained by him. If a subcutaneous injection of four centigrammes of iodide of potassium be made in a healthy individual, the urine will be found to contain two-thirds, and sometimes more, of the salt injected. The urine passed twenty minutes after the injection always contains an appreciable quantity of iodide. The elimination by this path continues for forty-four hours. The rate of discharge sometimes decreases in a very regular manner, but frequently, and especially towards the end of the excretion, there is irregularity; so much so that at times the urine may be free from the salt, only to be followed by a period in which the iodide again makes its appearance. After the injection under the skin of nine centigrammes of iodide one-half the salt may be recovered in the urine. It appears to take but three hours longer for the larger quantity of the salt to be totally eliminated. The presence of fever does not have any influence as regards the quantity of the salt discharged, but it prolongs the duration of the process. If fever is accompanied by renal mischief, the quantity of the salt eliminated is lessened, and the time taken is diminished. In cases of cardiac weakness not associated with renal changes the elimination is greatly prolonged, though the amount ejected may remain the same. But if renal complication be added to the above conditions a less quantity is excreted. In Bright's disease the iodide takes some time to appear in the urine; the quantity eliminated may be reduced to a fourth, a fifth, or even an eighth, and, speaking generally, the time required for total elimination is longer.

THE INCREASED MORTALITY IN ENGLISH TOWNS.

THE Registrar-General's recent weekly returns show that the annual death-rate in twenty-eight of the largest English towns, with an aggregate population of nearly nine million of persons, which had averaged only 19·4 in the five weeks ending the 5th inst. (ranging from 18·7 to 19·8), rose successively to 22·2 and 24·0 in the two weeks ending 12th and 19th inst. These figures signify an excess of 1255 deaths in the twenty-eight towns during the past two weeks. Two simple facts will show how this increase was caused. The deaths attributed to diarrhœa in these towns during the past two weeks exceeded by 1163 the number that would have been recorded had they corresponded with the average number in the five preceding weeks. Moreover, the deaths from all causes of infants under one year of age, which had averaged 758 in the five weeks under notice, were 2913 in the two weeks ending the 19th instant. It appears, therefore that more than the entire increase of deaths in these twenty-eight large towns occurred among infants under one year of age, and that nearly the whole of the increase was referred to the heading "diarrhœa." The annual death-rate from diarrhœa in these towns, which had averaged 1·0 and 3·0 per 1000 in the first two weeks of July, further rose to 5·0 in the week ending the 19th inst. No death was attributed to diarrhœa last week, either in Brighton, Wolverhampton, or Plymouth; whereas the recorded deaths from this cause were equal to an annual rate of 5·8 per 1000 in Salford, 6·4 in Leeds, 6·6 in Nottingham, 6·8 in Preston, 6·9 in London, and 12·2 in Leicester. It will be noted that most of these towns are the same in which are recorded, year after year, the greatest waste of infant life from all causes as well as from summer diarrhœa fatality. It is still a grave problem how much of this mortality from infantile diarrhœa is directly due to causes within the control of sanitary authorities, and affecting what is generally understood by "sanitary condition"; but it can scarcely be disputed that very much of this waste of infant life is distinctly preventable by human agency, sanitary and social, and that its annual recurrence is the result of apathy and neglect.

HIGHBURY FIELDS.

THE action of the Islington Vestry in unanimously agreeing to advance half the reasonable cost of buying Highbury Fields, on the condition that the Metropolitan Board of Works advance the other half, has given great satisfaction not only in the immediate neighbourhood, but generally in the metropolis. The extension of London is an overwhelming problem. One thing is clear that if sanitary disaster is to be averted and life is to be at all tolerable among its millions of toilers, open spaces such as that of Highbury must be maintained. The vestry of Islington is entitled to much credit for this action, and we heartily trust that the Metropolitan Board of Works will show equal regard for the interests and the health of this populous and important district of London.

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EVASION OF THE VACCINATION ACT IN DEWSBURY.

THE Solicitor-General, a few days ago, brought an action on behalf of the Local Government Board against the Guardians of Dewsbury Union, in respect of their refusal to appoint public vaccinators for two districts under their charge. The offices in question were vacant a year ago; the guardians, disapproving of vaccination, neglected to fill them and received a request from the Board to discharge this duty. After a time vaccinators were reluctantly advertised for, applications were received and refused, and advertisement began again. On July 4th a last motion for the appointment of vaccinators was rejected, and the majority found courage to resolve that the letter of the Government Board "lie on the table," though even now their faint heart would accept a committee of inquiry. It should be noted that in their diplomatic opposition the guardians, like some others who think with them, did not act for themselves, but they denied a benefit to persons practically helpless who were committed to their care. The Court of Queen's Bench had of course no difficulty in supporting the Local Government Board in its demand. The subject which this case opens up is a large one, and we cannot in a single article cover it in all its bearings. This much is certain, that, under the influence of vaccination, small-pox, which once was justly dreaded like the plague, has become a languid and comparatively tolerable evil, and has greatly lost its epidemic character. It still remains among us, chiefly because evasions like those of the Dewsbury guardians have maintained a soil for its development. Further, in the presence of such evasion, we must emphatically assert that vaccination has brought with it no inherent evil or risk whatever. Cases of illness after it, as is well known, are rare in any class, though less so among the poor than the rich. Occurring after, they are apt to be ascribed to vaccination, to which they are not properly referable. Yet these have most unjustly been made the ground of much emotional opposition to its practice. Uncleanly habits, neglect, concurrent illnesses quite alien to small-pox or vaccinia, may have introduced accidental maladies, even though but seldom, yet this does not mar the value of vaccination or lessen the need for it. With as much, nay, with much more, reason might the railway or the street vehicle, with every branch of art and manufacture, be condemned to extinction. For vaccination, as for each of these, one cause, necessity, exists. So long as it exists they must continue; and accident must be met by care and forethought, not by blind denial of that necessity.

NURSES FOR THE SICK POOR.

ON the auspicious occasion of the opening of the new nurses' home attached to the St. Marylebone Infirmary by H.R.H. the Princess Christian, we were kindly invited by the indefatigable and able medical superintendent, Mr. J. R. Lunn, to make an inspection of the whole of the magnificent buildings which are situate in an open and airy space within the view of all who leave town by the Paddington Station. We can testify to the curiosity which has been excited in the minds of uninitiated passengers on the Great Western Railway as to what the conspicuous pavilioned edifice might be. Whatever admiration may be called forth by a glimpse of the exterior of this hospital for the sick poor, that admiration suffers no diminution by a careful inspection of the interior and *personnel* of the noble institution. Contrasted with the disgraceful state of affairs revealed by THE LANCET Commissioners prior to the Gathorne Hardy Act of 1867, it is no exaggeration to say that this infirmary is a perfect paradise, not only to our pauper fellow subjects, but also to those who have laboured in the field of Poor-law reform. The main object of the erection of the neat and excellent building on the south side of the infirmary is to provide accommodation for forty nurses and probationers. A separate bedroom has been allotted to each person, and we cannot praise too much the good taste and common sense which have guided the planning out of the domestic offices and other apartments of this model home for nurses. The guardians of the infirmary and Mr. Lunn deserve much commendation for their determination to provide this and kindred institutions with the means for the supply of a succession of well-trained nurses, and the council of the Nightingale fund have done well by co-operating in this good work. So much for the nursing of the sick and infirm paupers. But one other thought has suggested itself, though not for the first time, and that is the possibility of utilising in some measure the advantages which offer themselves in our infirmaries for the instruction of medical students. Here, in these institutions, is a collective mass of clinical and pathological material which it is not unfair or unwise to say cannot be made proper use of by the customary medical authorities of these sick populations.

THE VOLUNTEER HOSPITAL CORPS.

DURING the past fortnight the medical students who form this corps have shown themselves in considerable numbers in different parts. They have paraded twice, first in a battalion and then as a company, at Wimbledon Camp. In Hyde-park and at the Health Exhibition the public have had an opportunity of seeing the kind of work meant to be done. On Friday last the corps paraded before the Princess Louise and the Marquis of Lorne in St. George's Barracks, Trafalgar-square. The students to the number of seventy rank and file, besides officers, appeared in uniform, the same as that worn by the Army Hospital Corps. There are now about 350 men in the different hospitals who have been trained, but the process of getting into uniform is slow owing to each man having to provide his own. The proficiency of the corps is excellent, and under the command of Mr. Cantlie, with Dr. Squire as adjutant, the corps handles well.

TREATMENT OF NASAL POLYPUS.

DR. RICHARDSON, in the *Asclepiad*, recommends the use of sodium ethylate in the treatment of nasal polypus. The caustic agent is applied by means of a probe made of soft cotton-wool twisted into shape on the points of a pair of forceps. This cotton probe is saturated with the ethylate and then plunged into the substance of the polypus. On removing the cotton it commonly happens that the patient can expel the whole mass of destroyed polypus, in a semi-fluid form, by blowing the nose sharply. A second application ought to be made with a view of destroying the base of the polypus. The mode of action is said to be sufficiently clear. The ethylate is decomposed by contact with the water of the polypus into caustic soda and alcohol; the latter coagulates the albuminoids and the former acts as a powerful caustic. With the exception of some burning pain no unpleasant effects seem to follow the use of this method.

INDIAN BARK.

FROM an official statement of the trade of British India it appears that the exportation of drugs has doubled during the last five years. This increase is due to the development of trade in cinchona bark. Madras contributed most largely to swell the exports, the cultivation of cinchona in that presidency being more extensively carried on in private estates than in Bengal, where the principal "bark" estates are the property of the Government, which reserves a large

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proportion of the bark produced for the local manufacture of the alkaloid. [Most of the bark hitherto exported has come to London, but the demand from Italy for Indian bark is increasing. The local manufacture of the alkaloid above referred to is seriously affecting the import of quinine from Europe into India. It is believed that in time the supply of quinine from Darjeeling and the Nilgherries will meet all the wants of the Indian population.

THE DARENTH SMALL-POX CAMP LAWSUIT.

A LAWSUIT which bids fair to be one of extreme importance, and which may settle some, at least, of the points in dispute as to the influence of small-pox hospitals on the neighbourhoods in which they are situated, has entered on its first stage. The Metropolitan Asylums Board have, as is now well known, established two large camps at Darenth for the reception of a thousand convalescent and mild cases of small-pox, and these camps are about 700 yards distant from the estate and residence of Mr. Thomas Horn Fleet, who seeks for an injunction to restrain the Asylums Board from maintaining the camps there. The plaintiff alleges nuisance, the possibility of infection being conveyed as far as his house, and also injury to his property. The defendants, on the other hand, bring forward evidence to show that it would be impossible for small-pox to be conveyed through the air from the camp to Mr. Fleet's residence. The case having been partially heard, Mr. Justice Pearson explained that since it would be impossible, under any circumstances, to order the removal of the patients until ample time had been given for the preparation of other accommodation, no good would result from hearing the case for an interim injunction at this stage, and it was therefore ordered to stand over until it was fully ready for a hearing. If necessary, he added, the pleadings could be continued during the vacation. The trial, however, has been adjourned until November. This result is by no means to be regretted, for in the interests of science it is very important that the evidence to be brought forward on both sides should be very carefully selected. The opinions expressed before the Hospitals Commission as to the distance at which the small-pox poison could be conveyed aerially varied so widely as to show clearly that but little is as yet known on the subject. Indeed, we have reason to believe that Mr. Power's investigations are the only ones which have been carried out with strict scientific accuracy, and possibly his renewed labours may throw new light on this subject before the trial commences.

THE BRITISH MEDICAL ASSOCIATION.

THE fifty-second annual meeting of the British Medical Association will be held at Belfast on Tuesday next and the three following days. The President elect is Dr. James Cuming, Professor of Medicine in Queen's College, and physician to the Royal Hospital, Belfast. Dr. William Ord will deliver an address in Medicine on Wednesday, July 30th, Dr. Peter Redfern an address in Physiology on the following day, and Dr. G. H. Kidd an address in Obstetrics on Friday. There will be no address in Surgery. As usual, the proceedings will be diversified by excursions to various places of repute, in which the locality abounds.

BACTERIAL URETHRITIS.

THE number of varieties of inflammation of the urethra cannot properly be regarded as less than the number of inflammations of any other mucous surface. It has long been recognised by surgeons that intense urethritis is not necessarily of gonorrhœal nature. Neisser and others have described a micrococcus as the cause of gonorrhœa. Aubert has for some time past made a systematic examination of urethral discharges, and in three instances has found, instead of the gonococcus, a rod-shaped micro-organism. He has traced a resemblance between these bacteria and those found in pus from ulcerative balanitis. Although Aubert is inclined to regard the presence of the bacilli as indicating a different variety of urethritis, he wisely abstains from giving his positive adhesion to this view.

THE HOSPITAL SUNDAY FUND.

THE Distribution Committee is summoned to meet at the Mansion House on the 31st inst. The total amount available for distribution, after allowing sufficient for liabilities and the usual current expenses, is £31,283. Of this sum £29,026 is recommended to be apportioned to ninety-eight hospitals, and £2257 to fifty dispensaries.

OLEOMARGARINE.

WE have on previous occasions expressed our opinion in regard to the sale and use of substitutes for butter. The sale of such substances as genuine butter is a fraud, just as the selling of chicory under the name of coffee is a fraud. And the use of any disgusting or dangerous substance in the manufacture ought to be rigidly prohibited and severely punished. But much, at any rate, of the oleomargarine sold is merely purified animal fat incorporated with genuine butter. Such a mixture is better, as well as cheaper, than much of the common butter sold. If it were prohibited altogether, the price of butter would rise materially, to the great injury of the poorer classes. All that we contend for is that the public ought to know what they are buying and be prevented from buying anything noxious. — *The Lancet*.

ON the 18th inst., the students of Charing cross Hospital assembled in the Upper Lecture Theatre of the Medical School, in order to make a presentation to Mr. J. Cantlie, the popular sub-dean, on the occasion of his approaching marriage. Dr. Corbould, a former student, occupied the chair, and he was supported by Mr. Canton, who preceded Mr. Cantlie as demonstrator of anatomy to the school. The presentation included a silver punch bowl and ladles.

THE plague is reported to be still raging in Bagdad and its vicinity. In Badra, where the epidemic took its rise, the mortality from the disease is stated to be enormous; but it is difficult to get at the real facts, in consequence of the efforts of the authorities to maintain secrecy.

FROM the report on the composition and quality of daily samples of the water supplied to London for the month of June, recently issued by Messrs. Crookes, Odling, and Tidy, it appears that the supply differed but little in character from the supplies of the preceding months.

WE are glad to learn that the Academy of Medicine of Paris has, on the report of Dr. Brouardel, unanimously voted that quarantine on land is impracticable in France, and that the process of disinfection at present imposed upon travellers and their luggage is inefficacious.

A LECTURE on the Rearing of Hand-fed Infants will be given at the Health Exhibition on August 1st, at 5.30 P.M., by Mr. E. Owen, of the Hospital for Sick Children. The chair will be taken on the occasion by Dr. Charles West.

M. CLOSMADEUC has recently performed the Cæsarean operation successfully both for mother and child. This makes his third operation and third success.

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THE introduction of a Bill for the Regulation of the Sale of Patent Medicines has been abandoned for the present session. A measure with the same object in view has, however, been prepared, and will, it is understood, be brought in by Lord Carlingford next year.

THE Select Committee on the Ventilation of the House of Commons held its first meeting on Wednesday. It is said that the evil odours which have recently annoyed honourable members have been traced to a factory in the vicinity of the House.

THE French Government has conferred the Order of the Legion of Honour upon Professor Koch, in recognition of his services in connexion with the investigation into the causes of the outbreak of cholera.

PROFESSOR ABBY of Berne has been appointed to the Anatomical Chair of the German Medical Faculty of the University of Prague, and Professor Strasser is named as his successor at Berne.

MR. HOPWOOD has blocked the second reading of a Bill brought in by Messrs. Gray and Dawson, "to make better provision against cholera and other dangerous epidemic diseases."

A VERY satisfactory report of the Jamaica Public Gardens and Plantations for the year ending September, 1883, has been drawn up by Mr. D. Morris, M.A., F.G.S., the director.

MR. VICTOR HORSLEY, F.R.C.S., has been appointed Professor Superintendent of the Brown Institution in succession to Dr. Roy.

THE second reading of the Canal Boats Act Amendment Bill will be moved by Lord Carrington in the House of Peers on the 28th inst.

M. CORNIL has been elected a member of the Académie de Médecine.

THE CHOLERA.

M. PAUL BERT has concluded his series of articles on cholera, and winds up his remarks as follows:—"We must give up supposed precautionary measures, which are merely troublesome without being of use. As soon as the first cases of cholera appear in any place we must take energetic steps to prevent contagion being transmitted by the discharges of the cholera patient and the objects used by him. We must consume none but perfectly cooked food, and take no beverages but those into which the germ of the disease cannot have penetrated or in which it has been destroyed by boiling. We must avoid all occupations which enfeeble the body, and especially all which may disturb the functions of the bowels. Finally, we must not yield to excessive fear of this disease, which, all things considered, is less terrible, less murderous, and far more accessible to the influence of remedies than the mysterious and subtle diphtheria." Last week there were in Paris thirty-seven deaths from choleriue and two deaths from sporadic cholera, the victims in the latter cases being men of seventy-five, one of whom had been drinking much iced beer and brandy while weakened by indigence and uncleanliness. At Toulon the Government has remitted the punishment of most of the prisoners in the civil prison, and out of 150 about forty only are now detained. The committee on M. Paul Bert's Cholera Bill was nominated on the 19th inst. Of the eleven members, all, except M. Paul Bert himself, were adverse to the Bill, which has since been withdrawn. Dr. Onimus has gone to Marseilles to study the epidemic there, and to make trial of a new mode of treatment—the administration of pulverised ozone.

At the meeting of the Academy of Medicine of Paris on the 22nd inst., a letter was read from Dr. Fauvel announcing that on regaining his health he will return to Paris and maintain against all comers that the epidemic is not Asiatic cholera. He urges that if the disease were contagious it would have established itself at Nimes, Lyons, and other towns, where there have been only isolated cases. Dr. Guérin read a long paper with a view of showing that the distinctions drawn between different forms of cholera are purely arbitrary, the malady differing merely in intensity, and argued that the simultaneous appearance of cases in parts of Toulon and Marseilles quite remote from each other was inconsistent with the theory of importation. On the 23rd inst. the Dispensary Committee at Cork held a special meeting, and instructions were issued to the medical staff, with a view to more vigorous action. A house-to-house examination was ordered, and additional sanitary officers were appointed. Mr. H. Le Cronier, medical inspector for the town of St. Heliers, has written to a contemporary to dispel the fears which have been expressed as to the cholera, owing to insufficient sanitary precautions, becoming prevalent in the Channel Islands. During the twenty-four hours ending at 8 P.M. on the 23rd inst. the number of deaths from the disease at Toulon was forty-four and at Marseilles sixty. The situation at Arles is stated to be even worse, and fresh cases are reported from Aix.

At a meeting of the City Commissioners of Sewers on the 22nd inst., Dr. Sedgwick Saunders, the medical officer of health for the City of London, presented a lengthy and exhaustive report on the subject of cholera. An order has been issued by the Local Government Board prohibiting the landing at any place in England or Wales of rags exported from Marseilles or Toulon.

A series of precautions against the infection of cholera, typhoid fever, &c., drawn up by Dr. Taaffe, medical officer of health, are being issued in large numbers by the sanitary authority of Brighton.

SALT IN CHOLERA.

In the House of Commons, on the 7th inst., Mr. Justin McCarthy asked the Under-Secretary of State for India whether, considering the alarm throughout Europe at the spread of Asiatic cholera, and in view of the statement that there is a deficiency of salt in the blood of those dying of Asiatic cholera, and that a sufficiency of salt is not now partaken of by vast numbers of the natives of India, due to the Government tax, Her Majesty's Government will abolish the salt tax in India. In THE LANCET of August 23rd, 1834, Mr. George Beaman recommended common table salt dissolved in water for the treatment of cholera patients, and reported that he had by this method successfully treated eleven consecutive cases. The good effect, Mr. Beaman stated, depends on powerful vomiting being produced; should vomiting not occur, a second or third dose is required at intervals of five minutes. If the beneficial effect is not permanent, another dose must be given in twenty minutes or half an hour. On April 21st, 1855, we published a letter by Dr. Beaman on the "Salt Monopoly in India, the alleged cause of Cholera"; and in the same year Dr. Beaman addressed to Lord Panmure, at that time Minister of War, a letter, a copy of which appears in our issue for April 28th of that year, in which he repeats his eulogy of salt in the treatment of cholera, and concludes by urging the abolition of the salt tax in India. The fifty years that have elapsed since Dr. Beaman first wrote have not added much in favour of his recommendation, and although there is probably a certain diminution in the saline ingredients as well as in the water of the blood, it is now generally recognised to be futile to administer remedies which depend for their efficacy on the powers of absorption, so markedly lessened in this disease. Even the utility of saline injections direct into the blood channels has too often been found to be illusory, the temporary rally from a state of collapse being followed by a return of the purging with fatal issue. As Dr. Goodeve points out, in his article in Reynolds's System of Medicine, there have been found "no means of keeping the injected fluid within the vessels."

THE BERLIN PHYSICIANS AND CHOLERA.

The Berlin Clinical Society (Verein für innere Medicin) at the meeting on the 14th inst. discussed the subject of cholera. Dr. S. Gutmann opened the debate, and recommended the formation of a committee to collect and report upon the relative value of various therapeutic measures, and to consider what influence the discovery of the cholera

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bacillus should have in the adoption of prophylactic and curative methods. An animated discussion followed, and a committee was nominated consisting of Drs. Leyden, Fräntzel, Klaatsch, Reiss, Goltdammer, Lehnert, Baer, Wernich, P. and S. Guttmann, and Guttstadt. Dr. P. Guttmann stated that accommodation for 500 cholera patients could be provided in the city hospital at Moabit. At the commencement of the sitting, Dr. Kronecker exhibited a newly devised apparatus for saline transfusion.

CHOLERA REMEDIES.

Not a day passes without the publication of suggestions for the treatment and cure of cholera; and it is remarkable with what a large measure of faith and credulity such measures are promulgated. It is not possible for us to print all the recommendations we have received, or to notice all those that are being advanced in other quarters. Amongst them may be cited the advocacy by M. Vigouroux of the employment of static electricity (*Progrès Médical*), on the ground of the production of ozone; the revival of calomel by Dr. Dornblüth of Rostock (*Deutsch. Med. Woch.*, July 17th); and of spinal ice-bags by Dr. Chapman. In the presence of so much conflicting advice the recommendations of the London College of Physicians will be looked for with interest, as well as with reliance that the treatment of the disease will be authoritatively laid down upon rational and satisfactory principles.

PRECAUTIONS IN EDINBURGH AGAINST CHOLERA.

On the 22nd instant, at a meeting of the Public Health Committee of the Edinburgh Town Council, it was ordered that all the present precautions against cholera, such as removing nuisances, washing out closes, cleansing stairs, and closing insanitary houses, should be continued. At this particular juncture it was pointed out specially that all cisterns for domestic use should be cleansed, and that in the process of cleansing soft brushes should be employed, lest the skin which forms on lead should be displaced, and thus give rise to the action of water on lead and its untoward effects. We have no doubt that under the skilful direction of Dr. Littlejohn, the medical officer of health for the city of Edinburgh, the above and many other points will be carefully attended to as a safeguard against the inroad of cholera. We would beg to offer the suggestion that the lodging and boarding houses in Edinburgh would be the better for an inspection into their sanitary arrangements. The main danger of the importation of cholera is probably from the direction of Leith by means of the shipping, and it is advisable that sanitary inspection of the vessels should be made, as well as cleanliness maintained, in that port.

CHOLERA AND THE BRINDISI ROUTE.

Owing to the prevalence of cholera on the Continent, the Brindisi passenger route to and from India has been closed, and we learn that this is causing no small amount of inconvenience, trouble, and annoyance to Indian officers returning home or going out to India, and among them there are not a few members of our profession. For them, every day in a short three months' privilege leave is a matter of considerable consequence. It is a pity that the Italian Government cannot be brought to see the futility of quarantine measures, at least in the absurd form in which they are carried out.

CHOLERA ON BOARD A LIVERPOOL BOUND SHIP; PRECAUTIONS AGAINST ITS SPREAD.

Our Liverpool correspondent writes:—"The steamer *St. Dunstan* arrived in the Mersey from Bombay on Thursday, the 17th inst., having called *en route* at Marseilles and remained there for some days. Previous to her arrival in Liverpool she put into Penarth Roads for orders, and reported that there had been sickness on board. In consequence of this information having been duly reported to the health authorities, the vessel was boarded shortly after her arrival by Dr. J. Stopford Taylor, the medical officer of health for the city and port. He found all on board in a very weak condition, two deaths having occurred on the passage from Marseilles. The first was that of John Cummings, fireman, who was taken ill on the 10th, the day after leaving Marseilles, with violent purging and cramp in the stomach. In spite of every attention and the best skill the master could give him he died the following afternoon, having been ill just twenty-one hours. On the 14th, one of the seamen, named Sulham, was taken ill with similar symptoms and died the following day. All on board suffered from choleraic diarrhœa, and at Dr. Taylor's visit were in a highly nervous state, as well as in a condition of great weakness and prostration. It transpired that the vessel was put into a dock into which a portion of the sewage of Marseilles was discharged, and the men noticed particularly at night a strong and offensive effluvium. On the sickness first occurring the captain most wisely decided to throw overboard all the stores and water obtained at Marseilles, and, humanly speaking, it is probable that this promptness prevented the disease from spreading further. Captain Brown, the port sanitary officer, remained on board on Thursday night, and on Friday she was again visited by Dr. Taylor and Dr. Hope, the assistant medical officer of health, who remained all that night. Seven of the crew who remained still unwell, and whose presence tended to alarm the rest of the crew, were removed to the port sanitary hospital (near Bromborough Pool, on the Cheshire side), by Dr. Taylor's advice. The *St. Dunstan* has been thoroughly disinfected, the water in the ballast tanks and bilge water being also disinfected before being pumped out. The seamen's beds have been destroyed and their clothing disinfected before their landing. The result has been that up to the afternoon of Wednesday last no fresh case has occurred, and the crew are quite well. In short, the measures adopted are models of what should be done if we wish to prevent any importation of cholera. Another steamer, the *Van Wraate*, has arrived in the Mersey, having called at Marseilles, but as no communication took place at the latter place, and none of the passengers or crew were infected, the vessel was allowed to enter dock.

REMOVAL OF THE SICK AND INJURED.

ON July 21st, Mr. J. FURLEY read a paper at the Health Exhibition on the Carriage and Removal of the Sick and Injured, of which the following is an abstract:—Until within the last ten or twelve years, the word "ambulance" was almost unknown in this country except in connexion with the Army Medical Service; but in 1870–71, through the efforts of the National Aid Society, more familiarly known as the Red Cross Society, it was so generally adopted in our language that it is now as much misapplied as formerly it was little used. People who are accustomed to think of invalid carriages, hand-litters, and stretchers as "ambulances," would be rather astonished to learn the War Office definition of an ambulance and all that it comprises in men, horses, carriages, medical and surgical stores, and camp furniture. In general hospital work Great Britain is on a level with, and in many respects in advance of, any other country in the world, but whilst much care and attention have been bestowed on the internal economy and hygiene of hospitals, comparatively little thought has been given to the manner in which sufferers are conveyed to them. What the National Aid Society accomplished in 1870–71 belongs to history. England was slow in following the example which had been set by other States, but the British Red Cross Society, when occasion called it into existence, gained in a few weeks a position second to that attained by no other country, not excepting the two powerful belligerents who then occupied the arena upon which all eyes were directed. What the St. John Ambulance Association has done during the last six years will fill a no less important page. This differs from the National Aid Society in one particular, that, whilst the latter followed, in its own vigorous and practical manner, examples which were the result of carefully matured thought and experience, the St. John Ambulance Association was a new creation, and no better testimony in its favour can be afforded than the fact that it has already been imitated in every part of the world, with more or less success, and notably by an institution which was originated at Kiel by Professor Esmarch, and is now flourishing in Germany under the title of the "Samariterverein." In the first hours after a great battle, or in the accidents of civil life, there is no more valuable knowledge than that which enables a man to improvise surgical appliances from anything he may find at hand; it is useful to the surgeon, and makes for him ready assistants in others. Except our own, there is not another country in Europe which has not during the last thirty years been more or less directly influenced by the realities of war; for all, if they have not suffered from its actual presence, have without exception

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left the great blast upon their frontiers. As a consequence of this experience, other nations have more fully realised that saddest part of war, the dead and the wounded scattered over vast battle-fields, the dressing stations where temporary relief is given, the field hospitals, and the long columns of waggons bearing hundreds of maimed men to the base of operations. All this and much more than it is necessary to describe in detail have, in a great measure, familiarised other European nations, and the United States of America, with military ambulance material and its uses, and civilians have vied with soldiers in the endeavour to keep the means of saving life and alleviating the sufferings of the wounded on a level with those means of destruction which military skill and scientific knowledge are ever striving to bring to perfection. The Exhibition held in connexion with the Red Cross Conference at Berlin in 1868, the important Ambulance Department of the International Exhibition at Vienna in 1873, the Hygienic Exhibition at Brussels in 1876, the Red Cross Exhibition at Geneva in 1882, the display at the Health Exhibition at Berlin in 1883, and the frequent meetings which have been held in Paris under the auspices of the Société de Secours aux Blessés Militaires have given great encouragement to this feeling, and much practical advantage has been derived from the trials and comparisons which were made of the means of hospital transport adopted by various nationalities. But in England no similar advantages have been enjoyed, and the number of surgeons and laymen who have taken part in these experiments is very limited. Had the ambulance group of exhibits in the present Exhibition attained that standard which continental critics might have expected, the fact would have been evident that we are beginning to realise our shortcomings, and we might have satisfactorily proved by demonstrations that we are not only taking lessons from the Continent of Europe and the United States of America, but that we are striking out paths of our own towards results which must have a world-wide influence. Ambulance work has a great future before it in England, more particularly as the country generally has not committed itself to any irretrievable steps involving considerable pecuniary sacrifice. Hitherto invalid transport, except at the cost of parishes, for short journeys to the workhouse or the hospital, has been limited to the rich. An attempt, however, should now be made to bring it within the reach of everyone, and to extend to all classes the benefit of change of air and scene when ill-health shall have made such change desirable; or when, as so often happens, a breadwinner is obliged to separate himself from his family because an invalid wife or child cannot be moved to a new home. Just in the same manner as it is mockery to recommend indigent patients when discharged from a hospital a diet of chicken, jelly, and port wine, unless it be provided for them, so it is useless to tell them to obey the doctor's instructions and seek change of air, unless such a possibility is brought within the means of the poorest.

WILLS OF MEDICAL MEN.

The will, with two codicils, of Alexander Tweedie, M.D., M.R.C.P., F.R.S., of Bute Lodge, Twickenham, who died on May 30th last, was proved on the 24th ult. by Mr. Edward Lawes Bevir, Q.C., Mr. Henry Daniel Bishop, and the Rev. Charles Creaghe Collins, the executors, the value of the personal estate amounting to upwards of £181,000. The testator, after making provision for his wife, daughter, and granddaughters, bequeaths £1000 each to the British Medical Benevolent Fund and University College Hospital; £500 each to Charing-cross Hospital, the Royal Hospital for Incurables, Putney, the Great Northern Hospital, Islington, the Scottish Hospital Corporation, the Royal Infirmary, Edinburgh, and the London Fever Hospital, Liverpool-road, Islington; £100 each to the Richmond Hospital, the Artists' Benevolent Fund, London, the Foundling Hospital Benevolent Fund, and the City of London Truss Society; £100 to the Vicar and Churchwardens of East Twickenham towards rebuilding the church, and numerous other legacies. As to the residue of his estate and effects, he leaves one-fourth to his daughter, Mrs. Hannah Cassel Collins, one-fourth each to his grandsons, Alexander Leslie Tweedie and George Alexander Tweedie, and one-fourth between his granddaughters Adelaide Leslie Tweedie and Ann Scott Tweedie.

The will of Frederick Appleton Sawtelle, M.D., of 129, Western-road, Brighton, who died on May 2nd last, at sea, was proved on the 27th ult. by Mrs. Flora Maria Robertson, the sole executrix, the value of the personal estate amounting to over £3600. The testator leaves his interest in a New York Life Assurance Society, to the amount of £1000, to Miss Emily Constance Wright, and subject thereto all that he dies possessed of to Mrs. Robertson.

The Irish probate, granted at Belfast, of the will and codicil of Cunningham Mulholland, M.D., of 41, Prospect-terrace, Belfast, who died on May 14th last, to Mrs. Letitia McDonald Mulholland, the widow, Cunningham Mulholland, the son, and the Rev. William Lowny Berkeley, the executors, was sealed in London on the 1st inst., the aggregate value of the personal estate in England and Ireland exceeding £2900. The testator leaves £100, his household furniture and effects, and an annuity of £60 to his wife; and life annuities to each of his children except his eldest son. All his real estate and the residue of the personalty he gives to his eldest son, the said Cunningham Mulholland.

The will of William Job Collins, M.D., of 1, Albert-terrace, Regent's-park, who died on May 10th last, was proved on the 19th ult. by Mr. W. J. Collins, the son, the sole executor, the value of the personal estate exceeding £1400. The testator leaves £500 to his son Edward Treacher Collins, and the residue of his property equally between him and his daughters, Mrs. Minnie Moor and Mrs. Anne Sarah Chipp.

The will of Henry Francis Williams, M.D., Deputy-Surgeon-General (retired) of Her Majesty's Indian Medical Service, late of Catherine Villa, Auckland-road, Southsea, who died on April 27th last, was proved on the 27th ult. by Mrs. Margaret Anne Williams, the widow and sole executrix, to whom he leaves everything of which he shall die possessed absolutely. The value of the personal estate amounts to over £1200.

The following legacies have recently been left to hospitals and other medical institutions:—Mr. William King, of 19, Ovington-gardens, who directs his executors to transfer to the treasurer or the trustees for the time being of St. George's Hospital, Hyde-park-corner, £100,000 Three per cent. Consolidated Bank Annuities for the purpose of endowing or of augmenting the endowment of such hospital, on condition that a ward in the said hospital shall for ever hereafter be called the "William King Ward."—Mr. James Carthew Quick, of 82, Marine-parade, Brighton, £1000 each to the London Hospital, Whitechapel, and the Sussex County Hospital, Brighton.—Mr. John Antoine Bradshaw, of 2, Alfred-terrace, Upper Holloway, the value of whose personal estate amounts to over £28,000, after giving therout several legacies, divides the residue equally between twenty-two charities, among which are the East London Hospital for Children, the Royal Free Hospital, Gray's-inn-road, St. Bartholomew's Hospital, King's College Hospital, University College Hospital, the Middlesex Hospital, the British Home for Incurables, and the Royal Hospital for Incurables.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Tichmarsh, by Mr. W. H. POWER.[1]—Tichmarsh is a village of some 900 inhabitants in the Thrapston rural sanitary district in Northamptonshire, and diphtheria, which made its appearance there in the spring of last year, lingered on throughout the summer, then underwent a sudden extension in October and November, declining again in the early part of this year. In all, nineteen cases terminated fatally. As in so many instances, this disease was preceded by sore-throats and colds of a sort that did not get recorded, and since cases occurring in Poor-law practice were absolutely withheld from the medical officer of health,

[1] To be purchased of Knight and Co., 90, Fleet-street; Shaw and Sons, Fetter-lane; Haddon, Best, and Co., Fetter-lane; and P. S. King and Son, King-street, Westminster.

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but little information tending to explain the origin and sequence of the disease was forthcoming. When the disease was first known of, it seemed to be related to school attendance, but since the privies at the school alone appeared to present defects, attention was in the main centred on the village water-supply, and several wells having been subjected to analysis they were closed. When school work ceased during harvest time, the school was left closed for a considerable period, until all cases of distinct diphtheria had ceased; but attention being given exclusively to typical cases, and not to the minor attacks of sore-throat, the outbreak underwent a rapid increase when school operations were recommenced towards the end of September. No history of importation could be ascertained, and although locally the disease was regarded as related to certain cases of foot-and-mouth disease, yet this latter disease was at the time prevalent over a wide area, whereas the diphtheria was strictly limited to Tichmarsh. School attendance must be regarded as having influenced the spread of the affection, but it required something more than this; and as Mr. Power points out, it was not until the well-known season of normal extra activity of diphtheria—viz., October to November, that the disease appeared able to take full advantage of the conditions of school attendance for spreading itself amongst the village children. The main sanitary defects which have been revealed in Tichmarsh as the result of Mr. Power's inquiry are the total absence of any means of sewerage, and with this resort to wells, either sunk in the superficial soil above the oolite rock, or through it into a bed of clay below. Pollution of these wells is chiefly due to the circumstance that the water in the superficial rock is largely supplemented by the soakage of filth, and it is this condition which calls for special action on the part of the sanitary authority. Care should also be taken during the forthcoming autumn to get the earliest information as to any cases of sore-throat, so that the families in which they occur may be at once excluded from school attendance.

Diphtheria at Eversholt, by Dr. PARSONS.[1]—This is a village of 768 inhabitants in the Woburn Union, Bedfordshire, and it consists of some fourteen distinct hamlets or ends, where the public health is well looked after by Dr. Prior, the medical officer of health. The place has many natural and sanitary advantages, but it has, notwithstanding, since July, 1883, been the scene of a considerable and persistent prevalence of diphtheria, which up to the date when the inquiry was made had caused forty-one attacks and thirteen deaths. In considering the cause of the disease the influence of sewers and water-supply could be excluded, and since the milk-supply available was from several independent sources, and since some of those attacked never used milk at all, that vehicle of infection could also be set aside. There is, however, a strong probability that the infection was imported into the district by means of a boy who, living in a house where diphtheria had prevailed and who himself having had what was believed to be scarlet fever, came to stay at Eversholt, where his friends kept a public-house. Frequenters of this inn are stated to have been the first persons attacked. The disease was also limited to the parish of Eversholt, and this fact is strongly in favour of the theory that the cause of its propagation was solely personal intercourse; a parish being not a physical but a social division. Dr. Parsons traces the method of personal intercommunication, and, dealing at some length with the question of school influence, he finds from the facts which came under his observation that diphtheria must, like measles and whooping-cough, be regarded as infectious before the characteristic symptoms of the affection have become developed; and the persistence of the disease, in spite of the active measures taken by the sanitary authority for its prevention, is regarded as having been essentially due to the succession of mild and unrecognised cases. The persistence with which the infection of diphtheria is apt to attach itself to certain places is illustrated by the following instance:—In a house in one of the hamlets known as Church End several members of a family had been attacked with diphtheria in December, but in the course of January all had either recovered or died. The house was subsequently fumigated with burning sulphur, the wall paper stripped off, and the walls limewashed. The floors, which were old and irregular, were washed with carbolic soap. Infected articles of clothing were either burnt, washed, or fumigated. On February 8th a daughter came home from service with a bad finger, and on February 13th she was taken ill with diphtheria. She had slept in a room which had been occupied by the sick, but which had been purified as above described. She had noticed, however, a bad smell in the neighbourhood of the fireplace, where certain articles soiled by the sick had been burnt. Also a piece of list nailed around the door-frame, to exclude draught had been allowed to remain. The list, which, from its position, would intercept particles floating in the air entering or leaving the room by the chink of the door, was found full of dust.

[1] Vide footnote on previous page.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6018 births and 4031 deaths were registered during the week ending the 19th inst. The annual death-rate in these towns, which had been equal to 19·5 and 22·2 per 1000 in the two preceding weeks, further rose last week to 24·0, and exceeded the rate recorded in any previous week of this year. This increase was entirely due to the fatal incidence of infantile summer diarrhœa. During the first three weeks of the current quarter the death-rate in these towns averaged 21·9 per 1000, against 18·9 and 20·6 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 14·0 in Bristol, 15·2 in Huddersfield, 15·7 in Portsmouth, and 16·4 in Hull. The rates in the other towns ranged upwards to 27·3 in Leeds, 27·8 in Preston, 29·2 in Nottingham, and 34·6 in Leicester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 572 and 876 in the two preceding weeks, further rose to 1257 last week; these included 838 from diarrhœa, 129 from whooping-cough, 117 from measles, 83 from scarlet fever, 36 from "fever" (principally enteric), 29 from diphtheria, and 25 from small-pox. No death from any of these diseases was registered last week in Wolverhampton, while they caused the highest death-rates in Leeds, Nottingham, London, Preston, and Leicester. The greatest mortality from diarrhœa, mainly infantile, was recorded last week in Leeds, Nottingham, Preston, and Leicester; from whooping-cough in Sunderland and Liverpool; from measles in Blackburn and Liverpool; from scarlet fever in Cardiff and Brighton; and from "fever" in Plymouth. The 29 deaths from diphtheria in the twenty-eight towns included 19 in London, 5 in Nottingham, and 2 in Leeds. Small-pox caused 30 deaths in Greater London, 1 in Sheffield, and 1 in Liverpool. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 1368 and 1241 on the two preceding Saturdays, had further declined to 1152 at the end of last week; the number of new cases admitted to these hospitals also declined to 141 last week, from 266 and 179 in the two preceding weeks. The Highgate Small-pox Hospital contained 68 patients on Saturday last, against numbers declining from 90 to 79 on the four preceding Saturdays; only 8 new cases were admitted during last week, against 20 and 18 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 231 and 206 in the two preceding weeks, further declined to 177 last week, and were 81 below the corrected average. The causes of 75, or only 1·9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Birmingham, Portsmouth, Hull, and in three other smaller towns. The largest proportions of uncertified deaths were registered in Wolverhampton, Birkenhead, and Oldham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 21·8 and 24·0 per 1000 in the two preceding weeks, rose to 22·8 in the week ending the 19th inst., and was 1·4 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 15·9 and 17·5 in Aberdeen and Edinburgh to 27·3 in Leith and 27·7 in Paisley. The 549 deaths in the eight towns included 57 which were referred to diarrhœal diseases, 26 to whooping-cough, 11 to "fever," 11 to diphtheria, 7 to scarlet fever, 4 to measles, and not one to small-pox; in all 116 deaths

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resulted from these principal zymotic diseases, against 78 and 87 in the two preceding weeks. These 116 deaths were equal to an annual rate of 4·8 per 1000, which was 2·7 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhœal diseases, which had been 13 and 32 in the two previous weeks, further rose to 57 last week, and were 30 above the number returned in the corresponding week of last year; they included 34 in Glasgow, 7 in Edinburgh, 5 in Dundee, and 5 in Paisley. The rate of mortality from diarrhœa in the Scotch towns last week was, however, very considerably below that recorded in the large English towns. The 26 fatal cases of whooping-cough in the Scotch towns showed an increase of 3 upon the number in the previous week, and included 13 in Glasgow, 5 in Edinburgh, and 3 in Dundee. Ten of the 11 deaths from "fever," and 6 of the 7 from scarlet fever, were recorded in Glasgow, the mortality from "fever" in this city showing a marked increase compared with the returns for recent weeks. The 11 deaths referred to diphtheria in the eight towns showed an increase upon recent weekly numbers, and included 4 in Glasgow, 3 in Edinburgh, and 2 in Dundee. The 4 fatal cases of measles, of which 2 occurred in Glasgow and 2 in Dundee, showed, however, a further decline from the numbers in recent weeks. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 83 and 54 in the two previous weeks, were 66 last week, and within 3 of the number returned in the corresponding week of last year. The causes of 89, or more than 16 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 21·0 and 22·3 per 1000 in the two preceding weeks, was 21·9 in the week ending the 19th inst. During the first three weeks of the current quarter the death-rate in the city averaged 21·7 per 1000, the rate during the same period being equal to 23·2 in London and only 17·4 in Edinburgh. The 147 deaths in Dublin last week showed a decline of 3 upon the number in the previous week, but included 24 which were referred to the principal zymotic diseases, against 18 and 13 in the two preceding weeks; 7 resulted from "fever" (typhus, enteric, or simple), 6 from whooping-cough, 6 from diarrhœa, 5 from scarlet fever, and not one either from small-pox, measles, or diphtheria. These 24 deaths were equal to an annual rate of 3·6 per 1000, the rate from the same diseases being 9·9 in London and 3·2 in Edinburgh. The deaths referred to "fever" in Dublin, which had been 2 and 5 in the two previous weeks, further rose to 7 last week. The fatal cases of scarlet fever and whooping-cough each also showed an increase of 2 upon the respective numbers in the previous week. The deaths attributed to diarrhœa, which had been but 3 in the previous fortnight, rose to 6 last week. Only 1 inquest case and 2 deaths from violence were registered; the 60 deaths recorded in public institutions showing, however, an increase. The deaths of infants showed a decline from the number in the previous week, while those of elderly persons remained stationary. The causes of 14, or nearly 16 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

CHOLERA.

To the Editor of THE LANCET.

SIR,—In sending you the brief extracts from my official reports on the Cholera Epidemic of 1853, and which were republished in THE LANCET of July 5th, I purposely refrained from comment, with the belief that any remarks in explanation were unnecessary. From what has appeared, however, I am not sure that this is the case. From a perusal of those extracts it is evident that the so-called vibriones are none other than the cholera bacilli of Koch, the discovery of which is all but universally attributed to that distinguished observer.

In THE LANCET of July 12th, under the heading "Dr. Tommasi Crudeli on 'Cholera,'" the following statement occurs:—"Dr. Filippo Pacini of Florence, who died just a year ago (see THE LANCET, July 21st, 1883), in 1854 was the first to recognise the cause of cholera in a microscopic organism which Dr. Tommasi-Crudeli in 1882 classified amongst the germs which multiply by division, &c." Whether I or Pacini was the first to observe the bacillus in question I have at present no means of determining. I would remark, however, that while I recognised the importance of this discovery I did not go the length of describing it as the cause of cholera.

But my object in addressing this communication to you is not merely to bring forward my own claims in the matter, but to urge my views of what I think should be one of the chief objects of the rational treatment of this disease. As I pointed out in the quotations from my report, the bacilli abound even in the secretions of the small intestines; that these sometimes are more or less decomposed and offensive, and that they are alkaline; that, in fact, in the intestines all the conditions exist which are highly favourable, or rather, I should say, are necessary, to the development and multiplication of those and other allied species of bacilli. One of those conditions is the presence of nitrogenous matter, and another the alkalinity of the liquid. I had elsewhere previously shown that while many fungi will not grow in alkaline fluids, bacilli, formerly known in most cases as vibriones, will not grow in decidedly acid liquids.

In these facts it seems to me that we are furnished with rational principles of treatment. One of these is to lessen, and if possible to abolish, the alkalinity of the rice-water-like secretions of the intestines, while another is to put a stop to their putrefactive changes. For these purposes a rigidly acid treatment should be carried out. The patient should drink water which has been boiled and strongly acidulated with sulphuric acid, as much acid being taken as can be borne, the reaction of the dejections being carefully watched. Ten- and even twenty-minim doses of the dilute acid I believe to be worthless, however frequently administered. This acid treatment may be combined with the employment of antiseptics, as creasote or carbolic acid, and perhaps better still with thymol, since it is a nervine stimulant, and not a depressant like carbolic acid. The acid and the disinfectant might be in part given by the rectum. The secretions of the alimentary canal being rendered acid, there would, I anticipate, be little to apprehend from the cholera bacillus; its growth would be greatly hindered, if not stopped, and with this arrest of its development the poison would cease to be generated with the formation of which it is credited.

I see by your report from Paris that the treatment of cholera at Toulon consists mainly of the hypodermic injections of ether in the stage of prostration, of atropine to relieve cramps and spasms, and the inhalation of oxygen for threatened coma. This treatment deals simply with certain prominent symptoms, and is merely palliative. Surely the time has now arrived for the formulation of some sound plan or system of treatment, not directed against isolated symptoms mainly, but against the general conditions of the disease, the state of the alimentary secretions and the presence of the cholera bacillus.

I remain, Sir, your obedient servant,
ARTHUR HILL HASSALL, M.D. Lond.

San Remo, July 16th, 1884.

To the Editor of THE LANCET.

SIR,—Allow me to controvert the idea that fresh fruit is injurious at this season, or has any but the most indirect relation to the prevalence of diarrhœa.

A hot summer mostly gives us good and cheap fruit. The severity of our summer diarrhœa is in proportion to the heat of the season, but it is those who seldom or never eat fruit who die from diarrhœa. For every twelve deaths from this cause ten are of infants under two years of age. It is a remnant of the crudest hygiene to prohibit fruit at all in hot seasons and climates. It is a still worse error to make exception to the character of the soil on which fruit is grown. Last week I stated in your columns that crystals of oxalate of lime would not pass from vegetable food into the absorbents and through the capillaries of the human body. I now have to protest against the possibility that any of the microscopic algæ or their spores can be absorbed by growing vegetables, increase in their tissue, or in any way penetrate into fresh fruit. Yet not only has M. Paul Bert, who is generally above superstitious influences, lent support to this theory, but Professor Nothnagel and

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Dr. Hoffmann of Vienna are said, in a *Times* telegram of July 21st, to declare that vegetables grown on an unwholesome soil are propagators of cholera. This statement is, up to the present time, entirely unsupported by any facts made known or ever submitted to scientific criticism. Are we again to return to the old views of the connexion between diarrhœa and the plum season, and be asked to believe that this high-growing drupe should, in ripening, attract bacilli to enter the roots of the tree and ascend its branches? If so, let us also be careful of this year's vintage from the south of France, and, though it may rival 1874 in quality, leave its enjoyment to those who a few years hence will not fear lest a cholera bacillus should have entered the grape. The only caution needed for fruit, as for other ingesta, in choleraic times, is to avoid excess, and to see that all is sound, clean, and fresh.—I am, Sir, yours truly,

WILLIAM SQUIRE, M.D., F.R.C.P.

Orchard-street, Portman-square, W., July 23rd, 1884.

To the Editor of THE LANCET.

SIR,—At this time, when our sanitary authorities will naturally wish to avail themselves of the experience of recent outbreaks of cholera, I take the liberty to call attention to the excellent volume devoted to the epidemic of 1873 in the United States of America, and issued from the Government Printing-office, Washington, in 1875. The full title-page of the book is as follows:—

"War Department, Surgeon-General's Office.

"*Cholera Epidemic of 1873 in the United States.*

"Reports prepared under the direction of the Surgeon-General of the Army:—(*a*) History of the Cholera Epidemic of 1873 in the United States, by Ely M'Clellan, M.D., Assistant-Surgeon, U.S.A.; (*b*) History of the Travels of Asiatic Cholera, by John C. Peters, M.D., of New York City, and Ely M'Clellan, M.D., Assistant-Surgeon, U.S.A. (*c*) Bibliography of Cholera, by John S. Billings, M.D., Assistant Surgeon, U.S.A."

This book, I understand, was generously distributed to sanitary authorities in this country, and even to individuals on special application. It is rich in facts, warnings, and lessons, which cannot fail to be appreciated in the present position of affairs. I am anxious that, among the many excellent works on cholera, the valuable gift of our American brethren should not be overlooked.

I remain, Sir, your obedient servant,

JAMES W. ALLAN.

City of Glasgow Fever Hospital, Belvidere, July, 1884.

"THE PHYSIOLOGY OF THE FEET."

To the Editor of THE LANCET.

SIR,—Mr. Allen's letter in THE LANCET of July 5th, which I am sorry not to have seen in time for a reply in your next issue, refers to a point in my paper already brought forcibly to my notice. To my opinion I adhere. Mr. Allen imputes to me the supposition that in walking the toes do first touch the ground. I stated that they should do so. I do not think that this is a "common error"; I find that everyone I ask says at once that the heels must touch the ground first. I am, however, glad to hear that the contrary is taught by "some very good physiologiste." While granting that, as a rule, the ground is touched first by the heels in walking with boots, yet I have found that in walking barefooted the toes first reach it. This is certainly so in my own case, and I do not think that, if seen so doing, I should "be supposed to be practising a burlesque step for the stage." But even if it did so seem, that would not prove the form of step to be wrong from a physiological point of view, for it will, doubtless, be admitted that a question of physiology can be settled only by reference to nature, without regard to conventional notions of walking, good or bad, as done now, after many generations who have habitually worn boots more or less interfering with perfect exercise of the functions of the feet. The use of any kind of foot-clothing cannot be presupposed. The human foot, even in savage life, never attains the hardness of sole necessary to make the character of the ground trodden on a matter of indifference in anything like the same degree as in animals provided with hoofs; yet man, in a state of nature, has to tread where his feet are liable to injury, as on broken sticks hidden by verdure or on rocky ground, perhaps in darkness.

It must then, I think, be conceded that, under the conditions given, it is desirable that the part of the foot which first touches the ground should be the part best calculated to estimate the character of the surface to be trodden on; and, further, that the part which last reaches it, as the weight of the body falls fully on the single foot, should be the part least liable to sustain injury, and most easily withdrawn from the gound if it meet, at that point, with any projection of an injurious character.

Now, if the toes, spoken of in the paper as the organs of feeling, and the anterior part of the foot, more sensitive than the heel, first touch the ground, the character of the surface is better estimated, and if the heel as it falls does happen to come on a sharp point, it is easily and momentarily raised, and, the tiptoe position being attained, injury to the heel is avoided. On the other hand, if the heel first touch the ground, not only does the want of sensibility prevent so accurate an estimate of the character of the surface, but worst of all, if, as the body falls forward to be borne on the single foot, the more sensitive part in front should happen to come on a sharp point, there is no recovery. To spring back into a position resting on one heel only is well-nigh impossible. As an exaggerated illustration of my meaning, let anyone try to walk with closed eyes and bare feet across a room where tin tacks have been purposely strewed. I can do it easily walking in the former manner, and bring the heel to the floor in each step. I would rather not try in the latter mode. Of course the movements extremely marked in this experiment would be scarcely perceptible under ordinary conditions. I suggest, however, that in principle they should be identical.

Mr. Allen says that "when the foot is put forward the heel is the part nearest the ground." If the foot in swinging forwards attain fully, as I think it should do, that which I have called "the position of rest," and defined as that of least tension and least pressure, least tension of the ligaments on the bones forming the joints, and least pressure of the bones on each other, or the mean between the extremes of motion, then, to attain this, the foot falls into an extended position with regard to the leg, thus bringing the toes nearest to the ground and ready to feel it. This position, too, allows of the widest range of lateral movement, useful at times, selecting the exact spot to be trodden on. The toes are kept free of the surface by bending the knee, in effect also resting that joint, previously strained by straightening.

On these grounds, as well as the avoidance of concussion, friction, or slipping, I have no doubt that, in walking, the toes should first touch the ground.

I am, Sir, yours faithfully,

Gloucester, July 14th, 1884. T. S. ELLIS.

MANCHESTER.

(From our own Correspondent.)

THE RECENT RAILWAY ACCIDENT.

THE public journals will have informed your readers of the terrible railway accident which occurred on the Manchester, Sheffield, and Lincolnshire Railway last week near Penistone. On receipt of information of the catastrophe at London-road Station surgical assistance was sought at the Royal Infirmary, and some of the resident staff were despatched by train to the scene of the accident. More than twenty were killed on the spot, whilst twenty-three of the more seriously injured were brought on to the Manchester Infirmary, and for a short time the resources of the hospital were taxed in providing immediate assistance and attention to the sufferers. Two died a few hours after admission; one, a young lady, had amputation of the thigh performed, but succumbed shortly after the operation. Three of the cases still remain in a critical condition, two of them being cerebral injuries; the patients, one a man the other a woman, remained unconscious until Monday last. They are now slowly regaining consciousness. The third is a fracture of leg with compound dislocation of the ankle, and will require amputation as soon as the condition of the patient will permit. Amongst the injured lying at the infirmary is a man of some local celebrity named Rawlings, known as the "Reddish Doctor," and famed as a curer of cancers.

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LAW AND MEDICINE.

On Monday last, at the assizes now being held here, Mr. Justice Day made some remarks upon the evidence given by medical witnesses, which, to say the least, were uncalled for if not unjust, for, as one of the local papers put it, "it is highly undesirable that so much contempt should be expressed for scientific evidence without a stronger reason than in this case is apparent." In summing up to the jury, at the conclusion of a case in which a man was upon his trial for the murder of his father, the judge is reported to have said:—"You must sacrifice your own views and your common sense. You are bound by what the doctors say. No one but a doctor knows or could have any doubt about it; but juries must be guided by their evidence, and you must acquit the prisoner. Although it is proved to your satisfaction that from the time this man was struck he gradually lingered and then died, if the doctors say the blow had nothing to do with the death you must acquit the prisoner. You cannot convict on this evidence. I can very well understand, even where a man's life is at stake, the reluctance you feel at stultifying yourself by giving such a verdict. After what you have heard from the counsel for the prosecution and this doctor, you would not be justified in finding this man guilty of murder, although I am sure, as men of common sense, you are satisfied of it. Nobody can doubt it, except these doctors." The main facts of the case and evidence which led to the above remarks were as follows. On May 17th, the prisoner Joseph Saxon, aged twenty-five, struck his father, the deceased, who at the time was in his usual health, a violent blow upon the head with a hammer, with the avowed intention of killing him. The wound was at once attended to at the Ardwick and Ancoats Dispensary, and two of the surgeons there, Mr. Scott and Mr. Webster, could detect no fracture, and considered the wound not of a serious nature. The man in a day or two was again able to work, and the son was sentenced to two months' imprisonment for a common assault. On May 23rd the deceased man felt worse, and went to the surgery of Dr. C. Smith, who, with his son, examined the wound, and found it still unhealed, but there were new symptoms pointing to some cerebral lesion. The man rapidly became worse, hemiplegia and coma coming on, and he died on the 26th, nine days after the receipt of the original injury. At the necropsy a slight depression of the inner table of the skull was found beneath the seat of the wound, but little or no hæmorrhage or other injury to the brain substance beneath; but in one of the ventricles a large quantity of blood was found, with a clot the size of a hen's egg. To this hæmorrhage there was no doubt death was due, but as counsel for the defence brought out in cross-examination, it could not with certainty be said whether this hæmorrhage had any direct connexion with the blow received or not. The clinical symptoms appeared rather in favour of the negative view, and the defence set up was that death was caused by an apoplectic seizure coming on six days after the blow was given, and due to violent excitement and passion, which it was shown the man gave way to just before the symptoms of apoplexy came on. From these facts most of your readers will agree that there was room for considerable and justifiable doubt whether the hæmorrhage, which undoubtedly caused death, was directly connected with the blow inflicted on the 17th, and that no medical man could have sent a fellow creature to the gallows without more convincing proof of the cause of the apoplexy than was forthcoming.

Dr. Roscoe, Professor of Chemistry in Owens College, has recently had the honour of knighthood conferred upon him in recognition of his services in connexion with the Technical Education Commission, though, doubtless, his European reputation as a chemist had also something to do this mark of distinction being offered to him.

The first public intimation of the above was made by Mr. Mundella, M.P., during his late visit here for the purpose of opening a new Board School for higher grade scholars, which he declared to be one of the most complete institutions of its kind in the kingdom; and a new museum lately built by the corporation in Queen's Park, which lies to the north-west of the city, and is a most admirably adapted building for the purpose for which it is intended. The museum is at present largely filled with objects and art treasures lent by the Government from South Kensington. Its situation, near a densely populated part of the city, reflects great credit upon the corporation, who certainly are in many ways attempting to provide for the masses of the people healthy and instructive recreation.

Allusion was recently made in these columns to the fact that the Medical Department of Owens College was likely soon to lose the valuable services of Dr. Gamgee. Although he will no longer be dean of the school, arrangements have been made by which for the present he will devote some of his time to the work of the College, retaining the Professorship of Physiology, whilst an additional assistant in the physiological laboratory will be appointed to aid in the practical work of the students there. It is rumoured that Dr. M. Watson, Professor of Anatomy, will succeed Dr. Gamgee as dean.

On Degree Day of the Victoria University there was a large attendance of visitors, including many ladies and old associates of the college. Degrees in Arts and in Science were conferred by the Vice-Chancellor, but none yet in Medicine, though it is expected that at the next ceremonial there will be several medical graduates in the pass list.

IRELAND.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

A MEETING of the Fellows was held last Monday for the purpose of electing a vice-president in the vacancy caused by the resignation of Mr. Corley, who is a candidate for the Professorship of Surgery, and was obliged to resign office in order to qualify for the appointment. There were two candidates—viz., Dr. Cameron, a professor in the College School and superintendent medical officer of health for Dublin, and Mr. Ormsby, surgeon to the Meath Hospital. The latter opposed Dr. Cameron because he was of opinion that a surgical corporation should be represented by a practising surgeon, and, as a general rule, no doubt such should be the case. But Dr. Cameron, although he does not practise surgery, yet is a distinguished pathologist, histologist, and analytical chemist, and is the leading authority in Ireland upon sanitary science, and has rendered valuable services to the citizens of Dublin in his capacity as medical officer of health. For these and other grounds the Fellows supported him, and he was returned as vice-president by a very large majority. At the same meeting an election for a member of Council took place. For this there were four candidates, Mr. Austin Meldon being successful by a majority of seven votes. The election to the Professorship of Surgery in the College takes place this week, when Messrs. Corley and Hamilton compete for the vacancy. It is expected to be a very close contest, and that two or three votes may decide the matter. Mr. Edward Hamilton, ex-vice-president, has been elected Professor of Surgery in the medical school of the college.

PRECAUTIONS AGAINST CHOLERA IN DUBLIN.

The superintendent medical officer of health (Dr. Cameron) has had several interviews with the Local Government Board in reference to the necessary measures to be adopted in case the cholera should become epidemic. The Board are prepared to constitute the corporation the sole authority under the 149th clause of the Public Health Act, and under its provisions they will have power to erect hospitals, appoint physicians, and arrange for a house-to-house visitation. The Public Health Committee have held a special meeting, and have recommended the corporation to accept the responsibility. The College of Physicians have reissued a memorandum in reference to the disease, and state that an isolated intercepting hospital containing twenty beds should be prepared within a convenient distance of the river. As regards the difficulty of procuring sites for cholera hospitals, it will be removed by the Cholera Hospitals Bill, which is now before Parliament, should it become law.

AT the recent meeting of the Council of the London Society for the Prevention of Cruelty to Children, it was announced that Lord Shaftesbury had accepted the presidency of the Society.

THE University of Heidelberg is about to celebrate its five hundredth anniversary. The Baden Parliament has voted £8000 to meet the expenses of the occasion.

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PARIS.

(From our own Correspondent.)

THE CHOLERA EPIDEMIC.

THE Academy of Medicine, consulted by the Minister of Commerce as to the utility of the measures taken to prevent the spread of cholera, has advised the Government as follows:—(1) Land quarantines intended to prevent the spread of cholera epidemics are impracticable; (2) the means of disinfection now taken at certain railway stations are inefficacious and delusive; (3) the prophylactic measures which are really useful are such as are dictated by general hygiene, particularly those which diminish overcrowding in contaminated places and those which isolate the sick. As regards the progress of the epidemic, no one can pretend to know with certainty more of what happens in Paris than the authorities choose to allow to transpire; but if official statements are true, the sanitary condition of the city is excellent, and up to the present time no cases of Asiatic cholera have occurred in the Paris hospitals. The Directeur de l'Assistance Publique has made a statement to the Municipal Council to this effect, and it now appears that the patients reported as choleraic during the last few days in the papers were simply subjects of diarrhœa and other gastric disturbances. The mortality caused by the epidemic in the South during the last week has somewhat increased in Toulon, whilst at Marseilles it remains stationary. Isolated cases have occurred at various other places; but, with the exception of Arles, there are as yet no new cholera centres. The following figures represent the death-rate of last week:—

July.	Toulon.	Marseilles.	Arles.
15	25	69	0
16	38	53	0
17	38	56	4
18	31	58	6
19	49	65	7
20	42	57	12
21	43	61	8

It is a pity that there is not a little more uniformity of opinion amongst medical men generally as to the proper treatment of the disease; but the fact is, *quot homines tot sententiæ*, and such a state of things is not likely to have a beneficial effect upon the public. Considering the diversity of opinion which exists even on the most elementary points, many of the lower classes will prefer to try the popular remedy, of getting drunk or of drinking lemon juice, &c., rather than apply for help to the orthodox practitioners. It is thought that contaminated drinking water is a means of propagating cholera, and instructions have been issued to the people to boil all that is intended to be so used. No such thing, says M. Colin; such an opinion is entirely erroneous, and can only serve to give false security. It is of the utmost importance, says M. Jules Guérin, to check the premonitory diarrhœa. Of 130,000 patients so treated in London, only 250 had cholera, although 6000 were bordering on the characteristic symptoms of the disease. On the contrary, opines M. Rabuteau, it is better to begin with a purge of sulphocarbolate of sodium, after which astringents, and particularly the tannates of alumina, bismuth, and magnesia, should be used. M. Burq, who has spent his whole life studying the subject, has presented another memoir to the Academy of Sciences to indicate the merits of copper as a prophylactic of cholera. Curiously enough, a telegram recording two deaths in the South, attributes them to the victims having partaken of food prepared in a copper vessel.

THE PATENT MEDICINES STAMP.

The question of the repeal of the Patent Medicines Stamp Act being now before the public, I may remind your readers that an inquiry upon proprietary medicines in France is still pending. Two or three years since, as I reported in THE LANCET at the time, the subject was discussed at the Academy of Medicine, and some of the most eminent pharmacists expressed the belief that it would be better, with perhaps some few exceptions, to abolish patent medicines altogether. The different wines of pepsine came in for special obloquy, as many of them were found to contain scarcely a trace of the active principle; a then popular preparation of iron also received its death-blow. Whatever may be the state of things in other places, such a reform would be a great benefit to the pharmaceutical profession at large in France. The numbers of specialities which are prescribed make private prescriptions quite a rare windfall in a Paris pharmacy, and competition is so great that, although patent medicines are generally high priced, and supplied to the retail chemists at 40 per cent. discount, the vendor is obliged to make a large reduction on the marked price to attract custom, and so gets but small profit. By abolishing the traffic altogether, a few large speculators would go to the wall, but the prosperity of the profession as a whole would be greatly increased. As the law now stands, any chemist may devise a speciality without going through any formality or paying any stamp duty. He may of course supply it to the trade, but if he retails it without a prescription he does it at his own risk and peril, the sale being tolerated when the medicine is of an inoffensive character, but rendering him liable to prosecution if this condition is infringed. Legally the chemist has no right to sell without a prescription anything but a few drugs and chemicals. The sale of an emetic or of castor oil on his own account renders him liable to prosecution; and although, as has been stated, no stamp or formality is required for patent medicines, their sale is only tolerated, and could be prevented in any case.

PREPARING FOR CHOLERA IN PARIS.

(From a Correspondent.)

The cholera more than ever engrosses public thought, and in medical circles is the principal, if not the only, subject of discussion. Nor is this solely a matter of conversation. Two notable measures have been adopted. Dr. Dujardin-Beaumetz, Member of the Council of Hygiene and Salubrity for the department of the Seine, is organising throughout Paris a sanitary service. Medical officers of health are now being appointed for every district. Orders are given that any illness of a choleraic nature must be reported at once to the nearest police station. The prefect of police is then communicated with by telegraph, and the medical officer is ordered to superintend personally the disinfection of the house where the case is reported. But the question arises as to what is meant by the term disinfection, and who is to do the work which these newly created medical officers are called upon to superintend. So far either policemen or firemen have been employed; and, on the whole, a distinct preference is shown for the latter. They are brave, active, and accustomed to constant alarms; on the other hand, they are young men, very susceptible to contract diseases, and may possibly infect the barracks in which they live. The term disinfection is also employed in a very vague manner. It generally means a good scouring, and but for the plentiful use of carbolic acid or chloride of lime would be little better than an English "spring cleaning." While, however, Dr. Dujardin-Beaumetz is organising the machinery for the disinfection of houses, M. Pasteur is conducting a series of experiments for the purpose of ascertaining what may be considered effective disinfection. In conjunction with several other medical men, some civil engineers, and the prefect of police, M. Pasteur has been every morning to the Hôpital Cochin, where experiments were organised in the following manner. M. Pasteur selected from his laboratory the microbes of chicken cholera, of anthrax, lymph of small-pox (both moist and dry), and other similar subjects. These specimens were divided into three equal parts, and placed in three different small rooms at the hospital. In one room common sulphur was burnt; in the second liquid sulphurous acid was injected through the door by M. Pictet; and nothing whatever was done to the third room. After twenty-four hours the microbes were examined, and calves were vaccinated with the small-pox lymph. The result so far goes to show that the sulphurous acid, whether derived from the fumes of burning sulphur or from M. Pictet's syphon bottles containing the liquid form, did not disinfect at all. M. Pasteur showed me some cultures, notably those of splenic fever, which had developed themselves with great activity in spite of twenty-four hours' sojourn in the midst of sulphurous acid gas. At the same time, I must state that the experiments were in no wise conclusive. The amount of sulphur employed was small—750 grammes to 80 cubic metres,—and now the experiments are being repeated with a far stronger proportion of sulphurous acid; and if the liquid form is employed, there will be no difficulty in attaining the required strength. But this is expensive. At present five francs a litre is the price demanded, though probably this will be reduced to

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two or three francs. Yet even at this price the disinfection of a room will cost from ten to twenty shillings, according to its size. The Hôpital Bichat and the Hôpital Broussais will be devoted especially to the treatment of cholera cases should the epidemic break out in Paris. The former hospital has only just been completed. It is built, according to the Tollet system, in pavilions that have 120 angles, being of the Gothic arch shape. It is spread over a large extent of waste space in the fortifications to the north of Paris, occupying in all 7700 square metres, but the hospital cost only £40,310, including the price of the land. Each pavilion is thoroughly separated from the neighbouring pavilions, contains thirty beds, giving a surface measurement of 11 metres per bed, and a cubic capacity of 60 metres per inmate. These rare advantages place this hospital first among the model hospitals of France, and the results already obtained in this building are most favourable. The idea of employing the Château de Brévannes, which it is proposed to convert into an asylum for the aged and infirm, as a cholera hospital is not so promising. This magnificent but antiquated building cannot be considered as equal to the modern exigencies of sanitary science, and I trust that no more infirmities than those inherent to old age will be treated in this building. Better far the proposed erection of wooden huts in the fortifications, though the ambulance of the Tollet type (such as may be seen behind the dairies at the Health Exhibition) would be even better suited to this purpose. They take only eight hours to construct, and may therefore be brought anywhere to meet a sudden emergency. As this model has been definitely adopted by the Ministry of War, an epidemic would be a good opportunity of testing the practical worth of the Tollet ambulance. In the meanwhile, the news from the south of France is more and more menacing. The epidemic has fairly invaded Arles. It seems to have begun in several other places, and is slowly travelling north. The proportion of fatal cases has greatly increased, amounting to as many as six in seven at Toulon, while the duration of the attack varies from six to eleven hours. Such was the official information given to me yesterday by Dr. Proust. Under these circumstances it is indeed fortunate that the authorities have displayed some activity, and are anxiously struggling to save Paris from this terrible scourge. The *Journal Officiel* to-day publishes the ministerial circular to the prefects on the subject, ordering the disinfection of all houses where cholera has occurred, but not describing how this disinfection is to be accomplished. The Government is evidently waiting for the conclusion of M. Pasteur's experiments.

Paris, July 22nd, 1884.

EGYPT.

(From a Correspondent.)

THE committee attached to the Egyptian Sanitary Department has now definitely resolved to abandon all idea of land quarantine and sanitary cordon in the event of another visitation of cholera. Most observers will allow that the strenuous efforts of the police in 1883 were a decided failure and had no salutary effect, while the needless disadvantages of the system are well known to most Englishmen. The committee, consisting of four native and two English doctors, has, therefore, unanimously decided upon adopting the conclusions come to at Vienna in 1874 by the International Sanitary Conference: "Considering that land quarantine is impracticable and useless, in consequence of the frequent and always increasing means of communication, and believing that it is fatal to all commerce, the conference rejects quarantine altogether." Although the committee frankly acknowledges that the isolation of the first village attacked is a useless and inhumane measure, it permits the sanitary department, in case of urgent need, such as allaying a panic, to recommend the measure to the Government, only stipulating that it shall cease to be employed directly the disease appears in a second town or village. The committee, of course, recommends many sanitary proceedings, such as the cleansing and scavenging of towns and villages, the evacuation of the first house infected, the substitution of earth trenches for mosque latrines in case of epidemic, the boiling of drinking water, the postponement of all fairs and cattle markets till the month of November, &c. No tents at present belonging to Government service which are not required for the Egyptian army, and means will at once be taken to procure a sufficient number for the provinces, in order to treat the sick of an epidemic, and those natives who may be evacuated from their homes. The resolutions of the sanitary committee have been approved by the Council of Ministers.

Examination of the last week's death returns from the three large towns of Egypt gives the following result:—The average daily death-rate for Cairo is 52, of which cases 23, or 44·2 per cent., are from intestinal diseases, and at least half this number are returned as gastro-enteritis in children. In Alexandria it would appear that 20 deaths occur daily, 5½, or 27·1 per cent., of them being accounted for by diarrhœa, typhoid, and kindred complaints. At Tantah there is an average daily rate of 10, with about 2 cases only of intestinal disease, or 21·4 per cent.

It is interesting at this time to look back to the account of the reappearance of cholera in Lower Egypt in 1866. The first known case in that year was on March 8th, and was traced to a fatal form of diarrhœa which prevailed in the workshops of the Isthmus Canal Company at Chalouf. Three other cases occurred in March and three more in April, all at Alexandria or Suez. In May the usual mortality of Suez was doubled, and "choleriforme" was reported, while in June and July dropping cases continued in the seaport towns. In August "cholerine" probably existed in Tantah and Cairo, and in three days it killed 8 per cent. of a population of 300 at a small village near Zagazig. On September 12th a considerable outbreak of epidemic cholera occurred, and for a short period the cases numbered, it is believed, sixty daily. On November 11th the disease had almost disappeared, and its complete cessation was reported on November 20th, 1866.

Cairo, July 13th.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Brigade Surgeon Robert Owen Hayden has been placed on temporary half-pay on account of ill-health.

ADMIRALTY.—Staff Surgeons William Middleton Power and John Neesom Stone have been promoted to the rank of Fleet Surgeon in her Majesty's Fleet.

The following appointments have been made: Robert W. Soper, to be Surgeon and Agent at Dartmouth; and Patrick T. Dillon, to be Surgeon and Agent at Tarbert.

MILITIA MEDICAL DEPARTMENT.—Surgeon-Major Henry Cooper Rose, 4th Battalion, the Duke of Cambridge's Own, (Middlesex Regiment), resigns his commission; also is permitted to retain his rank and to wear the prescribed uniform on his retirement.

RIFLE VOLUNTEERS.—7th Middlesex (London Scottish): Leslie Ogilvie, Gent., M.B., to be Acting Surgeon. James Rowlands Essex, Gent., to be Acting Surgeon.

MEDICAL NOTES IN PARLIAMENT.

The State of the Thames.

IN the House of Commons on Friday, Sir C. Dilke, replying to Sir A. Lusk, expressed his regret that the select committee had thrown out the scheme of the Joint Drainage Board for the Lower Thames Valley, and observed that now there was nothing to prevent sewage in a crude condition from being poured into the river.

Further questions were put on Monday by Sir F. Milner and Mr. Macfarlane as to the state of the river near Greenwich, but nothing new was elicited.

The Indian Medical Service.

Mr. Gibson, in an able speech, brought forward, on Friday, his motion, "That the condition of the Indian Medical Service calls for the early attention of the Government, and this House trusts that measures will soon be taken to lessen the block in promotion and the disappointment at the methods of employment and pay which exist in its ranks."—Sir L. Playfair seconded the motion, which was supported by Mr. Leamy, Dr. Lyons, Mr. Plunkett, Dr. Farquharson, and Mr. Healy.—Mr. J. R. Cross replied that the Government could not accept the resolution, but he would bring the subject before the Indian Government. At

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the same time he expressed an opinion that the Indian Medical Service was better than the British, and that the reduction of the number of yearly appointments was diminishing the block in promotion. The motion was negatived without a division.

The Cholera.

On Monday, in reply to Mr. Gray, Mr. Trevelyan stated that the Corporation of Dublin would be empowered by the Local Government Board to carry out the 149th Section of the Public Health Act in the event of cholera making its appearance. A floating intercepting hospital was ready in the harbour, and the medical officers were on the alert. The Local Government Board had full information as to the best means of obtaining portable hospitals.

Sir C. Dilke informed Dr. Cameron that the importation of rags from Marseilles and Toulon had been prohibited, and a cargo from the former place, which had been landed near Hull, would be sent back.

Lunacy Accounts.

Mr. Hibbert informed Mr. Corbet that the total annual cost of all English lunatic asylums appeared in the abstracts of the asylum accounts which were forwarded to the Lunacy Commissioners, and which were laid upon the table of the House, but not printed. Four letters had been written without effect to the medical superintendent of the Manchester Royal Lunatic Asylum, asking for his return. There was no separate account of the cost of lunatics in workhouses.

A Volunteer Hospital Corps.

Lord Hartington stated to Sir T. Lawrence that this scheme was not yet sufficiently advanced for the issue of regulations. It would be fully considered when next year's estimates were prepared.

Spurious Butter.

On Tuesday, Mr. Dodson replied to Mr. Dawnay that he was in communication with the Treasury as to separate returns of the imports into this country of injurious butter substitutes.

Vaccination.

Mr. Russell informed Mr. Hopwood that the Local Government Board, believing their opinion against repeated penalties for non-vaccination to be well known, did not think the issue of a fresh circular necessary.

On Thursday, the hon. gentleman expressed approval of a pamphlet on vaccination which had been issued by the National Health Society.

Royal University of Ireland.

Mr. Trevelyan, on Tuesday, stated to Mr. Kenny that the Senate of the Royal University of Ireland granted medical degrees to gentlemen who had passed the Arts course in the Catholic University, or had studied at some other university prior to the establishment of the Royal University.

The Salt Tax in India.

On Thursday, Mr. J. M'Carthy asked the Under Secretary of State for India whether his attention had been drawn to an article in THE LANCET, published two months ago, in which that high medical authority asserted that, "as the diet of the Hindoo is almost entirely farinaceous and vegetable, it is a cruel injustice to impose a tax that renders a physiological necessary a high-priced luxury;" and whether the Government would take into account the opinion of THE LANCET in arranging their future policy with regard to the salt tax in India.—Mr. J. R. Cross said his attention had been called to the article in question. The Government of India were thoroughly alive to the objections that were raised to the imposition of the salt tax, and would bear them in mind in arranging their future policy.

Nenagh Dispensary.

Mr. Trevelyan said, replying to Mr. Leahy, that the Local Government Board had called upon Dr. Calaghan, the medical attendant of the Nenagh Dispensary District of the Nenagh Union, for an explanation of his conduct in respect to alleged neglect of duty. The doctor did not deny that a red ticket might have been left on Friday, the 29th of May last, making it his duty to visit immediately Alice McCormack (the daughter of Mr. John McCormack, carpenter, of Nenagh), a girl who was lying at the time dangerously ill. If such a ticket were left he could find no trace of it. There was neither neglect nor forgetfulness attributable to him, inasmuch as he passed Mr. McCormack's house twice on the day in question, and could have called had he known, without any inconvenience whatever. The doctor had since prescribed for the child, and she was now quite well.

Obituary.

CÆSAR H. HAWKINS, F.R.S.

SERGEANT SURGEON TO THE QUEEN.

To comprise in the space at our command a professional life of seventy years, sixty of which were spent in active work, is difficult. In giving a sketch of the life of Mr. Cæsar Hawkins, who died on Sunday last, we can but refer to the most salient points. He was born on September 19th, 1798, at Bisley, in Gloucestershire, where his father, the Rev. Edward Hawkins, was vicar, who was the youngest son of Sir Cæsar Hawkins, Serjeant Surgeon to George II. and George III., Surgeon to St. George's Hospital from 1735 to 1774, when he was succeeded in that office by his son, Mr. Charles Hawkins, who resigned in 1792, but was re-elected in 1798, and in 1800 was appointed by Charter the first Master of the College of Surgeons of London, he being then Serjeant Surgeon. Mr. Cæsar Hawkins was first at a school in Gloucester, and in 1807 was admitted to Christ's Hospital School, where he remained until 1813, being then of the age when boys who were not going to Oxford or Cambridge were compelled to leave. Two of his brothers—the well-known Provost of Oriel, and Dr. Francis Hawkins, Physician to the Middlesex Hospital—were educated at the Merchant Taylors' School, and both went to St. John's College, Oxford. In 1814 he became an articled pupil to Mr. Sheppard, of Hampton Court, the medical attendant of the Duke of Clarence, afterwards King William IV., when he resided at Bushey-park. Mr. Cæsar Hawkins remained with Mr. Sheppard until 1819, when he became a pupil at St. George's Hospital, and entered to the lectures on Surgery of Mr. Brodie, Assistant-Surgeon, lecturing then in a small theatre in a house opposite the Hunterian School in Great Windmill-street, and to the lectures of Wilson and Charles Bell in that school, to Dr. George Pearson's lectures given at his house in George-street, Hanover-square, to Lectures on Chemistry at the Royal Institution, when Faraday was an assistant in the laboratory. This shows how the centres of education were then scattered.

For many years Mr. Cæsar Hawkins was the prosector in Windmill-street, also assisting Charles Bell and John Shaw in their experiments illustrating the uses of the fifth and seventh nerves. In 1821 he was house-surgeon at the Lock Hospital, in which year he became a member of the College of Surgeons. In 1922 he was house-surgeon to St. George's Hospital, and in 1823 he commenced practice in lodgings in Vere-street, Oxford-street. In 1825 he removed to Half Moon-street, where he took house pupils, and in 1842 to 26, Grosvenor-street, where he died. For some years he dissected and performed experiments for Sir Everard Home. Before leaving St. George's Hospital, he received overtures for teaching anatomy from Charles Bell and John Shaw at the Hunterian School; and also from Herbert Mayo, who had built a small theatre behind his house in Berwick-street. On Mr. Brodie's advice he accepted the latter offer, and there commenced giving anatomical demonstrations. In 1826 the lease of the Hunterian School was bought from Charles Bell by Herbert Mayo and himself, where he continued to teach anatomy until 1830, when he left, with all the St. George's Hospital staff, upon the opening of the school at that hospital, Mr. Mayo leaving in the next year to go to King's College. Mr. Cæsar Hawkins was the last member of the great Hunterian School founded by William Hunter in Great Windmill-street. In 1829 he joined Sir Benjamin Brodie, who was then lecturing on Surgery in the Hunterian School, in delivering part of the course, and continued subsequently to do so at St. George's Hospital, first with Mr. George Babington, and eventually with Mr. Tatum until 1874, after which he occasionally gave Clinical lectures. From 1832 to 1834 he also lectured with Dr. Seymour on Medical Juris-

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prudence. On leaving Great Windmill-street, the Museum was divided; one half Mr. Mayo took to King's College, the other Mr. Hawkins took to St. George's Hospital, and afterwards presented it to the hospital. On his relinquishing teaching at St. George's Hospital, he was requested to sit for his bust as a testimony of the esteem of his old pupils, which was presented to his wife. In 1828, in the absence of Sir Charles Bell and Mr. Mayo, he was requested by the governors of Middlesex Hospital to undertake their duties as surgeon, which he did for some months. In 1829 he was elected surgeon to St. George's Hospital. This office he held until 1861, when he was elected a consulting surgeon. At the College of Surgeons he held every office: appointed a Fellow by Charter in 1843, a Member of the Council in 1846, Examiner in 1849 (in which year he delivered the Hunterian Oration, in the presence of the late Prince Consort), and President in 1862 and 1861, representative on the Medical General Council in 1865, and in 1871 was elected a trustee of the Hunterian Museum.

From 1845 to 1849 he was an examiner in surgery at the University of London, President of the Royal Medical and Chirurgical Society in 1855 and 1856, of the Pathological Society in 1849 and 1850, and, of the Sydenham Society in 1873 and 1874. He was elected a Fellow of the Royal Society in 1856, appointed Surgeon Extraordinary to the Queen in 1857, and upon the death of Sir Benjamin Brodie in 1862, Sergeant Surgeon, being the fourth of his family holding that office—viz., Sir Cæsar Hawkins, his son Mr. Charles Hawkins, and his brother Mr. Pennell Hawkins, Surgeon to Middlesex Hospital. Mr. Cæsar Hawkins had been consulted by four generations of the present Royal Family. In 1874 he printed for private circulation two volumes containing his communications to scientific societies and medical journals. These were fully noticed by the medical journals, and with great praise. He died, as was stated in a notice of his life in *The Times* of last Monday, as John Hunter did, without receiving any title as a recognition of his merits. A most feeling allusion to his death was made in a sermon in St. George's, Hanover-square, Church, on Sunday. We are permitted to quote the following from a letter written to one of his friends on hearing of his death by one of the most distinguished members of the profession:—"We have lost, I think, the clearest mind in our profession, in which accuracy was least swayed by imagination, or temper, or desire for renown. I have never known one more completely honest or discreet in counsel, or less influenced by self-interest."

Mr. Cæsar Hawkins had been some months before his death more or less confined to his bedroom. Early in last December he met with an accident in going downstairs; he slipped, and though able to recover himself to some extent, he sustained a severe bruise on the left leg, followed by much effusion of blood. Without any subsequent external mischief the effusion became gradually absorbed, but during part of this period there were certain evidences of clot in the larger veins of the same leg, attended by some constitutional disturbance, all of which tended to weaken the system, and cause some anxiety to those in attendance upon him. But by degrees these symptoms subsided, and Mr. Hawkins was sometimes able to sit up, and even on one occasion to leave the house for a few hours. Subsequent to this he became less well, was troubled with cough and loss of appetite, added to which other ailments of advanced life combined to weaken the body and hasten the fatal end. To the last his mind was clear. He rose from his bed early on Sunday morning, became faint and expired in a few minutes.

There are few men who have gone through life more highly respected by all who knew him than the subject of these lines. High-minded, industrious, accurate, and conscientious, he commenced the struggle of life at an early age, and by hard work, honesty, and perseverance with comparatively very small means, and independent of worldly influences, raised himself from the position of the once well-known "apprentice to a general practitioner," to that of the highest in a surgeon's ambition.

In private life his real worth was known to comparatively few. No one appeared to be more influenced for all that was right and good than he was. "Faith, Hope, and Charity" might be said to have been his guiding principles through a long life. No one gave more freely to a deserving cause; none but the giver knew to what extent; none but the receiver knew to what amount. Mr. Cæsar Hawkins was twice married, and has left a widow to mourn her loss, but no children.

J. W. MOORE MILLER M.D., M.R.C.P., J.P.

IT is with much regret that we record the death of Dr. J. W. Moore Miller, which took place at his residence, Southsea, on the 9th inst. Dr. Miller was the only son of the late Captain Miller of the 46th and 24th Regiments, and was born in 1820. He began his medical studies as a pupil of the late Mr. Caldwell, at Millbrook, near Southampton, where his father resided, and in 1838 entered at University College Hospital, where he was a dresser under Liston. After passing the College in 1841, he joined the Peninsular and Oriental Steam Packet Company, at first taking voyages between this country and Calcutta, and afterwards becoming superintendent medical officer of the Peninsular and Oriental Company's Bengal Station and Hospital. In addition to these appointments, during his residence in Calcutta he enjoyed a large private practice. Returning to England, he settled at Southsea in 1859, succeeding the late Dr. Engledue. In 1862 he was elected one of the staff of the Royal Portsmouth Hospital, an appointment which he held for five years. He was also consulting physician to the Royal Seamen and Marines' Orphan School, and medical referee for several insurance companies.

In 1863 Dr. Miller became a member of the Town Council, but, after a few years' service, finding that he was unable to devote sufficient time to the duties, he retired, or there is no doubt he would have been asked to accept the office of Mayor. He was placed on the Commission of the Peace in 1871. In the early days of the Portsmouth Artillery Volunteers, he held a commission as surgeon, and took considerable interest in all matters relating to the corps. From its formation he was a warm supporter of the Portsmouth Literary and Scientific Society, in which he had held the office of president, and was a contributor of papers on the Horse's Foot and Shoeing. On his return from a voyage to Australia, which he made in 1880, he gave the members an account of his experiences, and dwelt upon the desirability of utilising the Australian meat trade for the benefit of the residents in the mother country, and since then he patented some processes for the preservation of meat. He was the holder of a patent for anhydrous leather, to the improvement of which he had devoted considerable attention. Dr. Miller had shown signs of failing health for some months past, but continued in full work up to a few days before his death. Early on the 5th inst., he was suddenly seized with abdominal pain, which resulted in peritonitis; symptoms of cardiac failure became apparent, and notwithstanding the constant watching and care of his friends, Mr. H. Rundle and Dr. Wallace, he passed away on the 9th inst.

Dr. Miller was a man of strong force of character. In private life he was genial and most hospitable, and won the esteem and affection of his patients, by many of whom he was regarded as a trusted friend as well as medical adviser. In public, his skill and thorough practical knowledge, combined with his sound treatment of disease, had secured for him a large practice, and brought him into frequent requisition as a consultant. By his unvarying kindness and ready sympathy, he had endeared himself to a wide circle of friends, by whom his memory will long be held in high regard.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on Monday last:—

Atkinson, Ambrose, Leeds.
Campbell, E. Kenneth, M.B. Edin., Wimpole-street.
Child, Herbert, L.S.A., Hedingley, near Leeds.
Graham, A. William, Cambridge-street.
Greenough, Edwin, M.B. Edin., Wibsey, Yorks.
Grimmer, C. George, L.R.C.P. Edin., Bungay.
Hanson, Alfred, Launceston.
Hepburn, David, M.B. Edin., Milnathort, N.B.
Hewer, Henry John, Highbury New-park.
Hoper-Dixon, Arthur, L.R.C.P. Edin., Ashford, Brecon.
Johnston, Benjamin Rigby, L.K. & Q.C.P.I., Ambleside.
Jones, Harry Shirley, L.S.A., Bromsgrove.
Lawson, Robert, Winthank, Fife, N.B.
MacConnel, Henry Wilson, M.B. Cantab., Girvan, N.B.
Mallam, L. George, M.B. Edin., Armidale, New South Wales.
Mason, Henry, Ulleskorpe.

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Pockley, F. Antill, M.B. Edin., Sydney, New South Wales.
Purchas, A. Challinor, M.B. Edin., Auckland, New Zealand.
Simms, Henry, Stourbridge.
Spackman, Coniston, Faringdon, Berkshire.
Stiles, A. Jalland, M.B. Edin., Spalding.
Warwick, F. James, M.B. Cantab., Loughborough-road.
Welpton, John, Leeds.
Williams, Alfred, M.B., Glasgow.

Admitted Members of the College on Tuesday last:—

Blacker, Arthur Barry, L.S.A., St. George's-road.
Brown, David Matthews, M.B. Edin., Edinburgh.
Churcher, Thomas Gillard, M.B. Edin., Walworth-road.
Collins, Arthur Ward, L.R.C.P. Lond., Rainhill.
Crisp, James Ellis, L.S.A., Lacock, Wilts.
Fletcher, W. W. Ernest, M.B. Cantab., Argyle-square.
Hughes, Henry Milner, M.B. Durham, Harrogate.
Jefferies, Horace, L.S.A., Bromsgrove.
Jones, Richard Nelson, L.R.C.P. Lond., Swansea.
Keele, John Rushworth, L.R.C.P. Lond., Southampton.
Mirza, Jafarkuli Faredumbeg, L.R.C.P. Lond., Bombay.
Taylor, John Clesaley, M.B. Edin., Windermere.
Thurston, Hugh Champneys, L.R.C.P. Lond., Thornbury, Gloucester.
Walker, Edward, M.B. Edin., Huddersfield.
Welsford, George Frederic, M.B. Cantab., Winterbourne, Isle of Wight.
Whitelock, R. H. Anglin, M.B. Edin., Jamaica, West Indies.

Admitted Members of the College on Wednesday last:—

Beardmore, George Russell, L.S.A., Islington.
Bowden, Reginald Treacher, L.S.A., Tenbury, Worcester.
Bryden, Frederick, M.B. Durham, Melbourne.
Clarke, J. McFarlane, L.R.C.P. Lond., Bolton, Lancashire.
Earle, Cyril Somerset, L.R.C.P. Edin., Manchester.
Ferguson, James Haig, M.B. Edin., Edinburgh.
Gent, George Sidney, L.S.A., Bristol.
McDougall, James Edlington, L.R.C.P. Edin., Walton, Liverpool.
Quennell, Robert William, L.R.C.P. Edin., Brentwood.
Roberts, Edwin, Leeds.
Shackel, George Arthur, L.S.A., Reading.
Sharp, Charles John, L.R.C.P. Lond., Liverpool.
Trevor, Robert, L.R.C.P. Lond., Halsey-street.
Weston, George Henry, L.S.A., Bognor, Sussex.
Williamson, Richard Thomas, L.S.A., Burnley.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At examinations held on the 30th ult. and following days, the undermentioned passed in Anatomy, Physiology, and Materia Medica:—

Alfred Barcroft, Alfred G. Beale, James C. Boyce, Thomas Browning, Alban Butler, Louis A. Byrne, Edward J. Cotton, Frederick G. Davis, Richard H. J. Fetherstone, Henry L. Finny, Arthur J. Gernon, Frederick Hall, Nicholas J. Harmon, Timothy H. Harrigan, John Keatly, Thomas Kidd, Richard J. Leper, Martin B. Lyster, Patrick T. Morrissy, Hugh S. Morrison, Samuel F. Murphy, Pierce J. J. O'Connor, James A. Sawyer, Davis D. Tate, George Woods, Ernest H. Tweedy.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on July 17th:—

Nutting, Philip Henry, Hasely Hall, Warwickshire.
Morgan, T. Whitworth Sewell, Roupell-park, Streatham-hill.
Preston, Francis Harrison, Ampton-street, Gray's-inn-road.
Shackel, Geo. Arthur, Erleigh-court, near Reading.
Soden, Thomas Armand Bourne, Newcastle-on-Tyne.
Staple, James Dibble, Hereford-road, Bayswater.
Wright, Sydney C. Ernest, Upper Kennington-lane, Vauxhall.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Ralph Holyoake and Bernard Volckman, London Hospital.

DR. EVANS, of the Lodge, Brymbo, who had practised as a surgeon in the locality for some years with marked success, was found yesterday morning burnt to death in a workman's cabin at Firwd Ironworks.

SANITARY HOUSES.—A conference was held on the 11th inst., under the auspices of the Royal Institution of British Architects, in the conference room of the Health Exhibition, on the Construction of Sanitary Houses. After an introductory paper on the subject of Sanitary Construction in general had been read by Professor T. Roger Smith, a paper was read by Mr. F. W. Hunt on the Sanitary Arrangements of Houses during the past 120 years, and another on Drainage under Dwellings by Mr. S. F. Clarkson. A discussion followed the reading of the papers.

VOLUNTEER AMBULANCE MOVEMENT.—An inspection of the bearer company of the St. Thomas's Hospital Ambulance Association was made in the grounds of Lambeth Palace on Wednesday last. The inspecting officers were Major-General Elkington, C.B., Deputy Adjutant-General, and Dr. Crawford, Director-General of the Army Medical Department. A numerous company were present, among whom were Lord Morley, Under Secretary of State for War; Surgeon-General Hanbury, K.C.B.; Dr. Billings; Mr. Ellisson, of the French Red Cross Society; Mr. Archibald Forbes; Professor Longmore, C.B.; Brigade Surgeon Nash; Surgeon-Major Roe; Surgeon-Major Evatt; Surgeon Cross; Mr. Cantlie; and Sir William Mac Connac, President of the Association. At the close of the drill, Dr. Crawford complimented the company on its performance, and remarked on the value of the movement as a means of providing properly qualified surgeons for the volunteer force.

AT a recent meeting of the Dover Town Council a scheme for extending the sewer outfalls and further improving the drainage of the town, consequent on the growth of the borough, was approved. The approximate cost of the scheme is about £10,000.

THE DRAINAGE OF HENDON.—A Select Committee of the House of Lords has passed a Bill, which has already received the sanction of the House of Commons, confirming a provisional order granted by the Local Government Board, to enable the Hendon Local Board to acquire by compulsion thirteen acres and a half of land at Hendon, for the purpose of enlarging their existing sewage works, and to deal with the sewage by chemical processes and by filtration. The effluent from the proposed works will pass into the river Brent, and the solid matter will be used as manure.

NATIONAL HEALTH SOCIETY.—At a meeting of the Vaccination Officers' Association, held on Saturday last, a cordial vote of thanks was given to the National Health Society for issuing their pamphlet entitled "Facts concerning Vaccination," and the Association expressed their appreciation of the "thoughtful kindness which prompted the Society to assist the vaccination officers of the metropolis in the discharge of their often difficult duties." The pamphlet in question has, we understand, now been distributed from house-to-house in most of the districts in the metropolis where small-pox is epidemic.

SOUTH LONDON SCHOOL OF PHARMACY.—The following were the successful competitors at the School examination held from the 26th of June to the 5th of July:—Senior Chemistry: medal, R. Wilkinson; certificates (equal), D. Arnott and J. Jackson. Junior Chemistry: medal, W. Rushton; certificate, W. Holme. Botany: medal, T. J. Clarke; certificate, R. Atkinson. Materia Medica: medal, W. Holme; certificate, T. J. Clarke. Pharmacy and Practical Dispensing: medal, F. E. Brown; certificate, W. Rushton. Extra certificates of merit: Messrs. Coleman, Cooper, H. Jackson, Kingan, Mathews, Taylor, Ward, and Williams.

SOCIAL SCIENCE ASSOCIATION.—At the annual business meeting held at the offices of the Association in Adam-street on Tuesday, a report from the Council, detailing the action taken by the Association during the twelve months ending June, was presented and ordered to be received and circulated. The report dealt with several subjects of interest in regard to which special action had been taken, and among these may be mentioned—milk-supply; loss of life at sea; the Hospitals Association, which was the outcome of the Conference on Hospital Administration held last year under the auspices and management of a special committee of the Council; and the International Health Exhibition. The Right Hon. G. J. Shaw-Lefevre, M.P., was appointed president for the year 1884-85, Dr. Norman Chevers being elected to preside over the Health Department with Mr. H. H. Collins and Dr. Edward Seaton as secretaries.

THE SANITARY ASSURANCE ASSOCIATION.—At the ordinary monthly meeting of the Council of this Association, on July 14th, a paper on the Sanitary Exhibits at the International Health Exhibition was read by Mr. Mark H. Judge, A.R.I.B.A. On the question of the disconnexion of house drains, Mr. Judge said arrangements for providing a free passage of air into drains on the house side of outfall traps to form an air break or disconnexion between sewers and house drains were now admitted to be necessary by all sanitary authorities. By means of the outfall syphon trap, combined with air disconnexion and outlet ventilation above the roof, a dwelling would be thoroughly protected from the ingress of sewer air. With perfect house drains properly disconnected from the sewer, the inhabitants of a town dwelling might enjoy the blessings attendant upon cleanliness; but without such disconnexion from the public sewer the cleanest possible household must share the dangers resulting from the sins of others against the laws of health.

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Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ANDERSON, JAMES, M.D., M.R.C.P.Lond., has been appointed Medical Registrar to the London Hospital, vice C. F. Coxwell, M.B., M.R.C.P.Lond., resigned.

ARTHY, G. F. S., M.R.C.S., L.R.C.P.Ed. (late House-Surgeon to the General Infirmary, Leeds), has been appointed House-Surgeon to the Chorlton Dispensary, Manchester.

BROUGHTON, HENRY TODD, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Heckmondwike District of the Dewsbury Union.

CARNELLEY, MATTHEW, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Wilford District of the Basford Union.

CATTE, JAMES, B.C.Dub., has been appointed Medical Officer for the Pembridge District of the Kington Union, vice Wilson, resigned.

COUPE, JOHN QUILLER, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Fifth District of the Penzance Union, vice J. Quick.

GROVES, H. J. FIRTH, L.R.C.P.Lond., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Manning River, N.S.W.

HARDING, THOS. MASSEY, F.R.C.S.Eng., has been appointed Government Medical Officer for the District of Ryde, N.S.W.

HILL, J. HIGHAM, M.D., F.R.C.S.E., has been appointed Government Medical Inspector for the United States of America at the Port of London.

HODGES, HERBERT CHAMNEY, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Watton District of the Hertford Union, vice H. B. Hodges, resigned.

KEMPE, JOHN ARTHUR, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the North Tawton District of the Okehampton Union, vice Norman, resigned.

PEARCE, WALTER, B.Sc., M.R.C.S., L.R.C.P., has been appointed Medical Superintendent to St. Mary's Hospital, London, vice Alex. Stewart Brown, F.R.C.S.Ed., resigned.

PRATT, W. SUTTON, L.F.P.S.Glas., L.S.A.Lond., has been appointed Medical Officer for the Third District of the Daventry Union, vice Swann, resigned.

QUICK, JOHN, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the First District and Workhouse of the Penzance Union, vice J. R. Quick, deceased.

SPURGIN, W. H., M.R.C.S., L.S.A.Lond., has been elected Medical Officer of Health for the District of Maryport, vice J. Pearson, M.D., resigned.

TUCK, JOHN, M.R.C.S., has been appointed Medical Officer to the Tambo Hospital, Queensland.

WHEELER, D. M. BRUMWELL, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Union Infirmary, Chelmsford, vice D. Wheeler, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BUCHANAN.—On the 22nd inst., at High-street, Chatham, the wife of Arthur Buchanan, M.D., of a son.

GWYNNE.—On the 20th inst., at Brightfield House, Sheffield, the wife of H. Nelson Gwynne, B.A., M.B., of a daughter.

HALL.—On the 19th inst., at Laurel Villa, Victoria-road, Surbiton, the wife of Edgar A. Hall, M.B., C.M.Edin., of a daughter.

SCOTT.—On the 18th inst., at Carlton Villas, Colney Hatch, the wife of Hugh Scott, M.R.C.S., L.S.A.Lond., &c., of a son.

MARRIAGES.

HOLTHOUSE—HESKETH.—On the 17th inst., at St. John's, Redhill, Surrey, Edwin Hermus Holthouse, M.A., F.R.C.S., second son of Casseton Holthouse, F.R.C.S., to Harriet Emily, eldest daughter of the Rev. Robert Hesketh, Esq., of Earlswood Mount, Redhill.

MCTAVISH—HOOPER.—On the 16th inst., at the Parish Church of Claines, Worcester, Alexander Campbell McTavish, Brigade Surgeon (retired), son of the late Rev. A. McTavish, of Inverchoalain, Argyleshire, to Mary H. Katherine, second daughter of A. C. Hooper, Esq., The Grange, Claines, Worcester.

DEATHS.

GODFREY.—On the 12th inst., at Epsom, Race Godfrey, M.R.C.S., formerly of Bath, in his 92nd year.

HAWKINS.—On the 20th inst., at Grosvenor-street, Cæsar Henry Hawkins, F.R.S., F.R.C.S., and Serjeant-Surgeon to the Queen, in his [illegible] year.

KNAGGS.—On the 17th inst., at Camden-road, N.W., Henry Knaggs, [illegible], aged [illegible].

MORRIS.—On the 11th inst., Henry Morris, F.R.C.P.Ed., late 6th Royal [illegible] and 7th Dragoon Guards, aged 45.

[illegible].—On the 17th inst., at Ashton House, Steeple Ashton, Job [illegible] Seale, M.D., aged 83.

TAYLER.—On the 12th inst., at Bradbourne House, Acton, Charles Alfred Andrews Tayler, M.R.C.S., aged 22.

N.B.—A fee of 2s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

La Gymnastique: Applications Hygiéniques et Médicales. Par Dr. A. Collineau. pp. 324, avec 136 Figures.

BAILLIÈRE, TINDALL, & COX, London.

The Winter Alpine Cure, with Notes on Davos Platz, Wiesen, St. Moritz, and the Maloja. By A. T. T. Wise, M.D. pp. 86.

CHATTO & WINDUS, London.

The Patient's Vade-Mecum. By Wm. Knight, M.R.C.S., and Edw. Knight, L.R.C.P.Ed. pp. 118.

GRIFFIN C., & Co., London.

Year-book of the Scientific and Learned Societies of Great Britain and Ireland. With an Appendix comprising a List of the Leading Scientific Societies throughout the World. First Annual Issue. pp. 226.

HODDER & STOUGHTON, London.

Health Studies. Studies in Life. By H. Sinclair Paterson, M.D. pp. 289–187.

KEENER, W. T., Chicago. TRÜBNER & Co., London.

Medical Education and the Regulation of the Practice of Medicine in the United States and Canada. Prepared by the Illinois Board of Health, and published by permission of the Board. pp. 270.

KEGAN PAUL, TRENCH, & Co., London.

The Foundation of Death: a Study of the Drink Question. By Axel Gustafson. pp. 582.

LEA'S SON & Co., Philadelphia.

Abstract of the Statutes of the United States and of the several States and Territories relating to the Custody of the Insane. By C. F. Folsom, M.D. pp. 111.

LEWIS, H. K., London.

A Statistical Inquiry into the Nature and Treatment of Epilepsy. By A. Hughes Bennett, M.D. pp. 47.

LONGMANS, GREEN, & Co., London.

Notes on Physiology. By Henry Ashby, M.D.Lond. Fourth Edition. pp. 344, with Illustrations.

PUTNAM'S SONS, London & New York.

Student's Manual of Electro-Therapeutics. By R. W. Amidon, M.D. pp. 93, Illustrated.

SMITH, ELDER, & Co., London.

A Treatise on the Theory and Practice of Medicine. By John Syer Bristowe, M.D., LL.D., F.R.S. Fifth Edition. pp. 1240, Illustrated.

A Defence of Harvey as the Discoverer of the Circulation of the Blood, in Reply to Prof. Scalzi. By George Johnson, M.D. pp. 23.

ULLASTRES, E., Barcelona.

Primer Certámen Frenopático Español, celebrado en Manicomio Nueva Belen. pp. 524.

VOSS, LEOPOLD, Hamburg and Leipsig.

Lehrbuch der Physiologie. Neu Herausgegeben, von Dr. A. Gruenhagen. Erste Lieferung.

The Later History of Spirillum Fever in Bombay, 1882–83; by H. V. Carter, M.D.—Nature and Treatment of Asiatic Cholera; by W. Wakefield, M.D.—Librairie de B. Baillière et Fils.—Report on the London Government Bill; by T. Eccleston Gibb.—Memoir on the Nature of Diphtheria; by Drs. H. C. Wood and H. F. Formad.—An Inquiry concerning the relative Influence of the Sex of the Fœtus in Utero on the Condition of the Mother; by J. Stockton-Hough, M.D.—Second Annual Report of the Provincial Board of Health of Ontario.—A few Valuable Hints for the Prevention of Cholera; by Dr. A. Fitzgerald. (Renshaw.)—Wintering Abroad—Mentone and the Riviera; by Dr. A. Drysdale.—The Asclepiad; by Dr. B. W. Richardson, F.R.S.—International Health Exhibition Handbooks: Dress, by E. W. Godwin; Athletics, by Rev. E. Warre; Furniture and Decoration, by R. W. Edis; Healthy and Unhealthy Houses, by W. Rassie; Accidental Injuries, by J. Cantlie; Alcoholic Drinks, by Dr. J. L. W. Thudichum; Infectious Disease and its Prevention, by J. Shirley F. Murphy; Ventilation, Warming, and Lighting, by Capt. Galton; Diet, by A. W. Blyth; Nurseries and Bedrooms, by Mrs. Gladstone; Health in the Workshop, by J. B. Lukeman.—Proceedings of the Society for the Study and Cure of Inebriety. (Lewis.)—Popular Sketch of the Bath Mineral Waters; by Louis King, M.R.C.S.; Second Edition.—Madère, étudiée comme Station d'Hiver et d'Eté; par le Dr. J. Goldschmidt; Deuxième Edition.—A Nomenclature of Ophthalmology; by S. M. Burnett, M.D.—Longman's Magazine, August.—Leisure Hour, Boy's Own Paper, Girl's Own Paper, and Sunday at Home, for August.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 24th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 18	30·03	W.	62	57	114	70	53	·08	Fine
,, 19	30·10	W.	60	55	115	69	51	..	Cloudy
,, 20	30·11	W.	67	57	100	70	53	·04	Hazy
,, 21	29·95	S.W.	63	60	93	71	57	..	Cloudy
,, 22	30·00	W.	64	61	101	74	57	·20	Overcast
,, 23	29·93	W.	63	61	107	72	61	..	Overcast
,, 24	29·76	W.	62	56	113	61	51	..	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE DRAINAGE OF SHREWSBURY.

A CORRESPONDENT writes that a good work would be accomplished if the people of Shrewsbury could be persuaded to direct their drainage from the Severn. He states that the fine old town is rendered a disgrace to civilisation, and that on a recent visit to the place, the water being low, six or eight discharge pipes were visible, emitting fæcal matter with great rapidity. His remonstrance to a friend elicited the reply that "the next storm would clear it all away." This water, filtered, forms the chief supply for all purposes when it reaches Worcester! He was informed that typhoid exists in Shrewsbury at the present time.

PURE OR IMPURE?

To the Editor of THE LANCET.

SIR,—On the coast a large fishing village is partly divided by a brook or beck, which commences amongst the hills a few miles distant, and flows into the sea a little below the village. This beck has been the water-supply of the inhabitants for centuries, and still provides the only water for drinking and all domestic purposes. There are several respectable residents—some shipowners, captains' families, and others.

It has been decided by the local board of a village about two miles distant to carry a drain the whole length of their village, and then, by a descent, to convey the contents into a branch stream, which flows onwards, passing into the waters which go on to the first-named village. This drain is to carry all offensive matters from the waterclosets, privies, pigstyes, slaughterhouses, and other impurities. Their present medical officer of health states that the sewage matters will have about two miles to flow, and cannot in any way tend to deteriorate the "pure water." There is something exceedingly repulsive in the idea of such proceedings.

Will you please state if such a course is justifiable, and whether the filth will not tend to make the waters unfit for use.—Yours truly,

July 14th, 1884. ONE INTERESTED.

*** The arrangement as described will be in violation of the Rivers Pollution Act, and it will also be unjustifiable. The purification which it is alleged will take place is denied by the Rivers Pollution Commissioners, and appeal should be made to the Local Government Board against the contemplated works.—ED. L.

"A TAILED CHILD."

To the Editor of THE LANCET.

SIR,—With reference to the above subject, which appeared in your issue of July 5th, p. 46, I think those interested in the subject may find several well authenticated cases noted in the Medical Digest, section 3: 5.

I am, Sir, yours truly,

RICHARD NEALE, M.D.Lond.

Boundary-road, N.W., July 18th, 1884.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

AT the examination for the Membership, on July 18th, the following were the questions put in Surgical Anatomy and the Principles and Practice of Surgery, four of which were required to be answered:—

1. Mention the several structures which must be divided in removal of one-half of the inferior maxilla.
2. Describe the ligaments of the hip-joint, and state how they are affected in dislocation upon the dorsum ilii.
3. Describe the treatment you would adopt in a case of extensive lacerated wound of the scalp, and mention the evil consequences which may follow this injury.
4. Describe the varieties of keratitis.
5. State the various complications of fracture of the ribs, and their treatment.
6. Mention the complications that may occur in the course of gonorrhœa in the male and female respectively. Explain their modes of origin.

On the 19th, answers to three of the following questions on the Principles and Practice of Medicine were required:—

1. Discuss the symptoms and production of general dropsy, indicating the causes on which it may depend, the manner in which the several varieties can be distinguished, and the treatment called for in different circumstances.
2. What are the causes and symptoms of Bell's paralysis, or paralysis of the portio dura? Point out the distinctions between this condition and the paralysis observed in hemiplegia.
3. What are the causes, signs, and symptoms of pneumothorax?
4. State the therapeutical effects of the following drugs, and mention their officinal preparations, and their doses when for internal administration: silver, lead, zinc, antimony, digitalis, colchicum, belladonna, and stramonium.

The questions on Midwifery and the Diseases of Women were as subjoined, answers to three of them being compulsory:—

1. Describe the mechanism of labour with the child in abdomino-anterior position and the breech presenting.
2. What means would you adopt with a view to prevent hæmorrhage after labour?
3. What is meant by concealed accidental hæmorrhage? What are its symptoms, and how would you treat it?
4. What conditions produce enlargement of the cervix uteri? How would you distinguish between them?

A CASE OF CHOLERAIC DIARRHŒA.

To the Editor of THE LANCET.

SIR,—On Sunday, the 13th inst., I was called to see G. B——, a married man, aged twenty-nine. I found him suffering from profuse watery diarrhœa and vomiting, with coldness of the extremities, cramps in the abdominal muscles and in the calves of the legs, and symptoms of collapse. He said he was quite well in the morning, and partook of a dinner of roast beef, potatoes, peas, and Yorkshire pudding, with beer. After dinner he laid down and slept for two hours and a half. On awaking he felt an inclination to go to stool, and on going to the closet a profuse watery motion of a yellowish-white colour "ran from him for ten minutes like a tap," without pain. The attacks of purging recurred every few minutes until he became so weak in two hours that he was unable to get up without fainting, and vomiting set in, with cramps in the bowels, and in the calves of the legs and soles of the feet. I ordered a large mustard plaster to be applied over the whole of the abdomen, and kept on as long as it could be borne, and gave half-drachm doses of a 1-in-20 solution of carbolic acid (B.P.), 15-minim doses of the solution of morphia, and 20-minim doses of the aromatic spirit of ammonia, in an effervescing mixture, every two hours. I also ordered a diet of soda-water and milk exclusively. The first dose gave relief to the cramps, and stopped the diarrhœa and vomiting. In six hours he felt comparatively well, and by the time six doses had been taken he was able to come down stairs, feeling all right, except for a little weakness of the legs.

I am, Sir, yours faithfully,

Clayton-le-Moors, July 20th, 1884. C. R. ILLINGWORTH, M.D.Ed.

KOUSSINATE OF SODA.

G. B. B. desires to know what is the dose and the best form in which to prescribe the koussinate of soda.

Incognito.—We do not think the present state of our knowledge of the subject would support the ideas entertained by our correspondent.

THE PINK FUND.

To the Editor of THE LANCET.

SIR,—The following additions to the above Fund have been received up to July 23rd:—H. de Vaux Balbirnie, Esq. (Walkley), £1; J. L. Jardine, Esq. (Capel Docking), 5*s.*; R. Palgrave Simpson, Esq. (Weymouth), 10*s.*; A. J. (Matlock), £1; Anonymous, (Warminster), 10*s.*; Thos. Smith, Esq. (Stratford-place), £3 3*s.*; W. R. Parker, Esq. (Liverpool), 10*s.*; Francis Walmesley, Esq. (Belmont), £1 1*s.*; Francis Vacher, M.D., £1 1*s.*; A. J. Newman, Esq. (St. Martin's, Bowness), 10*s.*

I am, Sir, yours truly,

Soho-square, July 29th, 1884. JOSEPH ROGERS.

Durham.—Both are good. The prestige of Durham is, of course, not equal to that of the other university mentioned.

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NON-PAYMENT OF A LOCUM TENENS.

A CORRESPONDENT sends us a curious account of his failure to get any payment from a practitioner whom he had served faithfully as a locum tenens during a long and somewhat mysterious absence. He has been at much expense to enforce payment of his claims. But law has not helped him. He should persevere, and, failing, place the facts before the Medical Council. He has reason to think that others have been similarly treated.

An Old Assistant will see that we have dealt with Sir Lyon Playfair's statements in a separate annotation. Our correspondent is a little shocked at Sir Lyon's representation of the risk of medical men not being forthcoming in sufficient numbers (as he well may be); but some sentences of his letter are a little too warm.

THE WHEATLEY MEMORIAL FUND.

To the Editor of THE LANCET.

SIR,—The committee of the Wheatley Memorial Fund have now closed the subscription list, and have desired me to announce a final list of donors, which I shall be obliged by your inserting in your next issue. The committee also authorise me to beg leave to publish the balance-sheet of the treasurer of the Fund, and to inform the subscribers that the treasurer has handed over to the beneficiaires of the Fund, after paying expenses, £804 6*s.* 1*d.*, in the proportion of two-thirds to Miss Maria Wheatley, the sister, and one-third to Miss Mary Caroline Wheatley, the niece, of the late Mr. B. R. Wheatley.

I am, Sir, yours faithfully,

Berners-street, W., July 21st, 1884. BERKELEY HILL, Hon. Sec.

BALANCE-SHEET.

Dr.				*Cr.*		
Subscriptions	£809	15	0	Postage	£7	10	7
Paid for postage by Dr. Wilson Fox and the treasurer	7	10	7	Printing, stationery, &c.	5	7	10
				Bank charges	0	1	1
				Cash in hand	804	6	1
	£817	5	7		£817	5	7

July 21st, 1884. (Signed) J. COOPER FORSTER, Treasurer.

FINAL LIST—NAMES NOT YET ANNOUNCED.

Mr. J. Mencrieff Arnott.	£10	10	0	Dr. Burdon Sanderson ..	£2	2	0
Dr. Bigelow, Boston, U.S.A.	10	10	0	Dr. Sankey	2	2	0
Dr. Hare	7	7	0	Mr. W. S. Savory (second donation)	2	2	0
Dr. Wilson Fox (additional for postage) ..	6	9	7	Dr. Shepherd	2	2	0
Dr. G. Johnson (second donation)	5	5	0	Sir Spencer Wells, Bart. (second donation) ..	2	2	0
Dr. Lees	5	5	0	Dr. Wilks	2	2	0
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Dr. Russell Reynolds ..	5	5	0	Dr. Ballard	1	1	0
Dr. Waiche	5	5	0	Dr. Barratt	1	1	0
Dr. Garrod	5	0	0	Dr. F. Beach	1	1	0
Dr. Blandford	3	3	0	Mr. E. U. Bury	1	1	0
Mr. Thomas Bryant ..	3	3	0	Dr. Biss	1	1	0
Mr. MacCarthy	3	3	0	Dr. Mitchell Bruce ..	1	1	0
Dr. Ringer	3	3	0	Mr. George Eastes ..	1	1	0
Dr. Graham Balfour ..	2	2	0	Dr. de Fonmartin ..	1	1	0
Mr. Richard Barwell ..	2	2	0	Mr. Cooper Forster (second donation, treasurer's postage)	1	1	0
Sir William Bowman, Bt. (second donation) ..	2	2	0	Mr. John Gay	1	1	0
Dr. Braidbank	2	2	0	Dr. Goodhart	1	1	0
Dr. Lauder Brunton ..	2	2	0	Mr. W. H. A. Jacobson ..	1	1	0
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Dr. Sydney Coupland ..	2	2	0	Sir William MacCormac ..	1	1	0
Mr. C. C. Dent	2	2	0	Mr. H. Page	1	1	0
Dr. Dickinson	2	2	0	Dr. T. Niven, Fife ..	1	1	0
Dr. Fenwick	2	2	0	Mrs. Laidlaw Purves ..	1	1	0
Dr. Fish	2	2	0	Dr. Savage	1	1	0
Sir William Gull, Bart. (second donation) ..	2	2	0	Dr. Semple	1	1	0
Dr. Hawksley	2	2	0	Dr. Spitta	1	1	0
Mr. Timothy Holmes ..	2	2	0	Mr. Waren Tay	1	1	0
Dr. Marcet	2	2	0	Dr. Frederic Taylor ..	1	1	0
Mr. John Marshall (second donation) ..	2	2	0	Mr. Thomas Taylor ..	1	1	0
Dr. John Ogle	2	2	0	Mr. C. C. Tomes	1	1	0
Sir James Paget, Bart. (second donation) ..	2	2	0	Mr. Edgcumbe Venning ..	1	1	0
Dr. Parkin	2	2	0	Dr. Hermann Weber ..	1	1	0
Dr. Reid	2	2	0	Dr. Samuel West	1	1	0
Dr. Wade	2	2	0		£172	2	7

STREET PAVING.

To the Editor of THE LANCET.

SIR,—At the present season, when the imperative necessity of immediately removing anything which may contaminate the atmosphere appears paramount for the dissemination of the germs of disease is fully recognised, is it not much to be desired that our streets, and especially our back streets and slums, should be more generally paved with some material, such as asphalte, which, being non-absorbent and impervious, cannot retain any liquid impurity, while its perfectly smooth and level surface is not only washed down by every shower of rain, but, offering no obstruction to the free action of the broom, is kept perfectly clean with the greatest ease, preserving the atmosphere in sweet and wholesome condition?

I am, Sir, your obedient servant,

July 17th, 1884. SANITAS.

W. B. Holderness.—It would depend upon the relative amount of Condy's fluid and stout in the mixture. If the stout were in excess it would reduce all the permanganate to the state of oxide. In that case the remaining organic matter should be destroyed by hydrochloric acid and chlorate of potash, and the usual tests for manganese then applied. If there is any permanganate remaining in the original mixture, the liquid should be saturated with carbonate of potash, filtered, the process repeated, the filtrate evaporated, and examination be made for crystals of potassic permanganate.

Mr. Roocroft.—Next week.

EXCISION OF SPINA BIFIDA.

To the Editor of THE LANCET.

SIR,—I beg to report a case of successful excision of a spinal hernia, upon which I operated a short time ago.

A child aged fourteen days was brought to my surgery, suffering from a spina bifida, the hernia being about the size of a pigeon's egg, situated over the fourth lumbar vertebra. It was covered by the whole thickness of integuments, having a narrow base, tense and elastic, and becoming very much more so when the child cried. There was no incontinence of urine or fæces, nor paralysis of the lower limbs, the child being healthy and well developed in every other respect. I explained to the mother the great danger there might be in interference, but she particularly desired, as she expressed it, "to have something done for the child." Having cautioned her again as to the possibility of the child dying immediately of convulsions, I proceeded to tap the tumour with one of Dr. Southey's trocars and cannula, and drew off about two drachms of spinal fluid. I then injected fifteen drops of the tincture of iodine with forty-five drops of water, afterwards applying a compress over the hernia, and sent the child home, with instructions to return in a couple of days, it being none the worse for the first tapping. I repeated the injection a second time, but of a strength of equal parts, again applying the compress. On the child presenting itself the third time, I was pleased to find a diffused inflammation over the parts and a decided contraction of the tumour, and was able to make pressure over the hernia without causing any symptoms of convulsions, which led me to believe there were no important nerves implicated. I therefore injected a drachm of tincture of iodine (B.P.), having previously drawn off a like quantity of spinal fluid; and having tightly compressed the parts, I once more told the nurse to bring the child in a couple of days, at which time I found the hernia contracted to the size of a cherry. I now applied a clamp, specially made for the case by Messrs. Woods of York, with the intention of closing the neck of the sac, yet not sufficiently tight as to interfere with the circulation, and each day I continued to tighten the clamp. On the fourth day, with a sharp bistoury I cut off the tumour, when there was some little hæmorrhage. I therefore simply tightened the clamp, and left it in position twenty-four hours longer, when I removed it, and was pleased to find the opening between the spinal column and the tumour entirely obliterated. From first to last the child never showed a bad symptom resulting from any portion of the operation, sleeping and taking the breast well.

I am, Sir, yours truly,

Snenton, Nottingham, July, 15th, 1884. ROBT. HOWSON.

Mr. S. H. Little.—The case would be very remarkable only if the two spleens were of equal, or nearly equal, size.

THE ONTARIO PUBLIC HEALTH ACT.

To the Editor of THE LANCET.

SIR,—Will you allow me a brief space to make a few remarks regarding the notice of the Ontario Public Health Act of 1884 which appeared in your issue of May 10th? I would have made this request earlier had I not been absent from home.

Your review, while on the whole favourable, takes exception to the "soil-pipe going up inside the dwelling, instead of in a chase outside." The reason for this you anticipate in your reference to the climate. It has been found by experience that we cannot run soil-pipes on the outer side of house walls in this country, or the northern portion of the United States. You may have some idea of the effects of our long-continued frost when you are informed that the ground freezes solid to a depth of over three feet. When we have thaws in the day-time and keen frosts at night we have trouble even with our rain-pipes. You would hardly imagine this from the reports of our bright, pleasant climate; the atmosphere is bright and dry, but there is long continuance of sharp frost at times. When you object to the soil-pipe being inside the house at all, you will *a fortiori* endorse the necessity there was for legislative enactment providing that all such soil-pipes should be continued up through the roof, and should have an outside ventilator allowing a current of fresh air to circulate through the drainage system of the house. The same reasons account for the difference in the treatment of the bath waste-pipe. The ventilation of drains at the ground level I consider dangerous; I have frequently seen such ventilators acting as outlets. I am glad to say as regards the ventilation of sewers on the level of the road-bed, that no less an authority than Mr. Sedgwick Saunders, through the medium of THE LANCET, pointed out some time ago the evil results arising from this practice in certain instances. You will find further arguments against this plan of drain and sewer ventilation, and in support of overhead ventilation of sewers, in a paper on that subject read by me before the American Public Health Association, and published in our second annual report, of which paper I send you a copy.

I am, Sir, yours truly,

Toronto, June 30th, 1884. WM. OLDRIGHT.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Col. Sir F. Bolton, London; Sir Edmund Lechmere; Dr. Champneys; Dr. A. B. Cook, Louisville; Mr. Cantlie, London; Mr. Stretton, Kidderminter; Mr. H. H. Moore, Darwen; Dr. Neale, London; Mr. F. C. Lucas, Edinburgh; Dr. Kirk, Partick; Messrs. Newbery and Son, London; Dr. Watson, Weirfield; Mr. Ellis, Gloucester; Dr. Illingworth, Clayton-le-Moors; Mr. J. W. Allan, Belvidere; Dr. MacGeagh, Kingston; Mr. Holderness, Windsor; Mr. Christiansen; Mr. Rundle, Southsea; Surgeon-General Gilbourne; Mrs. Drake, San Remo; Mr. Malcolm Morris, London; Mr. Dingley, King's-cross; Mr. Aste; Mr. Macfarlane, Hay; Mr. Eberle, Thirsk; Mr. Berridge, Loughborough; Mr. Jones, Dowlais; Mr. Kerr, Halesowen; Mr. Flint, Westgate-on-Sea; Mr. Johnson Martin, Bolton; Mr. Barr, Liverpool; Mr. Mason, Sudbury; Dr. Marsden, London; Dr. Clark, Tunbridge Wells; Dr. Hassall, Lago Maggiore; Mr. A. W. M. Robson, Leeds; Mr. R. Main, East Ilsley; Dr. Wilson, Cheltenham; Mr. Vanhouse, Lewisham; Dr. Macdougall, Carlisle; Dr. Harkin, Belfast; Mr. Standage, London; Dr. G. de C. Morris, London; Mr. Rideal, London; Mr. F. Lankester, London; Dr. Truman, Nottingham; Messrs. Arnold and Son, London; Dr. Reid, London; Mr. Antrobus; Dr. Squire, London; Dr. Hilliard, Aylesbury; Mr. Davies, Cheltenham; Mr. Jones, Sheffield; Messrs. Brown and Sons, Hull; Dr. Tennent, Aspatria; Mr. Nicholls; Messrs. Lee and Martin, Birmingham; Messrs. Lindsey and Son, London; Mr. Smith, Halifax; Messrs. Ingram and Royle, London; Mr. Pring, Putney; Dr. Caton, Liverpool; Mr. Graham, Wigan; Dr. Steele, Zürich; Mr. Fell, London; Dr. Wakefield, Aix-les-Bains; Dr. Campbell, Garlands; Mr. Terry, Winchester; Mr. Henry Lee, London; Dr. Weaver, Southport; Dr. Nixon, Dublin; Dr. Cutter, New York; Dr. Faulkner, London; Med. Student; A.H.; Verax; Incognito; M.; Sanitas; Alpha, Pennerstone; Durham; Scotus; L. E. J., Radcliffe.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Berry, Keeley; Messrs. Kilner and Co., London; Mr. Brown, Westgate-on-Sea; Dr. Gwynn, Cannock; Mr. Harris, Pontypool; Dr. Needham, Gloucester; Mr. Larmuth, Manchester; Mr. Cowland, Launceston; Mr. Armstrong, Manchester; Dr. Adams, Maidstone; Mr. Ruspini, Knutsford; Messrs. Atkinson and Co., Kendal; Mr. Marsh, Hindley; Dr. Duckworth, London; Dr. Lintock, Church Stretton; Mr. Scriven, Duffield; Messrs. Maclachlan and Stewart, Edinburgh; Dr. Woakes, London; Mr. Constable, Edinburgh; Mr. Parrott, Aylesbury; Mr. White, Bayswater; Messrs. Isaacs and Co., London; Mr. Marrett, Peterborough; Mr. Casella, London; Mrs. Thomson, Abergavenny; Dr. Colewell, Surbiton; Messrs. Bell and Co., Edinburgh; Messrs. Maguire and Son, Dublin; Mr. Abbs, Dewsbury; Messrs. Goddard and Massey, Nottingham; Dr. Parry, Pontycymer; Messrs. Baily and Co., Cambridge; Mr. Hollins; Mr. Chitty, Hastings; Mr. Reynolds, Castle Donnington; Mr. Buckley, Bulwell; Mrs. Cherry, Plymouth; Mr. Sergeant, Camden Town; Mr. Jefferson, York; Dr. Campbell, Carlisle; Messrs. Wyley and Co., Coventry; Dr. Martin, Landore; Messrs. Cassell and Co., London; Messrs. Wilson and Co., Brentwood; Numa, Liverpool; Castle; E. R., Brighton; Alpha, Dudley; A. B.; Mid, London; M.R.C.S., Bath; R. S., Epperstone; Substitute; Surgeon, Southport; Alpha, Finsbury-park; A., Oxford; Medicus, Ketton; M. B. B.; S. C.; Delta, York; P. D. H., Weymouth; F.R.C.S., Birmingham; Medicus, Chesterfield; Medicus, London; H. S., Limehouse; Epsilon.

Weymouth and Dorset Guardian, Calcutta Englishman, Money Market Review, Galignani's Messenger, Liverpool Courier, Cork Constitution, Western Morning News, London Commercial Record, &c., received.

Medical Diary for the ensuing Week.

Monday, July 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, July 29.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, July 30.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, July 31.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, August 1.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, August 2.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

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Clinical Lecture
ON
CHRONIC JOINT DISEASE.

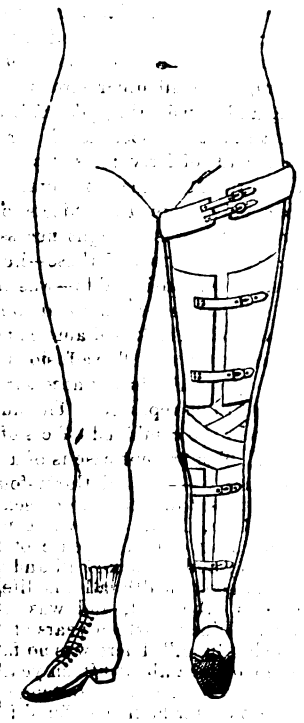
BY RICHARD BARWELL, F.R.C.S.,
SENIOR SURGEON TO CHARING-CROSS HOSPITAL.

GENTLEMEN,—When last I addressed you on the subject of joint disease, I called your attention to a certain mode of treating acute synovitis by means of emptying the distended sac. I now wish to say a few words to you concerning the management of chronic articular disease.

In its earlier phases, while cure with perfect conservation of movement is possible, that termination should always be aimed at, and may very often be attained. The forms of malady which are most common, and to which I now more particularly refer, are those which attack children from one year to twelve or even fourteen years of age, and which very generally are combined with a strumous or scrofulous habit of body. Now, please pay especial attention to this. These diseases, although arising in strumous children, are very rarely indeed tubercular in origin. Struma is a certain habit of body, a certain faulty method of forming and nourishing its tissues, which, thus produced and sustained, are not diseased, but are apt to respond to any slight irritation by sluggish and prolonged inflammations, the immediate products of which have little or no tendency to higher development, but rather to certain forms of degeneration—suppurative, fatty, caseous, and tubercular. In certain parts of the body tubercle appears with great facility, therefore very frequently; in other parts with very great difficulty; and among these parts the synovial membrane is pre-eminent. I would not give you to understand that in joints long the subject of chronic strumous inflammation tubercle is never to be found; but when so found, it is tubercle not of synovial membrane, but of old inflammatory products. Contrast this with the mode of tuberculosis in internal organs, as, for instance, lungs; in them tubercle appears simultaneously, or almost simultaneously, with some very slight inflammatory change of tissue; it is impossible to say whether the deposit of some minute tubercular element is or is not the origin of the disease. Such a state of things is never found in a synovial membane nor in the joint end of a bone; in those parts tubercle, if it appear at all, is a late production—the terminal, and not the initial point of a morbid process.[1] These distinctions are not mere pedantic hair-splitting; they underlie, in fact, the question whether treatment of strumous joint disease is of any great value; for if such disease were the result of tubercle, the assertion, made a minute or two ago, that cure may be often attained, would be false. Were we not here in England restricted from the most valuable of all modes of pathological research, I believe I should be able to put this question at rest; as it is I must limit myself to examining certain experiments made in Germany with tuberculous materials.

"Dr. Schüller of Greifswald injected such matters into the lungs of twenty-four animals (dogs and rabbits), and at the same time, or very shortly after, severely injured the right knee-joint by blows with a mallet. Of these injured joints only six showed some spots, the most characteristic of which are described as "perhaps initial tubercle," and some as "heaped-up epithelioid cells," and "colossal giant cells," and this although in nearly all these animals the internal organs were thickly beset with tubercle. There is, in fact, no doubt that these creatures were thoroughly tuberculised; yet with such difficulty do joint structures admit of tuberculisation, that no instance of typically characteristic tubercle could be found in the injured joints. But more than this, although several of these animals died of what might almost be called tubercular intoxication, not a single uninjured joint out of the 264[2] showed any trace of tubercular affection. Whence we must conclude that a tubercular state of body does not produce joint disease—in other words, the earlier phases of chronic joint disease are not tubercular. Therefore, gentlemen, we will take it that the cases I show you are strumous but not tuberculous, and therefore we may assume that under favourable circumstances they are curable. It is now my business to tell you how to make the circumstances favourable and how to utilise them for your patient's benefit.

First, then, you will have to make out whether the malady originates in the bone or the synovial membrane. It is in the first stage of joint disease quite easy to do so, and I have again and again explained to you how this is to be done. We need not now occupy our time on that subject; though, as you will shortly see, several important points of treatment depend on the diagnosis. In either bone or synovial malady you have to do with a remarkably obstinate disease, whose sluggish character depends upon a state of bodily malnutrition which we call struma, and one of the first essentials towards improving this condition is to abstain from confining the children to one room or ward, or still more to bed, but to give them plenty of fresh air and exercise. When the affected joint is one of the upper extremity this is easy; but if it be one of the lower some difficulties present themselves, for we must so manage that, while moving about, the diseased joint is kept at complete rest, and that no weight be thrown on the joint surface. A large number of splints to carry out these indications have been invented. I have used at different times Taylor's, Sayre's, Thomas's, and others, but the apparatus which above all others I prefer is one to which my attention was called by Dr. von Wahl of Derpat, and which was invented by Dr. Dumbrowski of that university. It is thus made for the knee: To the knee segments above and below the joint poroplastic felt or leather is carefully moulded by hand and bandage; while these are hardening the sound limb is placed with its posterior aspect on a piece of paper, and a tracing is made of its inner and outer aspects. The circumference of the top of the thigh is taken in an oblique direction—i.e., from the perineum to a point a little above the great trochanter. Now the splint-like moulds are removed, and the rest is done by the instrument-maker. He bends two flat bars of steel or of iron (plate gauge No. 10 or 16), about three-quarters of an inch broad, to the shape of the tracings, only with a larger divergence at the knee, and taking care that they are about two or two and a half inches longer than the limb. These are to be riveted to the poroplastic or leather, which are likewise to be provided with straps. The upper end of the bars are made fast to an ischio-iliac ring, well padded and provided in front with a hinge and flap. Their lower ends are fastened by a pivot joint to a sufficiently large plate that underlies the sole. If instead of the knee the ankle is diseased, the splint is to be modified thus. A poroplastic socket is moulded on the foot and rendered motionless by a strap riveted to the metal uprights, while hinges are introduced in the iron opposite the knee, so as to permit free movement of that joint.



Now, to put on this appliance, the felt or leather sockets are to be softened again, the flap arrangement of the ischio-iliac ring is to be opened, the limb is easily introduced, the various straps are tightened, and the patient left at rest till

[1] Neither must we take every non-vascular spot containing one or two giant cells in the midst of old granulation tissue to be tubercle; certain points are, by the very mode in which that tissue is formed, excluded from the direct area of circulation; and wherever from such cause nutrition becomes defective, giant cells are apt to form, and these in their growth push aside and somewhat flatten the surrounding cells.

[2] That is, reckoning three joints to each of the ninety-six limbs and subtracting twenty-four for the injured right knee of each animal.

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the rockets have hardened.[3] In a day or two a high shoe is to be provided for the sound limb so as to make it of the same length as the splint, and the patient must be taught to walk slowly at first, and probably with crutches. These he soon learns to discard, and to walk with surprising facility and comfort, and with arms perfectly free for any occupation or amusement. Observe that no motion can possibly take place at the joint, nor can any pressure of the body weight fall upon it; in fact, the diseased joint is at perfect rest, while the remainder of the body is in good exercise. Moreover, the surface of the articulation is uncovered, permitting any desirable treatment; but I see that I must defer these considerations to another very early opportunity, when I shall again refer to the subject.

ENDOCARDITIS COMPLICATED BY TUBERCULAR PLEURISY (WITH EFFUSION).[1]

BY SIDNEY COUPLAND, M.D., F.R.C.P.,
PHYSICIAN TO THE MIDDLESEX HOSPITAL.

IT would be a bold assertion to make that pleurisy does not commonly complicate chronic valvular disease of the heart, and I am not prepared to make it. The case is, however, I think, different with pleurisies which lead to large effusion, and far more important, because of the interference with the heart's action they produce. Setting aside the dropsical accumulations of fluid which occur in the pleura, as in all other serous sacs, in advanced cardiac disease, and considering *pleuritic* effusions only, I can safely assert that the association is rare. For on glancing through the records of forty cases of pleurisy with effusion under my care at the Middlesex Hospital during the past seven years, three only were in subjects of chronic cardiac disease. Paracentesis was thought necessary in twenty-two of these cases; and in two of these—i.e., cases in which mostly the effusion was considerable—was there heart disease present. One was the case I am about to relate. The other was in an old man with thickened aortic and mitral valves and general arterial atheroma. The effusion in his case was hæmorrhagic. Tapping was absolutely necessary for the relief of dyspnœa, and had to be repeated. The fluid became purulent, and he died from the combined effects of exhaustion and his cardiac lesion. The present case is of a different class.

Samuel S——, aged thirty-four, single, a house painter, was admitted into the Middlesex Hospital under my care on March 10th, 1884. He was complaining of a troublesome dry hacking cough, a sense of tightness in the chest and coldness; and he looked ill and worn. He said that he had enjoyed good health all his life, except that he was very liable to take cold, and was frequently troubled with a cough. When thirteen years of age he had "inflammation of the left lung." There was no family history of tubercle. He had gonorrhœa about fifteen years ago, but never contracted syphilis. His habits were temperate. During the whole of the past winter he had suffered from a cough, which a month ago became worse, and after one paroxysm he spat up a small quantity (about two ounces) of blood. At the same time he had been troubled with night sweatings. He seemed to lose sensation on the left side; he experienced a dull heavy feeling, "like a piece of wood" he expressed it, varied by attacks of sharp cutting pain over the lower ribs on exposure to cold. He had further been growing progressively weaker and losing flesh. He was a man of sallow complexion, unhealthy aspect, moist skin, and ill-nourished. Examination of the chest revealed a marked difference between the two sides. Thus, the left front was decidedly flatter than the right, which appeared abnormally bulged; and the inspiratory expansion was much less on the left than on the right. On percussion over the left front, resonance was impaired, merging in the axilla to absolute dulness. The right front and axilla were fully resonant. There was no appreciable difference, however, in the degree of vocal fremitus. The breathing was harsh, with prolonged expiration over both fronts and in right axilla; but in left axilla it was weak. A few scattered rhonchi were also audible. Over the back the contrast was more marked, the left being absolutely dull throughout and the right resonant. The dulness did not vary with position. Vocal fremitus was wholly absent over the lower half of the left back. The breath sounds were harsh, expiratory murmur prolonged and masked by sonorosibilant rhonchi over the right back; faint but somewhat bronchial in character over the left back, particularly at the angle of the scapula, where the breathing was intensely bronchial. At this spot also the vocal resonance was ægophonic. The heart's apex beat could not be defined, but a faint wave of pulsation was visible at the epigastrium. The carotid and subclavian arteries pulsated violently, and the radial pulse was collapsing but regular (84). The area of cardiac dulness began above at the third interspace, and did not extend beyond the left border of the sternum; outwards it merged in the axillary dulness. At the apex a soft systolic bruit was audible. At the second right (or aortic) cartilage was heard a well-marked blowing systolic bruit and a musical diastolic murmur. Both these murmurs were traceable down the sternum; and the systolic one could be heard in the carotids, where no second sound was audible. The pulmonary second sound was plainly developed at the third left cartilage and at the apex. The abdominal walls were tense. The hepatic area of dulness was normal, and the splenic margin could not be felt. The urine was high-coloured, turbid, with copious deposit of lithates; sp. gr. 1031, free from sugar or albumen. The expectoration was scanty and mucoid. The temperature ranged from 100·2° to 100·8° (evening).

The diagnosis was: aortic valvular disease, causing both obstruction and regurgitation, and, from entire absence of second sound in the carotids, probably of considerable degree; slight mitral regurgitation, possibly secondary to the aortic disease; pleurisy, with effusion on the left side of some standing, and consequent compression of lung; compensatory emphysema and slight bronchial catarrh on the right side. An exploratory puncture on the 11th was made with a hypodermic syringe, and the presence of a serous effusion in the left pleura was confirmed. The temperature during the next two days was above the normal, and from 1° to 2° higher in the evening than the morning. On the 12th breathing was rather laboured (30); pulse 90, regular; and he complained of being faint. He had been prescribed a mixture containing iodide of potassium, ipecacuanha, and squill. On the 13th, as he again showed a tendency to syncope, and the physical signs indicated no diminution in the effusion, it was decided to withdraw the fluid, and in order that this might be done with the least amount of disturbance to the heart, one of Southey's fine trocars was introduced into the chest in the sixth interspace, mid-axilla, and the fluid allowed to flow through a fine tube. By this means sixty-seven ounces of rather high-coloured serum were withdrawn in the space of two hours and forty minutes, when the flow ceased. He was greatly relieved by the tapping, having complained much during the previous night of the pain and pressure in the left side, which now ceased to trouble him. The next day it was noted that although the cardiac sounds were louder and the murmurs unaltered, the apex beat, hitherto obscured, was appreciable in the fifth interspace, an inch and a quarter below and one inch within the nipple. Over the left back resonance had returned as far as the angle of the scapula, but below that point and in the axilla dulness persisted. The ægophony had disappeared, but bronchial breathing remained, and in addition some fine friction sounds could be detected in the axilla. The breathing was easier and the cough lower. The skin was moist, and he still had some sweating at night; the temperature still maintained a level of about 99° in the morning and 101° at night. (See Chart.)

There is no need to enter fully into the daily detail of the case, which remained for some time in a stationary condition, the signs pointing to a certain amount of reaccumulation of fluid, the dulness and bronchial breathing never clearing up, and the sense of constriction being again complained of. In fact, there was no evidence of re-expansion of the lung, but rather of a slowly continuous contraction; for on the 25th it was noted that the gastric resonance reached as high as the seventh rib in the axilla, the epigastric pulsation of the heart was also plain, and the apex beat had undergone no change in position. Vocal fremitus had slightly returned over the left back, and the friction rales had mostly gone. Moreover, his cough remained very troublesome, and had assumed a clanging

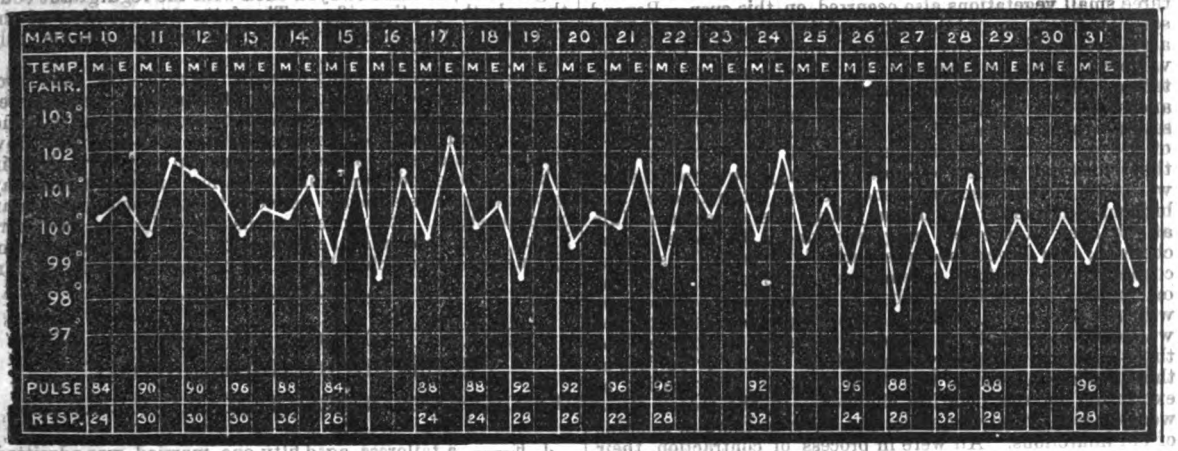
[3] If the joint have become bent, it must be straightened after the manner to be hereafter described.

[1] Read before the Cambridgeshire and Huntingdonshire Branch of the British Medical Association.

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character. It was further noted that the systolic murmur at the aortic cartilage was followed by a sharp sound, the diastolic bruit being almost inaudible, but heard at the mid-sternum from the third to the fifth cartilages.

On April 3rd, in spite of inhalations and sedatives, the cough troubled him a great deal, and also the constriction across the chest. Examination failed to detect any additional signs, certainly nothing to suggest the presence of a deep-seated thoracic aneurysm, or other source of pressure on the air-passage exciting the cough. Dr. Finlay, who took charge of the ward later, made a laryngoscopic examination with a negative result. The temperature chart still showed the same character of continued pyrexia, but there was no appreciable increase in the loss of flesh. The friction sounds had returned, and were heard during the remainder of his stay in the hospital; at first fairly universal, they became gradually limited to the axillary region. It was to the persistence of this pleurisy that was attributable the stabbing pain in the left shoulder complained of from April 20th to the 23rd. On the 24th it was noted that over the left back there were still dulness and diminution of vocal fremitus; fine friction sounds were also audible. The breathing was no longer bronchial, but towards the left axilla it became harsh, with prolonged expiration. As to the cardiac signs, it was again observed that the diastolic bruit, which had lost its musical character, was best heard over the sternum, about the third cartilage. Also that the soft systolic bruit at the apex was conducted towards the axilla. He had now been on tonics for about a week, and he was allowed to get



up for a short time, and his diet was increased. Although he remained anæmic and sallow, and still complained at times of a dragging pain in the left chest, his general state so much improved that I sent him to a convalescent home. He left the hospital on May 15th; the dulness over the left lung, except at the apex and in front, not having altered, the breath-sounds remaining weak and distant, and friction being still audible. Vocal fremitus was increased over the left front, diminished at the back; but vocal resonance was there in excess. The cardiac condition was unaltered.

I may pause here in the record to explain the view that one was almost compelled to take from the inveteracy of the pleurisy and the accompanying pyrexia. In the first place, it was tolerably clear that the pleurisy had no connexion with the cardiac disease. When and how the valve mischief originated it was not possible to say, nor indeed could a date be positively affixed to the attack of pleurisy. At any rate, the onset of the latter must have dated back many months; and it was probably partly an increase in the effusion as well as his growing debility, which led him to seek admission into the hospital. The fact that the lung did not re-expand to any marked extent after the removal of the fluid was confirmatory of this view, which was further borne out by the persistence of the dulness and enfeebled breathing to the very end.

There can be no question as to the need of paracentesis here. In the presence of grave valvular disease the existence of pleuritic effusion, especially on the left side, is a serious complication. And it seemed that the diseased heart was being embarrassed by it in this case. The withdrawal of upwards of three pints of fluid from the chest under these conditions could not but have been beneficial; and the relief obtained was for the time very marked. The cardiac disease, which eventually caused the death of the patient, did not at this time give rise to much anxiety. I confess that I was most concerned then with the pleural affection, which obviously seemed not to be a simple pleurisy. The persistence of the friction showed that the inflammatory process had not terminated in universal adhesion, and suggested that it was still continuing. Chiefly, however, the thermometric curve determined me to believe that the pleurisy was probably of tubercular character, an idea quite in accord with the history of the case, so far as the progressive emaciation and sweating were concerned, and the history of an attack of inflammation of the lungs in early life. Against this view was the absence of any family tubercular taint, and, what was more important, the entire absence of any evidence in the patient himself of pulmonary tubercle, unless the somewhat persistent bronchitis and the troublesome cough could be so explained. Believing, however, that a continued pyrexia of a somewhat hectic character, extending over weeks in duration, is one of the most important elements in determining the tubercular character of a chronic inflammation, I could think of no other alternative. Nor did the fact of his improvement in general health, sufficient to allow of his discharge, entirely dispel this notion, for when he left the hospital the pleuritic signs still persisted.

The rest of the case is unfortunately only too briefly told. He appeared at the hospital on June 5th, after his return from the convalescent home, looking none the better, but rather the worse, for his sojourn. He said that he had been suffering much from cramp in the legs, and that his cough still troubled him. An examination of the heart revealed a slight change in increased intensity of the systolic apex murmur, and of the diastolic basic, which was now inaudible over the aortic cartilage, but hardly heard over the pulmonary—i.e., to the left of the sternum. The condition of the left pleura was not apparently altered.

I regret that the patient was not then readmitted, for he returned a week later in a state of great prostration and dyspnœa. He said that for the last four days he had been unable to take food, and that he was extremely weak and feeble, added to which he was suffering from prolapsus ani of three days' standing. There was a slight rally from the collapse, under stimulants, including hypodermic injection of ether, and he recovered sufficiently to take some nourishment. The pulse, which was very rapid and thready when he was admitted, gained in force and volume. The rally was, however, delusive, for at 2 A.M. next day he was seized with pain at the heart, and fell back dead. Some urine which he passed before death was highly albuminous.

The post-mortem examination was made by Dr. J. K. Fowler, twelve hours after death, and his report is as follows:

"The peritoneal cavity contained fourteen ounces of slightly turbid serum; membrane normal. There were dense fibrous adhesions over the greater part of the left pleura, less firm at the apex, and incomplete over the posterior surface of the lower lobe, where there was still some fluid between the layers, which were here nearly three-sixteenths of an inch in thickness. Over the upper lobe both layers were studded with fine miliary granulations. These

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could not be distinguished below, probably owing to the thickness of the pleura. The costal pleura was removed with the lung, and its outer and posterior surface was marked by ridges corresponding to the intercostal spaces. There were no adhesions on the right side, but eight ounces of fluid. The pericardium was normal. The heart weighed 18 oz.; the right cavities were distended with mixed clot and fluid blood. The muscular tissue was marked by pale yellow fatty striæ; the valves were normal; the left auricle was not dilated; the mitral valve was slightly contracted at its free edge, near which, on the anterior cusp, were some fine fibrinous vegetations, which also occurred around some of the chordæ tendineæ near their insertion in the valve. Two aneurysms existed in this cusp: one three-sixteenths of an inch from the free edge had a perforation, one on each side, and a very small sac; the other higher up, a little above the centre of the cusp, projected on the auricular aspect in the form of a sac, the size of a pea, surmounted by a small diverticulum. On the ventricular aspect of the cusp the ulcerated mouths of these aneurysms were to be seen, the larger having smooth and rounded margins. Above and below this the valve was covered with a layer of minute vegetations as well as erosions, excited apparently by friction of the aortic vegetations, for the aortic valve was much diseased. Its middle cusp was in great part concealed by a warty mass of vegetations, embedded in which were concretions of lime salts; the right coronary cusp was much reduced in size, i ts free margin deeply eroded and ragged; the left cusp retained the normal shape, but was opaque and infiltrated with calcareous matter near its attachment; two or three small vegetations also occurred on this cusp. Beyond some atheroma around the orifices of the coronary arteries, the aorta presented a perfectly natural appearance. The mitral valve was probably competent; the aortic allowed regurgitation. The left ventricle was moderately hypertrophied and considerably dilated; the muscular tissue measured seven-eighths of an inch at the base and three-sixteenths of an inch at the apex; it was firm and dense, but through the somewhat thickened endocardium yellow fatty striæ were seen in the muscular tissue. Lungs: the trachea and bronchi contained frothy mucus; there was a caseous nodule at the apex of the left lung, surrounded by some fibrous changes; the lower lobe was partially collapsed, its tissue condensed and rather œdematous. The right lung was œdematous in the lower lobes, but crepitant. The liver weighed 62 ounces, had a nutmeg aspect on section, and was much indurated. The spleen weighed ten ounces and three-quarters, was firmly adherent to the under surface of the diaphragm, which had been fixed in the position of expiration by the pleuritic changes. In the spleen there were three old cicatrices along the anterior margin, remains of old infarctions. All were in process of contraction, their caseous contents dwindling, one surrounded by a zone of congestion. On the posterior surface of the right kidney there was a large puckered cicatricial-looking patch, where the renal tissue had been completely destroyed by an infarction, which had undergone absorption; the cortex was swollen. The cortex of the left kidney was much swollen, and of a pale buff tint, the surface studded with fine hæmorrhages."

The discovery of the miliary granulations in the least adherent portion of the pleural membrane proved the tubercular character of the pleurisy, a character which, had the thickening and adhesion been carried as far at the upper as it was at the lower part of the sac, might have been entirely missed; and the inference based on the clinical course of the case been incapable of proof. The case, then, gains much in interest in being an example of tubercular pleurisy with effusion; and the source of the tuberculosis lay in the caseous focus at the apex of the lung, a relic probably of the attack which befell him in boyhood. The case, then, does not bear out the statements of some writers that tuberclar pleurisy is invariably a *pleuritis sicca*, nor that of others that if there be effusion it is sanguinolent. I have had one other case of large serous pleurisy which proved to be tubercular, paracentesis being performed, and with much benefit, but without complete restoration. The patient died in an epileptoid seizure about two months after the tapping, and pleural as well as pulmonary tuberculosis was found.

The cardiac lesions were, as suspected, mainly upon the aortic valve, the cusp of which was so much disorganised that no question can be raised as to the murmurs described being generated at this orifice. The fact, noted more than once, that the diastolic bruit was better heard over the sternum and to the left of it than over the aortic cartilage is a common experience; but the sharp second sound that was audible at the latter spot must have been the pulmonary, for no second sound could possibly be produced by cusps like these. Whether the apex systolic bruit was really due to mitral regurgitation or not I cannot say. Certainly, the absence of any auricular dilatation shows that if the mitral valve were incompetent, it could only have been so for a very short period. The precise character of the aortic endocarditis in this case, and the manner in which the mitral cusp has become involved, are also points to be considered. The large mass of vegetations and the ragged condition of the aortic cusp, the vegetations spreading over the surface of the mitral valve and the ulceration that had taken place, show that the inflammation was still in progress, or, what is more likely, that it had been lighted up afresh; for the changes in spleen and kidney pointed to the occurrence of embolism at a date long prior to the present illness, and enable us to affirm the long duration of the aortic mischief, which the calcareous deposit in the valves also does. Far more recent, however, has been the ulcerative change on the one aortic cusp and on the mitral, which, destroying the ventricular part of the curtain at one or two spots, had led to the small aneurysmal patches which projected upwards from the valve into the auricle, and the perforation of one of which must have caused a minute current of blood to flow from one chamber to the other. (Did this suffice to produce the "mitral" bruit?) The exciting cause of this spreading inflammation on the mitral valve was in all probability the friction of the long, semi-calcified mass of aortic vegetations, as these swayed back with the regurgitant eddy through the aortic orifice. The fatty degeneration of the ventricular wall, together with the aortic disease, sufficiently explain the sudden death.

I have ventured to bring forward this case—1st, because of the occurrence of a large pleuritic effusion in cardiac disease; 2ndly, because of the tubercular nature of the pleurisy; and 3rdly, because of the character of the endocarditis. How far the lowered state of health of the man may have aided in rekindling the endocardial inflammation, and that a link may in this way be established between the two conditions, is an open question. Otherwise it seems to me that we have here in one subject an unusual combination of two uncommon conditions, each of which is by itself a necessarily fatal disorder.

OBSTRUCTION OF THE ŒSOPHAGUS TREATED BY GASTROSTOMY.

BY CHARLES N. MACNAMARA, F.R.C.S. ENG.

J. E——, a tailoress, aged fifty-one, married, was admitted into the Westminster Hospital on May 5th, 1884, under the care of Dr. Donkin. She stated that she had been quite unable to swallow anything for the previous three weeks; that she had constant pain, though not severe, in the chest, and that she had lost much flesh. The patient had had no serious illness. She had been pregnant five times, with two miscarriages. Many years ago she had a rash on the skin and sore-throat, with considerable loss of hair. The family history was good, giving no evidence of hereditary disease. Thirteen months ago she first noticed some difficulty in swallowing solid food, and about six months ago the difficulty seemed to become suddenly worse, so that it cost much effort and pain to swallow anything solid, and vomiting followed in about ten minutes after doing so. The dysphagia increasing, all attempts at taking solid food were relinquished, and only liquids were taken. Three weeks ago, however, even liquids were returned almost immediately. She was then admitted into a hospital where she had been attending for six months as an out-patient, and was fed with nutrient enemata.

On admission into Westminster Hospital the patient was seen to be extremely emaciated, with a somewhat sallow skin. She complained of pain behind the lower part of the sternum, and of great thirst; there was some tenderness on deep pressure over the supra-sternal notch. No tumour could be felt in the neck, or in any part of the body. The heart sounds were clear, but weak. There was no dyspnœa, nor any alteration of voice. The lung resonance was good. On deep inspiration the breath sounds were heard much less loudly over the right side of the back than over the left.

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On examination the abdomen appeared to be normal; numerous hard masses were felt at first, but these disappeared after an enema. Œsophageal bougies were passed, but all stopped at a point about twelve or thirteen inches below the teeth; a small-sized one (No. 6) passed no further than a large one; the passage caused a little pain. About three hours afterwards she brought up some pultaceous material, undigested, without acid reaction. Nutrient enemata were given every three hours, and were well retained. Any liquid given by the mouth was at once returned.

On May 9th, with a view to probable gastrotomy, Mr. Macnamara was called in consultation. He failed to pass the smallest instrument through the obstruction, and, as some bloody mucus was attached to the end of the bougie on its withdrawal, he thought it undesirable to make any further attempts to reach the stomach, and strongly advised the operation of gastrostomy, as the patient was rapidly failing.

At 1.30 P.M on May 14th, the patient being anæsthetised, Mr. Macnamara commenced the operation. As carbolic spray had been employed in the room for two hours previous to the operation, and all the instruments &c. were soaked in carbolic solution, no other antiseptic precautions were taken. A curved incision, about three inches long, having its convexity towards the middle line, was made parallel to and on the inner border of the left costal cartilages, beginning about an inch and a half below the ensiform cartilage. After the bleeding had been arrested, the peritoneal cavity was opened by a cut as long as the skin incision. Portions of large intestine and omentum at once protruded and were returned, and Mr. Macnamara had to enlarge the incision upwards about three-fourths of an inch, exposing the left lobe of the liver. The anterior surface of the stomach was now seen under and to the left of the liver, and a fold of it was drawn through the wound by dressing forceps tipped with rubber. This fold of the anterior wall of the stomach was then transfixed by a needle loaded with stout silver wire; the needle was then passed through a piece of the skin on the thorax, and the wire was there twisted and fastened. The edges of the abdominal wound were then brought together round the protruding portion of the stomach by silk sutures passed through the whole thickness of the wall and peritoneum. At no point was the stomach stitched to the edges of the wound, but the wire suture held it in its place, the piece of stomach protruding through the walls of the abdomen being about the size of the half shell of a walnut. Mr. Macnamara then thought that the wire stitch might cut through and the stomach fall back into the abdomen; so he transfixed the protruding part with a harelip pin placed transversely, so that it rested on the abdominal wall on either side of the wound. Thus all traction was taken off the silver wire, which might then have been removed, but to make quite safe this was not done. The wound was dressed with vaseline spread on lint, two large Gamgee pads covering this. This form of dressing was continued until the patient recovered and all dressing was dispensed with.

On May 15th the patient complained of much pain in the stomach and intense thirst; tongue furred and dry. Pulse 64; temperature 98°. The wound was cleaned and dressed. Nutrient enemata were given every four hours, with twenty minims of tincture of opium in the last one at night; she slept fairly well. On the 17th the wire stitch was removed; the wound looked very healthy and was uniting well. Pulse 65; temperature 98°. The patient still complained of much pain in the abdomen, which was tender; no tympanites. A simple enema was ordered, which acted copiously and gave much relief. At 1 P.M. on the 21st, the seventh day after the operation, Mr. Macnamara made a small opening in the protruding portion of the stomach with a Graefe's cataract knife; the incision was only just large enough to allow the introduction of a No. 8 gum and silk catheter. Through this were injected one ounce and a half of beef-tea and a teaspoonful of brandy. At 6.45 P.M. four ounces of beef-tea and three drachms of brandy were injected; the patient then said she felt full and satisfied. Temperature normal. On the 22nd the patient looked rather jaundiced; urine high coloured. A simple enema was ordered, and this relieved her discomfort. On the 22nd four injections of four ounces each and four of nutrient enemata were given alternately, and this plan of feeding was adhered to for six days. Temperature normal. The enemata were gradually discontinued, and the patient tried to swallow a little fluid by the mouth to relieve her great thirst, but was unable to do so. On the 29th she had her last nutrient enema of milk and egg. She could now swallow a very small quantity slowly.

The harelip pin was withdrawn a fortnight after the first operation, and the stomach receded considerably during the next few days, till it was below the level of the abdominal wall. The food administered by the stomach consisted of milk and egg, beef-tea, Carnrick's peptonoids, and arrowroot; these generally in succession every four hours, about four ounces at a time. If more were given at a time, the patient complained of feeling overfull and uncomfortable. Benger's liquor pepticus was mixed with the food during the first fortnight. The temperature never rose above normal, nor the pulse over 70°.

From June 14th the patient rose at 11 o'clock every morning and sat up all day, dressed in her ordinary clothes.—21st: Up to this time the patient had, since May 22nd, been able to swallow a little fluid, but no solid food. She was now, however, totally unable to take food by the mouth; if she attempted to swallow the fluid caused pain, and was almost immediately returned. The patient was up and about; she had gained flesh, and had no trouble whatever in injecting food into the stomach through the opening in the abdominal walls.

The above details from the date of the operation have been drawn up by Mr. Herbert Pulling, house-surgeon at Westminster Hospital, to whose great care and judgment the satisfactory termination of the case is largely due.

CONGENITAL CONTRACTION OF ORIFICE OF PULMONARY ARTERY FROM FUSION OF THE VALVES; FORAMEN OVALE OPEN.

SEQUEL TO "A CASE OF EXTREME CYANOSIS IN AN ADULT."[1]

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A CYANOTIC woman, aged twenty-one years, was exhibited at the Manchester Medical Society, Oct. 4th, 1882; and details of her condition are given in THE LANCET of the date mentioned, of which the following are the more important:—

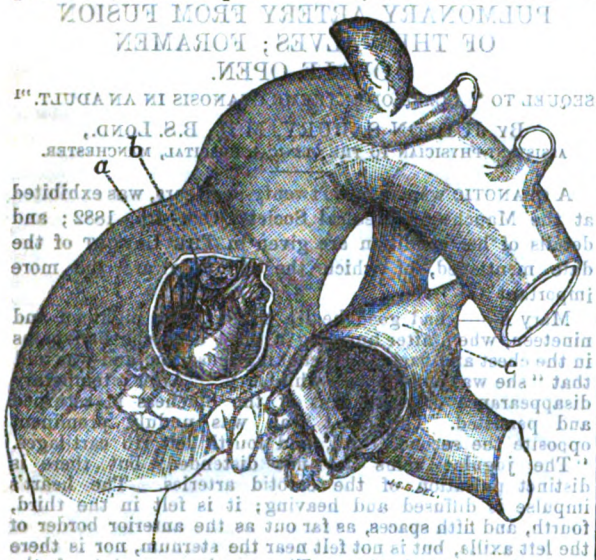
Mary F—— had good health till between eighteen and nineteen, when, after hurrying a good deal, she had pains in the chest and back and a choking sensation, and was told that "she was as blue as a whinberry." After a temporary disappearance or abatement of the blueness it returned and persisted. The chest wall was unduly prominent opposite the second, third, and fourth left rib cartilages. "The jugular veins are not distended, but there is distinct pulsation of the carotid arteries. The heart's impulse is diffused and heaving; it is felt in the third, fourth, and fifth spaces, as far out as the anterior border of the left axilla, but is not felt near the sternum, nor is there any epigastric pulsation. The maximum point of the impulse is in the fifth space in the nipple line; no thrill. The cardiac dulness is much increased, and laterally rather than vertically, extending from about one inch to the right of the sternum to almost the middle of the left axilla; the third rib marks the upper limit of superficial dulness, though the first two spaces are higher pitched than those on the right side; the sixth rib is the lower limit. On auscultation a high-pitched, systolic, whistling murmur is heard at the base, of maximum intensity over the first piece of the sternum; it is well conducted down this bone, being also well heard at the right sterno-clavicular articulation, and faintly in the carotids. A vertical line from the middle of the left clavicle marks its extreme left limit, and the murmur is gradually lost as the stethoscope is moved towards the apex; it is not heard behind; the sounds at the left apex are quite pure. The second sound is accentuated over the pulmonary cartilage, and is louder than at the aortic cartilage. The pulse is regular in rhythm, but not quite regular in force; it is equal on the two sides, and is felt in the femorals and in other arteries."

The patient was seen again in February, 1883, when she stated that she had had attacks of fainting for about a month, and that the pain in her chest was worse; it was noted that the cyanosis had increased, and that the systolic basic murmur was not so loud as formerly, but the heart in other respects was unaltered. The chest pains and difficulty in breath-

[1] Reported in THE LANCET, 1882, vol. ii., p. 801.

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ing became more severe, and early in April she was admitted into the hospital. On April 5th, at 1 A.M., the house-surgeon, Mr. Buchan, was called to her: "she was insensible, breathing stertorously, the pulse was rapid and very thready; there was no rigidity or spasm of muscles. Mustard poultices were applied to the cardiac region and an enema of brandy administered. The patient remained unconscious for half an hour and then slowly recovered, answered questions, but was very drowsy and heavy for some time. Temperature 100·8°. Later on in the day she seemed much as usual, and did not complain of anything." On April 23rd my colleague, Dr. Railton, carefully examined the heart and made the following note: "The basic systolic murmur is faint, it is heard equally in both the aortic and the pulmonary areas; no accentuation of the pulmonary second sound is perceptible. The murmur is continued down the sternum, but another murmur, systolic in time and of greater intensity, is heard at the base of the ensiform cartilage. There is no venous pulsation in the neck, and no perceptible pulsation of the liver, but the liver is very tender to pressure. The right auricle is largely distended, as testified by the absolute dulness to the right of the sternum as high as the third rib." On April 30th the patient complained of severe headache, especially at the back. On May 1st, at 12.20 A.M., Mr. Buchan found her screaming with pain in the chest, the cyanosis was excessive, the pulse 130 and very thready, her breathing became stertorous and she quickly passed into a state of profound coma, and died at 1 A.M.



At the necropsy, made fifteen hours after death, rigor mortis was well marked. The length of the body was about fifty-six inches, the limbs were well formed and the subcutaneous fat was everywhere abundant. The lips, ends of fingers, and toes were of a dark-purple colour. On removing the sternum and costal cartilages the pericardium came prominently into view, the tip of the lower lobe of the right lung was also seen, but the left lung was out of sight, being shrunk and bound down by firm fibrous bands. Transversely the exposed pericardium measured six inches and a half, and vertically in the mid-sternal line nearly four inches. The liver was much enlarged, had its lower margin in the same line four inches and a half below the pericardium. On opening the latter the heart, of large size, was placed with its longest diameter transversely, it was also tilted; its anterior surface was made up of right auricle and ventricle, the left ventricle being out of sight. The outer margin of the right auricle was two inches to the right of the right edge of the sternum; both the right cavities were distended with black blood. The heart, separated and emptied weighed seventeen ounces, just double the average weight in females at this age; it was square in shape and measured five inches from the root of the pulmonary artery to the apex, and four inches and a half from side to side. The four pulmonary veins were traced to the left auricle. The pulmonary artery after dividing normally into two branches appeared to be prolonged by means of the ductus arteriosus into the aorta; but subsequent dissection showed that there was no opening into the latter, but that the lower part of the duct consisted of a conically shaped space (see figure, *c*), the closed apex being three millimetres or one-ninth of an inch from the aorta. The valves of the pulmonary artery were blended, and formed a thick dome-shaped projection into the root of the artery, dividing the space at its base into three deep pockets. At the top of the dome was a slit-like aperture (*a*), one-eighth of an inch in length, and admitting easily the end of an ordinary probe; it was lined by minute vegetations, and on the wall of the artery immediately above and on the aortic side of this aperture was a small raised cluster of vegetations (*b*). The opening mentioned formed the only direct communication between the right ventricle and the pulmonary artery; the latter and its branches were smaller, and had thinner walls than normal. The right auricle and ventricle were dilated and hypertrophied, the muscular substance of the ventricle being dark-red and unusually firm and thick, and the musculi papillares very large. The tricuspid orifice admitted the tips of two fingers; granulations covered with fibrin were found on two of the segments of the valve: namely, on the left one—that resting on the ventricular septum—and on the anterior one, in each case on the auricular surface and near the lower edge, the crop of vegetations on the anterior cusp being much the larger and a quarter of an inch in diameter. The coronary sinus appeared much larger than natural; its auricular end was nearly half an inch in diameter. The foramen ovale, widely open, measured seven-eighths of an inch vertically and five-eighths across, a portion of the valve with a sharp edge projected from the posterior and lower side of the foramen. The left were, as compared with the right cavities, small in capacity; the ventricular wall was thickened, and its maximum thickness was a little greater than that of the wall of the right ventricle (for measurements see below). The left auriculo-ventricular opening was not quite so wide as the right one, scarcely admitting the tips of two fingers; both segments of the mitral valve were thickened just above their free edges, but there were no signs of recent endocarditis. The aortic valve presented slight irregularities; the two posterior flaps were firmly united for a short distance from their common angle of origin; they were also fenestrated near their junction with one another and with the anterior flap, at each corner of each of these valves were two small holes crossed by a slender fibrous band; the lunulæ of the anterior cusp were entire. Above the valve small patches of atheroma were present on the wall of the artery. Both the aorta and pulmonary artery were unusually small, alike as regards their calibre and the thickness of their walls; the aorta looked slightly constricted after giving off the left subclavian, and the lumen here was half an inch less than at the origin of the aorta. There were two instead of three primary branches, the left carotid and innominate starting as a common trunk. The accompanying table of measurements brings out, amongst other things, the contrast between the size of the heart and that of its orifices and the two arterial trunks; the former is larger, and its walls much thicker, the latter smaller and thinner, than natural.

*Dimensions of the heart, in inches.**

	Healthy female.	Mary F——
Circumference of heart	9·236	11·125
Girth of right ventricle	5·184	7·125
Girth of left ventricle	4·049	4
Thickness of walls of right ventricle	·118—·164	·4—·5
Thickness of walls of left ventricle	·222—·497	·4—·62
Thickness of septum	·421	·5
Circumf. of right auriculo-ventricular aperture	4·562	3·5
Circumf. of left auriculo-ventricular aperture	3·996	3
Circumf. of pulmonic aperture	3·493	2·5
Circumf. of aortic aperture	3·019	2·1
Circumf. of lumen of descending portion of arch	—	1·5

Weights.

	Healthy female.	Mary F——.
Heart	8½ ounces	17 ounces
Lungs	32 „	30 „
Kidneys	8—9 „	15 „
Spleen	4—9 „	8 „
Liver	40—50 „	54 „
Brain	43·7 „	49½ „

* See Peacock's article in Reynolds' System of Medicine, vol. iv.

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The lungs, much congested, were free from tubercle. The kidneys, spleen, liver, and brain were also very congested, and, as seen in the table, heavier than natural. Slices of the brain exhibited black bleeding points. The liver, large and firm, presented the characteristic nutmeg appearance, and showed under the microscope great dilatation of the veins, especially of the intralobular ones, and around the latter the liver cells were much wasted, the intervening spaces being filled up with yellowish-brown pigment granules. There was also a small-celled infiltration of the periportal connective tissue. The kidneys were firmer than natural, and sections showed a commencing interstitial cirrhosis, and all the bloodvessels and large tracts of tubules were filled and distended with red blood-corpuscles.

Remarks.—The view taken of the case during life—namely, "that the origin of the pulmonary artery was affected with endocarditis in fœtal life; that the effects of its obstruction were compensated for by the persistence of communication between the two sides of the heart, and perhaps also by a patent ductus arteriosus"—is shown by the post-mortem examination to have been in the main correct. But now, further, we see, from the absence of any defect in the septum between the ventricles, that in all probability the pulmonary artery became diseased late in fœtal life, after the completion of the septum, and that at birth the contracted orifice rendered the artery incapable of transmitting the increased current of blood to the lungs, and then the ensuing strain on the right ventricle would keep open and be relieved by the foramen ovale. With so much obstruction at the exit of the right ventricle the relatively large size of the pulmonary artery and its branches appears somewhat remarkable, and one would expect to find a patent ductus arteriosus or some other channel by means of which blood could enter the artery. But perhaps the narrowing of the pulmonic aperture from blending of the similunar cusps was slow enough to permit the closure of the duct, and attained its maximum some time after this closure; and even with a small communication between the ventricle and artery, the latter would be kept full of blood, and so maintain a fair size or dwindle very slowly. In the previous report it was pointed out that many of the physical signs suggested obstructive disease at the aortic orifice, thus the systolic murmur loudest at the top of the sternum was traceable towards the inner end of the right clavicle, and along the carotids; there was no epigastric pulsation, but a heaving impulse in the left mammary region. The autopsy revealed excessive hypertrophy with some dilatation of the right ventricle, and moderate hypertrophy of the left ventricle associated with a partial fusing of two cusps of the aortic valve; the frenum thus formed projecting into the aortic aperture would be likely to evolve sonorous vibrations in the blood of the ascending arch, and at least may be offered as an explanation of the fact that a systolic bruit was heard as well below the right as below the left clavicle, in the latter position generated with greater certainty by the narrowed pulmonic orifice. In the presence of such extreme right hypertrophy the absence of any perceptible transmitted impulse to the lower end of the sternum or to the epigastrium, is a striking clinical feature, and one to be remembered in making a diagnosis of unusual heart conditions. The chest was repeatedly examined, and yet no pulsation was ever felt near the sternum, and the maximum point of the heaving impulse was always about the left nipple-line. These signs receive some interpretation by a consideration of the rotated transverse position of the heart with its concealed hypertrophied left ventricle. The fenestration of the aortic valve is probably a congenital defect, and would not give rise to much, if any, regurgitation. The small size of the arch is noteworthy, and especially the constriction of the third portion. During the last few weeks of life a systolic murmur was heard at the ensiform cartilage, and the pulmonary second sound became weaker. The fibrinous deposits on the tricuspid valve and the resulting imperfect adaptation of its segments give reasons for a tricuspid murmur; and it has been said that tricuspid regurgitation will lessen the intensity of the second sound at the pulmonary cartilage.[2] Probably at this time, too, endocarditis was lit up in the pulmonary artery. Such gradually increasing obstacles to an already overstrained heart fully account for the increasing distress, the final paroxysms of pain, the quickly ensuing comatose death, and for the intense venous congestion of the brain and other organs found after death.

Many similar cases to the one related are to be found in medical literature. Thus, Dr. Peacock[3] collected notes of twenty persons who presented this anomaly—namely, obstruction at the orifice of the pulmonary artery with an open foramen ovale, and eleven of these lived to the age of fifteen years and upwards.

Manchester.

[2] See Balfour: Clinical Lectures on Diseases of the Heart and Aorta, second edition, p. 194.

[3] Malformations of the Human Heart, second edition, p. 180.

JEQUIRITY (ABRUS PRECATORIUS, LINNÉ); ITS USE IN DISEASES OF THE SKIN.

BY JOHN V. SHOEMAKER, A.M., M.D.,

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ALTHOUGH a drug of great antiquity, centuries ago in use in Egypt, and well known in Sanscrit by the name of Gunja to the Hindoos and Burmese, jequirity again comes forward as a most formidable weapon in the hands of the physician in his battle with disease. Prosper Albinus in 1592 quotes it as in use in Egypt. The resemblance of the plant to liquorice was remarked in 1700 by Sloane, who called it Phaseolus glycyrrhites. It was introduced in the Bengal Pharmacopœia in 1844, and in that of India in 1868. Its names and synonyms are so numerous as to cause me to omit the majority of them, which are claimed to number over fifty. It is frequently called Brazilian peas, Indian liquorice, wild liquorice, with equivalent terms in other languages, but by the rules for our terminology it should be known as "abrus." The seeds are now almost exclusively employed, and will only be considered hereafter in speaking of it. The plant belongs to the natural order of Leguminosæ. It is indigenous to India, but grows wild in all tropical countries, and though found in the primeval forests of Brazil, whence our supply is now mostly obtained, it is claimed to have been brought there by birds, or otherwise. The seeds, also called prayer beads, jumble beads, crabs' eyes, &c., are globular-ovate, about one-fifth of an inch in length, scarlet-red, glossy, with a black spot surrounding the hilum. The testa is hard, enclosing a fleshy embryo of plano-convex cotyledons, and accumbent radicle. They are inodorous and have a bean-like taste. Their chemical composition has been frequently investigated. Berzelius in 1827 found in the leaves and branches a principle resembling glycyrrhizin, also present in the root, which contains sugar, though he mentioned nothing of other constituents. Prof. Harden, in 1882, by treating the seeds with boiling alcohol, obtained white crystalline abric acid, slightly soluble in cold water, and said to have the formula of $C_5H_{14}NO$. They also contain fixed oil. Rigaud and Dusart in 1883 isolated from them an alkaloid, but neither the acid nor the alkaloid appears to be their active or toxic principle.[1] Mello E. Oliveiro, on treating the seeds with boiling water, slightly acidulated with hydrochloric acid, separated a bright-rose-coloured substance, which, on the addition of 45 per cent. of alcohol, changes to red, a greyish-white substance of a gummy nature being deposited. The red liquid thus obtained after exposure to light, assumes a greenish colour, persisting for some time. Dr. Neisser believes its active principle to be, so far, not yet isolated amorphous ferment, which Salmonsen and Dorkirk Holmfeld claim as insoluble in alcohol, chloroform, benzine, and ether, but slightly soluble in water and very soluble in glycerine. They claim to have obtained it by treating the powdered seed with ten times its weight of glycerine, from which it was precipitated by five times its volume of alcohol. The microscopic inspection of the fresh infusion by Dr. Silva E. Chanjo developed the presence of polyhedric cells filled with granular protoplasm, which he considers cells of the seeds, separated in the bruising and macerating; also round spherical very brilliant bodies, capable of movement either around their axes or in a forward direction, which with a lower power looked like a fine powder. The older infusion exhibits, besides the powder which

[1] Much of the botanical description is taken from advance sheets of the National Dispensatory, kindly furnished by Prof. J. M. Maisch.

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he considers as conidia, true cells and tubes of a microscopic plant with spores and mycelium. The spores he states as large, ovoid, sometimes solitary, or in groups of two, three, or more. The tubes either bear spores or are bare, and are branched, and between them the powder mentioned as conidia is seen. These are stated to be the more marked the older the infusion. Sattler of Erlangen states that schizomycetes, or cleft fungus, exists in the infusion in immense numbers. These he classes with bacilli. These microbes are found in the infusion five minutes after it is made, using warm water for that purpose. He claims that they increase by a sort of segmentation, giving off spores when about forty-eight hours old. Their property of vegetating is retained on remoistening after drying for a week, while in an ice-chest their development is arrested, and a temperature of 180° F. for five minutes does not affect the germinating power; but the infusion is entirely freed from germs by boiling, and was sterilised by a solution of mercuric bi chloride (1 in 10,000). The seeds have been often described as possessing poisonous properties, Herman even stating that two or three constitute a fatal dose. That this is not so would appear from the fact that though hard and indigestible, they have been used as food in Egypt and elsewhere. By Hindoo medical writers they have been variously recommended as an application in sciatica, stiffness of shoulder-joint, paralysis, and other affections. They are even said, when eaten, to prevent fecundity. The principal use of jequirity, however, is in certain affections of the eyes, for which it seems to have first found application in some parts of Brazil, where eye diseases are both frequent and virulent. The prevalent inflammations there are, if neglected, apt to develop granulations, followed by serious consequences. These granulations especially are one of the forms of ophthalmia which have proved so obstinate to treatment, and it is for this condition that jequirity seems to have been especially employed there empirically. Dr. Castro E. Silva published a paper on jequirity in affections of the eye in 1867, in which he calls attention to the dangers connected with its use. He speaks of cases in which after two or three applications a very intense inflammation of the eyelids and conjunctiva ensued, extending over the whole face, the neck, the upper part of the thorax, and even involving the submaxillary glands. A cold infusion is generally employed, which is applied to the eyes three times daily, so that some of it may pass under the lids. Even after the first application the eyes begin to "water," they feel burning hot, and the eyelids are heavy. The day following the inflammation is still more intense, the patient can no longer open the eyes, the lids swell, and are shining violet, ecchymosis of the conjunctiva is very marked, while an abundant muco-purulent discharge develops and the patient suffers great pain.

Dr. Moura, Brazil, made extended experiments on animals, especially rabbits; and in the strength of 1 in 20 produced a most intense inflammation of their eyes, which did not yield to any remedy, progressing to suppuration of the eyeball, gangrene of the lids, and inflammation of the submaxillary glands. The strength subsequently employed by Dr. Moura was 1 in 200, in the form of cold infusion, with which he produced, when applied to granular ophthalmia once a day, a moderate inflammation, and healing of the granulations in a few days.

Dr. L. de Wecker, of Paris, who, simultaneously with Dr. Moura, made observations on the action of jequirity in certain eye affections, gives his *résumé*, which is as follows: 1. There is no doubt that an infusion of jequirity produces a purulent ophthalmia of a croupous nature, the intensity of which can be regulated by the strength and number of applications. 2. The cornea runs no risk during the development of jequiritic ophthalmia. 3. The jequiritic ophthalmia cures granulations rapidly.

Dr. Knapp, of New York, regards the use of jequirity by no means without danger, and even holds that the secretion of the jequirity ophthalmia may be conveyed to and infect a healthy eye, and in a case where he tried it side by side with other means, he saw no particular advantage; and while he admits that it is a remedy in trachoma, it is not *the* remedy.

The latest report on the therapeutic value of jequirity in affections of the eye is probably that made by Dr. Arthur Benson before the Ophthalmological Society of the United Kingdom on March 13th, in which he sums up his results as follows:—Jequiritic ophthalmia can be produced (1) by the powdered seed; (2) by the freshly made infusion; (3) by the infusion after bacilli had grown in it; (4) by the infusion six weeks old, and swarming with micro-organisms of most varied types; and (5) by the infusion after these bacilli had ceased all motion, and had sunk apparently dead. The examination of the discharges from jequiritic ophthalmia revealed no typical bacilli, and were entirely devoid of infective qualities. He had a high opinion of the treatment of granular lids with jequirity, and had seen no serious results therefrom.

After considering all the foregoing observations, it certainly occurred to me that jequirity possesses qualities which make it act as a destructive agent upon the granular tissue of the eyelids, causing an inflammatory process which has all the characteristics of that produced by an escharotic, without the effect that the general class of the latter produces upon the surrounding tissue. If we consider by what means this is accomplished, we must certainly exclude chemical action of any kind, as the proximate components of the seeds have been shown to be innocent in their action on the animal organism. That they are even consumed as food would warrant us further in assuming them as such, else most certainly gastro-intestinal irritation of the most violent kind would be produced by them. That they need a third element to develop their destructive effect upon organic structure seems therefore evident. This can be construed as arising from two sources only. One of these would be explained by the development of a new substance formed by the action of the moisture on a certain ferment and bodies capable of being acted upon by it, as is the case in the emulsion and amygdalin of bitter almonds and the sinigrin and myrosin of mustard; but physical evidence for such a change in jequirity is wanting, as it betrays neither by smell nor taste the presence of a new product. The experiments and results of Neisser, as well as those of Salomonsen and Dorkirk Holmfeld, would warrant the assumption of this, and if their amorphous ferment obtained by glycerine extractions and alcohol precipitation really produced in solution the specific jequirity ophthalmia, the inference would lead us to such a theory. Possibly sterilisation, however, of jequirity infusion by mercuric bichloride and other antiseptics, as well as by boiling, renders this most untenable and improbable. There is evidently another agency concerned in this most remarkable action of jequirity, more so than the development of a new chemical irritant in that body. This we must look for in the atmosphere which we have been taught by Pasteur and others to regard as bearing the germs of more micro-organic development in soil suitable and chemically composed for their sustenance. This seems a more likely and plausible view from the fact that a proteid body and solution of its albuminous parts in a cold infusion is rapidly invaded by new growths of micro-vegetation possessed, as described above, both of conidia and mycelia. That it thus forms a nutrient liquid for the cultivation of germs there seems no further doubt, and that these can be destroyed and further growth arrested by either boiling or mercuric bichloride has been experimentally proved. That during the development of the new growth no carbonic acid gas is developed or acid formed shows, further, that the microbe owes its development not to an oxidation or destruction of any hydrocarbon contained in the bean. My deduction, therefore, leads me to the conclusion that the fungoid growth of the infusion, originating from bacterial influence of the atmosphere, must proliferate at the expense of the albuminous contents of the infusion, which in its rapid proliferation it destroys unto its own ultimate death. My argument is intended to show further its relation to cellular tissue and cell contents, in order to explain the *rationale* of its destruction of granular tissue. The bacterium applied to such cell structure finds in these and their contents all the elements necessary to its own growth and reproduction, casting the effete product on the surface, until by exclusion of atmospheric air and over-production its own existence ceases. That it is a typical disease carrier which could be employed to wage war and exterminate hostile micrococci is certainly ridiculous in the extreme, as well as that, like the ubiquitous bacillus, it acts on the vaccination principle by rendering the organism no longer a fertile soil for the invasion of other micro-organisms. The inference from this deduction led me to experiment with jequirity on a larger sphere and in affections which present similar pathological conditions, as the granular lid. As the action of the fungus developed in the jequirity infusion seems to destruc-

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tively attack the proliferating cell, while it does not act in such a manner on the external coverings and mucous surfaces, I employed it to affections of the skin showing great cell proliferation; as such I selected lupoid conditions, epitheliomæ, sloughing ulcers, &c. When at first disappointed with the ordinary infusion used in eye affections, and also with the dry powder dusted over the surface, I applied to Dr. L. Wolff, the well-known chemist, for a more effective preparation, which would not alone be much stronger, but which would at the same time be more viscid, so as to adhere longer to the surface. This he accomplished in a most successful manner in the following way:—Two hundred grains of the bean are decorticated by being slightly bruised and cracked in a mortar, the red hulls are carefully picked from the cotyledons and, in a bottle, covered with distilled water. They are thus macerated for twenty-four hours, when they are again transferred to a mortar and thoroughly triturated, until they are reduced to a smooth paste, when sufficient water is added to make the whole weigh 800 grains. Prepared in this way it presents all the appearances of an emulsion, and is applied with a large camel-hair pencil or mop to the surface to be treated. The effect of this preparation of jequirity, while almost painless in its application to ulcerated and granular surfaces, soon developed (and often within an hour) a great deal of irritation and inflammation, rendering the edges red and infiltrated, the surroundings œdematous and shining, and caused some febrile exacerbation in the patient, depending in degree on the area involved. The usual concomitant symptoms of such febrile process are apt to show themselves at this stage, such as headache, pain in the extremities, elevated temperature, and high pulse, all of which, however, are not general, but found only occasionally, and particularly in irritable and very susceptible patients. In the course of from six to twelve hours, the products of this specific inflammation are abundant, and soon aggregated on the surface in a desiccated, cuirass-like crust, which now obscures further observation. This crust, in the course of twenty-four hours, further exhibits a tendency to crack and break, giving vent to the flow of the products of the degenerative process. This condition, if left alone, will continue for five to six days, the discharge lessening by degrees, the firmly adhering crusts, if not detached on their own account, are now removed by water dressings, and expose to view a surface studded with healthy granulations and islets of healed-up surface, along with evidence of the progress of the regenerative progress at the periphery. In cases where one application does not suffice, and where there is still evidence of the presence of unhealthy granulations, a second application is now made, and conducted as before, and a third and further application being made, as the case may require.

The results thus obtained with jequirity will best be seen from the citation of a few cases from the case book of the Philadelphia Hospital for Skin Diseases.

CASE 1.—John T——, aged thirty-five years, car conductor, has been under treatment for some time. Specific ulceration on the right leg. He cannot give up his occupation. Under specific treatment the colour of the edges improved, but showed no tendency to heal. By an application of jequirity in one week the ulcer was greatly improved, with edges smooth and healing; another application of jequirity healed up the ulcer completely after the second week.

CASE 2.—Jane W——, aged seventeen, factory hand. Scrofulous indolent ulcer on neck, easily bleeding with unhealthy ground. She was put under constitutional anti-scrofulous treatment. After an application of jequirity the crusts were removed in a week, the patient being greatly improved in health. After two weeks' applications the ulceration was looking healthy, and healed under simple dressings.

CASE 3.—Mrs. G——, aged forty. Ulcerating lupus, extending over the bridge of the nose. A case of Dr. Albert Fricke, of this city, to whom I was called in consultation. The patient had been under the care of several physicians. Escharotics and scrapers had both been applied, but to no advantage. I suggested the use of jequirity. The first application of a clear infusion proved of no avail, running off without causing any marked irritation. The concentrated emulsio-infusion was applied with a camel-hair brush every third day, until a firm cuirass-like scab was formed. After this had become spontaneously detached, at the end of three weeks, the surface entirely healed over.

CASE 4.—Mr. W——, aged forty-three. A large epithelial ulceration on the dorsal surface of the left hand. He met some years ago with an injury to the hand. He had gradually increasing lancinating and excruciating pains and preceding ulceration, until it entirely covered the dorsal surface. He had been under various treatment, with only partial amelioration of the symptoms. Had been cauterised and scraped with no permanent advantage. The concentrated emulsio-infusion of jequirity was applied in the usual way. It soon developed all the signs of the specific inflammation, leaving immense scabs, which were from time to time detached, and followed by new applications, when ultimately the entire surface was completely cicatrised.

CASE 5.—Lavinia W——, aged forty-five, seamstress. Ulcerating lupus on both sides of the face, a most desperate case. She had been under treatment for years, consisting of periodical scraping and applications of caustics as well as the cautery, which in every instance were followed by exuberant granulations notwithstanding the most careful local and constitutional treatment. The surface was affected in irregular patches, extending to no less than two and a half by four inches on each side. As a *dernier ressort* and a last case for the jequirity treatment, the concentrated emulsio-infusion was applied freely over the patches. It was followed by an enormous amount of inflammation, accompanied by malaise, febrile exacerbation, the temperature rising to 103°, which lasted until the cuirass-like crusts had formed and commenced to dry up. After these were detached and the applications renewed the same constitutional disturbance took place, lessening, however, in the proportion as destruction decreased the affected surfaces. After the fifth application the crusts were allowed to detach themselves spontaneously, and with it a well-healed surface was apparent all over the patches, granulations, tubercles, and ulcerations having entirely disappeared.

A number of other cases from the hospital case book could be cited would space permit, and I would only refer to the alarming constitutional symptoms reported by Medical Director Albert L. Gihon, U.S.N., in a case treated by him at my suggestion. In that instance the temperature of the patient, an old man, rose to 103°, but the ultimate result has so far not been reported.

To sum up. The results of the treatment of diseases of the skin with jequirity lead me to pronounce it a most powerful agent, applicable to most all cases of unhealthy, ulcerating and granulating conditions, upon which it certainly exercises a destructive tendency, followed by a constructive change, and forming under the protective covers of the exudation it causes a rapid development of healthy tissue. Though under proper conditions and careful supervision it is a remedy of the greatest service, it should be applied with caution, as it may give rise to alarming symptoms—erysipelatous inflammation and, if used on weak and irritable patients, to great constitutional disturbances. These symptoms, however, will speedily subside with proper attention and on the drying of the crusts. That jequirity has in still larger field than simply that of ophthalmic practice will readily appear as a deduction from my experience. Though the *modus operandi* of its action as stated by me may be modified in the course of time, its curative results in the class of cases to which I have referred will be indisputable, and be more freely developed as it finds more general application and introduction.

THE RADICAL CURE OF UMBILICAL HERNIA.

By W. MITCHELL BOOCROFT,

HON. SURGEON TO THE ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

TRUE umbilical hernia is a disease of such frequent occurrence that cases are constantly coming under our notice as surgeons. It is a disease of infancy and childhood, being almost always congenital. When it occurs in adults we more frequently find it in women, especially those who have borne many children, or who are loaded with internal fat; and even in these adults I think that the disease commenced in childhood, but is unnoticed or does not develop itself until the abdominal muscles have been weakened and the umbilical aperture relaxed by the pressure of the gravid uterus. When the hernia is small and reducible we can generally effect all that is desired by an accurately fitting

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truss, though I doubt if a permanent cure is ever established by this method. It is in those cases especially which have grown to an enormous size as years have passed on, where the hernia is irreducible, the patient frequently suffering from flatulent distension, there is constant fear of obstruction or strangulation, or even where the surface of the tumour is covered with ulcerations, either the result of neglect or a badly fitting belt, that the surgeon feels it incumbent upon himself to recommend a means of cure beyond the usual methods of rest in the recumbent posture, strict attention to diet, and a belt or pad, &c. That such a means of cure exists, and is accompanied with less danger than is usually supposed, I hope the following notes may prove.

Margaret C——, aged fourteen years, was admitted under my care into the Wigan Infirmary on March 14th, 1884, suffering from a large umbilical hernia, with ulcerations over the surface of the tumour. On examination I find the patient is decidedly hydrocephalic, and presents evidences of having suffered from rickets. Is only thirty-eight inches in height, fairly well nourished, not very intelligent, though can answer simple questions. The corneæ are dull, the result of chronic keratitis. Family history good, though the mother died during the patient's infancy from alcoholism, so the child was probably neglected. I learn from the relations that the umbilicus was injured at birth through the neglect of the midwife; but they first noticed a swelling in the situation of the present tumour six years ago, when the patient was about eight years old. Since then it has gone on increasing in size, and has become ulcerated. The ulcerations do not heal, and are extending. On examining the abdomen I discovered a large umbilical hernia, rather larger than a cocoa-nut, covering the surface of the abdomen from within two inches of the ensiform cartilage to a point about three inches above the symphysis pubis. The skin covering the tumour is moderately tense, and presents several ulcerations over the anterior surface. The ulcerations seem to involve almost the whole thickness of the true skin, and discharge very offensive pus. Upon trying taxis I find that I can reduce most of the hernia, but a portion remains behind, and is irreducible. I discover the umbilical aperture will admit three fingers easily; consequently, taking into consideration the probable space occupied by the neck of the irreducible portion of the hernia, it is about two inches in diameter. The tongue is furred, and she suffers from obstinate constipation. Temperature normal.

Taking all the circumstances of the case into consideration, the great inconvenience of the tumour, the inapplicability of a belt or pad, the liability to obstruction or strangulation, the fear lest the ulcerations should extend into the sac and eventually establish an incurable artificial anus, with the anxiety of the relatives, and their urgent request that something should, if possible, be done to cure the patient, I decided to perform an operation which has hitherto been looked upon by surgeons as hazardous in the extreme. In order to prepare my patient for the operation, I gave instructions that she should remain in bed, to have milk diet, and the ulcerated surfaces to be dusted with iodoform, and absorbent pads repeatedly changed to render the part as near as possible aseptic. On March 20th I performed the following operation under carbolic spray, and with all necessary antiseptic precautions. The patient being under the influence of chloroform, as much of the hernia was reduced by taxis as possible. Two elliptical incisions were made, about five inches in length, uniting above and below, over the anterior surface of the tumour, including all the ulcerations. It was then found that the anterior surface of the sac was adherent to the skin, and could not be separated; so the sac was opened and the skin between the incisions, together with and including that portion of the sac which was adherent, removed. I then discovered that the irreducible portion of the hernia consisted principally of omentum, which was adherent to one side of the neck and adjacent portion of the sac. This was carefully separated, and the whole returned into the abdominal cavity. Four stout copper wires were next passed separately from without inwards on one side of the umbilical aperture, about half an inch from the margin, then involving the neck of the sac on both sides, and from within outwards, through the other side of the aperture, the point of the needle being the whole time guarded by my left index-finger. When the four sutures had all been passed, each was tightly twisted, and the aperture completely occluded. The ends of the wire sutures were brought out of the centre of the incision, and a drainage-tube inserted, traversing the whole length of the wound and protruding at each end. The sides of the incision were then brought together, except where the deep sutures escaped, with superficial carbolised catgut sutures, and the whole dressed in the usual antiseptic way, with plenty of crumpled dry gauze to absorb any discharge. I may mention that during the operation we had the greatest possible difficulty in retaining the intestines within the abdominal cavity. I had taken the precaution to have the bowels freely opened the day before the operation. I now ordered the patient to have no food by the mouth, but a little ice to suck, to check any vomiting or straining; nutrient enemata of two ounces of milk every two hours; the thighs to be flexed on the abdomen by means of a pillow under the legs, in order to take any tension off the abdominal muscles. A hypodermic injection of morphia at night if necessary. Night temperature after the operation 97°.—21st: Morning temperature 100°. Slept fairly well; did not require the morphia. Pulse 90; no pain. Has retained all the enemata but two; no vomiting. Evening temperature 101·4°. —22nd: Morning temperature 99·4°. Slept well; milk enemata, alternated with one ounce of kreechyle, all retained. Wound dressed; looks well; no suppuration; little discharge, which has all been absorbed by the crumpled gauze. Evening temperature 100·4°.—23rd: Morning temperature 99°. Slept well; feels very comfortable; no pain; enemata retained; says she is hungry, but still sucks the ice. Evening temperature 99·4°. —24th: Morning temperature 98·8°. Sleeping well, but complains of hunger; dressed; wound united in several places by first intention; no suppuration and little discharge; drainage-tube removed. From this date the patient continued to improve, the morning and evening temperatures remaining normal. The wound was dressed every second or third day and continued healthy. On the 25th the bowels acted naturally. On the 28th she was allowed a little of Brand's essence of meat by the mouth, and the enemata were discontinued. On the 31st the wound was dressed. A little suppuration was noticed, but the pus was not offensive. Two or three superficial sutures which had not become absorbed were removed.

April 4th.—In addition to the Brand's essence to have two pints of milk per diem. Bowels acting naturally.—13th: Patient placed under chloroform. By slightly enlarging the superficial incision through which the ends of the deep sutures passed these were snipped and withdrawn.—16th: Carbolic spray discontinued, dressed with an antiseptic absorbent pad; wound nearly healed.—19th: Temperature went up to 102°, but on dressing I found about two drachms of pus burrowing under one edge of the wound; on this being released, the temperature next morning returned to normal, and continued so.

May 1st.—Wound almost healed; patient discharged cured, but to attend for a short time as an out-patient. I saw her again on May 20th, when the wound had healed; there was a good firm cicatrix; the umbilical aperture seemed firmly and completely occluded, and the relatives assured me that she was in better health than she had been for years.

I know that surgeons in the past have displayed considerable apathy in adopting any active operative interference about the umbilicus, probably from a well-grounded supposition that operations in this region were almost invariably fatal. With the daily experiences derived from such operations as ovariotomy &c., where the peritoneal cavity is opened and the advantages of Listerism, such apathy must vanish; yet I hope the preceding remarks will not convey the impression that I would advocate a similar method of treatment in all cases of irreducible umbilical hernia. On the contrary, I am of opinion that only a few cases occur where the surgeon would feel himself justified in performing this operation. Moreover, I am quite cognisant of the fact that the experience of one case, no matter how satisfactory the result, is insufficient to arrive at any definite conclusion; yet I feel convinced that similar cases do exist where this operation, or some slight modification to meet the exigencies of individual cases, might advantageously be adopted and life saved. If my notes add one link to prove not only the feasibility, but, with careful attention to details, the hope of ultimate recovery, I shall rest contented that my efforts have been amply rewarded.

THE Library of the Royal Medical and Chirurgical Society will be closed on Monday, August 11th, and reopened on Monday, September 15th.

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CASES OF ACCIDENTAL POISONING.

BY EDGAR BECKIT TRUMAN, M.D., F.C.S.,
PUBLIC ANALYST TO THE BOROUGH OF NOTTINGHAM AND TO THE COUNTY OF NOTTS.

I. BY ARSENIC.

ON Dec. 5th, 1882, I gave evidence at an inquest held by Mr. A. Browne, deputy district coroner for Notts, at Stapleford, near Nottingham. On Nov. 19th, 1882, C. W—— obtained from a shop kept by Mrs. X—— a paper packet of what was believed to be magnesium carbonate. It was dispensed by Mrs. X—— out of a large bottle containing with the powder a leaden tablespoon as a measure. C. W—— and his wife each took a teaspoonful of the powder in milk, and shortly after suffered from vomiting and purging. The husband, after much pain and discomfort, recovered; but the wife died on the third day afterwards. A post-mortem was made, and the appearances of the viscera were those of death from an irritant poison. The case was referred to me, and on Nov. 25th I received four jars containing respectively the stomach, liver, duodenum, and rectum, a bottle with the contents of the stomach, a large wide-mouthed bottle half full of a white powder, and with a leaden spoon within, and a paper packet of a white powder. In the viscera and contents of the stomach I found arsenic. The white powder in the bottle gave off the usual reactions of arsenious acid and of magnesium carbonate. The relative quantities differed in different parts of the whole, four samples taken giving percentages of arsenious acid of 46, 55, 45, and 55, or an average of 50 per cent. A teaspoonful of the powder levelled up weighed twenty-one grains, so that in a teaspoonful there was about ten grains of arsenic. There was no other metal present. Lead from the spoon was blamed for the result at first. The powder in this paper was identical in character with that in the bottle. It seems that Mr. B—— had kept a shop in this neighbourhood, and obtained his drugs from a leading druggist in Nottingham, who in turn got his stock from London. This Mr. B—— had, however, given up his shop in July, 1881, and at that time sold Mrs. X—— several quantities of simple drugs, including a large bottle of magnesia. The bottle sold to Mrs. X—— was proved to be the same as that from which Mrs. X—— dispensed the powder to C. W——. It was a bottle known to the whole village in fact. Mr. B——'s nephew gave this in evidence, and the nephew's wife said that she had given of its contents frequently to her own baby, and it had never suffered any ill effects. She said she was sure that the bottle when sold was not so full as when produced at the inquest. The bottle was not labeled. The coroner said, in the course of his remarks, that he was afraid it would remain a mystery as to how the arsenic got into the powder, for according to Mrs. X——'s evidence, the contents of the bottle were just the same as when she bought the powder from Mr. B——. The jury returned a verdict that the deceased died from taking arsenic accidentally mixed with magnesia, but how such mixture took place there was no evidence to show.

II. BY STRYCHNIA.

On March 18th, 1884, I gave evidence at an inquest held by Dr. Housley, district coroner for Notts, at Warsop, near Mansfield. W. H—— had a daughter, the deceased, who was ten years old at the time of her death. She occasionally suffered from toothache. On January 4th—i.e., six weeks before the death, finding her in pain from toothache, he sent her to a druggist's shop in Warsop for some Epsom salts. Of this he gave her a teaspoonful in some hot water. She then went to bed; her father and his wife, the child's stepmother, shortly afterwards retired. About 10 o'clock (time of child going to bed not given) the child began to scream. Her father went to her, and she said, "Father, father, I am dying." She complained of pains in the legs, which were stiff and extended. He carried her about the room for twenty minutes, and then put her on the bed. At intervals she screamed and asked not to be put on the ground. When sitting on the bed she said, "It's coming on again." She made "funny faces," and he thought she was "going off her head." After half an hour she vomited and seemed better, and he did not think it necessary to send for a doctor. He gave her a little whisky and water, and occasionally after this there was twitching in the arms, body, and legs. In an hour she went to sleep. Next morning she seemed dull and drowsy. He did not think at the time that the salts were the cause of her symptoms. On February 16th the child again complained of the toothache, and her father gave her half a teaspoonful of the same salts in hot water. She went to lie down, and in a quarter of an hour cried out for him. He found her suffering in the same way as before. He sent for Mr. Stein of Warsop, who found the girl unconscious and almost pulseless, with the face quite pale and the lips livid. She went into a series of convulsions, which attacked the body, arms, and legs. She shortly after died. Mr. Stein made a post-mortem, and finding no appearance of death from natural causes, and indeed stating that the symptoms were those of strychnine poisoning, reserved the stomach for analysis. On February 20th I received the following articles: (1) A white jar, covered and sealed; (2) a powder in a blue paper; (3) a small bottle labelled "toothache tincture."

1. The jar contained a small human stomach, tied at both ends, weighing 13½ oz., with the contents, which latter weighed 8¼ oz. The mucous membrane was natural. The contents consisted of a brown thick fluid, with an acid reaction, and of some lumps of cooked flesh resembling ham and some fat and potato. I examined these contents for magnesium sulphate, finding both base and acid present. I then took half the stomach and half the contents, making an acid watery extract, which I exhausted with alcohol, the alcoholic extract dissolved in water being treated, by a well-known method, alternately with chloroform and ammonia and sulphuric acid. Finally I obtained from the half of the stomach and contents a pure white crystalline evaporate from alcoholic solution, weighing ·007 of a gramme—i.e., in grains, for the whole stomach, ·007 × 2 × 15 = ·21 grain. I tested this alkaloid in the usual way for strychnia. The solution in acetic acid was intensely bitter to the taste, gave a yellow precipitate with chromate of potassium, and the solid showed the violet reaction with manganese binoxide and sulphuric acid. Nitric acid did not redden the solid, showing absence of brucia. To show that this substance was altogether strychnia, and not a mixture with some other alkaloid, I made use of two methods, chemical and physiological. The colour, reaction, and bitterness to the taste I found most marked to ·00001 of a gramme, and the physiological test I used as follows. Frogs I found it impossible to get, and instead thereof made use of toads, just then spawning and easily obtained. I took male toads of equal size, and made two solutions, one of the crystalline evaporate and one of a pure strychnia from Morson's, of the same strength. Into toad A I injected by the hypodermic syringe ·005 gramme of the alkaloid from the stomach; into toad B ·005 gramme of pure strychnia. A had first marked tetanic spasm in eighteen minutes; B in twenty minutes. A died in six hours twenty-three minutes; B in six hours thirty-three minutes. A third toad I put unwounded into a vessel containing a grain of acetate of strychnia. He had no symptoms for twenty-seven hours and a half, but died of tetanus in forty-six hours and a half, showing how much longer the thickly tuberculated skin of the toad resists the entrance of a solution of strychnia than in the case of the frog. The dose, ·0001 grain, recommended to produce tetanus in the frog, by a solution in which it is placed unwounded, had not the least effect on the toad for seventy-two hours, when I removed it, and it showed no sign whatever of tetanus afterwards.

2. The blue paper packet contained a white crystalline powder, weighing 355 grains. This was what the father had given doses of to the child, and was supposed to be Epsom salts. There was no label, either of the substance or of the druggist's name. I analysed this substance for oxalic acid and for zinc, with a negative result. I obtained the usual evidence of magnesium and of sulphuric acid. I found and separated, by of course a much simpler proceeding than in No. 1, strychnia in the alkaloidal state, and amounting to 3 per cent. of the whole, but not uniformly distributed. A teaspoonful levelled up weighed 52½ grains; so that it would contain about one and a half grains of strychnia, and the half teaspoonful about three-fourths of a grain.

3. The "toothache tincture" contained no strychnia, and consisted of a solution of camphor in chloroform. It had been used by the child.

The stepmother deposed that her husband had three children, but none by her. On two occasions, by his desire, she bought strychnia for the purpose of poisoning rats (the father was a gamekeeper); but said that the

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last quantity, after what was necessary, was thrown into the fire; whilst the father said he distinctly remembered throwing it into a stream. After some little pressure, the stepmother admitted that the child's life was insured. Two of the neighbours deposed that in January of this year each of them had bought Epsom salts at the druggist's where the deceased child had purchased some. In one case the witness gave her daughter, aged ten, as much as would lie on a shilling, and the girl suffered from aching and stiffness of the arms and legs and twitching. Witness threw away the remainder of her salts when she heard of the death of deceased. In the other case the witness had taken a teaspoonful of the salts herself, had twitchings of the arms and legs, but vomited and soon recovered. The druggist who sold the salts deposed that he had no strychnia in the solid state, and had never had it in stock. The bulk of Epsom salts from which he supplied deceased came from a wholesale druggist's in London. The coroner reviewed the evidence at some length, pointing out that the questions for the jury to consider were: Whether the deceased died from poisoning by strychnia; and, if so, how was it mixed with the salts? Was it mixed wilfully and intentionally? Were the salts contaminated by the father, the local, or the London, druggist? He thought that the wisest course would be to return an open verdict, leaving any future action to be taken by the police, if they obtained sufficient information. The jury's verdict was: "That deceased died from strychnia poisoning; but there was not sufficient evidence to show how the poison became mixed with the salts."

Remarks.—I have brought forward these two cases, not for their pathological or chemical aspects but on a medico-legal account. They are similar, inasmuch as it was impossible to trace how, when, and by whom the mixture of poison and medicine took place. It seems to me to offer a new and facile field for the poisoner of the future. If A buys a medicine of B and a poison of C, and mixes them, who is to say whether A did so or whether B did not sell the medicine adulterated with the poison? Of course the greater number of hands the substance bought passes through the greater the difficulty of finding out the person who mixed with it a poison. In the first case the powder which killed Mrs. W—— was bought of Mrs. X——, who bought it of Mr. B——, who bought it of a druggist in Nottingham, who would buy of some London house. In the second case the salts were bought of a local man who bought of a London house. It would have been better in the second case if the police had seized the bulk from which the salts were dispensed by the local druggist.

The cases also were similar in respect of the varying strength of samples taken from different parts of the whole; looking indeed as if the mixture were an accidental one. The verdict of the jury was in each case in almost identical words, to the effect that death was caused by the poisoned medicine, but that there was no evidence to show how the mixture had been effected. My own theory with regard to the first case is as follows. Mr. B—— had been in the habit of keeping a little arsenic for the purpose of sheep-washing; this fact he kept in the background as much as possible, and there was no arsenic or indeed any drug on his premises at the time of the inquest. He probably or possibly kept this arsenic in a paper without a label, and when the necessity for using it had passed by he would push it into a corner of a cupboard and forget all about it. When transferring some of his stock to Mrs. X——, he would turn out this white powder in a paper; not labeled, he would imagine it was an additional quantity of what it so much resembled—viz., the magnesium carbonate—and would put it into the bottle containing his stock of the same. When Mr. B——'s nephew's wife gave her baby some magnesia out of this bottle, it would be before the transfer to Mrs. X—— took place. As to her saying that the bottle was fuller when produced at the inquest than when sold to Mrs. X——, that was possibly due to her imagination. The second case presents much more difficulty. The husband and wife, when examined separately, differed as to the mode in which the residual strychnia was disposed of, and it may perhaps be considered singular that the father, having poisoned rats so frequently, and most likely seen them in the convulsive stage, should have had no suspicion of the real state of things after the first dose. As to the whole teaspoonful being recovered from and the half proving fatal, in the first place the vomiting in the first instance would diminish the amount of poison absorbed, and, in the second place, too great reliance cannot be placed on loose measurements; the whole teaspoonful may have been a small one, and the half a large one. If the packet bought were really a two-ounce one, there must have been, after the teaspoonful and a half had been taken, an ounce unaccounted for; but as 355 grains (sent to me) + 50 + 25 (a teaspoonful and a half) = 430, the packet may have been an ounce only. As to the depositions of the two neighbours that they had suffered from twitching after taking salts purchased from the same druggist, we may perhaps attribute this, in the absence of any but their own testimony, to vivid imaginations acting posteriorly to the fact of the girl's death. I was told that two samples of salts bought from the same druggist had been sent for analysis to a chemist, and with negative results, but this was not put in evidence.

Nottingham.

"PRICKLY HEAT."

BY HENRY T. WHARTON, M.A. OXON.,
HONORARY SURGEON TO THE KILBURN DISPENSARY, ETC.

THIS distressing affection, so common among Europeans in tropical climates, is too rarely met with in England to figure in our text-books under anything but its mere name of "lichen tropicus." The apparent impossibility of relieving the fearful burning heat or the tormenting prickly itching seems to excuse dermatologists from even suggesting a remedy. Nevertheless the disease, although seldom recognised, is far from being unknown in this country. A well-marked case which has come under my observation, and which has ended in a complete cure, seems therefore worthy of being recorded.

My patient, a medical man, after passing the age of thirty suffered year by year continually increasing distress as each summer came round. He is a man of exceptionally good health, who knows nothing of indigestion, biliousness, or liver complaint in his own individual experience. At last his "prickly heat" became intolerable. Not only was the follicular lichenous inflammation so conspicuous on his back that he could not bear to take a Turkish bath in public; but the eruption would appear in considerable patches on his forearms, so that he was ashamed to turn up his shirt-sleeves in ever so troublesome an obstetric case. The disfigurement was almost as serious a matter as the pain. Yet, after having been out at night he would often return to his bed to suffer hours of the torture of his "prickles;" the least increase in the action of the skin brought them on; nor did any treatment prove adequate to bring the slightest relief. From May to November he was a martyr to his troublesome malady. He consulted all his friends and more than one distinguished specialist. His efforts to get cured were as unremitting as they were unavailing; no known art could aid him.

At last it occurred to me that perhaps the light short-sleeved India-gauze vests that he wore in the summer had some share in the causation of his agony; they were too thin either to absorb the perspiration or to protect the skin from sudden (but perniciously grateful) chills. In fact, his endeavour to keep cool was the very cause of his suffering from the heat. I accordingly advised him to wear throughout the summer the thickest long-sleeved vests made entirely of wool, such as he wore in the depth of winter. The result was the absolute cessation of his experience of "prickly heat." All last summer, and up to the present date of this, he has never felt a symptom of the recurrence of his dreaded agony.

I may further mention, as it may throw some light upon the case, that for years my patient suffered a transient attack of urticaria—itching without any outward signs—after a cold bath. Since he has taken to the constant use of hot water for all his ablutions, this irritation has never returned. It would be interesting to learn whether Indian practitioners have ever essayed to combat the excruciating anguish of "prickly heat" by any method similar to mine.

St. George's-road, N.W.

GUY'S HOSPITAL UNIVERSITIES DINNER.—A pleasant gathering of the members of the Universities of Oxford and Cambridge now at Guy's Hospital was held on Wednesday, July 16th, at the Holborn Restaurant, with Mr. J. N. C. Davies Colley, M.A., M.C., in the chair. It was decided that in order to bring the members of the Universities together the dinner should be held annually.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nullasantem estalia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum alforum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.

ACUTE YELLOW ATROPHY OF LIVER; NECROPSY; REMARKS.

(Under the care of Dr. ALBERT VENN.)

FOR the following notes we are indebted to Mr. John A. Shaw, the registrar:—

Harriet S——, aged seven years, a brunette, was admitted for jaundice and enlargement of abdomen. The family history was good, and the child had previously been healthy. She was taken ill eight months before with slight jaundice, which gradually increased. There had never been pain. The bowels were confined, and there was some bilious sickness after food. The child was quiet and drowsy. She had been treated for six weeks with grey powder.

On admission the body was well-nourished. The skin was of a deep-yellow-olive colour, and the conjunctivæ were deep yellow; the abdomen was uniformly distended and tympanitic, but not painful on pressure; there were no ascites. The superficial epigastric veins of both sides were prominent; the right lobe of the liver was just below the ribs; the left lobe was uniformly enlarged, its edge being well-defined and reaching three fingers' breadth below the ensiform cartilage. The urine was dark, and gave immediately bile reaction; the bowels were confined, the motions being light-coloured; the appetite was good, and there was great thirst. The lungs and heart were normal, and the odour of the breath was sickly sweet. A grain of calomel was given three times a day, and the abdomen was anointed with liniment of iodide of potassium with soap, and well bandaged.

In a few days the umbilicus was sore and inflamed, and there was some hæmorrhage from the bowels. The superficial veins had disappeared, and the abdomen was flaccid; the bowels were loose, being moved eight times in twenty-four hours.

On Feb. 26th the calomel and the liniment were omitted. On the following day a vesicular eruption had appeared, consisting of isolated spots on the sides of the abdomen and thighs, and inclined to be hæmorrhagic. The jaundice was less. Ordered a grain of grey powder three times a day. On the 28th there was hæmorrhage from the gums, lasting two days; the teeth were loose, but the jaundice was less.

March 9th.—The limit of the dulness of the left lobe of the liver was two inches above the umbilicus. The jaundice had increased again, and the child was more drowsy. On the 18th the hæmorrhage was greater from the bowels, and blood once passed without action of the bowels. The superficial veins were again appearing, and the abdomen was tympanitic. Next day one-tenth of a grain of podophyllin resin was given three times a day. On the 22nd the right lobe of the liver had diminished, and the left lobe was noticed to be smaller. One-eighth of a grain of podophyllin three times a day was ordered.

On April 5th the right lobe was much diminished, and the left was evidently getting much smaller. From March 22nd to April 7th one-sixth of a grain of podophyllin was given three times a day. On the 11th the child vomited a teaspoonful of blood, and the vomiting continued more or less to the 15th. On the 17th the child became light-headed, wandering, scarcely recognised her nurse, and was thirsty and drowsy. On the 20th she recognised no one; the pupils were dilated, inactive to light, and there was constant vomiting, with involuntary evacuations and stertorous breathing, and at length the child died. The general treatment consisted of saline purgatives and nitro-hydrochloric acid mixture.

Necropsy, forty-eight hours after death.—There was oozing of blood from the nose, mouth, and rectum. Purpuric spots existed on the legs and thighs. The cartilages of the ribs were stained light-yellow. The lungs were emphysematous at the edges, being externally of a bright-crimson tint; they were generally congested; there were no surface hæmorrhages; there were pneumonia patches at base. The heart was normal; the pericardium contained some yellow-tinged clear fluid. There was very little fluid in the peritoneal cavity on raising the intestines; on a superficial view the great omentum was found to be gathered up. The left lobe of the liver, as seen for about an inch square below the cartilages, was of a yellowish-white colour. The right lobe was not seen. There were considerable firm adhesions to the diaphragm. The liver, with gall-bladder, weighed 10½ oz. There were no superficial cicatrices. The whole was shrunken and the edges thinned; the surface was smooth; the right lobe on section was tough to cut; it presented a nutmeg appearance with yellow infiltrations; the left lobe consisted generally of yellow patches. The gall-bladder was very small, contracted, and contained a little dark-green inspissated matter. The kidneys weighed 2½ oz., and were congested; there were hæmorrhages in the cortical part. The spleen weighed 1½ oz.; on section it presented a deep-red plum colour, and was hard. Intestines: There were scybalæ in cæcum, and the walls were deeply congested; contents in some parts were greenish, in others of dark offensive feculent matter. The stomach contained dark-grumous, almost black, fluid. Brain: The dura mater was firmly adherent and of a yellow tint; the substance of the brain was apparently healthy.

Remarks.—The points of clinical interest are:—1. The continuance, but varying intensity of jaundice of surface and urine. 2. The hæmorrhage from the bowels at intervals; the pale clayey motions with diarrhœa at times. The latter vomiting of blood and hæmorrhage from gums. 3. The absence of ascites, and the absence of emaciation. 4. The low temperature; for the last three weeks usually below 98°. 5. The primary enlargement of liver; its almost sudden decrease with comatose condition supervening. 6. The combination and sequence of symptoms as usually ascribed to hypertrophic cirrhosis, and acute yellow atrophy. The points of therapeutic interest are:—1. The question of salivation, whether the bleeding from the gums was due to mercurial treatment or to the general hæmorrhagic tendency. 2. The first diminution in liver was noticed two days after the commencement of the podophyllin treatment. Was this a cause or a coincidence?

The following is a microscopical examination of the liver made by Dr. Hale White. The liver cells were much atrophied, containing a granular débris; in many cases its outline was vague and the nucleus indistinguishable. Some of the cells contained minute vacuoles, probably fat. There was evidence of interstitial hepatitis, but in no part had this proceeded to form fibrous tissue. In any field of the microscope one was struck with the large number of bile capillaries. It was difficult to say whether this was due simply to their having come close together, owing to the atrophy of the intervening liver cells, or whether they were newly formed. In favour of the latter view, they were distinctly most numerous in that part of the liver affected with hepatitis, although that had not proceeded far enough to cause contraction. There was nothing noteworthy about the bloodvessels. The microscopical appearances confirm the suggestion of the clinical history, that this was an example of acute yellow atrophy supervening on hypertrophic cirrhosis. Careful search failed to discover micro-organisms, described by Dreschfeld and others, filling up the vessels; in this respect the specimen agreed with those described by the various authors who have also failed to discover these micro-organisms.

MANCHESTER ROYAL INFIRMARY.

EXTIRPATION OF THE LARYNX FOR EPITHELIOMA: RECOVERY.

(Under the care of Mr. THOMAS JONES.)

FOR the following interesting notes we are indebted to Mr. Crawshaw, one of the house-surgeons.

J. B——, aged forty-four, was sent to the infirmary by Mr Martland of Oldham in the early part of the present year. His illness commenced two years ago with a hoarseness which soon ended in a whisper. At this time there was no difficulty in breathing or swallowing. The condition remained unchanged until last August, when he began to have sharp pains in the throat, both on swallowing and coughing. He also had dysphagia, especially when he attempted to swallow fluids.

On admission his condition was as follows:—The patient

was fairly healthy-looking and moderately well-nourished, though he had lost weight since the commencement of his illness. He spoke in a hoarse whisper. There was no evident dyspnœa, except when he lay down. He had occasional fits of coughing, particularly at night, and they generally terminated with the expectoration of a frothy tenacious mucus, which was sometimes tinged with blood. Fluids were swallowed with great difficulty, frequently they excited cough, and were eventually ejected. Swallowing efforts caused some pain, and in addition he sometimes experienced radiating pains in the head and face. On external examination of the larynx nothing abnormal could be felt, except perhaps some thickening of the right side. The larynx moved freely during deglutition, and it readily yielded to lateral pressure. An enlarged gland could be felt in the anterior border of the sterno-mastoid opposite the thyroid cartilage. A laryngoscopic examination was made by Dr. Dreschfeld. Projecting from the back of the epiglottis, a little to the right of the median line, there was a small-pointed tumour, about the size of a bean. Its attachment was broad and sessile, and there extended from it some thickening which involved the aryteno-epiglottidean folds, especially the one on the right. The movements of the vocal cords were impeded, the loss of motion chiefly affecting adduction, and was more marked on the left side.

After remaining in the infirmary for a few days, the patient went home. When he returned, after an absence of some weeks, a marked change for the worse was noticed; all the symptoms—the hoarseness, dyspnœa, cough, expectoration, dysphagia, and the pain—had decidedly increased; he had also become very sallow and pale, and had emaciated considerably. The examination with the laryngoscope was repeated. The growth springing from the epiglottis was much larger, while its surface had become irregular and papular. The thickening in its immediate vicinity had also increased, and that which involved the right epiglottidean fold now formed a very distinct mass, which concealed the right vocal cord. The left cord could be seen; it still retained some movement. No ulceration could be detected. The pharynx was apparently free. External examination disclosed an increase in the thickening of the right side, previously noted. In any attempt to pass a large-sized œsophageal bougie, an impediment was encountered in the lower part of the pharynx. Instruments of a smaller size were admitted without any difficulty; their withdrawal, however, was followed by the expectoration of blood.

April 22nd.—Preliminary tracheotomy was performed, an opening being made in the trachea above the isthmus of the thyroid; great relief followed this procedure, no unfavourable symptoms resulting. Four days later (April 26th) the whole larynx, together with the first ring of the trachea, were removed. The patient being under the influence of chloroform, the ordinary tracheotomy tube was removed and one of Trendelenburg's substituted. A vertical incision was made in the median line of the neck, reaching from the hyoid bone above to the tracheotomy incision below. The structures were carefully separated from the front of the thyroid cartilage, which was then divided and the two halves separated. The interior of the larynx thus brought into view was found to be almost completely filled with a new growth. The mass reached upwards to the epiglottis and downwards as far as, and to a certain extent into, the trachea. The extent of the growth made it evident that nothing short of complete extirpation would be of any avail. In order to do this, more room was required, and it was obtained by prolonging the incision downwards to the sternum, then dividing several more rings of the trachea so as to push the tracheotomy tube further down. This being done, the soft parts were now dissected off the sides of the thyroid cartilage and its attachment to the cricoid severed. The left half of the thyroid was then removed, its remaining attachments being divided with scissors. The right half, including the epiglottis, was treated in the same way. The laryngo-pharyngeal septum was found to be so extensively infiltrated that it was impossible to separate the larynx from the pharynx, so the whole of the anterior and lateral walls of the latter were taken away, only a portion (about an inch wide) of the posterior wall being left. This was subsequently divided and sutured to the margins of the skin incision. The cricoid cartilage, together with the first ring of the trachea, were next excised. The upper end of the trachea was fixed to the skin by a carbolised silk suture on each side. Above the points at which the œsophagus was attached to the skin there was a large cavity which communicated with the mouth. It was washed out with a solution of chloride of zinc (forty grains to the ounce), and afterwards plugged with iodoform gauze. During the operation numerous small arteries were divided, necessitating the application of twenty-two ligatures. Besides this, several vessels were torsioned. The patient took the chloroform well, and there was no special difficulty in any part of the operation. There was a marked degree of shock afterwards. An enema containing an ounce of brandy was given, but not retained. A second one half an hour later remained. The patient's bed was surrounded by a tent, the atmosphere in which was heated and moistened by means of a steam kettle, and the wound in the throat was covered with warm sponges constantly renewed. By the evening—i.e., twelve hours after the operation—the shock had to a great extent passed off. There had been no sickness. The pulse was good and the breathing quiet. The temperature was normal; all the enemata were retained. There was slight oozing of blood from the wound.—27th: The patient passed a very comfortable night, but was rather more feeble. The face wore an anxious expression, the pulse was weak and compressible, and the temperature still normal; slight cough, with expectoration of stringy mucus. In the evening the patient looked brighter, and the pulse was decidedly improving. Since the operation he had been fed exclusively by enemata. A tube was passed through the œsophageal opening in the neck and half a pint of milk introduced into the stomach. Temperature normal.—28th: Has had a good night, yet is depressed this morning. Milk given by the œsophagus causes occasional coughing and is sometimes brought back. Free discharge of mucus from the tracheal opening. During the day he had four pints of milk, one pint of beef, jelly, and two eggs by the œsophageal opening. The daily records show a slow and gradual improvement in the general condition. Our principal troubles arose from the saliva gaining access to the trachea and exciting a great deal of cough. Fortunately we overcame the difficulty by introducing one of Foulis's tubes into the trachea. This accurately fitted the opening and effectually prevented the passage of any secretions.

On May 4th the sutures attaching the œsophagus to the skin were removed, and the upper extremity of the tube allowed to fall back. This permitted a re-establishment of the communication with the mouth, temporarily suspended with the view of facilitating the introduction of food. On the 6th the patient was still progressing favourably, no unpleasant symptoms of any kind having made their appearance. The temperature remained normal. He looked bright and cheerful. A note was made of a swelling the size of a walnut, which was situated in the lower part of the neck at the posterior margin of the left sterno-mastoid muscle. It first appeared about six days after the operation, and attained its present size in two days. This fact rendered the inflammatory nature of the swelling probable. It remained stationary for several weeks, and eventually the withdrawal of a few drachms of sero-purulent fluid finally determined its true character.—15th: Since the date of the last observation patient has been making very rapid progress, and for the last three days has been getting up in the afternoons. The discharge from the wound is diminishing, and the parts look healthy.—25th: The cavity has contracted to such an extent that a finger can scarcely be passed upwards into the mouth. By the aid of a large drainage-tube having one end at the back of the mouth, and the other in the œsophagus, milk can be easily swallowed, without any of the fluid appearing in the neck.

The patient went home on June 14th. He still wears one of Foulis's tubes, and all nourishment is taken by the mouth. During the last three weeks he has gained over a stone in weight. An examination of the parts removed was made by Mr. Young. The whole of the mucous membrane of the larynx and lower part of the epiglottis presented an irregular, corrugated appearance, with here and there slight ulceration. It was so greatly thickened that the cavity of the larynx was almost obliterated. On the left side the true vocal cord and the orifice of the ventricle were discernible, but the normal appearances were in every other respect destroyed. The new growth was fairly limited inferiorly at the lower border of the cricoid cartilage, though below this the mucous membrane was not thickened. Above it was not clearly defined, for scattered nodules extended into the pharyngeal mucous membrane. Microscopically the growth presented the characters of a pavement-celled epithelioma.

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Medical Societies.

EPIDEMIOLOGICAL SOCIETY.

AT a meeting of this Society, held at 11, Chandos-street on July 9th, Inspector-General Lawson in the chair,

A short paper on the Revaccination of School Children was read by Mr. R. D. R. SWEETING, Medical Superintendent of the Western Fever and Small-pox Hospital. After observing that consideration of the large number of vaccinated children under fifteen years of age admitted into the small-pox hospitals was not sufficiently recognised by pro-vaccinators, though constantly taken notice of by anti-vaccinators, he brought forward statistics of such cases admitted into four of the large small-pox hospitals of London during 1881, 1880, 1879, and part of 1878. The numbers were divided into two classes, well and imperfectly vaccinated, and it was seen that 72 per cent. belonged to the latter class. A note was made of the difference of area standard between the Local Government Board and the Asylums Board, and the inference drawn that were the more rigid standard of the former adopted, the numbers of the well vaccinated would be found to be less. The age distribution of the cases was then examined, division into the three first quinquenniads of life being made, the result being that both the gross numbers in each age group and the totals of the two subdivisions were found to increase in the same progression with the age, this being roughly as 1 : 4 : 8. (It was incidentally remarked that this ratio showed the greater protection afforded under five years than over.) After drawing attention to the fact that it was not only the numbers of the imperfectly vaccinated that increased in a mathematical proportion with the age, but also those of the well vaccinated, a renewal of the operation was advised between the ages of ten and fifteen at the latest, and earlier if any special reason exists. Upon this question the opinion of Dr. MacCombie is quoted favourably. School attendance was looked upon as a convenient and readily applicable opportunity for the purpose of such revaccination, and upon this matter a recommendation of the Homerton Committee in 1876 and a valuable Order of the Illinois (U.S.A.) State Board of Health of 1882 were quoted in full. This latter is addressed chiefly to school teachers, and makes it imperative that they should keep a vaccinal record of every scholar, all of whom must present certificates of proper protection, this being very carefully defined. A similar vaccinal registration was then recommended for the London School Boards, to be supplemented by periodic inspection, and compulsory revaccination of the imperfectly protected. The suggested central authority would be either the Education Department, the Local Government Board, the proposed municipality, or, lastly, the hospital authority recommended by the Hospitals Commissioners.

Mr. C. E. PAGET then read some Notes on the Death-rate from Small-pox in the City of Chester in 1774, of which the following is an abstract. He stated that he was desirous of bringing before the Society the records, contained in a report on the city of Chester, of the behaviour of small-pox during an epidemic prevalence of the disease in 1774. From the tables in the report the population appeared to have numbered 14,713, and the average annual mortality from small-pox was estimated at 49, or 3·3 per 1000 of population. In 1774 the total number of deaths was 546, of which 202 were from small-pox, or 13·7 per 1000 of population. The total number of persons attacked by small-pox was 1385, so that, as stated in the report, there died 1 out of 6⅞ of those attacked, or at the rate of 14·5 per cent. The incidence of the disease appears to have been exceptionally large in the last three months of the year, 130 deaths out of the 202 being recorded during that period. It must be a matter of surprise that within such recent times the death-rate from small-pox should have been so enormous, for, taking the average annual mortality from this disease in Chester as 49, it was seen by the tables of the report that one-eighth of the whole annual mortality was from small-pox. The report further states that in January, 1775, there were in Chester only 1060, or 1 out of every 14, who had not contracted small-pox, a proportion quite as remarkable as that of the average mortality from the disease; and the report commences with the statement that "the tables prove Chester to be healthy in such an uncommon degree as will astonish those who are best acquainted with the general state of mortality in large towns." It is interesting to note the views of a physician of those times as to the possibility of controlling by inoculation the ravages of small-pox, for Jenner's attention was directed to cow-pox only in 1775, and his first decisive experiment in vaccination was not performed till twenty-one years later. Dr. Haygarth believed that if inoculation were universally practised in Chester the mortality from small-pox would be reduced from 49 to 4; but probably this estimate was too low, and it is fortunate that inoculation was not practised so vigorously as to delay the introduction of vaccination. He estimated, however, from his tables that the proper time for the performance of inoculation was between the first and third months of infancy, a time fully agreeing with that which has been proved to be the best for the performance of vaccination, and he pointed out that the total 202 deaths from small-pox already referred to were among children under ten years of age. The comparison, therefore, of the mortality from small-pox at that date with that which has been recorded of late years will not be found wanting in interest, for the infant mortality from this disease has now been enormously reduced, and the mortality among adults appears to arise chiefly through their not being revaccinated.

Dr. CORY also presented the report of the Special Committee appointed to investigate the Conditions affecting the protection against Small-pox afforded by Vaccination, which was ordered to be printed.

In the discussion which followed, Surgeon-General Manifold, Drs. Pringle, Cory, Willoughby, and Messrs. Corney and Shirley Murphy took part.

ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Pathological Section on May 2nd, Mr. ARTHUR BENSON read a paper on the Nature of Jequirity Inflammation, recounting a series of experiments on which he had been engaged since January last. He concluded that the bacillus found in the infusion had nothing whatever to do with the production of the inflammation, but had not yet satisfied himself as to its real nature. He could produce the characteristic membranous ophthalmia with jequirity powder, with freshly made cold infusion, with infusion in which the bacilli had developed, with the same after they had died, and with an infusion more than eight weeks old, but still swarming with micro-organisms of various kinds; while he had failed to produce any results by inoculation of the discharge or membrane caused by jequirity. Nor could he in the membrane or discharge find any bacilli whatever, though he had made numerous observations at all stages of the affection. In these respects his observations were confirmed by those of Neisser, Klein, Salomonsen, and Holmfield. He had latterly tried the effects of powdered jequirity dusted on callous ulcers of the leg, and found that a similar membranous inflammation was produced on them as in the conjunctiva, the membrane being easily detached from the ulcerated surface. The stimulation caused by the application seemed decidedly beneficial in a certain class of ulcers, and even in vascular ulcers the application of the powder produced hardly any pain whatever.—The PRESIDENT said the communication was most interesting. The merit of a man who demolished a false theory was only second to that of a man who established a true one.—Mr. STORY remarked that when jequirity was first introduced into ophthalmic surgery as a cure for granular ophthalmia, it was conjectured by oculists that the cause of the inflammation was micro-organisms. He, too, for a long time believed that bacilli were the cause of the ophthalmia, but since Dr. Benson's experiments he had modified his opinion, and did not regard that theory as proved.—Dr. JOSEPH KENNY believed that Dr. Benson's observations were at all events coeval with those of Klein. In the North Dublin Union Workhouse the drug was tried on ulcers with strongly marked improvement as the result, and on the whole he was encouraged to proceed with the investigation of the effects of the drug in cases of ulcer.

Mr. P. S. ABRAHAM, in a communication on Scapulo-Humeral Dislocation in the Horse, said that dislocation of the shoulder-joint is very uncommon in the horse. Most writers on veterinary surgery do not allude to such a lesion; others deny its possibility; and only one or two mention cases in which the accident had happened. No description had been found of an actual specimen, and probably the example before the Academy was unique. The humerus was

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dislocated on to the dorsum of the scapula, the head being three and a half inches away from the glenoid surface. The outer edge of the latter was broken off and forced up. The capsular ligament was ruptured, but none of the muscles or their tendons, that of the flexor brachii being only much stretched and changed in direction. Anchylosis had commenced between the humerus and scapula in their new position. The horse took a fence intemperately and fell across a narrow bank at the other side of the ditch, with its off fore-leg under it. When got to stand up the deformity was observed, but the horse was able to put the foot to the ground, and was led a distance of three miles and a half to the nearest station and brought to Dublin. The veterinary surgeons were confident that some muscle or muscles were ruptured, and that the joint was not dislocated. They ridiculed any attempt at reduction. A severe blister was applied, and subsequently a leather shield was fastened tightly on. The strap caused a sore on the withers, and ten weeks after the injury lockjaw set in.—Dr. BENNETT asked whether veterinary surgeons regarded this dislocation as an impossibility in the cow. The anatomy was similar to that in the horse, but the conditions for the occurrence were somewhat less favourable.—Mr. ABRAHAM said the joint in the cow, though similar, was not quite the same as that in the horse. The top of the humerus was not so large in the cow, and the whole shoulder was not so movable as in the horse. One method of reduction in the case of the cow was by putting the hoof of the leg over the horns and driving the animal until the dislocation got in of its own accord.

Mr. STORY exhibited a rare Tumour of the Orbit about the size of a small pea, which he had removed from a young woman aged twenty. It had existed from earliest childhood, and had lately increased in size. The tumour lay beneath the lower lid towards the inner canthus, was freely movable in all directions, strong and hard to the touch, and was covered by slightly discoloured skin. When the patient stooped, laughed, cried, or took violent exercise, this patch of bluish skin became swollen. When the superjacent soft parts were divided the little tumour came out without further interference. On section it was found to be solid and formed of a series of irregularly concentric lamellæ, which microscopical examination showed to consist of fibrous tissue and calcified matter of unknown origin, along with cellular conglomerations of an indefinite character. Nothing resembling either bone or cartilage existed in the tumour, its stony hardness being due to new calcification. He considered the tumour to be a phlebolith, the history of the case and the pathological appearances agreeing with that view. The only tumour at all resembling it hitherto described was one removed by Fano, and described by that author as an osteo-fibro-cartilaginous growth.—Mr. ABRAHAM said he had examined the section prepared by Mr. Story, and believed that he had come to a correct conclusion as to the tumour being of the nature of a phlebolith. There was nothing bearing the form of cartilage cells in the growth. It seemed to consist of a kind of fibrous tissue which had become calcified. The inside consisted of an irregular amorphous mass of material, and it was impossible to say what that was.—Mr. BENSON thought the tumour in the first instance was a nævus.—On the motion of Mr. STORY, seconded by Dr. BENNETT, the specimen was sent to the Committee of Reference.

Dr. LENTAIGNE having submitted a specimen of Multiple Diverticula of Large Intestine, said it was wonderful that no evil effects had resulted. According to the opinion of Dr. Habershon, the formations in such cases were the result of constipation and the attempts of the intestine to expel the fæces. In the specimen the longitudinal fibres were very much hypertrophied.

Mr. THOMSON showed a case of Fracture of the Head and Articular Surface of the Tibia. The patient had fallen from a height, reaching the ground on his feet, and the bone was fractured by the weight of the body communicated by the condyles of the femur. He showed that this fracture was not described in the ordinary books of reference. Heydenreich, in 1877, referred to four cases in the continental museums. Professor Gordon of Belfast mentioned that there were three specimens in the museum there, and Professor Bennett of Dublin had secured an excellent specimen from the dissecting-room, the injury in that case having been recovered from.—Dr. STOKES said a much smaller amount of force would produce fracture of the tibia when the knee was flexed than when it was in a straight position, because there was a much smaller amount of curvature of the condyles.

MEDICAL OFFICERS OF SCHOOLS ASSOCIATION.

A MEETING of this Association was held on July 24th at the Medical Society's Rooms, Cavendish-square, Surgeon-Major Evatt, M.D., President, in the chair. The hon. secretary, Dr. Alder Smith, read the minutes of the last meeting. The Council had decided that the annual general meeting should be held about Easter, 1885. Another ordinary meeting is to take place before the Christmas holidays.

The PRESIDENT, in opening the proceedings of the afternoon, prefaced Dr. Andrew's paper by a few remarks on some of the objects of the Association, which now numbers fifty-eight members. Dr. Evatt said he had long considered that the footing of medical officers of schools was not established on a satisfactory basis, and this Association was calculated to strengthen the hands of such medical officers. He thought it was a grand part of the duty of the medical officers to instruct boys on the dangers which assailed them on their entry into adult life, and Miss Ellis Hopkins, who so much sympathised with these aims, had congratulated him on the course he adopted at the Woolwich Military Academy. With regard to infectious diseases in large public schools, he considered that much good would result from a full discussion of the whole subject by members of the Association. In his opinion no man was better fitted for the head mastership of a school than a talented medical man, and he believed a new priesthood was coming forward in the form of medical men capable of discharging also the duties of head master.—Dr. ALDER SMITH then read the report of the Council, which set forth the objects, constitution, and printed rules of the Association. These were unanimously adopted by the meeting.

Dr. JAMES ANDREW, physician to Christ's Hospital, read a paper on the Managment of Epidemics of Infectious Diseases in Schools. He first dwelt on some general considerations bearing on the necessity for such an Association. It had been said that societies were so numerous that unless good reasons existed for founding a new one we had no right to add to the number. The principle of the division of labour may be carried too far, and we ought to be careful not to make artificial distinctions. To justify the creation of a new Association, the importance of the field of labour, practically or theoretically, or both, ought to be admitted on all sides. Further, there should be something special in the objects of the new body. Special qualifications should be required, or such as are only to be obtained by special training, so that things may be better done. In the care which was necessary for the welfare, physically, morally, and intellectually, of our youth he saw a sufficient justification for the establishment of this Society. Degeneration of the physical basis of life certainly could not take place without corresponding lowering of the mental and moral constitutions. The duties of medical officers of schools were becoming more and more widely separated from those of the general practitioner, and problems arose before them requiring the highest practical knowledge and sagacity in order to be promptly and efficiently solved. It must be confessed that at some schools a medical officer exists only in a most rudimentary form. The first necessity of a public school is efficient medical supervision, and this is impossible without a recognised medical head. It was constantly happening that masters of schools refused to recognise dangers to health resulting from many infectious diseases and overwork. Next, it was imperative that a recognised medical canon which should enlighten and guide all medical officers should exist; by such means the ignorant may be taught and the eccentricities of the otherwise competent smoothed out. Dr. Andrew next considered the nature and scope of work which ought to be undertaken by the Society. The opportunity afforded for the study of the nature and history of diseases amongst large numbers of boys congregated together was not one to be lost. The period of incubation was a subject which required much investigation. He opined that this period in scarlet fever was by no means so uniform as some books taught. We knew that the period of incubation varies greatly in small-pox after inoculation; the determination of the maximum and minimum periods of latency ought to be definitely ascertained. With regard to the presence of symptoms during the period of incubation from which a diagnosis might be made, he thought a large field of observation was opened.

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A careful examination of the conditions which gave rise to different types of the same diseases would repay the observer. Epidemics of scarlet fever and typhoid fever varied greatly in the intensity and characters of the predominant symptoms. Diphtheria, especially in relation to the paralysis which occurred afterwards, was also, in his opinion, a case in point. A study of the relationship of different forms of disease to each other and their influence on each other, as rheumatic fever and scarlet fever, variola and typhoid, was a promising field of inquiry. Whether the liability to take small-pox again or after successful vaccination were due to want of care in the vaccination, or whether, as Sir James Paget suggested, a fresh modification of constitution might be brought about by some disease subsequent to vaccination, was also a fit subject for investigation. Mention was made by Paget of the occurrence of typhoid fever, in 1850, in a town near Oxford; when small-pox broke out in 1865 it was shown by Mr. Daniel that out of 616 persons then revaccinated the result was unsuccessful in many, but by no means in all, and it also came out clearly that the successful revaccinations occurred chiefly or almost wholly among those who had had typhoid fever previously. Dr. Andrew was inclined to believe that a severe attack of typhoid fever did away with the protection afforded by vaccination. The development of inherited peculiarities, as well as the best mode of correcting hereditary diathesis, were also worthy subjects of observation. The best plan of erecting school buildings and dormitories, and the question of separate establishments for boys under and over twelve years, as was done at Christ's Hospital, with a view of diminishing the frequency and severity of epidemics in the London house, were also problems for consideration. Information, too, was wanted as to what were the best means to be adopted in case of an epidemic of scarlet fever and measles. In an instance in which the virus has been imported, perhaps complete isolation of the sufferers and possible carriers of infection would be effectual, and quarantine ought to extend as long as the maximum period of incubation of scarlet fever. In many instances there would be some difficulty, because no certain diagnosis would be possible. When the epidemic is raging, the question, Ought the school to be broken up? will arise. Dr. Andrew confessed that he permitted the parents to take away their boys if they chose. Another matter was the importance of careful disinfection of the clothes; in many schools adequate means for proper disinfection did not exist. —Dr. FULLER (St. Nicholas's College, Lancing) said that in many schools there were no proper means of isolation. The maximum limit of the period of incubation of scarlet fever, in his experience, might safely be put at fourteen days, and he always enforced quarantine for that space of time. He had waited for thirteen days without having a fresh case, but even then had been disappointed.—Dr. INGLE (The Leys School, Cambridge), Surgeon-Major LEVER (Military College, Oxford), Dr. ALDER SMITH, and the PRESIDENT, also made some remarks.—Dr. FYFFE (Clifton College) spoke of the value of a good sanatorium attached to a school. He asked how the origin of a case of scarlet fever occurring on the nineteenth day after another case could be explained. Dr. Clement Dukes had said that after eight days there need be no fear of new cases arising.—Dr. EVATT said that in a recent epidemic of measles at Woolwich he turned all his boys out into tents and marquees with satisfactory results.—Dr. FYFFE said that at Clifton he had three sanatoria, one for non-infectious cases, another for contagious skin diseases, and a third for acute specifics; but even here difficulties were to be encountered when the nature of a case was doubtful, so that in addition an observation room is required.—Mr. HOLDERNESS (Eton) thought that certificates stating that boys had not been in contact with contagious affections for a week or ten days before their return to school ought to be given.—Dr. ALDER SMITH said that he wished to state most strongly that every public school ought to be under the control of an undivided medical responsibility, with full power to act immediately occasion required it. It was well known that some masters were not nearly so particular as others. Moreover, it was unfortunate that so many differences of opinion existed amongst medical officers themselves. This fact was strongly illustrated by a review of the fifty replies which had been received to a circular form of inquiry drawn up by Dr. Alder Smith. For instance, in answer to the question, What length of time (dating from the appearance of the rash) do you insist upon before the pupil is allowed to rejoin school? the time given varies for scarlet fever from one month to three months, and the same difference of opinion was found by going through the whole list of questions proposed in the circular form of inquiry.—Mr. COOMBS (Bedford County School) was strongly of opinion that certificates from parents or guardians were not of the least value, for infectious disorders might be caught whilst the pupils were *en route* to the school.—Dr. DOLAN (Shibden Industrial Schools) said that quarantine for three weeks was an excellent regulation when any doubt existed as to whether the boys came from an infected district.—Dr. BRETT (London Orphan Asylum) did not think certificates were of much value.—Dr. JONES (Epsom College) considered that certificates were of some good, though not of much importance. He was sorry to have to say that the parents did not always write the truth.—Mr. STEDMAN (St. John's Foundation Schools) also joined in the discussion.—Dr. SHELLY (Haileybury) thought that every school should have some place of isolation for the detention of doubtful cases. With regard to the certificate from the parents, stating that the boy had not been in contact with infection for a certain period before returning to school, he said that personal experience made him absolutely sure that it was of no value. He also spoke on the question of disinfection of clothes, and said that he believed the disinfection of the clothes of a measles patient might be accomplished by exposure to sunlight and air. German measles was in his experience much more difficult of disinfection.

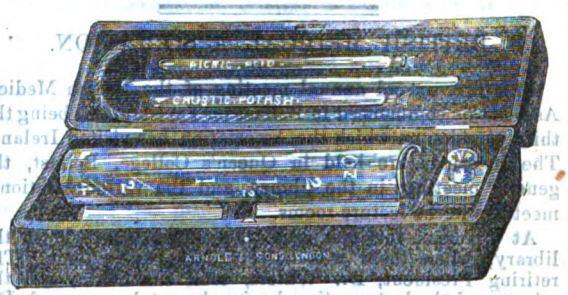
The following resolution was moved by Dr. ALDER SMITH, seconded by Dr. EVATT, and unanimously carried:—"That the Council be requested to bring forward at the next meeting a series of resolutions on the best methods for the prevention of epidemic diseases in schools, and that the business of the meeting be the discussion of the resolutions with a view to their adoption." A copy of this resolution will be sent to every member at least three weeks before the next meeting takes place.

Dr. Thursfield (Leamington College), Dr. Fletcher (Highgate Grammar School), Dr. Pike (Malvern College), Dr. Jones (Epsom Medical College), and Dr. Tomkins (Female Orphan Asylum) were elected members of the Society.

New Inventions.

THE COMPANION URINARY CASE.

THE above-named case contains in very compact form all the appliances usually required in the examination of urine. It may be briefly described as follows:—An ordinary cylindrical two-ounce glass measure has closely fitted into it a test-tube, and into this again is placed a urinometer in case. At one end is a small spirit-lamp. Litmus and turmeric papers fill up a groove running lengthways. In the lid is a



gum catheter, a glass stirring rod, and two delicate long glass-stoppered bottles for caustic potash and picric acid. With the contents of this case the urine can be drawn off, the amount measured, and the specific gravity and reactions to blue and red litmus paper taken. With the two chemicals, caustic potash and picric acid, and the aid of the spirit-lamp, pus, albumen, and sugar may be examined for. There is no strong acid to ooze out in carriage. The whole is contained in a case measuring seven inches long, one three-quarters deep, and the same in width. It has been made for me by Messrs. Arnold and Sons of Smithfield.

T. FREDERICK PEARSE, M.D.

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A NEW LEVER WITH TRACTOR BLADE.

THE instrument here represented has been recently made by my direction by Messrs. Meyer and Meltzer. When closed it is of the form of an ordinary vectis, but with this modification: it has applied to its inner surface, by means of a sliding screw running in its handle and shank, a similarly shaped blade to the outer one, and this inner blade can be projected beyond the outer one after the instrument is applied in a closed condition to the extent of two inches and a half or less, according to need. The chief novelty of this instrument is the augmentation of the lever and tractile power of a vectis by the projection of an inner movable blade. The cases in which this instrument will be found useful are: in breech or footling presentations, where there is delay in the delivery of the after-coming head, especially in those cases where, owing to the presence of the shoulders causing an obstacle to locking of the blades, the forceps cannot readily be applied, its great power as a tractor being then eminently useful. It is also efficient in cases of face presentation, the occiput being easily brought down by means of this instrument, and also in some cases of occipito-posterior presentations in which it is desired to aid rotation of the vertex. It should be introduced closed as an ordinary forceps blade, the end of the fenestrum being carefully guarded and directed by the fingers of the left hand inside the cervix. When in proper position, the screw is pressed, and the inner blade made to project to the requisite distance. As the blade is projected by simple pressure, the resistance can be estimated, and the chances of injury to the soft parts reduced to a minimum.



Tavistock-square. LUKE ROBINSON, M.D. Cal., &c.

THE ALBERT SATCHEL.

THIS is one of the best satchels for tourists' use we have seen. It is made so as to combine the advantages of a knapsack and handbag, is thoroughly waterproof, and weighs about 16 oz. It will, we believe, be a welcome addition to the pedestrian's equipment. The manufacturers are the Army Rubber Company, Brompton-road, Knightsbridge.

BRITISH MEDICAL ASSOCIATION.

THE fifty-second annual meeting of the British Medical Association commenced in Belfast on Tuesday, this being the third occasion on which the Association has visited Ireland. The meetings are held in Queen's College, Belfast, the general meetings in the library, and the various sectional meetings in the lecture-rooms.

At 3 o'clock the first general meeting was held in the library, when there was a very large assemblage. The retiring President, Dr. Waters, took the chair; and the minutes of the last meeting having been taken as read, Dr. Waters said that, as the term of his presidency was about to expire, the only remaining duty which he had to perform was to introduce his successor to the chair which he had the honour of filling. The past year had not been an uneventful one in the history of their Association; on the contrary, it had been marked by the enactment of laws in reference to the Society which had produced material alteration, making the executive more responsible than the whole body. The change was one which, he believed, would tend to the increased prosperity of the Association. To that body and the committee of council, which had guided the council to its present position of strength and usefulness, they owed, in his opinion, a large debt of gratitude. He congratulated them on the great prosperity of their Society, and the steady increase of their members—an increase which bade fair, in the course of years, to include within the Association almost every member of the profession in this country. Dr. Waters concluded by thanking them for the honour they had conferred upon him, and by introducing Prof. Cuming, Belfast, the president for the ensuing year.

Dr. Cuming having taken the chair, a cordial vote of thanks was given to Dr. Waters, and he was elected a vice-president of the Association for life. From the report we gather that the invested funds of the Association now amount to over £17,000, and the number of members to nearly 11,000. The revenue of the Association for the year ending Dec. 31st last was £20,545, the expenditure £18,141, leaving a surplus of £2404. Dr. Wade having resigned the post of treasurer, Mr. Macnamara (London) was elected in his place. At 8 o'clock the meeting reassembled in the library, which was lit up with the electric light, and was crowded with members who had come to hear the President's address.

At the conclusion of Dr. Cuming's address a vote of thanks, proposed by Dr. Douglas Powell, and seconded by Dr. Grimshaw of Dublin, Registrar-General of Ireland, and a native of Belfast, was most heartily accorded to him. A discussion on some notices of motion followed, and the meeting concluded at 10.30. Amongst the distinguished foreigners attending the meeting are Professor Sayre (New York), Dr. Jacobi (New York), Dr. Cordes (Geneva), Dr. Jones (Chicago), Dr. Moore (Rochester), Dr. Shoemaker (Philadelphia), Professor Zehender (Rostock), Dr. Pozzi (Paris), Professor Gayet (Lyons), Dr. Dujardin-Beaumetz (Paris).

On Wednesday morning, at 9.30, Professor Sayre (New York) gave a demonstration in the anatomical theatre of the College of his plan of treating curvature of the spine. There was an immense audience, who paid marked attention to the professor as he explained and illustrated his well-known method of treatment.

At eleven o'clock the second general meeting was held when Mr. Wheelhouse (Leeds) resigned his post of President of the Council and was elected a vice-president of the Association for life. Dr. Balthazar Foster (Birmingham) was elected President of the Council in his place. An invitation was presented from the medical men in South Wales asking that the Association should meet in Cardiff next year. This was cordially agreed to, and Dr. Edwards was chosen President-elect. Dr. Ord then delivered his address, at the conclusion of which a cordial vote of thanks, moved by Dr. Waters (Liverpool), and seconded by Professor Gairdner (Glasgow), was accorded to that gentleman.

The meetings of the sections opened on Wednesday afternoon, when addresses were delivered by Dr. Smith, Dr. Godson, Professor Greenfield, Dr. Maclagan, and Sir J. Mac Cormac. Special discussions were opened by Mr. Lawson Tait and Dr. G. Johnson. In the evening there was a brilliant conversazione in Queen's College, two thousand guests being present.

MEDICAL MEN FOR COLONIAL SERVICE.

A BRIEF paper was read by Dr. Dyce Duckworth at the First Intercolonial Medical Congress, held in Amsterdam last year, on the supply of sound practitioners for the English colonies. The author of the paper is of opinion that encouragement should be given to young men of good ability to come forward for colonial service, and that this end might be served by the institution of scholarships in general literature or science of such value that the costs of medical education might be, at all events, partially defrayed, it being suggested that the funds for this purpose should come from the Colonial Department of the Government. The study of physics and chemistry is urged in opposition to a detailed knowledge of anatomy, physiology, and botany. To protect properly qualified men, Dr. Duckworth considers that it ought to be the care of the mother country or of the local Government to prevent imperfectly educated practitioners from practising in a colony. He thinks it important to recommend that no colonial practitioners should commence work in tropical regions under the age of twenty-three or twenty-four years. Statistics seem to prove that a better standard of health is maintained if tropical service is begun at this time of life, and that Europeans are thus enabled to resist the special risks of trying climates with greater prospect of success.

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THE LANCET.

LONDON: SATURDAY, AUGUST 2, 1884.

WE confess to announcing the miscarriage of the Medical Bill with a considerable sense of relief. For some weeks past it has been too evident that if the Bill was to pass at all it would do so in a gravely mutilated condition. Hence our relief at its disappearance. But let no one construe our confession of relief into one of satisfaction. We are filled with shame and the sense of disappointment, qualified only with the conviction that what has happened is better than what might have happened. The present system of numerous and rival bodies granting half diplomas remains condemned and disparaged before the country and Parliament. It has not been slightly altered, so as to look something different, as it might have been if the Ministry had yielded—as it threatened to do—to the pressure that was so discreditably applied to it. When a great accident happens, the only satisfaction to be got is in a diligent search for the answer to two great questions—What is to blame? and Who is to blame?

To take the first question—*What* is to blame for the fact that an obvious reform, recommended by a Royal Commission of the highest authority, regarded by the Medical Council itself as the only thing to remedy the existing evils, and demanded for forty years by the medical profession, has been again defeated? The fact itself is of the gravest import. The reform desired is not a revolution. It is one which has been repeatedly attempted by the Conservative party, and which the Duke of RICHMOND besought the Government to carry through without further delay. It is only fair to admit that for the failure of legislation one of the most obvious and simple causes is the absurd state of Parliamentary procedure. The forms of the House of Commons invite obstruction, and reward it. At every stage encouragement is given to the least distinguished members to mar the work upon which Ministers and Members of Royal Commissions may have spent years. Leave has to be taken to bring in a Bill. It has to be read three times. A motion has to be made to go into Committee, and various other motions. On all of these occasions speeches may be made, amendments moved, and obstruction practised. The 652 members may all try their hands at an amendment, and intimidate Ministers by a show of opposition. But perhaps the greatest absurdity in Parliamentary procedure is the rule that the progress made with a Bill in one session is not to count at all in the next. The promoters of the Bill have to begin again *de novo*. The Medical Bill, for example, has passed the House of Lords, and has been read a second time in the House of Commons. Its principles have been accepted in both Houses. If next year it could be taken straight into Committee in the House of Commons, and the Minister in charge had the time and the courage to place boldly before the House the chief points of the evidence put before the Royal Commission, the Bill would pass by a large majority. But according to the present rules of procedure, the Bill would, in all probability, not reach the Committee stage of the House of Commons till the end of July, and the Minister would be driven to an undignified system of haggling with exacting or unpatriotic members, and the process of bargaining would go on till the very marrow of the Bill would be sold, and nothing left for anyone to care for. The enemies of medical reform may well congratulate themselves on the perfection with which these rules for preventing legislation have been carried out. But the result is terribly humbling to the strongest Government of modern times, with a majority of 130 at its back. On the theory that the House of Commons is an excellent club, and legislation a mischievous thing to be discouraged, the blank report of sessions is of course all right. But this theory will not long command for the House of Commons the respect of earnest men who see great evils to be remedied, and the utter impotence of Parliament to deal with them. Verily, Mr. GLADSTONE lately struck the right nail on the head when he said that, beyond all other reforms, that which is most needed is the reform of procedure in the House of Commons.

But, coming to our second inquiry, *Who* is to blame? no fault of the rules of procedure will exonerate those who take advantage of them, or who abuse their influence in the House to prevent wholesome and reasonable legislation. There were pages of amendments placed on the order papers which we have no hesitation in saying were entirely without justification, and, if not meant to waste time and stop the Bill, were singularly well fitted for that purpose. Take as an illustration—by no means the worst—an amendment in Dr. LYONS' name, proposing to create Medical Lords of Appeal with the rank of Barons, and votes and seats for life in the House of Lords. Can a man of Dr. LYONS' sense really think to alter the constitution of the House of Lords by a clause in a Medical Bill, or can he think to increase respect for medical representatives in Parliament by giving utterance to such impracticable propositions? If Dr. LYONS had spent half as much of his excellent intellect in supporting the Government Bill as in devising this amendment, he would have compelled the admiration of the profession. But the chief culprit, in our opinion, for the last and greatest failure in medical legislation, is Sir LYON PLAYFAIR. Everything was going smoothly, and promised success, till his amendment, dealing a deadly blow at the very essence of all wholesome and just legislation, was propounded. Sir LYON PLAYFAIR had last year, with his university, entirely accepted the principle that university students, like all other students, should pass the Final Board. The very numbers taught and passed by the Scotch universities constitute an argument why they should cheerfully accept this principle. Their degrees would have gained in public estimation by their doing so. Now they appear as shirking a slight test, and give Mr. SIMON additional ground for his taunt that their examinations are no higher than a qualifying examination ought to be. Sir LYON PLAYFAIR knows that the profession had set its mind on fair play all round—the subjecting of graduates and non-graduates to one common test. He knew that when he began to tamper with that principle he was parting company with the profession and grievously disappointing it. His speech, as we have shown, was full of damaging insinuations against the Bill, founded on most inaccurate data and unsound arguments. He spoke as an ex-professor, and in no sense as a medical man. Neither is this the first time

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hat Sir LYON has disappointed the profession. Ten years ago, when Mr. GLADSTONE'S Government brought in a Bill, he could have carried direct representation with a little pains. But he did not take the pains, and the Bill was lost. Now he has had the courage to move the omission of the other great principle, the reduction and consolidation of the licensing authorities; and by so harassing the Government, which too easily yielded to his pressure, he has wrecked another Bill. Few men had it in their power to do so much good or so much harm. He has chosen to do harm and to wreck another Medical Bill. The Edinburgh University and Sir LYON PLAYFAIR doubtless know their own business best, but the profession will not soon be convinced that Sir LYON PLAYFAIR has any claim to its confidence, seeing that he has on two great occasions so blighted its most reasonable and most ardent hopes.

IT is not for us to rejoice in the adverse issue of an action at law arising out of proceedings that discredit the profession to which we belong, and which it is our pride to represent. At the same time, it must be confessed, we believe good—great and lasting good—will come out of this evil. The men upon whom the Tower of Siloam fell were not worse than a multitude of others who were not so visited; but it was none the less on that account a fact that wrong-doing merited punishment. We have for many years past protested, in the name of the profession, against the lunacy laws and the system of private asylums. These laws are as bad as they can well be, and the pretended supervision exercised by the Commissioners in Lunacy is a farce, a technical travesty of protection, nothing better, and, on the whole, tending to increase the peril of evil by throwing a false glamour of security over them. So far as the relations of the public to the medical profession are concerned, the whole principle of the law of lunacy is utterly and hopelessly wrong, and places us in a false position. The power of imprisonment given to the keepers of asylums, whether public or private, is not needed. The manner of proceeding by examination and certificates is clumsy and ineffective. The endowment of "medical" certificates with the power of a *lettre de cachet* is a violation of the underlying principles of law and justice, and outrageously and recklessly imprudent. The reception of such certificates from any and every member of the profession without regard to special qualification of any sort is an astounding piece of stupidity. And the attachment of any value whatever to the scrutiny of these certificates by the Commissioners must be perfectly inexplicable to anyone who knows anything of the facts. The Commissioners do not even go through the farce of inquiring into the nature of the case, the accuracy of the allegations made, or the *bona fides* of the persons making them. The keeper of the asylum is the only person who has any check on the medical certificates given outside, in the sense of judging whether the statements made in those documents are true or false; and, in the case of the keeper of private asylums at least, this person is directly interested in the retention of the patient placed under his care. It is an unjustifiable and misleading pretence on the part of the Commissioners that they exercise any protective control over the certificates. This is perfectly well known at Whitehall; and we cannot understand how it comes to pass that it has not been avowed, in the House of Lords at least, that the Commissioners cannot possibly do more than look to the clerical fulfilment of technicalities in regard to the way in which the forms are filled up. As regards the private asylum system, there is nothing to add to what we have already said on the subject—namely, that it is wholly antagonistic to the interests of public safety. Meanwhile, we think the time has come when the medical profession should clear itself from the discredit of being connected with such a system, and when the College of Physicians, which forbids its members to enter into professional partnerships, should set its face also against this trade in lodging-houses for lunatics. The election of members who are engaged in this lodging-house-keeping to the Fellowship of the College is an enigma we have never been able to solve.

We do not wish to sit in judgment on the particular case which has just been decided, so far as the medical men are concerned. The manner in which the procuring of certificates in this case was carried out, and the manner in which the supposed lunatic was examined and the forms were filled up, do not strike us as being either better or worse than the methods of procedure adopted by men more eminent than those engaged. We do not think any member of the profession engaged in lunacy practice has a right to cast a stone at those of his brethren who have been in this instance "found out." The eminent specialist who leans his arm on a mantelshelf and asks a few questions on general topics without taking any step to ascertain the physical state of his patient, albeit and paradoxically the distinguished physician may not believe in the existence of anything outside the organism, and may regard mind as brain-function, and nothing more; and the eminent specialist who spends two hours in the discussion of a question of spiritualism with the patient he is examining, are not in a position to complain of the manner in which the medical men concerned in the recent case discharged their "duty." It matters little how an essentially bad thing is done. We have no hesitation in affirming that, except in cases where the certificate is needless because the case is plain to everybody, an opinion formed at a single interview must be untrustworthy. Of course there are cases of brain and nerve disease, such as general paralysis of the insane, brain-softening, and the like, on which a rational diagnosis may be made, but these are cases which the profession generally understands. We do not deny that special study of the pathology of the nervous system as a whole, or of the brain in particular, may enable a physician to recognise cerebral disease by the abnormalities of cerebral function. This is a distinctly scientific position to take up. Meanwhile we do deny that a knowledge of medicine in the broad sense renders it possible to recognise mental disease, or to discriminate between eccentricities and delusions without the application of precise scientific tests. The members of our profession who have been assailed in this case have our sympathy, not because we entertain the smallest doubt that what they did was unwise, and in that sense wrong; but because we fail to see that they have done anything worse than is done daily by more eminent men around them, and that will and must

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continue to be done until the law is altered, and the scandal of the lunacy system as a whole permanently effaced.

THE subject chosen by Dr. MILLER ORD for his Address in Medicine, delivered this week at Belfast before the British Medical Association, is one which illustrates in a striking manner the tendency of modern thought towards a neurotic system of pathology—not, indeed, in the old sense of the predominant influence of nerve action throughout the whole range of disease, but yet ample enough to prevent its full exposition in the limits of a lengthy and closely reasoned address, abounding in clinical facts. The address will do much to attract attention to this interesting and fertile field, which has been explored already on so many sides, and in which Dr. ORD himself has done much to elucidate the inter-relations of morbid states. No one can doubt in the present day the very close and direct connexion subsisting between the processes of nutrition and secretion and the nervous system. Examples of such a connexion are daily before us, and new instances are being constantly brought to light. Often the knowledge depends more upon inferences derived from the clinical course of diseases than of such positive proof as the morbid anatomist or the physiologist would demand. But the examples are now so numerous, and those in which obvious nerve lesions are present are so similar to those in which such changes are wanting, that there is little room for escape from the conclusions arrived at.

Prominent among such disorders of nutrition, or, as Dr. ORD terms them, "neurotic dystrophies," are affections of the muscles and joints, and the first alluded to in the address was muscular atrophy dependent upon articular disease. It has been observed that such wasting may occur out of all proportion to the disuse of the limb, and a well-marked instance was quoted from M. CHARCOT of atrophy of the vasti muscles in a case of traumatic arthritis of the knee. M. CHARCOT—whose name is inseparably associated with this subject—explained the muscular condition in that case by the transmission of nerve influence from the diseased joint to the spinal cord, which operated upon the centres governing the nutrition of the muscles connected with the joint—an argument which receives support in the occurrence (in a case recorded by RUMPF) of an arthritis of the knee, set up after fracture of the thigh apart from any continuity of the inflammatory process. From these comparatively simple instances of trophic disorder in limbs, excited through the action of the spinal cord, Dr. ORD passed to consider the wider question of similar lesions being produced by central disease or by nerve irritation from sources other than parts of the limbs. The similarity of the joint affection in tabes to the lesions of chronic rheumatic arthritis—a similarity that has led many to be sceptical as to the propriety of separating "tabetic arthropathy" from the more general affection—is suggestive of a common bond in nerve disorder. The connexion of muscular atrophy with affection of the anterior cornua of the cord is well established; and very interesting is the observation made by Dr. GULLIVER of a case of progressive muscular atrophy complicated with a painful affection of the shoulder. Pointing in the same direction is the muscular wasting and other dystrophic phenomena associated with chronic joint disease, and especially chronic rheumatic arthritis, a condition of muscles which bears very marked resemblance to that of progressive muscular atrophy. Nor do these clinical facts by any means exhaust the catalogue of conditions which suggest more than has yet been capable of proof. Thus, Dr. ORD related the details of a case of severe and painful progressive rheumatic arthritis, which was initiated by a chill, affecting particularly the spinal cord. SENATOR, indeed, argues strongly for the nervous origin of rheumatic arthritis, and appeals to the symmetrical distribution of its lesions in support of the view, an argument which, as Dr. ORD points out, was so forcibly used by Sir JAMES PAGET as affording evidence of a blood disease.

The considerations thus advanced, which all point to the direct interference of the nervous system with the nutrition of the limbs and their articulations, were turned to excellent account by Dr. ORD in dealing with the chief subject of his address—a subject which, it may be remembered, he brought before the Clinical Society of London a few years ago. His contention is that the nodular form of chronic rheumatic arthritis (digitorum nodi of HEBERDEN) is intimately associated with uterine irritation. And the abundance of clinical facts advanced in support of this argument goes far to justify it. For not only is the affection far more common among women, but it is closely connected with dysmenorrhœa and other symptoms of disordered uterine function; whilst in several of the cases detailed by Dr. ORD relief from the joint disease was not obtained until the climacteric was reached. This association has been pointed out by others, but hitherto it has generally been considered that the connexion depended upon an altered blood state rather than on nervous influence. Thus once more we seem to be confronted with the well-worn controversy between humoral and neuristic pathologists. When, however, we consider all the allied facts which Dr. ORD has marshalled, it does not seem so irrational to invoke the agency of the nervous system to explain these striking disorders of nutrition. At least it may be conceded that the humoral view is quite as open to criticism, and in point of fact less capable of explanation. Dr. ORD, however, is not contented with this; and fully confident of the security of his own position, he advances still further against the humoralists, claiming gonorrhœal rheumatism to be a neurotic disorder. In so doing he has pushed the doctrine he advocates almost beyond due limits; and yet for those who admit the truth of the previous reasoning, it is not difficult to follow him here. Certainly it is curious that gonorrhœa in women is seldom (Dr. ORD seemed to say "never") associated with rheumatism, as it is in the other sex; but for all that few will, without further evidence, adopt the doctrine laid down at Belfast, that the relatively great excitability of the prostatic part of the urethra (*quoad* the spinal cord) accounts for the supervention of arthritis in cases of gonorrhœa or urethritis. Naturally the mind reverts to examples of "urinary paraplegia," and Dr. ORD did well to adduce them in support of his views.

It would, we venture to think, have been better had the address ended here. It had arrived at a climax of no small importance, and up to this point doubtless it fully engaged the attention of the audience. We can imagine that they

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would have been contented with this, having received sufficient material for thought and contemplation. So it was rather hard upon his hearers for Dr. ORD to have started off anew to consider the subjects of glycosuria and its relation to nerve influence, the mechanism of the occurrence of intercurrent inflammation in diabetes, and the nervous relations of myxœdema, full of interest as these subjects are. There can be no question as to the interest of the address, nor as to the wealth of clinical material whereby it was illustrated; whilst many will be grateful to Dr. ORD for having chosen a definite subject in preference to dealing in generalities; in pointing the paths open to inquiry rather than staying to admire what has been already achieved; thereby making a really useful contribution to medicine, and one worthy of the occasion on which it was delivered.

IN view of the increasing tendency to treat pelvic disease by abdominal section, any trustworthy statistics are valuable. In the case of cancer of the cervix uteri, the frequency of the disease makes the question of treatment one of ever-persistent importance. A contribution of great value bearing on this matter has lately been added to our knowledge by PAWLIK, who gives us careful records of 136 cases treated by the galvanic cautery in the first gynæcological clinic of Vienna, and kept as far as possible under observation from the date of operation. When we mention the fact that the cases extend back to the year 1861, the importance of PAWLIK'S report will at once be perceived.

The mode of operation adopted has been that of the galvano-caustic wire, which (in spite of an apparently theoretical preference for cutting instruments) has been found to furnish the best results. The details of the operation are given at length, and comprise the principles of getting, if possible, beyond the disease, and performing the amputation through healthy tissues. This is effected by seizing the cervix or vaginal wall (if encroached upon) with the volsella forceps and sharp hook, taking care that the loop lies beyond them. A caution is given to tighten the loop very slowly, especially in cutting through the periphery, in order to prevent bleeding; and to avoid making a premature circuit by allowing both wires to touch the steel instruments, by which accident the écraseur becomes simply a cutting instead of a burning instrument. If it is acting well, a seething noise can be heard on auscultating above the pubes. The part removed is examined to see whether (*a*) the peritoneum has been opened, and (*b*) the disease has been entirely removed. The peritoneum contrasts with the charred surface by its cartilaginous glistening. Imperfect removal of the disease is seen by the cut section not appearing homogeneous, but lighter in colour and exuberant. The peritoneal wound is generally of little moment. The imperfect removal of the disease must be supplemented by the scissors, galvanic cautery, or thermo-cautery. The slough generally separates on the tenth to the fourteenth day, by which time the peritoneal wound (if present) is generally healed. The granulating surface is then stimulated from time to time by lunar caustic. There is nearly always cicatricial narrowing or even closure of the canal, sometimes producing considerable menstrual retention. To avoid this the sound should be frequently passed. The author also adds that pregnancy, which under the circumstances is disastrous, is thus abolished. Patients rarely obey orders to attend regularly, and therefore complete closure is infrequent. In this case the canal has to be opened or manufactured, by trocar, knife, or metrotome. After incision nothing should be done for three weeks, lest peritonitis &c. supervene; and then the sound should be passed in order to break down any adhesions which may have formed.

The results obtained by PAWLIK are as follows:—Patients who died in hospital, 10; of these, 1 died from recurrence of the disease nearly four months after the operation, 1 from marasmus twenty-five days after, 8 shortly after (3 from anæmia, and 1 from peritonitis). Patients lost sight of, 22; of these, however, 2 were known to be in good health two years after the operation. Patients who left the hospital not cured, 16. Patients who died outside the hospital, 31; of these, 16 died probably from recurrence (1 three years after the operation), 1 had a return *near* the uterus two years after the operation, the cicatrix being unaffected, and 3 died of tuberculosis. Cases which relapsed, 22 (date of death unknown); among these, 1 patient remained in good health for six years, 1 for nineteen months, and 2 had cancer outside the uterus, the cicatrix remaining intact. Patients who died in childbed without recurrence, 2; one in seven years and a half, the other one year later. Those who remained in good health numbered 33—viz., nineteen years and a half after operation, 1 (seen in good health nearly twenty-one years after operation); twelve years after, 2; eight years after, 3; seven years after, 3; five years after, 3; four years after, 2; three years after, 5; two years after, 7; and one year after, 7. With regard to the very important question of the correct diagnosis of malignant disease, a microscopical examination is expressly reported in the following cases, which remained healthy: 1 nearly twenty-one years, 3 twelve years, 5 ten years, 6 eight years, 12 six years, 18 three years, 19 four years, 29 two years, and 33 one year, after the operation. The peritoneal cavity was opened thirty-nine times behind, and once both in front and behind; of these patients, 4 died—2 of anæmia and 2 of peritonitis. Hæmorrhage occurred during or immediately after the operation six times; in 5 cases it was checked by styptic cotton, and once by the cautery. Secondary hæmorrhage occurred in 13 cases; once on the eighth day, twice on the ninth, and once on the tenth, eleventh, twelfth, thirteenth, and seventeenth days. Vesico-vaginal fistula occurred on separation of the slough three times; in one instance this was due to rapid return of the disease, which had been imperfectly removed. Parametritis only occurred once.

The matter is so important that the foregoing facts ought to be known. The disease is manifestly localised, and not general, in many cases, and a hope of cure is therefore not to be absolutely denied. Necropsies have shown thickening in the neighbourhood of the growth to be sometimes purely the result of inflammation, and not of malignant infiltration. The operation for extirpation of the uterus by abdominal incision is most difficult, unsatisfactory, and perilous; the vaginal operation, though generally preferable, is not much more satisfactory; and the ultimate results of cases of extirpation of the uterus for cancer show that even this operation by no means ensures against return of the disease. Practice with regard to the affection seems to have sepa-

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rated itself into two widely divergent lines: on the one hand, to remove the disease only in those cases in which a protuberant mass presents itself; and, on the other, to treat the disease by extirpation of the whole organ. The latter appears to be an unnecessary operation in many cases, the disease having a frequent tendency to extend laterally instead of vertically. The former implies the abandonment of some women whom a more hopeful view might have helped to cure, and very many of whom might have been relieved. Even where the uterus is fixed, an operation sometimes produces happy results. A woman, for instance, may have fever, sweating, and all the symptoms of septic intoxication; the disease is partly (and, it is true, imperfectly) removed, the symptoms instantly subside, and she enjoys a period of what seems to her perfect health. The result of PAWLIK'S statistics will probably be that we shall hear less of extirpation of the uterus and more of removal of the cancerous cervix.

THE address on Physiology, delivered at the Belfast meeting by Professor REDFERN, deals chiefly with the broad general truths of physiology, and is an endeavour to trace the recent advances in histology and in physiological pathology and their application to medicine and surgery. The subject is a difficult one, but the Professor exhibits a large and varied knowledge of modern work, and with this object in view he cites numerous observations and experiments. He cordially agrees with the doctrine explicitly laid down by Professor HUXLEY, in his Presidential Address to the British Association for the Advancement of Science, that all living matter has been derived from previously living matter of its own kind, and that all living beings and living tissues have originated from fragments of previously living beings or tissues, which, when detached, carried the properties of their parents with them. He shows how living matter presents alterations proceeding both from inherited predisposition and from the action of external changes, and he dwells in particular on the relations that exist between the blood and the tissues and the influence of agents affecting the tone and vital properties of the vessels. To illustrate his statements, he adduces the observations of WILLIAMS, who showed the effects of applying solutions of capsicum to the web of the foot of the frog; the experiments of LISTER, who demonstrated the delicacy of the relations between the walls of the bloodvessels and the circulating fluid; those of CONHEIM, who described the effects on the diapedesis of white corpuscles in arresting the circulation through certain vessels for two or three days; and those of RANVIER, who himself citing the remarkable phenomenon of the migration of white corpuscles into pieces of dead membrane inserted into the peritoneal cavity, and the difficulty of maintaining that the migration of corpuscles is in such instances due to an increased attraction between them and the tissues, arrives at the conclusion that we are returning to the notion of JOHN HUNTER, who accounted for the inflammatory blush by referring it to the action of the vessels. But important as the vessels are in bringing pabulum to the tissues, in the active discharge of their function, they still hold a secondary position as compared with those more intimate relations which exist between the blood and the tissues themselves. "Here," as the Professor observes, "is the real laboratory of the system; the place where the work of the body is done." The vessels, indeed, supply a larger or smaller quantity of the fluid plasma, in which all the tissues are bathed, in proportion as their demands are greater or less at one time than at another; but it is the business of each tissue to select, both as to character and amount, all it requires, and the energy with which this is effected is well shown by the high pressure at which the cells of the salivary gland excrete saliva.

In order further to elucidate the deeper relations existing between living and non-living matter, and the processes by which growth and nutrition are effected, the Professor next proceeds to consider the anatomical relations of the tissue elements to the lymph spaces, and to the contents of the lymph spaces, and lightly sketches the histological observations of v. RECKLINGHAUSEN, KLEIN, and others—showing that such spaces are far more widely distributed through the body than was formerly imagined; additional proofs of the important part they play in the economy being obtained by the immediate effect of endermic injections, now so familiar to all practitioners. The rapid absorption—a process that has indeed been actually witnessed—of milk and other fluids from the peritoneum, and the mode in which, if CREIGHTON'S observations are correct, the chyle is taken up from the intestines, the cells themselves forming the epithelium of the lymphatic spaces, or at least being immediately continuous with these spaces, and constituting the agents of absorption. The contents of the lymphatics are composed of plasma and corpuscles, and the mode of origin of the corpuscles has a special interest, since it affords some clue to the manner in which the blood-corpuscles are constantly being renewed and large losses of blood are repaired; and the organs in which the lymphoid cells are produced have been shown by recent research to be extraordinarily great, for, in addition to the lymphatic glands, the spleen, the adenoid tissue of the intestines and mucous membranes generally, the cancellous tissue of bones and many other parts, are all engaged in the production of leucocytes, the destination of which, obscure as the intermediate stages are, seems to be the renovation of the blood. From the lymphatic system Professor REDFERN travels by an easy transition to the domain of pathology. He refers to Sir JAMES PAGET'S investigations into the processes of repair, to the observations of ZIEGLER on the mode of recovery from burns, to the communication of syphilis by inoculation, and to what he rightly terms the most difficult, exciting, and important problem of the day—whether other diseases than small-pox can be deprived of their virulence by vaccination. If PASTEUR'S hopes in this respect are verified, it may perhaps be the glory of some future period to render even hydrophobia innocuous. In the meanwhile, investigations of this kind are left to the ardour of private individuals; and in this country, at least, Professor Redfern laments, little aid is afforded by the public, who, in the mischievous legislation of the few last years, are opposing the efforts of those whose labours would prove of the greatest possible benefit to them.

A SELECT COMMITTEE is to be appointed next session to inquire into the subject of the multiplication of overhead telegraph wires in the metropolis.

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Annotations.

"Ne quid nimis."

THE HEALTH OF PARIS.

DURING the recent discussion in the French Chamber on the sanitary condition of France, M. Paul Bert described France as being, next to Spain and Turkey, the most backward European country in sanitary matters. With especial reference to the health of Paris, he stated that the deaths in that city exceeded by 8000 per annum the number returned in London, after allowance for the different populations of the two cities. It is much to be regretted that the Chamber rejected the proposal for the appointment of a committee on sanitation, more especially as M. Bert's figures very much understated the excess of mortality in Paris compared with that in London. The annual death-rate in Paris during the five years 1879–83 averaged 27·1 per 1000, while the annual rate in London during the same period did not exceed 21·4 per 1000. To make these rates strictly comparable, however, it is necessary to take into account the relative age constitution of the populations of these two cities. The proportion of children aged under five years in Paris is scarcely more than half that in London, and this difference is but slightly compensated by a small excess in the proportion of the Paris population aged upwards of sixty years. Indeed, the age distribution of the Paris population is so favourable to its death-rate, that by applying the English life-table rates of mortality to each of five groups of ages its normal death-rate is found to be only 19·92 per 1000; whereas the normal death-rate of the London population obtained in a similar manner is 21·79. As the *normal* death-rate in London is 9·8 per cent. higher than that of Paris, it is necessary to raise the recorded death-rate in Paris by 9·8 per cent. for difference of age distribution, in order to make it fairly comparable with the recorded rate in London. The Paris annual death-rate for the five years ending 1883, thus corrected, becomes 29·8, which is 8·4 per 1000 above the London rate for the same period. The true excess of mortality in Paris, compared with that in London, is therefore more than double that stated by M. Paul Bert, and urgently calls for a thorough reform in the sanitary organisation of the French capital. In 1883 alone more than 2000 deaths from typhoid fever were recorded in Paris, which, although showing a marked decline from the still larger number in 1882, were equal to a rate nearly four times greater than the rate from the same disease in London. It may be hoped that the force of public opinion in Paris may induce the French Government to adopt some measure similar to that which was last week supported by M. Bert, and was only defeated in the Chamber by 219 votes to 193.

SIR WILLIAM MAC CORMAC'S ADDRESS ON SURGERY.

THE executive of the British Medical Association decided that there should not be any special Association Address in Surgery this year, and we therefore turn to the address delivered by Sir William Mac Cormac as President of the Surgical Section as the leading contribution to this branch of science at this meeting. Sir William Mac Cormac chose not to dwell on any of the special scientific problems now exciting the interest and thought of surgeons, but preferred rather to detail certain operative successes of his own. He first related two cases of gastrostomy for malignant disease of the œsophagus, in which he was enabled to postpone the second step of the operation in the one case for fourteen days, and in the other for seven weeks. In his remarks upon these cases he urges the importance of resorting to the operation early, so that the surgeon has sufficient time to secure the firm adhesion of the stomach to the parietes before it is necessary to open the stomach. This caution was, however, carried too far in his second case, for there is no practical advantage in allowing seven weeks to intervene between the two steps, and this patient was obviously operated upon five weeks too soon. Sir William Mac Cormac then detailed sixteen cases of radical cure of hernia performed either primarily or as a sequel to the relief of strangulation of the bowel. Of these, thirteen were quite successful. The method adopted was to excise the sac and ligature its neck with, in some cases, suture of the ring or rings, although Sir William does not place much value upon the latter step. This series of cases is very good, and they will, no doubt, help surgeons generally in adopting the practice which has been advocated and practised by some few, of converting all operations performed for the relief of strangulated hernia into the radical cure of the affection. The last case recorded is one of excision of a large goitre. There were no special features in this case beyond the large size of the tumour, its great vascularity, and the consequent difficulty and long duration of the operation. Sir William is evidently of opinion that the fear of inducing the cachexia strumipriva must not be allowed to prevent surgeons interfering in otherwise suitable cases, and he thinks that this sequela is only to be expected when the operation is performed upon children or adolescents.

BEER-DRINKING AND HEART DISEASE.

THE most essential factors of the living heart are unquestionably its neural and muscular elements. It may seem superfluous to assert so plain a truth; nevertheless, the necessity of bearing this fact in mind is demonstrated by every-day experience. If the heart be the subject of debate amongst medical students at our hospitals, how much do we hear of the murmurs and how little of the condition of the myocardium! Our present object is to draw attention to a class of cases which have not received the wide study they deserve. Idiopathic hypertrophy and dilatation of the heart are not phrases which carry their own credentials. To speak openly, the term "idiopathic" is regarded by scientific physicians as a pleonastic cloak for our ignorance. Cardiac hypertrophy of idiopathic sort is said to be of common occurrence in Munich as compared with other cities. Spatz found that of 638 men no less than 35 were affected with so-called myocarditis. Among 433 women there were 23 cases. Of 290 men between the ages of thirty and sixty, there were 41 cases of myocarditis, or about 14 per cent. Of 144 women at the same period of life, only 10, or about 7 per cent., were affected. Hermann's reports showed 49 cases of muscular disease of the heart in the male among 305 necropsies, whilst only 3 females had this condition. Von Buhl looked on these instances of cardiac hypertrophy as the result of chronic myocarditis, which usually ended fatally in consequence of fatty degeneration of the muscle. Bollinger, who has restudied this subject, cannot find any evidence of inflammatory changes or fatty degeneration. At his suggestion, Schmidebauer undertook to establish the extent of the prevalence of cardiac hypertrophy in Munich upon a statistical basis, with a view to making clear its causation. Among 1000 necropsies there were 46 cases (32 men and 14 women) in which the cause of death was attributed to simple hypertrophy of the heart. As an associated condition, not as a cause of death, idiopathic hypertrophy of the heart was found in 33 other cases (23 men and 10 women). All cases of enlargement of the heart due to lesions of the valves, or disturbances of the pulmonary circulation, or associated with arterial sclerosis, or granular kidneys, were said to be excluded. Some of the cases were attributed to prolonged muscular effort. But the greater number were believed to be due to habitual excess in beer drinking, attended with a

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true plethora or overcharge of blood. It is argued that the habitual consumption of beer in large quantities tends to enlarge the heart by the direct action of the alcohol on its tissues, by the increase in the amount of fluids in the body, and by the belief that the nutritive ingredients of the beer are easily assimilated. Statements are made to the effect that the average weight of the heart in men is relatively greater in Munich than elsewhere. Both sides of the heart participate in this hypertrophy. It may naturally be asked how it is that sufferers from simple hypertrophy are prone to die of an affection which apparently contains no fatal elements in its composition. The phrase simple or idiopathic hypertrophy is in this respect misleading. Exhaustion of the nervous apparatus without obvious disease of the muscular tissues is the proffered explanation of the fatal result—an explanation not altogether free from valid objections. As an interesting fact it may be stated that during the year 1882 the average amount of beer consumed by each person in Germany ranged, in different districts, from 54 to 186 litres, in Bavaria it reached 233 litres, and in Munich 432.

SCHOOL PRESSURE AT THE HEALTH EXHIBITION.

If nothing essentially new was elicited at the discussion on School Hygiene on Tuesday, the views of those who believe that education is taking unhealthy and unnatural forms were stated with new force and clearness. Mr. Teale's paper, in particular, was a bold and clear indictment of the existing system, with its ever-multiplying examinations, its premium on cram and cleverness, and its want of respect for good, general, and sensible results. Mr. R. Brudenell Carter was equally explicit in saying that the present system was injuring the eyesight. Defects of sight were increasing, and in one board school in London, he said, no less than one-fourth of the children were suffering from such defects. A word was said by Mr. C. E. Shelley, M.B., in defence of old-fashioned methods of corporal punishment, "which modern sentimentalism seemed inclined to abolish altogether," but which, by the way, are not altogether extinct. Sir Joseph Fayrer wound up by pointing out the evil results of children having to prepare lessons at home in the evening. The fact is that we ought to make education more pleasant, healthy, and natural, and should remember that the world does not exist for clever children, but for ordinary ones. The success of our methods should consist in turning out the largest number of healthy, happy, and capable pupils, not in creating a few prodigies.

THE CHOLERA GERM AND ITS DISCOVERER.

OUR correspondent in Rome writes:—Professor Filippo Pacini of Florence, the discoverer of the tactile corpuscles which bear his name, contributed in 1854 to the *Gazzetta Medica Italiana* a paper on the cholera visitation, in which occur the following words:—"Esaminando minutamente le diverse parti del tubo gastro-enterico dei colerosi morti nello stato algido, dovei convincermi che quella lesione epiteliale non è operta da altri che da *un organismo semplicissimo e di estrema tenuità, che io appellerò microbio* con termine generico e moderno e specialmente *microbio colerigeno*." (Examining minutely the different parts of the gastro-enteric tube of subjects dead from cholera when in the algid state, I was forced to the conviction that that epithelial lesion is caused by nothing but a very simple organism of extreme tenuity, which I shall call "microbe," a term generic and modern, and with special reference to the disease in question, "cholerigenous microbe.") As usual, this pregnant discovery was more quickly and thoroughly appreciated by foreigners than by its author's own countrymen, and in 1865, on the next cholera visitation, Pacini wrote:—"Quando i miei lavora scientifici dall' Europa saranno tornati a Firenze abbigliati alla foggia straniera, potranno avere il permesso di entrare nelle scuole e allora noi saremo nel placido riposo di Trespiano." (When my scientific labours, having made the tour of Europe, will have returned, arrayed in foreign garb, to Florence, they will have permission to enter the schools, and then we shall be enjoying the tranquil repose of Trespiano—in our grave, in short.) This bitter forecast has been verified almost to the letter, Pacini's doctrine, rehabilitated by the German Cholera Commission, being now adopted by his compatriots and taught in the Istituti Pathologici of Italy a year after his death.

SMALL-POX AT THE DIAMOND FIELDS.

FROM the *Port Elizabeth Telegraph* of June 28th we learn that at that time small-pox was spreading with alarming rapidity at the Diamond Fields. There were over 300 cases at Dutoitspan. The lazaretto accommodation was unequal to the demand upon it, and persons stricken with the disease had to remain outside. The virulence of the epidemic showed no signs of abatement as to mortality, for, according to Dr. Sauer, the death-rate was 25 per cent. The time has surely come for the most vigorous attempts to free the colony from this deadly plague. We trust that the medical men who have so persistently refused to accept the opinion of the bulk of the profession will now see their way to acknowledge the inaccuracy of their diagnosis, and generously aid the authorities in their attempts to stem the torrent which threatens to swamp the community. If we mistake not, Kimberley and the adjoining districts will have enough, and more than enough, to do to cope successfully with an epidemic that heeds neither the caprice of fortune nor the folly of indifference. It seems incredible that the Government should not ere this have awakened to a sense of the enormous responsibility cast upon it. If the local authorities are powerless to meet the exigencies of the case, it is surely time for the central executive to step in and not only indicate the course of action, but provide also the means of carrying their recommendations into effect.

LEFT HEMIPLEGIA AND APHASIA IN A RIGHT-HANDED PATIENT.

CASES of left hemiplegia and aphasia in which the patient was not left-handed possess considerable interest to cerebral physiologists. M. Michel Catsaras has recorded an instance of this combination of facts in *La France Médicale* of July 17th. The patient was a Greek, aged thirty-five years, a broker by profession, and enjoyed good health till August, 1883, when his wife noticed that his mouth was drawn to the right. At this time there was no other symptom of disease. The facial palsy is said to have passed away in a fortnight without treatment. At the end of September, whilst in a café, the man was seized with a fit, fell down unconscious, and remained in this condition for half an hour, at the end of which time he came to, and it was discovered that the left side was paralysed and the faculty of speech was gone, with the exception of the words meaning water and bread. To every question asked he replied νερο and ψωμι. He understood everything that was said to him or what he read, and could write perfectly what he thought. After fourteen days the hemiplegia and aphasia had so much passed away that he was able to go to work again. According to his wife, however, he did not please his clients. During the month of November the patient suffered much from nausea, thirst, and hunger. On January 20th, 1884, a fresh attack of unconsciousness set in, which was followed by profound aphasia and left hemiplegia; he could neither speak,

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write, read, nor understand much that was said to him. M. Catsaras diagnosed thrombosis of the right Sylvian artery. The case does not seem to have been followed by an autopsy. The author thinks the notion of lesions in the two hemispheres not tenable, and suggests that in this case the pyramidal tracts did not cross at all. Dr. Hughlings Jackson described a case of aphasia with left hemiplegia in a right-handed person in THE LANCET of April 24th, 1880.

THE PRESIDENT'S ADDRESS AT THE BRITISH MEDICAL ASSOCIATION.

THE presidential address with which Dr. James Cuming opened the fifty-second annual meeting of the British Medical Association, held this week at Belfast, was a dignified and scholarly production. Wisely refraining from dwelling upon the topics of local interest that so often form the staple of these utterances, Dr. Cuming dealt mainly with the most pressing questions of the medical science of to-day, and did good service in drawing attention to the directions in which the profession should work to advance the knowledge of disease and the power to cope with it successfully. He did well to remind us that apart from the valuable researches which now engage so much attention, and which tend so much to show that the ancient doctrine of disease being in the main the result of external agencies is not far from the truth, there are great questions to be solved respecting racial proclivities and individual tendencies which are open for inquiry by the collective research of all practitioners. For important as is the knowledge gained from the study of the part played in etiology by the numberless forms of micro-organisms that have been revealed to us by the patient research of the pathologist, and valuable as such knowledge may come to be in showing us how to prevent and cure specific diseases, it would be folly to lose sight of the larger facts that need no microscope for their detection. Another warning, not less needed, was given in this address, to the effect that anatomical investigations should not be allowed to eclipse the facts gained by clinical observation. It was this which Trousseau feared, and against which he used to declaim, perhaps with too much bias; and it was happily illustrated by Dr. Cuming in the much-debated subject of scrofula and tubercle. The morbid anatomist declares for an identity, while the clinical observer sees nothing more than a kinship; and he is the true pathologist who, taking into account the morbid condition as observed in the living patient, applies that knowledge to explain the changes that dissection and microscopical investigation reveal to him. In a like spirit Dr. Cuming adverted to the advances that are being made in pharmacology and therapeutics, and he maintained that the scientific pursuit of medicine is not to be shackled by the methods followed in physical science, whilst adhering to the general principles that govern all scientific research.

UNRIPE AND UNSOUND FRUIT.

AFTER so many former warnings as to the close connexion between unripe or too ripe fruit and disease, it may be doubted whether further remarks will convey any fresh information on the subject. The advance of cholera on the Continent gives a new and important interest to all such observations, since no better conditions for the spread of that disease can exist than such as are furnished by the presence in the market and the household of unsound fruit. It is true that legislative interference with a subject of this kind might be overdone, and is but little needed on behalf of the better educated and wealthier classes, for with them unsuitable fruit does not find much acceptance. The poorer population, on the other hand, have much greater difficulty in selection. Their fare must be cheap, and cheapness in regard to fruit signifies—though it need not and should not—unripeness, over-ripeness, or damage, far more often than mere poorness of quality. In their interest some legal control over fruit-sellers is necessary, and no doubt is already exercised in glaring cases. A greater degree of stringency, however, is called for, and would not be oppressive. Supervision, in order to be effective, should be rigidly enforced at the central markets, and also to some extent at the stalls of street vendors.

PROFESSOR DE CHAUMONT ON DISINFECTANTS.

NOT the least valuable part of Professor De Chaumont's lecture at the Health Exhibition on cholera and its prevention was that in which he exposed the untrustworthiness of many so-called disinfectants. The belief in a few of these disinfectants has come to be almost a superstition, and it has been too much played upon by some sanitary authorities, and even medical officers of health, who in times of small-pox have covered all available hoardings in the parish with posters vaunting the epidemic virtues of disinfectants. Professor De Chaumont said: "In regard to disinfectants, there is but one true disinfectant—viz., fire. The majority of so-called disinfectants are simply deodorants. The idea that tobacco smoke or the odour of camphor is destructive of contagion is still extensively held, though it is simply absurd. A true disinfectant is a substance that will kill the germ or living particle in which the contagious principle resides, or through which it is conveyed." Of true disinfectants, as Professor De Chaumont says, undoubtedly heat is the most reliable, though others are not to be despised, such as carbolic acid, chlorine, and sulphurous acid gas.

MEANS OF ISOLATION AT LIVERPOOL.

THE question of the erection of a hospital for infectious diseases for Liverpool has entered on its most difficult stage. No site can be suggested without at once raising the problem of the extent to which small-pox patients may be aggregated together without danger to the surrounding community. The present proposal evidently relates to a large hospital which shall endeavour to cope with the existing epidemic, and to such a hospital in the vicinity of Wavertree-park objection is taken by an important section of the public and of the press. We have already expressed an opinion against the aggregation of cases of small-pox in large numbers; we have advocated the establishment of several hospitals instead of one in the case of populous places like Liverpool; and everything that takes place in connexion with this subject goes to confirm us in these opinions. The Hospitals Commission evidently held the same view when they urged that no small-pox hospital in the metropolis should be capable of receiving more than some forty acute cases, and the Fulham experience, on which this recommendation was based, was conclusive in the same direction. Whilst we cannot but sympathise with the corporation in their attempt to overcome the difficulties which face them in the almost impossible task of dealing with an existing epidemic by measures of isolation, yet we feel that their opponents have just grounds for their suspicions of possible mischief. The attempt to deal in an emergency with an epidemic which has already widely diffused itself is by no means promising, and it is already surmised that the temporary sheds advocated cannot be ready in time. If the Liverpool corporation were to take advantage of the present crisis to secure several sites, at each of which some permanent buildings could be erected which would serve for the isolation of the several infectious fevers, the opposition which they are meeting with might subside, and they would then be prepared to cope with other diseases as well as small-pox; whereas, so

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far as our experience goes, extensive small-pox sheds never serve for the isolation of other diseases, and they tend, by the aggregation of the most tenacious of all infections, to produce the very evil which they profess to obviate. Indeed, according to local information, Liverpool itself affords one of the most recent proofs of this result.

DIPHTHERIA AT BIERTON.

AN interesting report on a recent outbreak of diphtheria at Bierton has been issued by Dr. R. H. Hilliard, medical officer of health to the Aylesbury Rural District. Some were well-marked cases, with characteristic symptoms and sequelæ, others were mild and of an indefinite type, and others, again, were regarded as scarlet fever, one of these latter, however, being followed by paralysis of the soft palate. The disease would appear to have been imported by means of a convalescent who had had an ill-defined attack and to have had its spread facilitated both by the bad sanitary state of the house into which the case was received and by intercommunication between the healthy and the sick. Dr. Hilliard points out that, according to recent researches, two kinds of organisms are associated with diphtheria:—1st, the ordinary diphtheritic germ, which is easily destructible; and, 2nd, "resting spores" or germs, which are absorbed into the blood during the course of the disease. These "resting spores" can live under more unfavourable conditions than the other germs, and they resist destruction much more easily, continuing in the blood after the primary disease has ceased, and causing the sequelæ which are so characteristic of diphtheria. It is also assumed that under special circumstances they may set up the disease in others by infection, and in the instance reported Dr. Hilliard infers that these "resting spores" were still potent for mischief in the case of the barely convalescent patient who came to Bierton, and that their influence was facilitated by means of gross sanitary defects at the house to which the patient came. Whatever be the correct explanation, it is certain that under some conditions the poison of diphtheria is capable of being communicated for some considerable time after the original ailment has subsided, and this has often been explained by regarding it as capable of attaching itself to plants and houses for a longer time than it does to individuals. In this case such an explanation would not account for the diffusion of the disease, but it is highly probable that the ichorous discharge from the nose and ear from which the convalescent was suffering was capable of communicating infection in the same way as the desquamating cuticle does in scarlet fever. Dr. Hilliard evidently inclines to this view.

SALT TAX AND CHOLERA.

ATTENTION has lately been drawn by questions in Parliament to the sufferings of the poorest classes in the Indian Empire, alleged to be due largely to the difficulty of obtaining common table salt. The difficulty arises, of course, from the high price of this article of diet, the result of the imposition of a Government tax. A society, the Indian Reform Association, has for some time been agitating to procure the abolition of this salt tax. A correspondent, who has this matter at heart, wishes us to give some information on the possible relationship that may exist between the want of salt and the occurrence of cholera in India. So far as we know, India was the birthplace, and unquestionably is the "home," of cholera. Whether the salt tax, by rendering a physiological necessary a high-priced luxury, is responsible for the origin and maintenance of cholera in India, is a question not perhaps of direct answer. No one would deny that, in a generally debilitated condition, disease is more prone to appear in persons suffering from chronic insufficiency of some essential article of food, and so a predisposition to cholera may be inferred to exist in those who are deprived of so important an element of food as salt. As the salts of soda are in greater excess in the fluids of the body, the diminution of salts in the blood in cases of cholera is easily accounted for by the great drain of fluids into the intestines. Precise scientific data do not exist to prove that excessive perspiration really needs to be compensated by the increased ingestion of salts; but on *a priori* grounds it would appear that such compensation should be made. It is highly probable that the deprivation of salt does tend to increase the liability of children to suffer from intestinal worms.

THE GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.

IN consideration of the great eminence of the late Dr. S. D. Gross as a surgeon, and his immense influence as a teacher in the medical schools of the United States, it has been widely felt that it would be a very fitting memorial of his career to establish a Professorship to bear his name in connexion with one of the American medical schools. The Alumni Association of Jefferson Medical College has inaugurated a movement to secure this, and has decided that the chair to be endowed shall be one for the teaching of Pathological Anatomy. Subscriptions towards the fund are to be sent to Dr. J. M. Barton, 1344, Spruce-street, Philadelphia. Dr. Gross had many friends and admirers in this country, and we are sure they will be glad of an opportunity of joining in such a worthy way of perpetuating the memory of a truly great man.

MEDICAL EVIDENCE v. "COMMON SENSE."

DURING the hearing of a charge of murder at the Manchester Assizes, a summary of which was given by our Manchester correspondent last week, Mr. Justice Day, in addressing the jury at the close of the evidence, expressed himself in very decided terms that the jury were compelled to stultify themselves by returning a verdict in accordance with the medical testimony, although their common sense must have told them that morally the accused was guilty. The deceased, Richard Saxon, sixty-five years of age, received on May 17th a severe blow from a hammer at the hands of his son Joseph, aged twenty-five. On presenting himself at the Ancoats Infirmary, the medical men were of opinion that the injury was not of a dangerous, much less of a fatal, nature. For the next two days deceased went to work, but at the end of that time he appears to have again lost a considerable quantity of blood from his scalp wound, and shortly afterwards to have passed into a state of coma, which ended in his death. It may be stated that the incidence of these grave symptoms was at the time of great mental excitement brought on by his dissatisfaction with the mildness of his son's sentence by the magistrate. At the post-mortem examination, made by Dr. Charnley Smith, a shallow depressed fracture of the skull was detected in the occipital bone. A partially decolorised blood-clot the size of a penny piece lay between the bone and dura mater, but there was no laceration of the brain, and no congestion or hæmorrhage in the superficial portion of the convolutions. In one lateral ventricle was a recent clot, which by its pressure had presumably been the proximate cause of death. The question the jury had to decide was, Had the original injury any causative relationship with the secondary ventricular hæmorrhage? Dr. Smith could not say that it had, and to this opinion we subscribe. It is true that, had the blow not been struck, the excitement of the deceased at what he deemed the insufficiency of the punishment inflicted on his assailant would not have arisen, and clearly Mr. Justice Day was not prepared to attach great importance to a point

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so remote in its bearing on an issue of life or death. What evidence was there to justify the assumption that death might have arisen from natural causes? To our minds there was ample. Here was a man in all probability the subject of vascular disease; he was sixty-five years of age, addicted to intemperance, and crippled in one elbow from "rheumatic gout." The records of medicine show that it does not require any vast amount of physiological or physical strain to test unhealthy cerebral vessels beyond their power of endurance. From the absence of signs clearly connecting the initial injury with the apoplexy, and the presence of other conditions conducive to the attack both before and after the blow, we hold that the jury were morally as well as technically justified in acquitting the prisoner. We venture to differ from Mr. Justice Day as to the relative value in such a case of scientific testimony on the one hand and "common sense"—which by the way is often very uncommon nonsense—on the other. Dr. Bilton Pollard, of the Manchester Infirmary, was ready to support the position taken by Dr. Smith, but he was not called at the trial, as the judge ruled that Dr. Smith's evidence disposed of the case, a ruling with which we entirely agree.

THE WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM.

THE following gentlemen, being the active medical staff of this institution, have, we are informed, sent in their resignations: Drs. Heron, Dawson, Williams, Wolfenden, and Huggard. The late committee of management also declined nomination for re-election at the late annual meeting, consequent on the resolution which was carried impugning their decision in a matter that has occupied their attention for some months past. Mr. Proctor has also tendered his resignation of the office of treasurer, to which he was lately appointed. A protest has been lodged against the constitution of the late meeting, and a request made to the old committee and trustees not to give up their office until the governors have had an opportunity of expressing an opinion on the present state of affairs.

AID TO THE WOUNDED.

LAST week an important trial took place at Aldershot of an electric light waggon intended for lighting the field of battle at night to enable the wounded to be efficiently attended to. The demonstration, which was given at night, was intended to illustrate the application of the electric waggon in searching for, succouring, and transporting 100 men (representing the wounded) from the field to the dressing station, on the night after a supposed battle, by a bearer column of the Army Hospital Corps, with mule, mountain, and wheeled transport. Making allowance for the fact that there had not been time to test the machine effectually after its arrival at Aldershot, and to arrange an efficient code of signals, the trial may be deemed a success, the light being thrown over the field in such a manner as to materially assist in the search for the wounded and in applying temporary dressings. The principal drawbacks to it appear to be its weight (said to be three tons), and the difficulty which would no doubt be experienced with regard to transport. It cannot be doubted, however, that if these can be overcome the electric waggon would prove a very valuable adjunct to the surgical equipment of an army in the field. The trial was made under the personal superintendence of Baron Mundy, in the presence of a number of distinguished military and medical officers; among whom were the Director-General of the Army Medical Department, Sir Joseph Fayrer, Surgeon-General Mackinnon, Professor Longmore, and Dr. Farquharson, M.P.

THE LATE EDWARD VON JAEGER.

PROF. E. VON JAEGER, of Vienna, who died recently after a long illness, was born in 1818. His father, Frederich Jaeger, was Professor of Ocular Therapeutics at the Josephinum, so that from an early age his attention was directed to the subject that in after life he made his own. He graduated M.D. in 1844, and after some service in the army he abandoned the pursuit of medicine for a time in favour of mechanics. In 1850 he returned to the study of ophthalmology, to which the invention of the ophthalmoscope in 1851 by Helmholtz added considerable interest. In devising a less cumbrous instrument than the original ophthalmoscope, Jaeger made good use of his mechanical talent; and he set himself assiduously to study in this new field. Having examined numbers of healthy as well as of diseased eyes, he described and depicted the ophthalmoscopic appearances, thus laying the foundation of his well-known atlas. In 1856 he was named Extra-Professor, and in 1857 First Physician, to the Eye Department of the General Hospital; but it was only quite recently that he was appointed University Professor.

VACCINATION v. SMALL-POX.

LAST week we made certain remarks on the necessity and value of vaccination, as amply justifying its compulsory adoption as a preventive of small-pox. Dr. Cooper, medical officer of health for Widnes, relates a recent case which affords almost positive experimental proof to the same effect. A married woman, with an infant a few weeks old at the breast, was attacked with severe small-pox. The child was promptly vaccinated, and, though suckled throughout her illness and convalescence by the mother, did not take the disease. There can be hardly any doubt that in this case vaccination saved the child's life. Some, perhaps, may say that insusceptibility to the disease would equally account for the result. This could not be so, for in that case the vaccination, which was successful, must have failed, seeing that experiments by Ceely and Badcock, and by other later observers, have clearly shown that vaccinia and small-pox are one and the same disease. Genuine insusceptibility is a condition so rare, and so doubtfully existent, that it may practically be ignored. We have in Dr. Cooper's case a singularly concise illustration of the principle shown by M. Pasteur to apply to such maladies as anthrax and hydrophobia, and it is abundantly evident in the small-pox epidemics of this country, that the timely inoculation of a modified infectious disease will, other things being equal, infallibly prevent or mitigate the onset of a severer form.

WOOLSORTERS' DISEASE AT BRADFORD.

THE two inquests upon cases of woolsorters' disease at Bradford are still unfinished. The one is the case of Isaac Savile, in the employ of Messrs. Mitchell Brothers, who died on May 26th. The inquest was first adjourned to June 18th, and was continued on July 3rd and 21st, when it was again adjourned to August 20th, in order that the jury might have before them the new code of regulations upon the prophylaxis of the disease being drawn up by the Sanitary Committee. On the last occasion a conflict of medical opinion occurred—not, however, of much practical import. Thus Dr. Hime, the medical officer of health, who with Dr. Bell and others is assured that the deceased died of anthrax, was cross-examined at much length respecting the characteristics of the bacillus anthracis and the means taken to destroy it, and his evidence is in accord with the result of the researches of Koch and others. Dr. E. T. Tibbits, however, gave evidence to the effect that the bacillus anthracis was indistinguishable from putrefactive bacteria, and that woolsorters' disease had

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no features distinct from those of blood-poisoning. The second inquiry is that on Catherine Cox, which was opened on June 30th, resumed on July 23rd, and adjourned to August 21st. Meanwhile an inquest upon a woolsorter at Saltaire was held by the same coroner (Mr. Barstow) on July 23rd. The man died in four days after the first onset of symptoms. He had been engaged in sorting Turkey mohair. Mr. Rutherford, surgeon, of Shipley, testified to the case having run the course of anthrax, and presenting morbid conditions (including the presence of bacilli in the blood) such as occur in this disease. The jury returned a verdict to the effect that the deceased died from woolsorters' disease, but that the firm (Sir T. Salt and Sons) had duly carried out all the regulations agreed to in July, 1880, by the masters and woolsorters, adding a recommendation to the firm to adopt any further precautionary measures that may be devised. Mr. Neil, on behalf of the firm, expressed their willingness to accede to that recommendation.

THE THIRD BLOOD-CORPUSCLE.

La Gazzetta degli Ospitali of July 16th publishes a memoir by Professor J. Bizzozero, "On the Pre-existence of Plastrine ("Blutplättchen") in the Normal Blood of the Mammalia." To obviate Weigert's objection, that observations on mesenteric vessels are liable to fallacy in consequence of exposure to the air, Bizzozero examined a living bat's-wing under the microscope, and he found that in all the bloodvessels, and at all times, the piastrine circulated, in addition to the red and white corpuscles. The piastrine of Bizzozero, the hæmatoblast of Hayem, is the visible form of a series to which Dr. Norris has given the general title of the fugitive discs of the blood. In a letter dated Jan. 23rd, 1882, which was published in this journal, Dr. Norris succinctly stated his claim to priority in the discovery of the existence and function of the new blood-corpuscle—a matter capable of physical demonstration, and yet in controversy between the leading histologists. Is the third blood-corpuscle a reality or an optical delusion? If the former, who discovered it, and what are its properties?

CANCER OF THE BREAST AND PREGNANCY.

As an illustration of an untoward conjunction of events leading to corresponding difficulty in treatment, M. Larger brought before the Société de Chirurgie an account of the following case:—The patient is a young married woman in the fifth month of pregnancy, and suffering from an ulcerating tumour of the breast, regarded as of an "encephaloid" nature. The general health is said to be excellent. The tumour, though malignant, appears to be strictly limited to the glandular tissue, and bled at times profusely. MM. Trélat, Polaillon, Terrillon, Guéniot, and Verneuil all advised immediate operation.

HOSPITAL SUNDAY FUND.

It affords us great gratification to be able to announce that the amount already received on behalf of the above fund is between £100 and £200 in excess of last year's total of £33,935, and the receipt of another £500 may fairly be expected before the close of the financial year on Oct. 31st. The amount to be received from the managers of the very successful hospital *fête* held at the Health Exhibition on the evening of the 23rd ult. will be handed over by the Lord Mayor to the Council of the Hospital Sunday Fund for distribution, though separately from the proceeds of the fund.

NEARLY one hundred persons have been made ill at Brooklyn by eating ice cream in which acetate of copper was present.

IN consequence of recent legal proceedings, Sir Henry Holland has placed before the Government a suggestion that reports as to the working of the lunacy laws on the Continent shall be ordered for for presentation to Parliament, special attention being paid to the following points:—Whether there are private as well as public asylums; what are the checks against improper admission or detention of persons in an asylum; what supervision and inspection, if any, are exercised by any public and recognised authority; and the nature and powers of such authority.

A REDUCTION of 50 per cent. on the published tariff is allowed to members of the profession attending the forthcoming International Congress of Hygiene and Demography, on production of their "carte d'inscription," by (*a*) the Company for the Exploitation of the State Railways in the Netherlands, (*b*) the State Railways of Belgium, and (*c*) the Réseau du Nord Français.

AT a well-attended public meeting of residents in the neighbourhood of the Hampstead Small-pox Hospital a resolution calling upon the vestry of Hampstead to take prompt and energetic action to secure the abolition of the hospital was carried unanimously. A resolution in favour of the establishment of local hospitals for each parish or district was also carried.

MR. BAILEY DENTON, who is perhaps more widely known as a sanitary than as an agricultural engineer, has received from the French Government the distinction of the Cross for "Mérite Agricole." We believe that it is to Mr. Bailey Denton that tenants-for-life chiefly owe their power to charge their estates for agricultural improvements.

IT is stated that Sir Charles Dilke has made arrangements for an inspection by the medical staff of the Local Government Board of the sanitary arrangements at the principal ports of the United Kingdom. The inspection will, it is understood, be made immediately.

WE learn that on the 25th ult. Dr. Elder performed nephrectomy, for the third time, at the Hospital for Women, Nottingham, and that the patient so far is progressing satisfactorily.

AN eburnated exostosis of the frontal bone, filling up the orbital cavity, has been removed by M. Badal by means of mallet and chisel, healing taking place without damage to the eye or vision.

DR. BATORSKY, a surgeon attached to the department for foreign affairs, has left St. Petersburg for Bagdad, in order to join a medical board deputed to investigate the outbreak of plague in that district.

THE eighth International Medical Congress will commence its sittings at Copenhagen on Saturday the 16th inst., and the session will continue till the 16th. A full programme of the proceedings will be found in our impression of June 7th.

AT a special meeting of the Macclesfield Board of Health held on the 24th ult., a scheme proposing the expenditure of £5000 on an infectious disease hospital was rejected.

PRESENTATION.—Mr. H. W. Langdon, M.R.C.S., on his retirement from the medical charge of the members of the Foresters' Court, Devizes, has been presented with a testimonial in the shape of a handsome pair of emblems, framed in oak, and inlaid with gilt.

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Pharmacology and Therapeutics.

HYDRASTIS CANADENSIS.

M. SCHATZ has employed a fluid extract of this drug in fifty cases of uterine hæmorrhage due to various causes. The results have been very satisfactory in about two-thirds of the cases. Metrorrhagia due to fibroid tumours, post-puerperal menorrhagia, and menorrhagia about the time of puberty, were the affections most readily relieved. The fluid extract has been given in doses of twenty drops three times a day. The treatment was begun a week or more before the commencement of the period of menstruation. Under its influence the duration of the catamenia was diminished and the blood discharged was lessened, and in some cases there was actual suppression. M. Fellner has investigated the physiological action of the fluid extract of hydrastis canadensis on dogs, and attention was strictly confined to the vessels, heart, small intestine, and uterus. In large doses (two to five grains) the fluid extract injected directly into the veins momentarily raises the intra-vascular pressure; but this first phase is soon followed by another in which the blood-pressure sinks permanently below the normal level, and death may ensue. When doses of 1·2 to 1 gramme are employed in the form of hypodermic injections, the lowering of the blood-pressure is less pronounced and takes longer to appear, but it is still persistent. At the same time the elevation of the intra-vascular pressure lasts a longer time. In still feebler doses the initial effect is, on the contrary, a diminution of the blood-pressure of very short duration; and the secondary effect is an elevation of the blood-pressure, which persists indefinitely. When a number of minute doses are injected in succession, the final result is the same as with a single dose. The subcutaneous injection of a strong dose (two grammes) determines, first, a transient decrease in the blood-pressure; this then passes away for a brief period, to be again followed by a fresh lowering, not in a continuous fashion, but by a series of well-marked oscillations. The results are the same when the drug is given by the rectum or stomach. Previous section of the splanchnic nerves does not appreciably modify the effects produced by intravenous injection of small or large doses of the fluid extract. The same fact holds good of compression of the abdominal aorta. Section of the cervical portion of the spinal cord does not stop the action of the drug in lowering blood-pressure. Strychnia can to a certain extent undo the effects of hydrastis on the blood-pressure. By direct inspection the small intestines are observed to be injected during the period of lowered blood-pressure, and to be exsanguineous when the blood-pressure is raised again. Hydrastis is believed thus to have a powerful effect on the vaso-motor apparatus, due to an excitation of the cerebral centres. During the first stage of the action of the drug the pulse is slowed. This delay may go on to complete arrest of the heart's action; it appears to be due to excitation of the central end of the vagus, because it does not occur when the pneumogastric nerves are divided. After the injection of large doses the slowing of the pulse with syncope is met with during the second stage, when the blood-pressure is diminished. In this stage previous division of the vagi exercises no influence on the frequency of the heart's action. All injections give rise to contraction of the womb, both of its body and horns; the maximum effect is produced a short time after the injection—later on, however, manifest contractions do take place, chiefly of the cornua. The uterine contractions synchronise with the contractions of the blood-vessels.

SIZYGIUM.

The fruit of Sizygium jambolanum, an East Indian plant belonging to the natural order Myrtaceæ, has recently been somewhat in demand on the Continent for use in the treatment of diabetes. M. Banatrala has found in three cases in which he has tried it that its use led to a diminution in the amount of urine secreted, and that it caused the disappearance of the sugar. These results were manifested in forty-eight hours after taking the medicine. During the time that the patients were submitted to the action of the drug they could take amylaceous food with impunity. The astringent rind of the fruit seems to be the active part.

HAZIGNE.

Professor Baillon has described a Malagasy plant called "hazigne" in the *Journal de Pharmacie*, the fruit of which yields an oil and the stem a resin, which are used by the natives as a remedy in certain skin diseases, such as leprosy, the itch, and ulcers. The oil obtained from the seeds is also used as food and for lamps. The hazigne is a handsome tree belonging to the Guttiferæ, and is named Symphonia fasciculata. The fruit is known to the natives by the name of "voa-sou-vouara."

PHASEOLUS LIMATUS.

The pois d'Achery is a sort of kidney bean which is cultivated in the Mauritius and used there as an occasional article of diet by the Creoles. It exists in two varieties: the one white, which is generally wholesome; the other prettily variegated, which is regarded as poisonous. The poisonous character is due, according to Davidson and Stevenson, to hydrocyanic acid, which is formed when the beans are macerated in water by a process similar to that by which it is produced in certain plants of the Rosaceæ, such as the almond and cherry laurel.

PALILLO.

A Mexican plant, which appears to be Croton morifolius, has recently been the subject of experiment by Messrs. Duges and Armendaris. Two or three drops of the oil contained in the seeds act like a moderate dose of castor oil. The natives of Mexico use the leaves of the plant in the form of infusion as a remedy against gastralgia and atony of stomach. The tincture of the leaves is said to give excellent results in neuralgia, especially of the face, either when used as a liniment or dropped into the ears, or taken in the dose of ten or fifteen drops in orange-flower water (*Pharmaceutical Journal*).

TUTU.

The "tutu" plant (pronounced "toot") is indigenous to New Zealand; its botanical name is Coriariæ ruscifoliæ. Tutu is a poison under certain conditions and for certain animals. The horse and pig are said to resist its poisonous action. Springtime appears to be the period of its greatest activity; when the succulent shoots thrown up from the spreading roots are ingested on a full stomach the effects are greatly modified. Mr. Hustwick, from whose account in the *Pharmaceutical Journal* we have abstracted this information, says that the system may become accustomed to the poison taken gradually. The chief effects of the plant is on the nervous system; the animal eating it appears to have the "staggers," becomes lethargic, but is liable to fits of frenzy, the occurrence of which may be due to slight provocation. These violent attacks of madness seem to recur at rapidly decreasing intervals, until the animal at last succumbs from sheer exhaustion. Phlebotomy performed on the jugular vein has been vaunted as a cure for these symptoms, but apparently on insufficient grounds. The effect of the green herb on man is not known, but the "berries" when ripe are said to be grateful and refreshing to the thirsty, though care must be taken to reject the seeds. Small birds enjoy the ripe fruit without inconvenience. Goats may eat the plant with impunity. Ruminants are, for the most part, however, seriously affected by it.

KAIRIN.

The physiological effects of kairin have received further study at the hands of M. Morohewetz, agrégé in physiology at the Faculty of Moscow. It appears from these investigations that the alkaloid kairin does not spend its activity in lowering the temperature. Kairin was used in a 6 per cent. (*sic*) solution of chloride of sodium, in order to prevent the action of the distilled water on the red blood discs. The blood remained alkaline, but its colour changed, and the more rapidly the greater the degree of concentration of the solution employed. A continuous current of air deprived of its carbonic acid did not restore the red colour of arterial blood. The blood spectrum indicated the presence of met-hæmoglobin by the appearance of four bands between the C and F of Frauenhofer's lines; these bands were more evident in proportion to the strength of the kairin in the solution. The red blood globules become dome-shaped under the influence of kairin; their colour is changed to that of a brownish tint and is paler according to the degree of concentration of the alkaloid. The number of red discs is not diminished. The blood of dogs which have ingested kairin coagulates almost instantaneously after escaping from the bloodvessels. The

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change in the colour of the blood is seen in the living animal as a cyanosis of leaden tint, and this is said to have been witnessed in man by M. Golouboff as the result of the administration of 70 centigramme of kairin. The salivary and bilious secretions are made more abundant by the injection of the alkaloid under the skin or into the duodenum, the bile becoming black and viscous. A reddish-yellow ring, situate between fuming nitric acid and urine, is the test for the presence of kairin in the renal secretions. An elevation, followed by a depression, of the blood pressure in the carotid arteries and intense dyspnœa have been observed to follow the administration of large doses of kairin. In the dog 1·80 grammes of kairin is said to paralyse the heart first, respiration proceeding and taking on the character of Cheyne-Stokes breathing. At the autopsy the cavities of the heart are found to be dilated and full of blood. In the frog, kairin is said, like curare, to paralyse the terminations of the peripheral nerves. Newiadomsky has observed great prostration and cyanosis in a case of pneumonia after the administration of ·40 centigramme of kairin.

OSMIC ACID IN EPILEPSY.

The employment of osmic acid in epilepsy suggested itself to M. Wildermuth from the value of the drug in cases of neuralgia. At first the acid was used, but later an osmiate of potassium. The medicament was administered as pilules, each containing one milligramme of the active substance. The maximum daily dose employed was fifteen pilules, or fifteen milligrammes. Thirteen patients, the subjects of confirmed epilepsy, were under observation. The remedy was first combined with bromide of potassium, but this method was not followed by good results. Under the sole influence of the osmiate the number of attacks was steadily diminished, as compared with their frequency on expectant treatment. In only one instance, however, was complete immunity conferred.

AMYL NITRITE.

In the second number of the *Asclepiad* Dr. Richardson gives a formula for the administration of amyl nitrite by the mouth:—Amyl nitrite, pure, ℿxxxvi.; ethylic alcohol (sp. gr. 830), ʒvi; pure glycerine to ʒiss. To make a mixture of twelve doses. One fluid drachm to be taken in a wineglassful of warm water. In asthma this method is specially recommended.

THE INTERNATIONAL HEALTH EXHIBITION.

THE FRENCH SECTION.

[SECOND NOTICE.]

HAVING dealt with water-supply and drainage in our previous article on the French section, warming and ventilation, with the construction of hospitals, barracks, schools, &c., suggest themselves as bearing most directly on the preservation of health. In these departments the French have made more progress than in the matter of drainage. Indeed, so far as hospital construction is concerned, it is generally admitted that the Tollet pavilion is the best in Europe. Such was the opinion expressed by Dr. F. J. Mouat in his remarkable reports on hospital construction throughout Europe, published in these columns. For simplicity, cheapness, and thorough ventilation, the Gothic arch, which is the chief feature of the system, gives the best results. It would take too much space, however, to recapitulate all that has been said on this subject; but the attendants at the Exhibition have for distribution a capital little pamphlet containing the catalogue and explanations of the Tollet exhibits published in English, which gives very full information. Behind the dairies will be found a perfect embodiment of the model which has just been definitely and officially adopted by the French Ministry of War for the army. This tent is upheld by the iron framework which is permanent as in temporary structures, forms the sole support of the Tollet pavilions. No pickets are necessary, and in being exposed to the most violent winds on the coast of Tunis these tents withstood the pressure when all the ordinary tents were blown down. There are some sixty models and drawings at the Exhibition of the Tollet system in all its applications.

Equally prominent in the French section are the drawings, models, &c., of Messrs. Geneste and Herscher's systems of heating, ventilating, &c. They have also issued, in English and French, a bulky volume explaining their exhibits. To them is due the ventilation of the Hôtel de Ville and the principal primary schools of Paris, the law courts, and the Monnaie Theatre of Brussels, the Grand Theatre of Geneva, the Ferrari Asylum at Clamart, the prison at Nanterre, and a great number of other important buildings. This firm has brought out a mechanical ventilator which is used at the Anzin coal mines and at the Hôtal de Ville. Formerly large ventilators only yielded 50 to 70 per cent. as as compared to the motive power employed. Messrs. Geneste and Herscher's ventilator gives 83 per cent., whilst its moderate dimensions permit of its being introduced in small passages and other inconvenient places, which is of the utmost importance in preserving the health of mining communities. With a dynamomotor a small mechanical ventilator is introduced at different points of public buildings and pumps forward the required air supply. Models of schools show how they are warmed in such a manner as to ensure ventilation and secure the utmost economy. The theory and practice here involved are complicated, but the result compares very favourably with what has been done in England; draughts are avoided, the cooling influence of the window counteracted, and the warmth is equally diffused throughout the room. There are also some interesting drawings showing how the workmen engaged at Messrs. Christofphe's silver-plating works are protected from the nitrous fumes. A lip overhangs the rim of the cauldron, and the suction produced underneath draws away the dangerous vapours. For steel works also there is a system of drawing off the small particles that otherwise would prove so dangerous to the workmen. In all these matters Messrs. Geneste and Herscher have displayed great enterprise and much scientific and engineering knowledge.

With respect to education, we are glad to note how the natural sciences are taught in the primary and secondary schools, both girls and boys being made to draw and describe all the principal organs of the human body, also various animals and subjects illustrative of elementary physics. By the adoption, now very general throughout France, of unilateral light, initiated and so ably advocated by M. Emile Trélat, the French are certainly in advance of England on this important question. While in English schools rays of light of different intensity coming from different directions cross each other, and confuse and fatigue the sight of the students, the light in a French school comes in one steady stream from large windows on the left hand side of the class. Excellent drawings illustrate this principle, and show it is only after class hours that the windows on the other side of the room may be opened, and this solely for the purposes of purification. The numerous plans of schools indicate a preference for pavilions or detached buildings, and the ample provision for drilling and gymnastics is highly commendable. The school furniture, though good, does not offer any special advantage over what is shown in other parts of the Exhibition, and we should like to see better provision made for the varying stature and growth of the pupils.

Among the miscellaneous exhibits within the Court, the appliances for blowing glass with compressed air will be welcome to all who know the injury done to the workmen engaged in glass-blowing. Not only is the strain upon the lungs most exhausting, but, by passing the blowing tube from one man to another, diseases, especially syphilis, are often communicated. Now, however, Messrs. Appert Brothers have put an end to these risks; and not only do they preserve the health of their workmen, but, as with compressed air they can bring much greater power to bear, they are able to exhibit a huge globe out of which 5000 watch-glasses can be cut. Just opposite this exhibit will be found Papier's ventilating cowls, which by imparting a rotary motion to the air that enters them are supposed to acquire over an ordinary chimney or pipe some of the superiority of the rifle over a smooth-bore. The theory is interesting, but we do not exactly understand what it has to do with the French Court, as the firm is established in England, and the list given of the places where the ventilator is applied are all in England.

Leaving the centre of the Court and going outside of the surrounding wall, exhibits of a less serious but of a more popular description will be found. For instance, there are the celebrated French soups of the Société Générale des Potages Economiques de Paris. These we analysed on a former occasion,

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and found most nutritive, in spite of their wonderful cheapness. They present a great variety of flavours, need only to be boiled for a few minutes to be ready for consumption, and at an outlay of less than twopence per head. We get the clearness of the French soup and the peculiar familiar flavour so often missed in English soups. Close at hand the exhibits of M. Martin Brey of Paris are of some interest, as showing that macaroni, vermicelli, &c., can be made in the north. Formerly Lyons and Italy had the monopoly of this trade; for a powerful sun was required to dry the paste, so that it can be preserved indefinitely, as the smallest proportion of water may determine decomposition. M. Brey now, however, employs a stove specially contrived for drying paste, and he is therefore quite independent of the sunshine. It is said that 1,000,000 kilos of Italian macaroni and other pastes are manufactured annually in Paris. Among the familiar French beverages exhibited we recognised the Grande Champagne liquor of Barabeaux père et fils, and Get's peppermint. The latter is a mixture of syrup, alcohol, and peppermint, and forms, when diluted with water, a wholesome refreshing summer drink. Gellé Frères give us some French perfumery which has a special elegance that can only be described as truly Parisian. In their bearing upon health, the soaps, &c., have their hygienic virtues on the liberal admixture of glycerine; but, apart from this advantage, French perfumery has always been an attractive luxury. The café hygienic of Messrs. Marshall and Co., of Lyons and Paris, is peculiar. It tastes like ordinary coffee, it is the price of ordinary coffee, but is made of mocha and torrified acorns of the South European species. It therefore professes to be a food and a stimulant that will not cause sleeplessness. The preparations of chestnut flour of the same firm are very useful as helping to bring into general use a plentiful and excellent article of diet. The well-known chocolate Lombart also possesses similar merits. A large painting on the wall shows the vast underground passages that pass beneath this celebrated chocolate manufactory. The air is drawn down into these passages from a chimney that rises above the impurities on the surface of the ground, it is moistened, cooled underground, and then delivered into large cases in the factory above at exactly the same temperature in every season. These cases, thus cooled, receive the warm chocolate in moulds, and harden it in its right shape. Nearly as pleasant as these bonbons, Dr. Laféron's liqueur will be found a most enticing preparation of iron and quinine. It is an after-dinner liqueur, in which bitter oranges, myrrh, colombo, quinine, and iron are associated without injuring the palatable effect of the beverage. Dr. Laféron is a well-known practising physician in Paris.

In conclusion, the French may be warmly commended for the success of their section, though it was prepared under great difficulties. The invitation, lost in the pigeon-holes of the French Ministry, was only made known after the time for application for space was already terminated. On the other hand, the Government could only contribute £120 towards the expenses. In spite of these discouraging circumstances, and by private initiative, each exhibitor subscribing to the expenses, the money was found, and a very complete exhibition organised. The chief French commissioner, Dr. A. J. Martin, with great skill and energy secured the support of those friends of sanitary reform whom he knew most capable of entering into the spirit of such an exhibition. The love of science and of country aiding, the desired end was attained. The section was opened a month late, but, under the circumstances, this could not be avoided. The decorations and installations were all arranged with much taste by Messrs. Joubert and Sons, who also fitted up a small renaissance saloon for the French commissioners, and, by their knowledge of English and French, contributed materially to success in carrying out the scheme which at the eleventh hour had been so hastily yet well prepared.

ESSEX AND HERTS BENEVOLENT MEDICAL SOCIETY.

The ninety-eighth annual general court of audit of this Society was held at Hertford on the 15th ult., when petitions for relief were received from eleven widows and two medical men, and grants amounting to £433 were made. The Society has up to the present time received in subscriptions over £25,000, and has granted for relief over £30,000; the funded stock now amounts to £9800, and it is hoped that £10,000 may be invested before the centenary of the Society.

THE CHOLERA.

THE hope we ventured to express last week as to the diminution of the cholera epidemic at Marseilles and Toulon has so far been realised that, with the advent of the mistral and the diminution of temperature, the daily number of fresh attacks has been reduced to about half that which obtained about a fortnight ago. But, notwithstanding this, the disease is steadily extending its area; some twelve or more towns and villages in Provence and the south have become attacked; and in a few places, as at Arles and Aix, the onset of the disease has been of considerable virulence. The infection has also travelled into Italy, but so little confidence is reposed in the public by those who are there in authority that it is extremely difficult to judge whether the disease is being kept within the bounds of the localities first infected, or whether it is diffusing itself. Whatever be the future course of the disease, this is certainly not the time in which to relax any of the sanitary measures which have for their object the removal of all filth conditions which favour the retention and diffusion of the cholera poison. Even Marseilles and Toulon will be by no means out of danger, even if the number of fresh attacks goes on progressively diminishing, for where cholera has found the material favourable to its vitality it has not failed to show itself even in the depth of a Russian winter, and places that are attacked this year will certainly be liable to a renewal of the epidemic next autumn if they do not efficiently rid themselves of all sources, by which excremental contamination of air and water may be brought about. In the midst of such conditions the poison will hardly fail to lie dormant; if they are removed, the poison will doubtless be at the same time got rid of. So far all rumours as to the actual importation of cholera into this country have turned out to be without foundation, although the sanitary defences at two or three of our ports have been put to the test. On rigid inspection and immediate isolation primarily in our port sanitary districts, and on measures of sanitation and isolation in all the sanitary areas of the country, the advisers of our Government have decided to rely; and we are glad to observe that with the aid of their own staff, and by the help of additional skilled physicians who have acquaintance with cholera and with the measures of prevention with which the disease must be met, the Local Government Board have commenced a special inspection of the sanitary arrangements which are in force at our principal ports. The influence of visits thus paid by officers from the central authority can only be useful, and in many districts they will be helpful in the extreme in enabling authorities who are hesitating as to the measures they should adopt to arrive at a right decision. In the meantime, all needed sanitary work should be pressed forward, and an attitude of watchfulness maintained.

Dr. Marckowitz, the Bucharest physician who has gone to study the cholera in the south of France, takes a more hopeful view of the situation than his Berlin *confrère*, Dr. Koch, who predicted that the epidemic would extend its ravages all over Europe, and is inclined to believe that it will die out where it originated. M. Claretie, in a recent *chronique* in the *Temps*, mentions a rather sensational case of recovery from cholera during one of the earlier visits of the epidemic, due to the skill of Dr. Lorain, a well-known physician of the time. The patient had sunk into the last stage of collapse, and the hospital physicians had stopped the treatment as useless. Dr. Lorain, happening to enter the ward, determined after a hasty examination of the sufferer to try an experiment with the object of restoring the circulation, which had practically ceased. He first performed the operation he contemplated on a rabbit, into whose crural vein he injected a certain quantity of warm water. He then repeated it on the dying man, into whose circulatory system he pumped 400 grammes—nearly a pint—of the same fluid. The heart began to beat at once, though so faintly as to be hardly perceptible. The operation was repeated with still happier effects. The pulse could now be felt at the wrist; the patient recovered sensibility and voice. In ten days he left the hospital perfectly well. As M. Claretie remarks, the case, which is a well-authenticated one, illustrates the soundness of Dr. Koch's advice, never to despair

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of a cholera patient, and to keep up the treatment to the very last. The health of Paris continues to be satisfactory. Lloyd's agent at Lisbon states that the Portuguese Official Gazette of the 26th ult. contained a sanitary bulletin declaring the port of Huelva infected with cholera, and considered as suspected the ports between Cadiz and Ayamonte, both inclusive. The Paris delegates have visited Marseilles and Toulon. M. Clemenceau, who is a medical man as well as a deputy, speaking on sanitary measures at a meeting of the municipal council of the former city, proposed a central committee of medical men, and expressed himself in favour of the hospital being transferred to the outside of the town. There are now in Paris some 14,000 fewer visitors than were present at this time last year. It is stated that twenty cases of cholera have occurred at St. Petersburg, and that the disease has appeared at Charkoff and other towns. They have, however, been on the whole of a mild character, and the patients have recovered.

THE SUSPECTED CASE OF CHOLERA AT LIVERPOOL.

On the 25th ult., one of the crew of the *St. Dunstan* steamer was seized with severe cramp in the limbs and stomach followed by vomiting. This happened while he was transacting business in the city. He was taken home in a conveyance, and Dr. Welsh of the South Dispensary visited him at once. As the case appeared to be of a serious character, and as the patient had come from a vessel on board which two men had recently died with all the symptoms of cholera, Dr. Welsh very properly sought further advice and assistance. Dr. Lindsay and Mr. Hutchinson attended, and under their treatment the patient soon recovered. Dr. Taylor, the medical officer of health, also visited the patient. It is very satisfactory to note that the thorough disinfection of the vessel with the other precautions adopted, as mentioned in last week's LANCET, has proved successful, no other case having occurred. It ought to be mentioned that the sanitary authorities were enabled to do more in this case than the Health Act authorised, the owners having placed the vessel entirely at their disposal.

THE PICTORIAL PRESS AND CHOLERA.

The *Graphic* published last week some humorous sketches of the manner in which our continental neighbours put into practice the sanitary cordon and the fumigation of passengers. The dipping of a dog, which had, by mistake of course, violated the regulations by crossing the cordon, into a bucket of vinegar by way of disinfection is as amusing and grotesque as the bargaining by bribery for getting poultry across the cordon, with policemen watching complacently over this little transaction, and the fumigation of the persons of passengers—the former being carried out by the Spanish authorities at Gibraltar and the latter by the French at Avignon. In another page we notice a "cholera fumigating box," by which it would seem that still more stringent precautions are adopted at Geneva. "The suspected person," says the *Graphic*, "is placed in a box, which is about 6 ft. high, and in which he stands upright, with only his head outside, a towel being wrapped round the neck. The process occupies from three to four minutes, and the disinfectants used are chloride of lime and carbolic acid. The top piece of the box is made to slide in, and is removed when the process is completed by simply pulling outwards. While the sliding-board is being removed the towel comes in handily as a respirator."

NEW CHOLERA PRECAUTIONS AT LEITH.

In support of our remarks last week, we now learn that the sanitary authorities at Leith have received a communication from the Board of Trade informing them that a vessel had sailed from Marseilles with a cargo of old rags, and instructing them to be on the alert in case it should go to Leith. We trust that effective measures will forthwith be adopted in view of preventing at this juncture the importation of old rags and such-like media for conveying the cholera virus, especially when they happen to come from infected places.

Charles George Guy Perceval, Esq., H.B.M.'s Consul at Marseilles, has, we are informed, consented to receive contributions &c. towards relieving the distress among the labouring poor of the town induced by the epidemic now prevailing there.

The master of the steamship *Bracadale*, bound from Calcutta to Demerara, with nearly seven hundred souls on board, on the arrival of the vessel in Table Bay on the 4th ult., reported that cholera had broken out during the voyage, and that eighteen fatal cases had occurred.

The National Health Society has prepared for circulation a leaflet containing a variety of plain instructions for the prevention of cholera, and mentioning the precautions which it is desirable to take in the event of the appearance of an actual case of the disease.

THE FORTHCOMING OTOLOGICAL CONGRES AT BALE.

THE programme of this Congress, the third of its kind, which is to be held at Bâle from September 1st to 4th, has been published. The opening meeting will commence on September 1st at 10 A.M., when the election of officers will be held and addresses delivered by Dr. Sapolini, the President of the last Otological Congress, by Professor Burckhardtmerian, the President of the Organisation Committee, and by the members delegated from the Haut Conseil Fédéral and the Conseil d'Etat du Canton de Bâle-Ville. At 12.30 P.M. a breakfast will be given by the Swiss aural surgeons at the Veltlinerhette, and from 3 to 6 P.M. a meeting of the Congress will be held. On September 2nd, 3rd, and 4th meetings will be held from 9 A.M. to 12, and from 3 to 6 P.M., and on the 3rd the members will in the evening be entertained at a dinner given by the Conseil d'Etat of the Canton de Bâle-Ville. For September 5th an excursion to the lake of the four cantons is projected. The official languages are French, German, English, and Italian. The subscription is fixed at 20 francs, and tickets of membership may be obtained on application to Dr. Courvoisin, Bâle. In the list of communications promised, which number thirty-eight, we notice the names of but two residents in the United Kingdom—Mr. Bendelack Hewetson, who will read a paper on the Immediate Relief from Earache by the Injection against the Membrana Tympani of Glycerinum Acidi Carbolici, and its Power in arresting the Progress of Inflammation in the Middle Ear, of which the Earache is a symptom, and deliver some remarks on the Treatment of Catarrhal Deafness by the daily Injection of a strong Solution of Sodæ Bicarbonas into the Nares by the patients; and Dr. Thomas Barr, who has promised a paper on Adenoid Vegetations of the Naso-pharyngeal Cavity.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Barton, Winton, Eccles, and Monton (*Urban*). — The urban sanitary district bearing this composite name, which is approximate to Manchester and Salford, had in 1881 an enumerated population of 21,786. The medical officer of health, Dr. Carrington, has recently issued an interesting report for the two years 1882 and 1883, in which he has good reason for congratulating the sanitary authority and himself upon the evidence of improving sanitary condition that the recent mortality statistics for the district afford. The death-rate in the district which averaged 23·0 per 1000 in the four years 1873-76, fell to 18·3 in the four years 1880-83. In 1883 the death-rate was only 16·2, and Dr. Carrington estimates that 161 persons were alive in his district at the end of the year, whose deaths would have been recorded had the death-rate that prevailed ten years ago been maintained. We should have liked to see mentioned in the report the method adopted for estimating the population of the district, for whereas it appears to be admitted that the population declined from 1878 to 1881, it is now assumed to be increasing again, notwithstanding the decrease in the number of recorded births. The statistics given suggest the probability that the present population is somewhat over-estimated. Although so much undoubted improvement in the sanitary condition of the district has evidently taken place in recent years, the zymotic death-rate, reduced though it is, shows that the mortality is susceptible of further reduction; indeed

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Dr. Carrington admits that "there are plenty of insanitary cottages in our midst." The proportion of child mortality is still exceedingly high, although the report does not give the means for measuring it satisfactorily, by showing the proportion of deaths of children under five years to those living at those ages. This is a test of sanitary condition which should always find a place in health reports. The inspector's report shows that a vast amount of useful work has recently been done, and no one need hesitate to refer to this work, and the reduction of the death-rate, as cause and effect. The result should encourage further effort in the same direction.

Stratford-on-Avon Combination.—Mr. Fosbroke, who has now held office in the Stratford-on-Avon combined district for over ten years, reports an annual mortality at the rate of 15·2 per 1000 inhabitants, and a birth-rate of 32·1. The sanatorium at Alcester has, as during former years, been of considerable service, and at Bidport an outbreak of German measles was stamped out by its aid. Scarlet fever appeared in ten different localities, but nowhere did it assume extended proportions. Thirteen cases came to Mr. Fosbroke's knowledge where speedy removal to the sanatorium prevented any extension of the disease, even to other members of the infected houses; a result which must, doubtless, be attributed in part to the system of voluntary notification of infectious diseases which has been organised in this district. Diphtheria was prevalent, although but little fatal, in this district, and Mr. Fosbroke inclines strongly to the opinion that ordinary sore-throat may by progressive development eventually produce the characteristic disease. Together with the medical officer to the Alcester Workhouse, Mr. Fosbroke investigated an outbreak of seventeen cases of diarrhœa in that establishment, and, after taking voluminous evidence, they came to the conclusion that the illness had been brought about by the consumption of soup cooked in a dirty copper furnace. The fact that the outbreak subsided immediately this culinary vessel was cleaned confirms the view expressed. The excellent sanitary work which has been organised in this combined district continues steadily in progress. The Evesham urban and rural districts are about jointly to erect a hospital for infectious diseases, new bye-laws have been framed by the Stratford and Evesham urban authorities, and the Alcester Board have delegated a similar work to a committee of their own members.

Jarrow (Urban).—The population of this district is calculated at some 28,000, and the death-rate was as high as 23·4 per 1000, whereas for the triennial period 1881–83 the mean was 21·4. Even this, however, exceeds last year's average death-rate of 20·4 in the fifty large towns of England. To some extent the excess is regarded by Dr. Munro as due to considerable fluctuations in population following on variations in the shipbuilding industry, and he is able to point to some diminution in the infantile death-rate. On the other hand, the zymotic death-rate reached 5·1 per 1000. Measles caused 82 deaths, small-pox 6, fever 8, and diarrhœa 28. The former disease is not one which requires notification under the Jarrow Improvement Act. This is unfortunate, because, although it is not often that much can be done to stay its spread by isolation, disinfection, and improved sanitary measures, yet much can be done in that direction in connexion with the closing of schools and the exclusion of scholars from infected houses. Out of 434 cases of infectious disease which were notified, and which happened to include many cases of measles, the only cases admitted into the infectious hospital were 25 small-pox and 1 typhus; thus affording another instance of the comparative failure of these temporary buildings. Not one out of 143 scarlet fever cases which came under notice was thus isolated. Short of isolation, considerable efforts are made by Dr. Munro's staff to control the spread of infectious diseases, and special pains are taken to see that the sanitary state of the schools, which form such fertile centres of infection, is maintained at a proper standard.

Lytham (Urban).—Excluding deaths occurring amongst casual visitors, the death-rate for 1883 reached only 12 per 1000, and two deaths were registered from zymotic causes. The general death-rate has also undergone a steady annual diminution, and Dr. Fisher maintains, with justice, that Lytham has a claim to be regarded as a salubrious health resort. The list of actual sanitary works carried out shows that a genuine effort is made to ensure the result attained.

Scarborough (Urban).—In the borough of Scarborough the death-rate in a population of 32,150 was 18·8 per 1000, and the zymotic rate 1·3. Scarlet fever was somewhat prevalent during 1883, six deaths from this cause having taken place during both the second and the third quarters. Scarborough is especially liable to receive infection from without, and the corporation have hence provided themselves with an infectious hospital, a fever ambulance, and one of the best-known disinfecting stoves. We fear, however, that the hospital is but rarely used, and it certainly is not such a one as should be possessed by a health resort like Scarborough, where visitors needing isolation demand a superior class of accommodation. Care is evidently bestowed by Dr. Taylor on all the sanitary details of the town, and the best efforts are made by him to maintain the healthiness of the borough.

Bedford (Rural).—This is an extensive district, having a scattered population of some 23,000. The death-rate, 19 per 1000, must be regarded as high. Diphtheria has for some years past maintained a steady hold on this and some neighbouring districts, and Dr. Prior, who has given very careful attention to its mode of origin and distribution, is inclined to fear that it is getting established in the locality. During 1883 the deaths were scattered over various parts of the district, no severe outbreak in any one place having occurred. In this report Dr. Prior calls attention to the sad lack of space about houses in some of the villages, and to the resulting courts and yards which resemble those of our large towns. It is often held that bye-laws needed in towns are not applicable to villages, but their adoption is the only way to prevent occurrences such as these. The same remark applies to the erection of privies which must necessarily cause nuisance, but which, without bye-laws, cannot be controlled until the end which should be avoided has already been brought about.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5659 births and 4176 deaths were registered during the week ending the 26th ult. The annual death-rate in these towns, which had steadily increased in the five preceding weeks from 18·7 to 24·0, further rose last week to 24·9, a higher rate than has prevailed in any week since April, 1883. During the first four weeks of the current quarter the death-rate in these towns averaged 22·7 per 1000, against 23·2, 19·1, and 20·7 in the corresponding periods of 1881, 1882, and 1883. The lowest rates in these towns last week were 11·1 in Brighton, 13·3 in Portsmouth, and 13·8 in Birkenhead. The rates in the other towns ranged upwards to 29·6 in Cardiff, 29·7 in Bolton, 31·9 in Liverpool, and 33·8 in Leicester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 572, 876, and 1257 in the three previous weeks, were 1246 last week; these included 881 from diarrhœa, 118 from whooping-cough, 86 from measles, 77 from scarlet fever, 33 from "fever" (principally enteric), 30 from diphtheria, and 21 from small-pox. These diseases caused the lowest death-rates last week in Huddersfield and Birkenhead, and the highest rates in Nottingham, Preston, and Leicester. The greatest mortality from diarrhœa, mainly infantile, was recorded last week in Norwich, Leeds, Nottingham, Preston, and Leicester; from measles in Liverpool and Bolton; from whooping-cough in Sunderland and Liverpool; from scarlet fever in Cardiff and Sheffield; and from "fever" in Plymouth. The 30 deaths from diphtheria in the twenty-eight towns included 20 in London. Small-pox caused 23 deaths in Greater London (exclusive of 17 metropolitan cases registered outside Registration London), 1 in Liverpool, 1 in Sheffield, 1 in Hull, and 1 in Sunderland. The number of small-pox patients in the metropolitan asylums hospitals situated in and around London, which had been 1368, 1241, and 1152 on the three preceding Saturdays, had further declined to 1011 at the end of last week; the number of new cases admitted to these hospitals also declined to 105 last week, from 266, 179, and 141 in the three preceding weeks. The Highgate Small-pox Hospital contained 56 patients on Saturday last, 6 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 231, 206, and 177 in the three previous weeks, further declined to 159 last week, and were 26 below the corrected average. The causes of 63, or only 1·5 per cent., of the deaths in the twenty-eight towns last week were not

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certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Brighton, Sunderland, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Blackburn, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 21·0 and 22·8 per 1000 in the two preceding weeks, further rose to 23·3 in the week ending the 26th ult.; it was, however, 1·6 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 16·8 and 18·3 in Perth and Edinburgh, to 24·0 in Paisley and 28·6 in Glasgow. The 563 deaths in the eight towns included 43 which were referred to diarrhœal diseases, 22 to whooping-cough, 6 to measles, 6 to scarlet fever, 5 to diphtheria, 3 to "fever," and not one to small-pox; in all 85 deaths resulted from these principal zymotic diseases, against 87 and 116 in the two preceding weeks. These 85 deaths were equal to an annual rate of 3·5 per 1000, which was 3·9 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhœal diseases, which had been 13, 32, and 57 in the three previous weeks, were 43 last week, and exceeded the number in the corresponding week of last year by 19; the 43 last week included 25 in Glasgow, 5 in Edinburgh, 5 in Dundee, and 4 in Greenock. The rate of mortality from diarrhœa last week was almost three times as great in the English as in the Scotch towns. The 22 fatal cases of whooping-cough in the Scotch towns showed a decline of 4 from the number in the previous week; they included 15 in Glasgow and 4 in Leith. Of the 6 deaths from measles, 2 occurred in Glasgow and 2 in Dundee. Five of the 6 deaths from scarlet fever and 3 of the 5 from diphtheria were returned in Glasgow; the fatal cases of diphtheria showed a considerable decline from recent weekly numbers. The 3 deaths referred to "fever" included 2 in Paisley and 1 in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been but 54 and 66 in the two preceding weeks, further rose to 89 last week, and exceeded by 24 the number returned in the corresponding week of last year. The causes of 69, or more than 12 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 22·3 and 21·9 per 1000 in the two preceding weeks, further declined to 19·3 in the week ending the 26th ult. During the first four weeks of the current quarter the death-rate in the city averaged 21·1 per 1000, the rate during the same period being equal to 23·9 in London and 17·7 in Edinburgh. The 130 deaths in Dublin showed a further decline of 17 from the numbers returned in recent weeks, and included 16 which were referred to the principal zymotic diseases, against 13 and 24 in the two preceding weeks; 5 resulted from scarlet fever, 4 from diarrhœa, 3 from "fever" (typhus, enteric, or simple), 3 from whooping-cough, 1 from diphtheria, and not one either from small-pox or measles. These 16 deaths were equal to an annual rate of 2·4 per 1000, the rate from the same diseases being 3·3 in London and only 1·7 in Edinburgh. The 5 fatal cases of scarlet fever corresponded with the number in the previous week, while the deaths referred to diarrhœa, "fever," and whooping-cough showed a decline from the respective numbers in the previous week. Four inquest cases and 4 deaths from violence were registered in the city last week; and 30 deaths were recorded in public institutions. The deaths both of infants and of elderly persons exceeded those returned in the previous week. The causes of 20, or more than 15 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ARTILLERY VOLUNTEERS.—4th Lancashire: Edwin Hyla Greves, Gent., M.B., to be Acting Surgeon.—2nd East Riding: Acting Surgeon George Wilkinson Pybus resigns his appointment.—1st Volunteer Battalion, the Leicestershire Regiment: Acting Surgeon Clement Frederick Bryan to be Surgeon.

ADMIRALTY.—The following appointment has been made:—Surgeon Charles William Magrave to the *Penelope*

Correspondence.

"Audi alteram partem."

SIR LYON PLAYFAIR'S ESTIMATE OF "THE WASTE OF THE PROFESSION."

To the Editor of THE LANCET.

SIR,—You ask me how I arrive at the large figure of 1600 as representing the annual demand for licences in the medical profession, or, as I put it, to supply the waste. The word "waste" was perhaps inappropriate, and a few lines further in my speech I used the word "requirements." But my meaning was obvious enough when I said that "the doors of admission to a licence must be wide enough to let 1600 men at least pass through them." If you refer to the minutes of the General Medical Council of March 25th, 1884, you will find that all the licences of corporations and universities amounted to 2163. But a considerable number of these are duplicate entries, on account of men taking more than one licence. I consulted a competent authority, and was informed that 500 would more than correct these double entries. To be on the safe side I deducted 563, and so arrived at, in round numbers, 1600. In your article you show that while the deaths in 1883 were 530, the number of new registries was 1304. As many licentiates go to the colonies and foreign countries, I do not think 1600 very wide of the mark as indicating the number of individual men annually licensed to practise in the medical profession.

I am, Sir, yours, &c.,

London, July 30th, 1884. LYON PLAYFAIR.

*** Sir Lyon Playfair fails entirely to justify his estimate of the waste of the profession, or his attempt to frighten the House of Commons into believing that there was a danger of the supply of medical men falling short of the demand. It is the business of the Medical Registrar to ascertain the deaths of all registered medical men, and, with all his pains, he can only make out an annual death-rate, of—taking the last three years—526. Sir Lyon has told the House of Commons that the waste of the profession is 1600! The annual average number of *new registrations* for the last three years is 1176—that is, *more than twice the number of the deaths.* We must say again that the only thing which Sir Lyon Playfair can properly do with an error which has so grievously misled the House, and so misrepresented the case of the profession, is to make an equally public correction of it.—ED. L.

THE CHOLERA.

To the Editor of THE LANCET.

SIR,—A few days ago my friend, Dr. Wilks, charged me with having discovered Koch's cholera bacillus in 1866, and told me that I had given a brief description of it in the Ninth Report of the Medical Officer of the Privy Council. I disclaimed all knowledge of the fact. Last night, at a meeting of the College of Physicians, he repeated his statement to myself and several other Fellows. I still had to confess incredulity; but determined to look the matter up. This I have just done, with the following result.

In August, 1866, when cholera was raging at the East-end of London, Mr. Simon arranged that a series of investigations should be made into important questions connected with that disease; and he appointed Dr. Wilks, Dr. Martin, Dr. Hughlings Jackson, and myself, to report upon the degrees of success attained by different methods of treatment of cholera, especially as practised in the London hospitals; and Dr. Burdon Sanderson to undertake the verification of alleged experimental proof of the communicability of cholera. Owing to the rapid and almost sudden subsidence of the epidemic, and its limitation in area, the former of these inquiries died in its infancy. Dr. Burdon

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Sanderson, however, as is well known, was able to repeat and verify Prof. Thiersch's experiments with respect to the communicability of cholera to mice. In the course of his report to the Privy Council, he says: "During the month of September I dissected about twenty mice affected with cholera, more or less severely. During the progress of the inquiry a certain number were forwarded to Dr. Bristowe, who had kindly consented to examine them, and has since furnished me with notes of his observations." And later on, after detailing his own microscopical results, he proceeds as follows: "I append here, by Dr. Bristowe's permission, the notes which have been forwarded to me by him, only observing that the above description"—that is, his own description which preceded mine—"was written before I had read them, and that our dissections were made independently. 'There was in every case a remarkable tendency to decomposition of the bowels. The small intestines generally contained a largish quantity of pale yellowish fluid, mixed with bubbles of gas. The cæcum was more or less distended with fluid of a dusky reddish hue, and similar fluid was also found in greater or less quantity in the colon and rectum. From the anal orifice sometimes mucus and sometimes a little solid lump of fæces was extruded. The fluid in the intestines always contained detached intestinal epithelium, and sometimes an immense quantity of it. The cells were mostly separated from one another, but were sometimes in groups as if they had come off in flakes either from the surface of the mucous membrane or from the interior of follicles. Such cells were met with even in the mucus exuding from the anus. There were also throughout the whole of the intestinal tract vast numbers of low vegetable organisms, some consisting of two joints and undergoing constant movement, others of several successive joints and either moving or stationary (bacteria, &c.)' Dr. Bristowe further refers to 'round or oval well-defined thick-walled cells, apparently parasitic,' which, he says, existed 'in greater or less number in the small intestine, but were always most numerous in the cæcum and large intestine.' He also observed *'numerous oval, slightly curved cells with a single nucleus,'* of the nature of which he is unable to form a decisive opinion. On perusing these forgotten statements of mine, and especially that which I have put in italics, circumstances related with them, but not recorded, came to my mind; and especially I recalled that I had made some sketches of the bodies whose nature I had not ventured to surmise, and on looking for them I found them in one of my note books. Here is an exact reproduction of them. I discovered no memorandum, however, of their actual size or of the magnifying power under which I examined them. But I was working at that time with Ross's highest powers, and was habitually employing lenses magnifying from 500 to 2000 diameters. Probably therefore I drew them as they appeared under a magnifying power of between 500 and 1200 diameters. The bodies clearly accord with my own description of them, and present also the comma-like form manifested by the bacilli which Koch has recently discovered in cholera stools. I think there can be no reasonable doubt that the bodies are in fact identical. Owing to the subsidence of cholera coincidentally with the performance of Dr. Sanderson's experiments, and its absence from England ever since, I never had any further opportunity of investigating the nature of the bodies I described, and none of determining whether or not they were also present in the choleraic evacuations of human cholera patients; and, consequently, although I was evidently interested in them at the time, the incident left no permanent impression on my mind. I need scarcely say that I do not write this letter with the object of putting forward any claim whatever to the discovery of the cholera bacillus. That discovery, assuming it to be one, belongs to Koch alone. But my forgotten investigations seem to me to have a little interest at the present time, inasmuch as they tend to show that Koch's cholera bacilli were found in connexion with the cholera of 1866, and that in Dr. Sanderson's experiments cholera, as was at the time contended, was actually imparted to mice. They show, too, how closely one may approach a discovery and yet fail to grasp it.

I am, Sir, yours faithfully,

Old Burlington-street, July 23rd, 1884. J. S. BRISTOWE.

To the Editor of THE LANCET.

SIR,—Perhaps at present a few simple facts concerning cholera may prove instructive. They came under my notice while serving in India, through two very virulent epidemic invasions—one at Delhi in June, 1861, another at Jullundhur in September, 1862, while surgeon to H.M.'s 82nd Regiment. Both outbreaks emanated from the enormous gatherings of religious pilgrims who periodically flock to the "holy city" of Benares, and, dispersing thence, carry back the *materies morbi* (indigenous to the place), leaving its footprints, march by march, along the various routes they retrace homewards. Thus it reached Delhi, where the 82nd Regiment was quartered after the Mutiny, not in barracks, but in native buildings extemporised for use in the city, and within the fort, both these being separately enclosed within lofty fortified walls; the latter inside the former. I need scarcely say the sanitary condition was indifferent. The men in the fort suffered more severely than those in the city around, but the band, some forty strong, which occupied the worst quarters of all—viz., an old zenana building, crowded and closely shut in from light and ventilation by high thick walls absorbing and radiating heat—had not a single case from first to last. The companies in the fort, the most severely attacked, were moved (in June) to tents on "the ridge," a belt of slightly elevated ground not more than half a mile from the city. The disease ceased at once; not another case occurred. Other companies were sent in detachments to the Kootuli and elsewhere; the change was also beneficial, and disease slowly abated. Three men occupied a small central room or compartment open on four sides to the Martiniere building. All three died in two days, the adjacent rooms being free; one man was taken from the room to the hospital, the two others on duty returned to the room and died next day. No special local cause was ascertainable. Delhi boils and Delhi flies were the whole time as pestilential as usual. At Jullundhur the barracks are separated by a road; on one side the disease was virulent and fatal, on the other side absent. This epidemic was extremely virulent in type, though limited in extension, the regiment being at once broken up into detachments and kept moving every few days. It lasted from September 8th to the 21st; all, or nearly all, attacked died. Various methods of treatment were adopted: calomel, quinine, effusion, electricity, opiates, stimulants, counter-irritants, heat, &c.; all failed. Prognosis was mere guesswork. Some of the worst cases (inveterate drinkers) recovered when in articulo mortis; others more favourably circumstanced, especially among the women, proved fatal. My own opinion is, I am sorry to own, that in types of this virulence medical science has as yet no remedy whatever.

I am, Sir, your obedient servant,

Bedford, July 29th, 1884. H. D. FOWLER, Deputy Surg.-Gen., A.M.D. (retired).

P.S.—How is the cholera bacillus (?) so suddenly annihilated and so definitely limited? Should not the use of rain water as much as possible be substituted for that in ordinary use during cholera times? No officers or members of their families suffered; they were quartered both in the fort and city of Delhi outside, and the same applies to Jullundhur.

To the Editor of THE LANCET.

SIR,—Now that the subject of Asiatic cholera is again upon the *tapis*, perhaps the synopsis of a hundred cases treated during the present outbreak at Marseilles may be of interest to you. I may premise that, taken as a whole, the present epidemic cannot compare in virulence with those which devasted various English towns in 1849. The percentage of those attacked and the mortality among them are both much less. Out of the total of 100 cases, 10 died of the fatal cases, 2 died before there was time for symptoms of reaction to manifest themselves; 1 died of exhaustion produced by diarrhœa and vomiting, after an illness of varying duration, but under three days. Five died after an illness protracted beyond the three days, but

from the same cause—viz, asthenia produced by exhausting discharges; 2 died of consecutive fever. The cases coming under the first category ended fatally in from five to twelve hours. Their aspect was appalling to anyone not accustomed to such sights. The eyes were sunk in the back of the head like those of a corpse, but widely opened and staring; eyelids livid; skin of an ashen-grey colour, cold and clammy with moisture; the features were often so distorted as to be unrecognisable by the nearest relations; the pulse was imperceptible. The patient often shrieked aloud to the "bon Dieu" or to his or her favourite saint. The limbs were violently cramped and the whole aspect that of acute suffering and collapse. Those who survived this stage to succumb at a later period presented the usual symptoms, which have been sufficiently described in medical works. The only point to which I desire to draw attention is the greater proportion of cases which, though ultimately fatal, survived beyond the third day as compared with the percentage recorded in previous epidemics. This may be either due to the milder character of the virus or to the greater efficiency of the treatment. Only one death among medical attendants has come to my knowledge, that of a student, with whom I was well acquainted; so perhaps, after all, the Duc de Chartres in his recent act of heroism did not run any very great risk.—I am, Sir, yours truly,

ALFRED DRYSDALE, M.B. Lond.,
Officier de Santé.

Mentone, July, 1884.

THE WELDON CASE.

To the Editor of THE LANCET.

SIR,—Will you kindly allow me to state that I am not the defendant in the recent trial, Weldon *v.* Semple, and that I know nothing of the case beyond what I have read in the newspapers.—I remain, Sir, yours very truly,

R. H. SEMPLE, M.D., F.R.C.P.L.

Torrington Square, July 31st, 1884.

THE SANITATION OF MARSEILLES HARBOURS.

To the Editor of THE LANCET.

SIR,—Your Liverpool correspondent, in commenting upon the cases of cholera on board the steamship *St. Dunstan* in the current issue of THE LANCET, says:—"It transpired that the vessel was put into a dock into which a portion of the sewage of Marseilles was discharged, and the men noticed, particularly at night, a strong and offensive effluvium." I have to observe that the same thing was noticed by myself and other passengers of the Peninsular and Oriental steamship *Cathay*, which entered the quarantine harbour at Marseilles on March 25th. Moreover, the water being quite still, large quantities of excreta could be seen floating about in the early morning, and the stench was abominable. We had to undergo the stupid, absurd, and odious *fiasco* of quarantine, which was enforced for twenty-four hours, while the *Cathay* and other vessels were exposed to the influence of the effluvium of sewage, which, it would appear, was pumped into the quarantine harbour for some occult purpose. We were boarded by officials; an *officier de santé* inspected the crew and officers, but not the passengers; and, during a long interview with the ship's surgeon, he put that gentleman through a searching *vivâ-voce* examination on the symptoms of cholera, and the differential diagnosis between it and dysentery. He caused the hatchways to be limewashed, and the w.c.'s of the native crew only to be nominally disinfected. From Paris I sent a report on the bad sanitary arrangements at Marseilles and the danger of cholera for publication in your columns, but it would seem that the manuscript did not reach its destination.

I am, Sir, yours, &c.,

JOHN C. LUCAS.

July 28th, 1884.

FOREIGN GRADUATES' ASSOCIATION.—Dr. W. C. Dansie, of Epsom, has been elected President for the ensuing year, vice Dr. H. J. Handwicke, of Sheffield, who becomes a Vice-President. Dr. K. N. Macdonald, a former President, has been elected a Vice-President, and Dr. J. J. Bailey, of Marple, Hon. Secretary. The Council consists of twelve London and provincial foreign graduates.

NEWCASTLE-ON-TYNE.

(*From our own Correspondent.*)

THE ROYAL VISIT TO NEWCASTLE.

HIS Royal Highness the Prince of Wales with the Princess and some of the Royal children are expected to arrive here on August 19th, and will at once proceed to Sir W. Armstrong's seat at Rothbury, where they will stay during their visit to Northumberland. The next day they will visit Newcastle to open the new building erected for the Natural History Museum and the Jesmond Park, presented to Newcastle by Sir W. Armstrong. The new reference department of our public library will also be opened, and the day's proceedings will conclude with a banquet given by the civic authorities to the Prince, which is expected to be a representative one, and worthy of the occasion. The next day the Prince will again visit the city, and, taking a view of the Tyne and the famous High Level Bridge, will proceed down the river to North Shields, and after opening the new dock there will go on to our "Northern Brighton," Tynemouth. Thence he will return to Rothbury, and possibly have a few days' grouse shooting in the vicinity, the place being surrounded by well-stocked moors. It has given much satisfaction that the Royal party is to be welcomed and received in our ancient town, but modern city, by a medical mayor (Mr. H. W. Newton).

ROTHBURY.

The Royal visit will bring this picturesque little mountain town into deserved prominence, so that a few words about it as a health resort may not be out of place here. Rothbury, the name of which signifies "the town in the clearing," is situated forty-one miles from Newcastle. The town has a population of rather over 5000, and has been known as a health resort for several generations. The beautiful valley of the Coquet, on which it is situated, extends from three to four miles, and is about two miles broad. The main street is about 250 feet above the sea-level, and the valley is shut in on all sides, except the west, by hills from 700 to 1400 feet in height; ample protection is thus given the town from all cold winds. Observation shows the rainfall to be moderate; but what is of far more consequence is the fact that this rainfall occurs on about 160 days, the remaining 205 being quite dry. Dr. J. Gordon Black, of Harrogate, who has given much attention to the climate of Rothbury, says that sufferers from spasmodic asthma or chronic bronchitis with asthma should carefully avoid the place, from its air being a too powerful and exciting a stimulant. In pure bronchitis, however, having a tendency to become chronic from passive congestion of mucous membrane, Rothbury is often curative by exciting a healthy circulation. For strama no better inland or rather mountain health resort could be selected. The drinking water is pure and soft, and, as Dr. Gordon Black observes, admirable as a means of solution of thickenings or coagulations of the lymphatic type. It may be mentioned that the Coquet is celebrated as the *beau idéal* of an angler's river; and that the trout streams are numerous and well stocked. The little town will supply all the wants of the visitor. Lodgings are good, and as yet the charges are moderate; but during the present season, which is an exceptional one owing to the Royal visit, visitors would do well to make arrangements as to quarters in advance.

Newcastle-on-Tyne, July 28th, 1884.

IRELAND.

(*From our own Correspondent.*)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE election for a Professor of Surgery in the Medical School of the College took place on the 24th ult., when, after an exciting contest, Mr. Edward Hamilton was successful. Of eighteen members of Council who recorded their votes, ten voted for Mr. Hamilton and eight for Mr. Corley. The result has been, as I anticipated in these columns some time since—viz., the election of Mr. Hamilton by two or three votes. Either candidate was well qualified to succeed the late Dr. Stannus Hughes in the chair of Surgery. The election of Dr. Cameron to the Vice-Presidency necessarily

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causes a vacancy for a member of Council, which will be filled up on Monday, the 4th inst. So far there are only two candidates before the electors—Mr. Corley (late Vice-President) and Mr. Nixon. At the recent examinations for the first half of the licence in Surgery, of seventy-four candidates who presented themselves only twenty-six satisfied the examiners.

PRECAUTIONS AGAINST CHOLERA IN BELFAST.

The committee appointed to make proper arrangements should cholera visit that town recently met to consider the report of Dr. Seaton Reid in reference to the staff and accommodation required at the intercepting hospital. They recommended that nurses and a medical staff should be engaged, and that an additional building be erected near the present intercepting hospital, to contain ten additional apartments. These suggestions came before the guardians last week, who agreed to the various recommendations made except as regarded the additional building, which was considered unnecessary. The guardians, however, have taken advantage of an offer made through the Local Government Board to utilise a number of police huts capable of accommodating five or six persons each.

SANITARY CONGRESS IN DUBLIN.

A Sanitary Congress and Exhibition will be held towards the end of September, under the auspices of the Sanitary Institute of Great Britain. Various papers will be read and discussed on matters relating to sanitary science. There will be three sections—viz., Sanitary Science and Preventive Medicine, presided over by the Registrar-General for Ireland; Engineering and Architecture; and, lastly, Chemistry, Meteorology, and Geology, of which the President will be Dr. Cameron, Vice-President of the Royal College of Surgeons. The special questions in the various sections include the housing of the poor, the disposal of town sewage, and the effects of water-supply and of site and climate on health. Dr. Cameron is expected to read a paper on the influence of good water supplies on health considered from a chemical and physiological point of view.

ROYAL UNIVERSITY OF IRELAND.

The Maternity Hospital, Glasgow, and the Maternity in connexion with the Royal Infirmary School of Medicine, Liverpool, have been placed on the list of institutions from which the University receives certificates for degrees in medicine.

It is proposed to hold a Hospital Saturday in Belfast, to benefit the funds of the Belfast Royal Hospital.

During the June quarter there were 31,549 births and 23,868 deaths registered in Ireland, the births and deaths being both below the average. Compared with those for the corresponding quarter of 1883, the returns of pauperism show a decrease of 2888 in the average number of workhouse inmates on Saturdays during the quarter, and a decrease of 3483 in the number of persons on out-door relief.

Dublin, July 29th, 1884.

PARIS.

(From a Correspondent.)

THE CHOLERA.

In hinting last week that the diversity of opinions expressed by those who consider themselves authorities on the subject would not be without an injurious effect upon the public, I did not anticipate so speedy a confirmation of my words. In several instances those who have been seized with cholera have committed suicide upon feeling the first symptoms, rather than take their chances of treatment, and now a newspaper correspondent telegraphing from Marseilles on July 26th says, "A medical certificate bears the following statement: 'The patient refused to take the medicine prescribed, and, although the fact has only been officially noticed to-day, certain patients have refused for the last few days either to see a doctor or take medicines.'" And not without some reason. Every theorist must thrust his ill-digested views on the public through the medium of the daily papers, and so the newspapers are filled with the most contradictory statements, which cannot fail to destroy anything like confidence. One considers the alkalinity of the secretions the great thing to be got over, and would saturate the patient with acid to check the development of bacilli. Another considers these of so little importance that he would swallow any amount of them to prove it. I am not alluding to the opinions expressed in the medical press, where, of course, they are entirely in place, but to the letters with which the lay periodicals are crowded. Another enthusiast writes on the virtue of copper *intus et extra*, and others must do battle for and against astringents. The homœopaths, too, are claiming to be consulted. One of their adepts would have the choleraic patients handed over to them exclusively on the ground that, whereas the death-rate is only 20 per cent. in their hands, thrice that mortality results from allopathic treatment. If certain members of the medical profession are enjoying the satisfaction of seeing their lucubrations in print, the chemists and manufacturers of cholera specifics and quackeries are reaping more substantial advantages. The copper theory has been appropriated by an enterprising individual, who makes a kind of plaster, a certain surface of which is guaranteed to secure immunity from cholera during the next twenty-four hours; each day the application must be repeated, and the greatest benefit (to the vendor) of course results from the application. Another external appliance of occult power which has been largely advertised as a cure for every kind of pain, and, strange to say, at the same time as a remedy for locomotor ataxy and obesity, this last affection being radically cured in thirty days, is now asserted to stay the virulence of cholera. The advertisers ingeniously admit that it will not preserve from the disease, but its pain-allaying qualities of course render the malady less formidable. The specifics for internal use, both of home and foreign manufacture, are advertised in the most unwarrantable manner, too often owing much of their success to medical encouragement; and to give some idea of the extent to which ill-advised medical advice and pharmaceutical quackery is carried, it may be mentioned that on Monday last the secretaries of the Academy of Sciences received no less than *two hundred and forty* communications on the subject. M. Gosselin, speaking in the name of the Commission appointed to examine this correspondence, informed the Academy that there was nothing in it of any practical interest. Some of the writers had medicines with which they wished to experiment without allowing the composition to be known; others offered to sell their "secret" to the Government for various large sums. There were those who wanted to contract at so much per cent. either with the Government or with the patients. And, lastly, came experimenters claiming that wards should be reserved for them in the hospitals to try the various remedies they fancied; amongst these were olive oil, sulphur, petroleum, benzine, carbolic acid, baths of urine (!) and of wine, arsenic, copper, veratrin, pilocarpine, salicylic acid, inhalations of oxygen, &c. Surely there never was better proof of the advisability of suppressing quack medicines altogether. If any of these preparations are really useful in cholera their composition should be made known, and the profit derived from their sale reaped in a regular manner by the retailers; but at the present time the medical profession especially should set its face against this speculation in human life by inventors of secret medicines, and discourage every such speciality, however vaunted by the advertisers. The mortality from the epidemic during the last week in the principal centres has been as follows:—

Date.	Toulon.	Marseilles.	Arles.
July 22nd	42	57	8
,, 23rd	34	44	9
,, 24th	26	48	12
,, 25th	27	38	4
,, 26th	17	58	15
,, 27th	12	36	8
,, 28th	21	24	12

July 30th, 1884.

ROYAL VISIT TO ST. THOMAS'S HOSPITAL.—Her Imperial Highness the Crown Princess Victoria of Germany and suite visited St. Thomas's Hospital on Tuesday afternoon at very short notice, with a view to seeing the hospital in its every-day working state and under ordinary conditions. Her Imperial Highness visited several of the wards, the various details connected with the working and nursing arrangements being explained to her by the senior surgeon, Mr. Sydney Jones, Dr. Hadden (on behalf of the medical staff), and Mrs. Wardroper, the matron of the hospital. At the close of her visit the Crown Princess expressed her satisfaction with the arrangements of the institution.

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ROYAL COLLEGE OF PHYSICIANS.

At the ordinary Comitia, held on Thursday, the 31st ult., Sir W. Jenner, Bart., President, in the chair, the following gentlemen were elected censors for the ensuing year—Dr. J. W. Ogle, Dr. Wilson Fox, Dr. W. H. Stone, and Dr. J. E. Pollock. The examiners and other officers were also appointed.

The report of the Cholera Committee, embodying general instructions for the prevention and treatment of cholera, was received, and will be published after it has been sent to the Local Government Board.

Reports from the Library Committee, the Curators of the Museum, and the Finance Committee were read and adopted.

The Medical Bill having been withdrawn, a committee was formed to facilitate the adoption of the Scheme for a Conjunction of the College with the Royal College of Surgeons for examination purposes.

MEDICAL NOTES IN PARLIAMENT.

Smoke Abatement.

IN the House of Lords on Monday, Lord Derby presented a petition from the vestry of St. James's against the Smoke Abatement (Metropolis) Bill.

On Thursday, Lord Stratheden and Campbell moved the second reading of the Bill, and it was carried by 31 to 17, but on the understanding that at this period of the session the measure would not be enabled to pass into law.

The Canal Boats Act Amendment Bill and the Cholera Hospitals (Ireland) Bill passed through Committee.

Oleomargarine.

In the House of Commons, on Friday (25th ult.), Mr. Hibbert informed Mr. Duckham that the Local Government Board had no supervision over oleomargarine factories, and had no definite information as to the extent of the manufacture in the United Kingdom. They believed the provisions of the Food and Drugs Act were sufficient to meet the case of any deleterious compound, and a circular was sent to the sanitary authorities last month, urging increased activity in obtaining samples of food and drugs for analysis. If samples of oleomargarine were found to be injurious to health, and if that compound were sold when butter was asked for, prosecutions would follow, as they had in the case of butterine.

The Medical Bill.

In reply to Mr. Talbot, Mr. Gladstone expressed his regret at having to announce that in view of the convenience of members and the circumstances of the session, this Bill would not be further proceeded with this session. Subsequently, the order for going into committee was discharged, and the Bill was withdrawn. During the week, petitions in connexion with the Bill continued to be presented, mostly in favour of the proposed Pharmacopœia Committee.

Rags and Cholera.

Sir C. Dilke assured Sir F. Milner that a cargo of rags from Marseilles had not been landed. In reply to Mr. Cowen, the right hon. baronet said there was no evidence of the communication of cholera by rags, but small-pox and woolsorters' disease had been so conveyed.

The Carriage Tax.

Lord A. Percy moved a resolution in favour of the abolition of the carriage tax, and specially referred to medical men as requiring carriages for professional purposes. The Chancellor of the Exchequer contended that several other taxes had priority for remission, and the resolution was rejected by 93 to 38.

Broadmoor Lunatic Asylum.

In Committee of Supply, Mr. Hibbert informed Mr. Warton that the increase of 7 per cent. in the vote for this asylum was due to the fact that criminal lunatics were no longer sent to licensed houses.

Vaccination Questions.

Mr. Russell replied to Mr. Hopwood that the death of a recently vaccinated child, named Best, at Hull, was certified as due to erysipelas, and the doctor stated that the disease had no connexion with the vaccination. Other children vaccinated from the same lymph took no harm. The parents asked the Local Government Board for an inquiry, but at present no action had been taken.

On Tuesday, Mr. Russell stated to the same hon. gentleman that the Local Government Board did not propose to sanction the stipulation of the Dewsbury guardians, that a public vaccinator should guarantee children against injury. The present rules were sufficient to prevent any but the most minute risk, and a public vaccinator ought not to be called upon for more than due observance of these rules.

The State of the Thames.

On Monday, Sir W. Harcourt, in answer to Mr. Rogers, said the correspondence between the Home Office and the Metropolitan Board of Works on this subject would be ready for presentation next week.

Burgh Police and Health (Scotland) Bill.

A petition from the Forfarshire Medical Association was presented against the Bill.

On Tuesday, the rejection of the Bill was moved by Mr. Hopwood, who strongly complained of the arbitrary powers proposed to be given by it to local sanitary authorities. A long debate followed, and after a division the House went into committee on the Bill, but progress was immediately reported, and it is understood that the Bill cannot pass this session.

The Contagious Diseases Acts.

In Committee of Supply on the Army Estimates, Mr. Puleston raised a discussion as to the evil effects of the abolition of compulsory examination. Dr. Farquharson, whilst admitting that the Government were bound to act upon the adverse vote of the House of Commons, said the Acts must fail without compulsory examination. He praised the manner in which the doctors and police had performed their duties. Lord Hartington averred that he was still opposed to the step which had been taken, but he did not regard the consequent increase of disease as considerable. Mr. Campbell-Bannerman endorsed this view with regard to the navy. Lord Hartington excused the non-production of his promised Bill owing to the state of public business.

The Lunacy Laws.

On Thursday, in reply to Sir H. Holland, Lord E. Fitzmaurice stated that much information as to the lunacy laws of foreign countries was to be found in a book by Dr. Harrison of Philadelphia, entitled "Legislation for Insanity." He should be happy to show the hon. member a copy, and to procure further information if required.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following candidates passed the Second Examination in Anatomy and Physiology on July 25th:—

Alfred Percy Blankinsop, Henry Asher Dutch, Frederick Richard Miller, Wm. Arthur John Nottingham, John Maynard Picktball, Ernest Albert Qaicke, Alfred Henry Spurrier, George William Stringfield.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 24th ult:—

Aikins, Henry Wilberforce, M.D. Toronto, Toronto.
Biden, Charles Walter, L.R.C.P. Lond., Peckham.
Bolton, John Usherwood, L.R.C.P. Edin., Wimbledon.
Coronel, Julius, M.D. Amsterdam, West Indies.
Craddock, Sidney Ernest, L.S.A., Milman-street.
Gooding, Charles Ernest, M.D. McGill College, Barbadoes.
Loring, J. Brown, M.D. McGill College, Montreal.
Macdonald, George Childs, L.R.C.P. Ed., Craven-street.
Marriott, Hyde, L.S.A., Stockport.
Miller, Thomas Hugh, L.R.C.P. Lond., Clapham.
Morgan, George, L.S.A., Brewer-street.
Parrott, Thomas Godfrey, L.R.C.P. Lond., Aylesbury.
Penny, Francis, L.S.A., Crewkerne.
Perkin, R. F. Thornton, Warwick.
Rees, William Thomas, L.S.A., Llanboidy.
Reilly, Charles Cooper, L.R.C.P. Lond., Denbigh-street.
Rowell, George Ball, M.D. McGill College, San Francisco.
Shaw, H. C. Costello, L.R.C.P. Lond., Kingston-on-Thames.
Watson, James Russell, L.S.A., Moore-street, Chelsea.

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Admitted Members of the College on the 25th ult.:—
Barker, A. J. Glanville, Finsbury-park.
Collins, W. C. Glasier, L.R.C.P. Edin., Holford-square.
Drage, Lovell, Hatfield, Herts.
Harpur, Alexander, Hertford-street, Mayfair.
Innes, Charles Barclay, Hampstead.
Laslett, Thomas George, L.R.C.P. Lond., Bootle, Lancashire.
Macloglin, E. P. Plantaganet, Wigan.
Purslow, Charles Edwin, Wolverhampton.
Somers, Edward O'Reilly, Salford.
Spry, William, Southsea.
Stevenson, John, L.R.C.P. Lond., Stretford, Manchester.
Watkins, Arthur Muriel, L.R.C.P. Lond., Newton-le-Willows.
Webster, Ernest, Hulme, Manchester.
Wild, George Samuel, Liverpool.
Williams, Patrick Watson, Bristol.

Admitted Members of the College on the 28th ult.:—
Adie, Joseph Rosamond, Brixton.
Aikin, William Arthur, Clifton-place.
Barber, Frederic Samuel, Claremont-square.
Brock, J. H. Ernest, Bartholomew-road.
Brogden, Richard William, L.R.C.P. Lond., Clapham-road.
Castor, Richard Henderson, L.R.C.P. Lond., Primrose-hill.
Montbrun, Pedro Louis de, L.R.C.P. Lond., Trinidad, West Indies.
Reid, A. St. George Cauldfield, Chatham.
Roberts, James Reid, L.R.C.P. Lond., Suez, Egypt.
Ruck, John Ernest, Devizes, Wilts.
Stacy, W. H. Waterhouse, Norwich.
Turner, Philip Dymock, Tulse-hill.
Voelcker, Arthur Francis, Argyll-road.

Admitted Members of the College on the 29th ult.:—
Cocking, William Tusting, Sheffield.
Elliott, John, Whitchurch, Salop.
Field, Adolphus Theodore, L.S.A., Shepherd's-bush.
Fowler, Alfred Henderson, L.R.C.P. Lond., Sharsted-street.
Gabriel, William Maurice, Gloucester-gardens.
Habershon, Samuel Herbert, Brook-street.
Hall, Alfred Richard, Stanraer-place.
James, John, Llangwyryfon.
Lavie, Tudor German, Queen Anne's-gate.
Morgan, T. W. Sewell, L.S.A., Roupell-park.
Penrose, Francis George, Gower-street.
Roberts, Owen William, L.R.C.P. Lond., Cambridge-gardens.
Smith, E. A. Cloete, L.R.C.P. Lond., Woolwich.
Taylor, Alfred Ernest, Acton.
Tubby, Alfred Herbert, Kennington.
Vernon, J. J. Dean, Audley, Newcastle-under-Lyne.

Admitted Members of the College on the 30th ult.:—
Andrews, Charles, Hammersmith-road.
Fouterton, A. G. Russell, Norland-square.
Gayford, Charles, Brecknock-road.
Hornby, Thomas Edmund, Mile-end.
Jackson, Percy Vaughan, Ballina, county Mayo.
Muspratt, Charles Drummond, Clapham.
Palmer, Sydney Joseph, Seaton, Devon.
Pearse, Frank, L.R.C.P. Ed., Exeter.
Randell, R. M. Henry, Sydenham.
Spreat, Frank Arthur, Belsize-square.
Washbourn, William, Blackfriars, Gloucester.

[In the list published last week the name Frederick Bryden, M.B. Melbourne, should have been Frederick Bryan, M.B. Melbourne, Australia.]

COLLEGIATE FINANCES.—From the last annual report, just published, of the receipts and expenditure of the College in the year ending Midsummer-day last, it appears that the former amounted to £20,024 5*s.*, derived principally from fees paid on examinations for the Fellowship and Membership of the College, which produced £16,917 7*s.*; fees paid on admission to Council, Court of Examiners, and to Fellowship, £94 10*s.*; dividends on stock and rents from chambers adjoining the College, £2713 17*s.* 3*d.* The disbursements amounted to £20,046 7*s.* 4*d.*, the largest item being in fees paid to the Council and members of the Court and Board of Examiners—viz., £7674 4*s.* The next largest item was for salaries and wages for the officers and servants in the three departments, office, museum, and library—viz., £3784 14*s.*; taxes, rates, diploma stamps, and insurance, £1469 9*s.* 3*d.*; miscellaneous items, £441 11*s.* 6*d.* In the extraordinary expenditure, £700 appears in honoraria to Messrs. Trimmer, Goodhart, and Doran; leaving a balance at the bankers of £2065 3*s.* 5*d.*

THE HUNTERIAN MUSEUM.—In his interesting annual report on the state of the Museum, Professor Flower states that an unusually large number of specimens have been added to the Pathological section. The series of Diseases of the Teeth, previously small and incomplete, have received an addition of 130 specimens, collected from various sources, many of them presented by Mr. Alfred Coleman, F.R.C.S. Among other notable contributions was a very valuable specimen of actinomycosis, affecting the lower jaw of a heifer, and two examples of the same disease of the tongues of oxen, which were presented by Mr. Alfred Lingard. Upon the conclusion of his course of lectures on the Surgery of the Urinary Organs, Sir Henry Thompson presented to the Museum the cabinet containing his collection of calculi, the result of 812 operations by lithotrity and lithotomy, which has been already noticed. Among valuable additions to the series of Human Osteology, Prof. Flower specially mentions a series of skulls and skeletons of natives of Sierra del Fuego, presented by the Rev. Thomas Bridges, of the South American Missionary Society.

UNIVERSITY OF EDINBURGH.—The following candidates have passed the final examinations. Those marked thus * have passed with distinction:—
A. M. Adams, M. S. P. Aganoor, N. E. Aldridge, J. H. L. Allott, M. Altounian, S. Arnold, E. H. Bannister, J. Barrie, G. B. Batten, J. B. Bawden, T. W. Bell, D. Berry, *A. Bissett, J. A. Blair, F. M. Blumer, B.A., T. Bonar, F. F. Bond, J. E. Bottomley, *P. Bowes, H. Bramwell, H. R. Bramwell, R. A. Brewis, *D. M. Brown, *R. M'D. Brown, T. A. Brown, S. B. Burns, J. M. Cadell, E. K. Campbell, *E. Carmichael, W. R. Carter, L. M. F. Christian, T. G. Churcher, R. L. Clark, D. Cloete, J. G. Cossins, R. S. Coulthard, A. H. Croucher, W. L. Cullen, A. S. Cumming, T. B. Darling, H. H. Davies, T. L. K. Davies, J. D. Davies, T. W. Dewar, *D. G. Donaldson, D. R. Dow, M.A., T. Easton, M.A., E. Eckersley, T. Edwards, H. S. Fairbank, J. E. A. Ferguson, J. H. Ferguson, T. Ferrier, G. Fisher, W. S. Flett, A. Fraser, T. Fraser, M.A., T. A. W. Fulton, C. H. Gage-Brown, W. G. Gallelly, D. J. Galloway, D. F. Gardiner, L. R. Gray, F. G. Greenbury, E. Greenough, B. Griffiths, C. D. G. Hailes, *W. W. Hall, J. R. Henderson, T. M. Hodgson, W. A. Holmes, T. A. F. Hood, *R. Howden, R. S. Hubbersty, Dirk de Vos Hugo, J. Hume, B. E. Iastrzebski, J. O. Jones, G. H. Kenyon, M. A. Ker, D. O. Kerr, J. Kerr, W. V. M. Koch, D. Laing, W. Laing, C. A. Lane, *W. S. Lang, A. E. G. Langschmidt, C. N. Lee, A. W. M. Leicester, L. H. Le Merle, C. L. Lempriere, W. G. Little, M.A., G. S. F. Loubser, W. W. R. Love, C. J. Macalister, B. F. P. M'Donald, A. G. Macdonald, W. C. M'Ewan, M.A., J. M'Gibbon, A. MacGregor, D. MacGregor, M.A., H. J. Mackay, W. B. Mackay, J. C. Mackenzie, *J. H. Mackenzie, M.A., M. MacLaren, B.A., A. Maclennan, J. M'Leod, B.A., J. M'Myn, A. Macqueen, G. D. Malan, L. G. Mallam, A. Matheson, A. Menzies, W. J. van der Merwe, G. Michael, R. Mitchell, M.A., D. Morgan, A. E. Morison, D. Mowat, W. J. Munro, B.A., F. Morgan, B.A., B. H. Nicholson, J. Noble, F. B. O'Flaherty, *A. G. Paterson, M.A., C. E. Paterson, *F. A. Pockley, J. M. S. Preston, E. F. T. Price, W. T. Prout, A. C. Purchas, T. R. Rait, *F. M. Reynolds, T. Rhodes, W. Richards, J. Rigg, A. L. F. Robertson, J. Robertson, J. C. Robertson, R. M. Robertson, A. J. T. Roux, J. Rutter, Y. S. Sanitwongse, T. S. Shaw, *F. H. Simmons, G. R. Smuts, W. Sneddon, J. S. Stephen, H. F. D. Stephens, S. H. A. Stephenson, *J. Stevens, M.A., C. H. Stewart, B.Sc., J. W. Stirling, J. Stuart, G. H. H. Symonds, J. C. Taylor, G. Thomson, R. S. Thornton, C. G. Thorp, J. Tod, Cecil G. Traill, George A. Tullis, J. W. O. Underhill, E. Walker, N. H. Walker, N. P. Walker, D. Wallace, T. A. Watson, S. F. Wernich, A. Westlake, R. H. A. Whitelocke, W. J. Will, *C. Wilson, A. B. Winder, J. E. Wolfhagen, J. C. Young, B.Sc.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At examinations held on July 14th and following days, the undermentioned were admitted Licentiates of the College:—
Arthur J. Barlow, Henry T. Baylor, George Brown, William J. Connor, John J. Costello, Samuel A. Crotty, Robert Cross, George Davidson, Henry G. Day, Ulysses C. H. De Burgh, William Dillon, Joseph E. Dormer, Andrew A. Doyle, Alexander T. Drake, Fitzwilliam Evans, Charles J. Falkner, Martin Fennelly, Richard H. Fetherston, Robert Gloster, William E. Grandy, John Hobbs, Samuel Horneck, William G. F. Johnston, Cornelius J. Kelly, Patrick J. Kiernan, Alexander D. La Touche, Edmund D. La Touche, Richard R. Leeper, Kenneth Mackay, Michael J. Magan, Barcroft Manly, Robert F. McArdle, Arthur McCutcheon, John J. McDonnell, John McFadden Arthur McGaman, John McGrane, Henry McLaughlin, William McManus, Hugh Morrison, Timothy Mulcahy, Edwin G. Newell, John J. Norton, James Oakly, Alfred Ross, James L. Rowlette, Francis H. Sinclair, Alfred J. Smith, James H. Stewart, Augustus Tabuteau, Hamilton J. Thornbury, Launcelot A. Whitcroft.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on July 24th:—
Field, Adolphus Theodore, Sunnyside, Shepherd's-bush.
Hall, William Hall, Cumberland-park.
Lewis, James King, Old Woolwich-road.
Pollard, George Frederick, Earl's-court-road, Kensington.
Silverlock, Richard Greenhill, Northwold, Norfolk.
Vallance, Ernest, The Deanery, Stratford.
Warwick, Francis Jas., Vaughan-road, Loughborough.

THE Chelsea demonstration in aid of the Victoria Hospital for Children realised £237 6*s.*, as compared with £105 collected last year.

AN official inspection of the Thames from Westminster to Erith, on behalf of the Metropolitan Board of Works, has been made by Dr. Dupré and other experts.

A NEW Eye Hospital was opened at Birmingham on the 24th ult. The cost of the building and appliances is estimated at £20,000.

AT the examination in Diseases of Women held at the Hospital for Women in July, the first prize was awarded to Mr. J. R. Jones, of University College Hospital, and the second prize to Mr. Barber, of St. Bartholomew's Hospital.

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THE Congress of German Naturalists and Physicians will be held at Magdeburg, Sept. 18th to 23rd.

A NEW Masonic Lodge, which was consecrated at Waltham-cross on the 23rd ult., has been named the "Wilson Iles Lodge, No. 2054, in memory of the late Bro. F. H. Wilson Iles, M.D., of Watford.

BRITON LIFE ASSOCIATION.—The annual report of this Association was presented to the general meeting of shareholders and policy-holders on Thursday, the 17th ult. The premium on new business (£5253 19*s.* 3*d.*) is in excess of the previous year. A dividend of 5 per cent. was declared, and the funds increased to £54,396 15*s.* 7*d.* We would again call attention to the advantages offered by this Company to insurers who are total abstainers from alcohol.

THE FISKE FUND PRIZE.—At a meeting of the Rhode Island Medical Society on June 19th, it was stated that a prize of $300 for the best essay on "The Origin and Progress of the Malarial Fever now Prevalent in New England" had been awarded to Dr. C. V. Chapin, the Superintendent of Health of the City of Providence. The following subjects were proposed for the year 1885: "Original Investigations in Household Hygiene," "The Present State of the Germ Theory of Disease," "Physiological and Pathological Effects of the Use of Tobacco," "Migraine, its Nature and Treatment." The prize for the best essay to be $200.

THE SALOP AND NORTH WALES EYE, EAR, AND THROAT HOSPITAL. — The sixty-fourth annual general meeting of the subscribers to this institution was held on the 23rd ult. During the past year 153 in-patients have been received and 1139 out-patients attended, making a total of 1392. Only fourteen beds have hitherto been provided, but the committee hope during the present year to supply the full complement—viz., twenty. The total receipts during the year were £1814 6*s.* 8*d.*, and the expenditure £1787 12*s.* 9*d.*, leaving a balance of £26 13*s.* 11*d.* in favour of the hospital.

VACCINATION OFFICERS' ASSOCIATION. — The monthly meeting of this Association was held on the 19th ult., at the Charing-cross Hospital Medical School. It was resolved that each member of the Association be requested to furnish the secretary with the following information:—1. To show how promptly on the action of the vaccination officer the protection of vaccination can be secured to those in infected houses. 2. Any instances in which such prompt action has illustrated its advantages. The thanks of the Association were also expressed to the National Health Society for the pamphlet issued by them calling the attention of the public to "Facts concerning Vaccination."

ST. JOHN AMBULANCE ASSOCIATION.—A conference of the London and provincial medical staff was held on Friday, the 25th ult., by permission of the council, in the theatre of the Royal United Service Institution, for the purpose of discussing points connected with the instruction and examination of classes. Dr. Sieveking presided, being supported by Sir E. Lechmere, Mr. J. Furley, Mr. V. B. Kennett, Captain R. Dallas, Captain H. C. Perrott, and other gentlemen. The chairman said the movement which they had met to further had scarcely any parallel in modern times. The assistance which had been rendered by the medical profession had been most marked; but they would never have done what they had if it had not been for the great enthusiasm and hard work in the first instance of Colonel Duncan and the perseverance and talent of Mr. Furley. Dr. H. Swete of Worcester then brought forward some suggestions for securing uniformity in the Association's examinations, and for improving the stretcher-drill. Surgeon-Major Evatt proposed that the nursing certificate should be thrown open for competition by the male classes. Dr. A. S. Eccles suggested, and Surgeon-Major Hutton seconded, measures for more efficient instruction in the treatment of the apparently drowned. Colonel Paris, chairman of the Liverpool Centre, then exhibited some interesting and useful models for illustrating the lectures. In the evening a dinner was held at the Holborn Restaurant, Sir E. Lechmere presiding. At a meeting of the Association on the 29th ult., a lecture was delivered by Baron Dr. Mundy on the urgent necessity for making Surgical Provision for Railway Accidents.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

DAVIES, JOHN, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the First District of the Bath Union.

DIXON, J. R. L., M.R.C.S., L.R.C.P.Ed., has been appointed Junior House-Surgeon to the Royal Southern Hospital, Liverpool, vice A. H. Gordon, M.R.C.S., promoted.

FOX, ROBERT FORTESCUE, M.R.C.S., L.S.A.Lond., has been appointed Resident Physician to the Strathpeffer Spa.

GORDON, A. H., M.R.C.S., L.R.C.P.Ed., has been appointed Senior House-Surgeon to the Royal Southern Hospital, Liverpool, vice W. H. I. Sellers, M.B., C.M., resigned.

HENRY, ROBERT, M.D., M.Ch.Q.U.I., has been appointed Medical Officer of Health for the Comber Dispensary District.

HUDSON, CHARLES LEOPOLD, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the Middlesex Hospital.

JOSEPH, J. RAPHAEL, L.F.P.S.Glas., has been appointed Resident Surgeon at the Hospital for Pacific Islanders in the Maryborough District, Queensland.

KNIGHT, F., M.B.Lond., M.R.C.S., has been appointed Second House-Surgeon to the Royal Southern Hospital, Liverpool, vice F. J. Allen, M.A., M.R.C.S., L.R.C.P., resigned.

LEDIARD, H. AMBROSE, M.D.Ed., F.R.C.S.Eng., has been appointed Surgeon to Her Majesty's Prison, Carlisle, vice J. A. Macdougall, resigned.

MACINDOE, ALEXANDER, M.B., C.M.Glas., has been appointed Medical Officer for the Ashley District of the Drayton Union.

MOFFITT, J. ERNEST JAMES, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Acting Resident Medical Officer to the Ballarat Hospital, Victoria.

PHILLIPS, EDWARD ENGLAND, L.R.C.P., M.R.C.S., & L.S.A.Lond., has been reappointed Medical Officer of Health for the Southend Urban Sanitary District.

PIGGOT, ALLEN, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Fifth District of the Bromley Union, vice Booth, resigned.

SHEILD, MARMADUKE, M.B., B.S., F.R.C.S., has been appointed Curator of the Museum of St. George's Hospital.

Births, Marriages, and Deaths.

BIRTHS.

BALLANCE. — On the 24th ult., at 56, Harley-street, Cavendish-square, W., the wife of Charles A. Ballance, M.S.Lond., F.R.C.S.Eng., of a daughter.

LEADAM.—On the 23rd ult., at Gloucester-terrace, Hyde-park-gardens, the wife of W. Ward Leadam, M.D., of a daughter.

RYAN.—On the 24th ult., at Emly, Tipperary, the wife of Charles E. Ryan, M.D., of a daughter.

MARRIAGES.

BROWNE—FLEMING.—On the 30th ult., at Glenorchy House, Edinburgh, by the Rev. Lewis Davidson, M.A., of Mayfield, F.C., assisted by the Rev. Dr. Reid, of Lothian-road U.P. Church, W. J. Browne, L.R.C.P.Ed., L.R.C.S.Ed., of 33, Warrender-park-road, Edinburgh, to Gracie Strang, elder daughter of the late Patrick Fleming, and granddaughter of the late Sir Robert Boag, J.P., of Belfast.

BROWNE—WILSON.—On the 23rd ult., at Christ Church, Highbury, Robert Browne, M.D., eldest son of the late Hugh Browne, Esq., J.P., of Rathgar, Dublin, to Frances, second daughter of the late John Wilson, Esq., of Compton-terrace, Highbury.

CUFF—SAWYER.—On the 24th ult., at St. Mary's, Lewisham, Robert Cuff, M.B., of Scarborough, to Marian, eldest daughter of John Sawyer, of Craythorne House, Lewisham-hill.

HARRIS—CURTIS.—On the 24th ult., at the Congregational Church, Wellingborough, U.A. Carpenter Harris, M.R.C.S., L.D.S.Eng., of Mount-view-road, Hornsey, London, eldest son of Underwood P. Harris, of Bethune-road, Amhurst-park, to Nellie, second daughter of Thomas S. Curtis, of Rose-hill, Wellingborough.

NICHOLSON — BEDWELL. — On the 29th ult., at All Saints' Church, Hull, Frank Nicholson, M.D.Lond., of 29, Albion-street, Hull, to Grace, second daughter of F. A. Bedwell, Esq., Judge of County Courts.

SCOTT—TRASK.—On the 29th ult., at St. Mary's Church, Bathwick, by the Rev. J. J. Scott (father of the bridegroom), assisted by the Rev. J. C. Clutterbuck, D.D., and the Rev. A. Cassan, Richard J. H. Scott, Esq., M.R.C.S.Eng., to Alice Marian, eldest daughter of James Trask, Esq., of Bayfield House, Bathwick-hill, Bath.

STATHERS — ABBOTTS. — On the 29th ult., at Holy Trinity Church, Burton-on-Trent, by the Rev. W. F. Drury, George Nicholson Stathers, M.R.C.S., of Stokenchurch, Oxon., to Maud, second daughter of R. W. Abbotts, Esq., of Burton-on-Trent.

DEATHS.

BELL. — On the 28th ult., at Manor-place, Edinburgh, Alexander Montgomerie Bell, M.D., F.R.C.S.E.

RIORDAN.—On the 10th ult., at Marksbury, Somerset, Thomas Travers Riordan, M.D., formerly of Castleconnell, co. Limerick, aged 80.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 31st, 1884.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia. in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
July 25	29·91	N.W.	58	54	106	68	50	·12	Cloudy
,, 26	30·13	W.	56	51	85	64	46	..	Cloudy
,, 27	29·84	S.W.	60	53	105	69	53	·54	Raining
,, 28	30·12	N.	53	55	106	71	54	·15	Cloudy
,, 29	30·06	W.	62	61	89	69	56	·18	Overcast
,, 30	30·19	N.W.	63	65	107	75	61	..	Overcast
,, 31	30·20	W.	66	62	111	79	59	..	Hazy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

WESTERN AS A HEALTH RESORT.

WE are glad to learn from a correspondent that the drains have been thoroughly overhauled and put in order, as promised; and that the system of drainage and the watercloseting are better, in his own experience of the past three winters, than at any place on the Riviera or Engadine.

Mr. John Fletcher Little.—We do not know of any decided cases, but we are clearly of opinion that "any aged person who cannot write" can make a sound will. All that is legally necessary is that the testator shall at the time understand the nature of the act, and be able to sign the deed—it may be with the physical aid of another person. As, however, such a will might not improbably be disputed, it would be well for it to be accompanied by a certificate signed by two competent independent medical witnesses. By "competent" we mean, well versed in the forms of interference with the outward expression of thought and other mental operations, and the bearing these have upon the rationality of a particular process—*e.g.*, making a will.

Quimdarly dent ethers.—We may probably in a future number give some general information on the point.

VACCINATION WITH OLD LYMPH.

To the Editor of THE LANCET.

SIR,—The success attending Dr. N. Gosset-Brown in his use of fourteen-year-old lymph, as communicated by him in your issue of July 19th, cannot fail to be interesting; and I feel sure that your readers will be glad to receive further citations as to success or non-success following the use of old lymph, with a view of really ascertaining as to what length of time vaccine lymph may be supposed to retain its virtues and properties, as there is very little (if any) authentic information given on the subject.

A short time ago I had the opportunity of testing the efficacy of some lymph collected so far back as February, 1864, by the late Mr. Robert Ceely of Aylesbury. The contents of six hermetically sealed tubes were tried on six individuals, members of different families, and all of whom have since been successfully revaccinated with recent lymph, with the result that in every case the lymph proved itself perfectly inert. I may say that, contrary to my expectation, the lymph was in a fluid state and had apparently lost much of its specific gravity, for it was (for vaccine lymph) particularly thin and watery. I regret that I did not carefully examine it microscopically, and that I do not possess any more.

I am, Sir, yours obediently,

Regency-street, S.W., July 22nd, 1884. CHARLES F. RIDEAL.

THE FORTHCOMING MEDICAL AND PHARMACEUTICAL EXHIBITION.

WITH respect to the contradictory statements which have appeared in the daily journals regarding the use of the names of the medical staff of University College Hospital in support of a Medical and Pharmaceutical Association, Mr. Berkeley Hill, Dean of the Faculty of Medicine and Chairman of the Medical Committee of University College Hospital, states: 1. That the secretary to the Hospital, Mr. Nixon, greatly exceeded his instructions by stating that he (Mr. Hill) had agreed to the use of the names of the medical staff of the hospital when he wrote, on June 19th, to Mr. Southwick Rogers the letter which that gentleman has published with his own of July 23th in the daily newspapers. 2. That when the medical committee of the hospital met on July 9th, the application for the use of the names of the medical staff was considered, and positively refused by that body. Reference to the hospital letter-book shows that on July 11th Mr. Nixon wrote to Mr. Rogers two letters enclosed in one cover, one informing him that the medical staff declined to give the use of their names, the other concerning some other matter. On July 12th Mr. Humphreys, through his clerk, acknowledged the receipt of Mr. Nixon's letter of the 11th, and said it had been forwarded to Mr. Southwick Rogers. 3. That the circular containing the names of the medical staff, in spite of this prohibition, came first under his notice on July 26th, when he wrote to the daily newspapers a warning that the names of his colleagues were being used without their consent. He wrote at the same time to Mr. Southwick Rogers, requesting that he would at once withdraw the circular from circulation, and informing him of what had been done with regard to the public newspapers.

A. H.—Absolute cleanliness and avoidance of perturbation as far as possible are the only general precautions that can be indicated. Contraction of disease by nurses fitted to their work is very unusual.

Major Terry is thanked for his communication.

INFANTILE DISEASE AND MORTALITY.

To the Editor of THE LANCET.

SIR,—During my short residence here I have been struck by the number of patients brought up for treatment suffering from the effects of improper feeding, and by the number of cases which inevitably succumb, notwithstanding the advice and medicine given, in consequence of prolonged malnutrition. I refer to two classes of cases: first, those patients, young babies under nine months, who are fed with all kinds of patent farinaceous foods, biscuits, arrowroot, bread, and the like; and, secondly, children varying from eighteen months to two and three years, who are fed with very little else besides the impoverished milk from their mothers' breasts. It has occurred to me that possibly some good might be effected were every institution of this kind to hand all the out-patient papers or cards with the instructions that "no child should under any circumstances be fed with anything but milk from the breast or cow's milk and water until nine months old," and that "continued suckling after this time is bad both for the baby and its mother." Some such instructions would, at all events, embrace the rough truth, and if followed out would prevent much of the deplorable sickness we see every day, and the loss of life which is of such common occurrence.

I am, Sir, yours truly,

HARDING H. TOMKINS, M.R.C.S.,
Assistant House-Surgeon, Infirmary for Children, Liverpool.

July 28th, 1884.

Veritas.—We think that an assistant should consult with his principal both as regards any serious case and the propriety of giving it up.

Enquirens shall be answered next week.

PYRETHRUM ROSEUM AS A DISINFECTANT.

PROFESSOR C. V. RILEY, the well-known American entomologist, has presented to the Committee of the International Forestry Exhibition in Edinburgh a series of reports on the best mode of preventing the damage done by insects to trees. He is strongly of opinion that for the destruction of the micro-germs to which so much epidemic disease has recently been traced effective use might be made of the pyrethrum roseum of Asia, which, he says, has lately been imported into America, and is cultivated in large quantities for the sake of its flowers, which contain a volatile oil of great value as a field insecticide. As to kerosene as a disinfectant, he has found the subjoined formula particularly efficacious:—Kerosene, two gallons; common soap, half a pound; water, one gallon. The mixture of soap and water is added boiling hot to the kerosene, and the whole is then churned with a force-pump for five or ten minutes, forming a cream, which thickens on cooling, and adheres without oiliness to the surface of the glass. From this formula three gallons of emulsion are obtained, which, with water, may be made into three gallons of wash, the cost being about three farthings a gallon. In applying it a force-pump and hose with a nozzle (newly invented by Professor Riley) are used, the new nozzle being capable of producing the finest atomised spray.

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HISTORIC DROUGHTS.

AN Italian *savant* passes in review the hot years of history, beginning with 68 A.D., in which the water-supply of France, Germany, and Italy was completely dried up. In the year 897 the heat was so great on the Continent that vast numbers of peasants were struck down with *coup de soleil* in the fields; in the year 993 vegetation was burnt up by the sun as if by fire; in A.D. 1000 the wells and watercourses were all dried up, and the masses of fish heaped up on the banks of rivers and lakes produced a pestilence by their putrefaction. In 1132 the earth was so scorched with the intense solar heat that great fissures were made in it for miles, and seven years afterwards the same phenomenon was witnessed, especially in Italy. The years 1260, 1277, 1303, and 1304 were all signalised by protracted drought, insomuch that the largest rivers in Europe, the Rhine, the Seine, the Po, the Tiber, shrunk to the tiniest streamlets. In 1615 and 1625 a similarly excessive heat prevailed all over Europe, and in 1705 the temperature rose so high as sometimes to resemble that of a glass manufactory. Butcher's meat was cooked by the sun, and from mid-day till 4 P.M. no one ventured out of doors. For six months in 1718 not a drop of rainwater fell, and in 1753 the thermometer averaged between 88° and 40° C. Bologna was visited by excessive heat in 1779, so that many died of asphyxia, and to escape a similar fate the inhabitants took refuge in pits and caves underground. The month of July, 1793, was also one of intolerable heat. All the vegetation and the harvest withered up. The furniture in houses cracked and split, and meat became putrid almost under the butcher's hands. Hurricanes and earthquakes accompanied the intense droughts of 1811 and 1822. In some countries the earth delivered itself, under the contained heat, of hosts of field mice, which ravaged the most fertile plains. Of these mice no fewer than 2,000,000 were destroyed in fifteen days in one country alone. In 1832 the fearfully hot weather in Paris was coincident with the cholera epidemic in which 20,000 persons died.

Mr. Alex. Faulkner.—The point mentioned is hardly of sufficient importance for publication.

Mr. Thomas Jones.—We do not recommend practitioners.

SANITARY STATE OF HYERES.

To the Editor of THE LANCET.

SIR,—My attention has been directed to a communication from a correspondent in THE LANCET of July 19th, entitled "Cholera and Sanitation on the Riviera." In justice to Hyères and its enterprising and liberal-minded municipal council, will you allow me to suggest that, however true the striking picture drawn by your correspondent may have been years ago, it is no longer so. Old streets have been widened and purified, new streets have been made, and all the water channels have been cleaned out, properly levelled, and are regularly flushed. There are no sewers as understood in England. These channels exist only for surface water; everything else is cast into the cesspools, except the kitchen refuse, which is placed in the street during the night, and carted off before daybreak. The cesspools are carefully superintended and regularly emptied; in the villas and hotels occupied by English visitors they are efficiently ventilated, and the waterclosets trapped. The municipality are making every effort to ensure that Hyères shall be a health resort in more than name; that the benefits conferred by its mild, stimulating climate shall not be marred by preventable evils; and from my own experience—an experience extending over seven years—I can vouch for the success of their endeavours.

I am, Sir, yours truly,

W. P. BIDEN, L.R.C.P.Ed.

St. Mary's-road, Peckham, S.E., July 28th, 1884.

TREATMENT OF LUPUS VULGARIS BY THE THERMO-CAUTERY.

A paper of an article in THE LANCET of the 26th ult. on the "Complete Destruction of Lupus Vulgaris," with illustrations of an instrument, Mr. [illegible] reports a case which recently came under his notice in the [illegible] and Galloway Royal Infirmary, in which the disease lupus [illegible] extended over the greater part of the left cheek and side of [illegible] involving the ear, half of which was eaten away; it also [illegible] down the front of the neck, over and under the chin, and [illegible] cheek nearly to the right ear. To scarify or scrape so [illegible] was thought rather a serious undertaking; but something [illegible] be done. On the morning of the operation the use of a [illegible] cautery was decided upon. When the patient, a lad nineteen years of age, was fully under chloroform the gelatinous covering of [illegible] was rubbed off with a hard sponge and pledgets of cotton-wool, and the thermo-cautery applied to the denuded and bleeding surface. This was done [illegible] as to avoid excessive [illegible]. The sore was dressed with weak boracic ointment, and a [illegible] injection of morphia given for the pain. This treatment turned out most successful. The raw surface showed healthy granulations from the first, and, except an occasional touch of the cautery to some sluggish spots, the case required no further treatment, the skin healing nicely, to the satisfaction of all concerned.

A MEDICAL PATRON IN THE ISLE OF MAN.

A MOST astonishing account reaches us of the action of a distinguished official in the Isle of Man. Not content with appointing a complete stranger, a young medical man, to an official professional position over the heads of three or four senior medical residents, he has given his *protégé* a letter of introduction to the manager of the principal hotel. The fortunate young man seems only too much of a consenting party to this strange and unusual action of his patron. We suppress names at present, as really the account seems almost incredible, either as regards a high official or a recently qualified, and doubtless modest and diffident, member of the profession.

Medical Student.—We do not doubt that anyone who is familiar with the ophthalmoscope would be able to recognise coarse disease of the fundus of the eye—such, for example, as the presence of blood clots, detachment of the retina, and even optic neuritis, if well marked; but we should expect that in a case which was about to become the subject of medico-legal inquiry the ophthalmoscopic examination would be conducted with all the precautions requisite to avoid error, amongst which a darkened chamber and a good steady light are conspicuous.

Dr. Theodore Euart.—The paper is marked for insertion.

SMALL-POX *ALIAS* CHICKEN-POX, &c., IN BASUTOLAND.

To the Editor of THE LANCET.

SIR,—A leading article in your issue of May 10th on the unfortunate discrepancy of opinion amongst the members of our profession at Kimberley and elsewhere as to the real nature of the epidemic of eruptive fever now raging amongst the native population in some parts of South Africa leads me to believe that an account of this disease as seen by me in Basutoland may be interesting.

The disease has in many cases all the premonitory symptoms of ordinary small-pox, the head symptoms being the first complained of, and almost always present, though the lumbar pains and vomiting are absent. The eruption, as regards incubation, development, and decay, corresponds very nearly in essential particulars with that seen in small-pox. The vesicles, however, are not of one uniform shape; some are oval, some are round and umbilicated. The oval ones collapse on being pricked, the round ones do not. Those vesicles appearing in the mucous membranes of the mouth are always of the round umbilicated form, and should, in my opinion, decide the true nature of the disease. When the principal proportion of the vesicles are small oval-like blisters, and collapse on being pricked, one might be led to say that the case resembled more closely chicken-pox than small-pox; possibly others may have been misled on similar grounds. In the discrete the vesicles frequently commence to die or dry up as they appear, but generally the case proceeds from its commencement to its termination in the usual manner. The confluent generally die from the tenth to the fifteenth day of the eruption. Delirium is not a marked symptom, and these cases have not given very much trouble. There is not much pitting or much smell from the confluent cases. The form most frequently met with is the confluent. The persons attacked are of all ages; the old and young are the first victims, the old, as a rule, dying first. Many die in the eruption begins, others at the suppurating stage, and but few between these stages. Where isolation has been carried out and quarantine kept the disease has not spread. No European has been attacked yet, and only three coloured people, one of whom died of confluent small-pox. Most of the coloured population have been vaccinated, and the three cases referred to are the only exceptions, for not one of them was vaccinated.

I am, Sir, yours truly,

Basutoland, June 15th, 1884. S. CARNEGIE REID, M.D.

Mr. E. T. Le Quesne.—By no means.

Mr. Roderick Maclaren.—The suggestion shall receive consideration.

THE HEALTH EXHIBITION.

A CORRESPONDENT suggests the opening of the Health Exhibition on Sundays free of charge, visitors to be invited to contribute to the Hospital Sunday Fund, boxes being placed for that purpose in different parts of the building.

Balbus.—Probably Niemeyer's work would answer the purpose.

Dr. G. Ogilvie.—Yes.

Dr. Barrs (Leeds).—In an early number.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Lyon Playfair, London; Dr. Goodwin Timms, London; Dr. Maclaren, Carlisle; Dr. Byers, Belfast; Dr. Kerr, Dumfries; Dr. Sturges, London; Mr. Jones, Manchester; Mr. J. M. Balfour, Edinburgh; Mr. Wheeler, Ilfracombe; Mr. H. J. Thompson, Sevenoaks; Mr. J. M. Clark, London; Dr. Bristowe, London; Dr. Hassall, Leamington; Mr. E. E. Phillips, Southend; Mr. A. Drysdale, Mentone; Dr. Barrs, Leeds; Mr. G. Browne, Marseilles; Mr. J. Oliver, London; Mr. Batterham, Wolverhampton; Dr. Wise, Malaga; Messrs. Campbell and Co., Paisley; Dr. Dyce Duckworth, London; Dr. Lionel Beale, London;

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Dr. Moir, Glasgow; Mr. Bird, Falmouth; Mr. Woodward, Birmingham; Mr. Craig, Bankhead; Mr. Hewetson, Wisbeach; Mr. Wickham, Gosforth; Dr. Mitchell, Templemore; Messrs. Booth and Fox, Cork; Mr. Lee, Manchester; Mr. Motherwell, Glasgow; Mr. Rice, Surrey; Messrs. Smith and Son, Dublin; Mr. Hodgson, London; Messrs. Condy and Mitchell, London; Mr. Brown; Dr. Tily, Chiswick; Messrs. Brook and Co., Liverpool; Mr. Wilson; Mr. Cooper, Ross; Dr. Clarke, Tunbridge Wells; Messrs. Smith and Co., London; Dr. Butler, Woolwich; Mr. Hawkins, Bushey; Mr. Birdwood, Purfleet; Mr. Forbes, London; Dr. Swann, Batley; Mr. Wharton, London; Deputy Surgeon-General Fowler; Mr. H. A. Smith, Ealing; Mr. F. Little, Ben Rhydding; Brigade Surgeon McDowall, Toulon; Mr. Maxwell, Leith; Dr. Bury, Manchester; Dr. Coupland, London; Mr. Barwell, London; Mr. R. J. Collins, London; Dr. Robertson, Kimberley; Mr. L. Kempe, London; Mr. F. P. Atkinson, Surbiton; Mr. Le Quesne, Tring; Mr. T. Mitchell; Dr. Elder, Nottingham; Dr. Roberts, Manchester; Mr. Woodland, Bournemouth; Mr. Lovell, Cambridge; Messrs. Sampson Low and Co., London; Messrs. Bell and Co., Lancaster; Mr. Trennery, Bristol; Mr. Armstrong, Manchester; Mr. Elliott, London; Messrs. Hoffnung; Mr. T. W. Hughes, Criccieth; Mr. Welford, London; Mr. Dessurne, London; Mr. Kidd, West Hartlepool; Mr. Ensworth, London; Herr W. de Mayer, Utrecht; Mr. T. J. Woodrow, London; Quandary; A M.D. of Twenty Years' Standing; An Associate; Enquirens; M. T., Bexley; Balbus; Physician; A Foreigner in Fashionable Lodgings; L. E. H.; R.; J. Q. P.; W. P., Manchester; N. S.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Main, East Ilsley; Dr. Hilliard, Aylesbury; Dr. Bramwell, Edinburgh; Mr. Dixon, Leeds; Mr. Temple, Kington; Mr. Loveridge, Lynn; Dr. March, Rochdale; Mr. Baron, Manchester; Mr. David, Builth; Mr. Hartin, Worcester; Messrs. Mottershead and Co., Manchester; Dr. Ward, Oxford; Mr. Kershaw, Middleton; Mr. Sharp, Walsall; Messrs. Lindsay and Son, London; Messrs. McGee and Co., Belfast; Messrs. Deighton and Co., Cambridge; Dr. Oliver, Harrogate; Messrs. Beck and Co., London; Messrs. Bentin and Sons, Southport; Mr. James, Pentre; Mr. T. W. Cunningham, Edinburgh; Mr. Browne, Hong Kong; Mr. Nicholson, Hull; Mr. Carter, London; Miss Moorhouse, London; Mr. Sloane, Bradford; Mr. Marrian, Leicester; Mr. Gwynne, Cannock; Mr. Temson, Abergavenny; Mr. Pearson, Sheffield; Mr. Hemmons, Bristol; Mr. Morgan, Cymmer; Mr. Hoyle, Liddersley; Mr. Austel, Carlisle; Mr. James, Manor-park; Mr. Howard, Barnsley; Mr. March, Stafford; Mr. Hill, Leeds; Mr. Barff, Leytonstone; Mr. Salmon, London; Mr. Cornish, Manchester; Messrs. Brook and Co., Liverpool; Mr. Roocroft, Wigan; Mr. Scattergood, Leeds; Mr. Davies, Bath; Mr. Walton, Blackpool; Mr. Stathers; Messrs. Keith and Co., Edinburgh; Dr. Hella, Hampstead; Secretary, Bristol Infirmary; Truth, Camberwell-road; Syntax; Scotia, Notts; J. P., Bradford; X., Aberdeen; A. C.; Z., Birmingham; L. O.; M.D.; Surgeon, Dublin; Galen; Æsculapius; H. L. G., Dorrington; M.B., Huddersfield; Matron, Itchin; C. A. N., York; E. P. T., Duffryn; Medicus, Sheffield; F., Gibraltar; R. A., Bow; Alpha, Liverpool; Scalpel; Medicus, Southwark; N. R. P.; A. B. K.; Lady Superintendent, Cambridge; C. D., Dawlish; Dr. S., Nelson; Medicus, Southport.

Bradford Observer, Eastbourne Courier, Macclesfield Courier, Kimberley Daily Independent, Port Elizabeth Telegraph, Warehousemen and Drapers' Trade Journal, Cape Times, Pioneer, Sheffield and Rotherham Independent, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 4.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, August 5.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, August 6.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

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Clinical Remarks ON GASTROSTOMY; WITH CASES.

By THOMAS JONES, F.R.C.S.,
SURGEON TO THE MANCHESTER ROYAL INFIRMARY.

GASTROSTOMY, formerly so uniformly unsuccessful, promises to become a palliative measure of decided utility. To Sédillot, of Strasburg, belongs the credit of introducing both the operation and the name. In 1849 he performed gastrostomy on a male patient fifty-two years of age, who was the subject of cancerous stricture of the œsophagus. The stomach was opened at once, and the aperture in it fitted with a tube, which embraced an elastic catheter, introduced for the purpose of conveying nourishment. Unfortunately the attempt proved unsuccessful, as also did a repetiton of it during many succeeding years. The record of the cases operated upon between 1849 and 1876 constitutes an unbroken series of failures. The operation was repeated some twenty-five times, and most of the patients died within the first few days; some of them lived periods varying from four to ten days, and one survived forty days. In 1876, Verneuil, of Paris, obtained the first real success. His patient, a healthy lad, seventeen years of age, some months previously had swallowed a solution of caustic potash. This was followed by intense pain in the throat, with exfoliation of the mucous membrane of the stomach. When the acute symptoms subsided the patient experienced great difficulty in swallowing. The dysphagia increased, and attempts at catheterism of the gullet were frequently made, but without success. The stricture was situated about seven inches below the upper end of the gullet, and so low as to preclude the idea of œsophagostomy; it was therefore decided to perform gastrostomy. The portion of stomach exposed was carefully stitched to the lips of the wound in the peritoneum and abdominal wall. The viscus was then laid open and a vulcanite tube introduced. The patient made a good recovery, and almost at once was able to take liquid food through the artificial opening. At the time of operation the weight of the patient was 72 lb., a month later 75 lb., and three months later 92 lb. The lad lived seventeen months.

I have referred somewhat at length to this case because it forms the commencement of an important era, and constitutes the first of a limited number of successful gastrostomies. Since 1876 the operation has been frequently repeated. The most elaborate statistics of the results are those published by Blum.[1] He tabulates 131 gastrostomies, of these eighty-five died before the twentieth day—that is, in consequence of the operation, and so giving a mortality of nearly 65 per cent. Thirty-eight have survived the operation from several months to two years and more. One other point which these statistical tables bring out is worthy of our attention. By eliminating the gastrostomies for cancerous disease of the œsophagus we have left twenty-five examples in which the operation has been performed for fibrous or non-cancerous strictures. Of these only twelve patients died before the twentieth day, showing a mortality of 48 per cent. I think that if the merits of gastrostomy had no other basis than its success in non-cancerous strictures, it ought to claim our respectful consideration, and it is quite possible that if in cancerous cases we resorted to the operation at an earlier period and before the patient's powers had fallen to a low ebb, the successes would be more numerous. What particularly attracted my attention while perusing reports of gastrostomy cases was the rapid sinking soon after the operation. The little remaining strength has been quite unequal to the task of rallying. Even in these cases by an improvement in the mode of operating the chances of a successful issue are very materially increased. In THE LANCET of January 7th, 1882, I published a successful gastrostomy for non-cancerous stricture of the œsophagus. The patient (a female, now aged twenty-two) is still alive, and is able to work in a cotton mill, while she continues to introduce fluid food through the artificial opening. Quite lately, through the kindness of my friend Mr. Waller, late house-surgeon to the Blackburn Infirmary, I have been able to obtain an accurate statement of her condition. He writes to say that he has visited Mary N——, and found her in a very satisfactory condition. The general nutrition is good, and saliva and fluids can be swallowed with ease. The gastric aperture is patent, and is kept so by the patient constantly wearing a small plug, which accurately fits the artificial opening. A short time ago there was some slight eczema around the opening, which has now disappeared. The patient's weight was found to be 101 lb, which is considerably more than when she was last seen at the infirmary. This case must be regarded as one of the most satisfactory gastrostomies. Here was a patient doomed to one of the most distressing deaths—that from inanition—restored to a condition of comparative comfort; and it is quite possible deglutition may continue to improve, and that eventually dilatation of the stricture may be accomplished.

CASE 2.—Ann W——, aged forty-five, was admitted under Dr. Dreschfeld's care on June 21st, 1882. She was found to be suffering from stricture (malignant) of the œsophagus. There was no history of syphilis, and no corrosive fluid had been swallowed. Present disease commenced seven months before admission, with vomiting immediately after taking food. She soon began to lose flesh and to experience shooting pains down the inner side of the left arm. The vomiting was not accompanied by any exertion, but simply consisted of the regurgitation of unaltered food. An œsophageal bougie passed readily a distance of thirteen inches, when its progress was suddenly arrested. While under treatment emaciation steadily advanced, although she was fed by nutrient enemata. On July 3rd the patient was transferred to a surgical ward under my care, with the view of gastrostomy being performed. No difficulty was experienced during the performance of the first part of the operation, which was done on July 4th. The stomach was easily reached by making an incision below the left costal margin, commencing above opposite the anterior extremity of the seventh intercostal space. Care was taken that all oozing had entirely stopped before the peritoneum was incised. The stomach presented at the opening, and its peritoneal and muscular coats were stitched to the margins of the skin incision. The parietal peritoneum was not included. The number of sutures (chromised catgut) employed did not exceed half a dozen, and I feel convinced that the unfortunate termination of the case must to a certain extent be attributed to this cause. For six days afterwards no special symptoms appeared. The temperature continued about the normal, and there was an absence of pain. During this time the patient was exclusively fed on enemata, which consisted of three ounces of beef-tea or milk (peptonised) and four drachms of whisky every two hours. On July 10th the antiseptic dressings were removed, and the wound appeared healthy. The stomach was now opened with a tenotomy knife, a catheter introduced, and a small quantity of warm milk injected. The next day a pint of milk was administered by the artificial aperture, while the nutrient injections were continued. The patient progressed favourably until the 16th, when through an unlucky mishap a pint of cold milk was poured into the stomach. Immediately she became collapsed, and was seized with a rigor; afterwards the temperature rose to 102°, delirium, followed by insensibility, supervened, and the patient died in about fifteen hours. A short abstract of the post-mortem examination is appended. The body was well developed, but greatly emaciated. The margins of the gastrostomy incisions were united to the walls of the stomach, except at one part, where no adhesion had taken place. The tissues in the region of the incision were more or less infiltrated with purulent matter, and the underlying peritoneum acutely inflamed. The peritoneum was coated with a thin layer of inflammatory exudation. This was most marked (excluding the vicinity of the wound) in the region of the ovaries, both of which were intensely congested. The œsophagus was normal down to three inches and a half from the cardiac end, where the lumen was almost obliterated by a dense whitish mass of new formation (cancerous), which involved the whole circumference of the tube, and extended downwards about an inch and a half. To all appearance the fatal termination was immediately due to the accidental administration of milk which had not been properly warmed. The post-mortem, however, revealed an amount of peritonitis which in all probability had been going on insidiously for some days,

[1] Archives Générales de Médecine, November, 1883.

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although the temperature and general symptoms contra-indicated such an assumption. The case clearly shows that great care is absolutely needed in carrying out the after-treatment. The milk or other fluid food poured into the stomach through an artificial opening should have a temperature of not less than 100°.

CASE 3.—Sarah A——, widow, aged fifty, was admitted into the infirmary under Dr. Leech's care in August, 1883. She was an in-patient for a week in March of the present year; was then sent to Cheadle Convalescent Hospital, where she remained six weeks, and appeared to derive considerable benefit. Her symptoms at that time were chiefly those of dyspepsia, with attacks of vomiting every three or four weeks. The vomited matter consisted of a dark brown fluid, which bore some resemblance to coffee grounds. Pain of an aching character, referable to the region of the stomach, accompanied each act of vomiting. No family predisposition to cancer could be discovered, and inquiry into a history of syphilis only gave negative results. Patient had never swallowed any corrosive fluid. The passage of an œsophageal bougie determined the presence of a stricture which was impassable and situated about fifteen inches and a half from the mouth. On August 16th, 1883, she was transferred to the surgical side of the infirmary. At that time she was very haggard, and had an exhausted anæmic appearance. For some days she had been fed on peptonised beef-tea and milk administered by the rectum. The injections were continued, and her weight increased from 90 lb. to 95 lb. Any fluid food given by the mouth appeared to stop before it reached the stomach, and in a few minutes was regurgitated. On Sept. 20th the first part of the operation of gastrostomy was performed with antiseptic precautions. No difficulty of any kind was met with, and the stomach was easily drawn forwards and sutured to the skin. In order to accurately approximate the peritoneal and cutaneous surfaces the number of sutures employed was about a dozen. After the operation all food by the mouth was stopped, and the patient fed by enemata of beef jelly and milk (an ounce of each) every two hours. The temperature for the most part maintained a normal course, reaching 99° on the 22nd. There was freedom from pain or any symptom of peritonitis. Fortunately the enemata were well retained. On the 26th the dressings were removed for the first time; the parts appeared healthy, and adhesions had taken place between the opposed surfaces. I now proceeded to make an opening into the stomach by means of a tenotomy knife. Through the opening a cannula was passed, and about a third of a pint of milk injected. This caused a stomach-ache, and during the night the patient became collapsed, and complained of pain in the abdomen. The cannula was withdrawn, and all attempts at the introduction of milk postponed until Oct. 4th—i.e., for eight days. Meanwhile the local and general symptoms indicated an attack of circumscribed peritonitis. For a week the temperature continued at or about 100°, and one evening it exceeded 101°. The fever had subsided by Oct. 4th, when a more successful attempt to open the stomach was made. A cannula was again inserted through a puncture produced by the tenotomy knife and six ounces of milk introduced. The cannula was retained *in situ* until the next day, when sixteen ounces of milk were poured into the stomach without causing any pain or inconvenience. The nutrient enemata were discontinued on Oct. 10th, and four pints of milk were administered daily through the artificial opening. About a month after the date of the first operation she was weighed, and found to be 87 lb., which is 9 lb. less than her weight immediately before operation. Six weeks later the weight was again taken and an increase of 13 lb. recorded. Each time the patient has been seen since her discharge a considerable increase in the weight has been noted. The patient is now in the enjoyment of very good health. The artificial opening occasions no inconvenience, nor does the surrounding integument bear any evidence of regurgitation. She is quite satisfied with the fluid food, and its introduction causes no sensation, except that of heat or cold. The condition of the stricture remains practically the same, and any food which is swallowed is instantly rejected.

CASE 4.—Ann B——, aged thirty-nine years, admitted under Dr. Leech's care, on Oct. 12th, 1883. She is emaciated to an extraordinary degree, and, although of ordinary stature, she only weighs four and a half stones. The history of dysphagia extended back a year and ten months, and has been accompanied by symptoms of dyspepsia. At first the sickness recurred at intervals of a fortnight, but lately it has taken place immediately after each meal. She says she feels the milk pass down a certain distance, where it remains a few minutes and is then regurgitated. The patient has never swallowed any corrosive fluid, and no history of syphilis or cancer can be elicited. An œsophageal bougie can be easily passed a distance of twelve inches from the mouth. Its further progress is then suddenly and completely arrested. Three days after admission she was transferred to the surgical ward. For some time an attempt, partially successful, to improve her condition was made. By the aid of nutrient enemata her weight was increased by four pounds. On Nov. 3rd the first part of the operation was performed. No difficulty was experienced, the stomach being easily reached and brought forward. During the following week the patient was in an exceedingly low condition, and fears were entertained that it would be quite impossible to preserve life until the stomach opening could safely be made. However, by the careful administration of enemata and the free use of stimulants I succeeded in carrying her through a very anxious period. The operation was completed on Nov. 10th, and ten ounces of milk were at once introduced through the newly made opening without producing any pain or uneasiness. In a few days the quantity of milk administered by the artificial aperture was increased to five points, so the nutrient injections were discontinued. For some time she was much troubled by the regurgitation of a dark, grumous, exceedingly offensive fluid, which was brought up whenever she had a fit of coughing. No doubt it came from the œsophagus, which, in all probability, was dilated above the stricture. Its gastric origin was excluded by the non-appearance of the milk in the regurgitated fluid when the stomach was opened. The quantity of fluid gradually diminished, and finally ceased. Very soon she began to improve in appearance and to put on flesh, and we were able to register an increase of 8 lb. in her weight. Since her return home she has been heard of from time to time. At first there was a steady and continuous improvement, and she added considerably to her weight. Unfortunately, however, the amendment has been arrested by an attack of pneumonia, from which she is slowly convalescing.

CASES 5 and 6 terminated fatally about thirty hours after operation. Both were males. One patient, seventy years of age, had suffered dysphagia for thirteen months. From the distance the bougie traversed it was judged that there existed a stricture at the lower extremity of the œsophagus. No difficulty attended the operation. The patient rallied well, and remained free from pain for more than twenty-four hours, when the symptoms suddenly declared the onset of peritonitis. The temperature rapidly rose, and death took place in a few hours. In the other patient, a man forty-seven years of age, the sequence of events was practically the same. Death followed the operation after a similar interval, and was preceded by symptoms of a like nature. As no post-mortem examination was made in either case, the exact state of things must remain a matter of conjecture.

It should be noted that the method of operating in all the foregoing cases was that introduced by Mr. Howse. It constitutes an undoubted improvement over the plan formerly in vogue. By delaying the second stage of the operation for some days we obtain adhesions between the peritoneal covering of the stomach and the margins of the skin incision, so that when the stomach opening is made extravasation of the gastric contents into the peritoneal cavity is effectually prevented. French surgeons seek the same end by a double row of sutures, the first row between the parietal peritoneum and the serous covering of the stomach, and the second between the skin and the gastric opening. Mr. Howse's plan is preferable, and for several reasons. It not only removes all chances of extravasation into the peritoneal cavity, but it permits the first and most important part of the operation to be conducted with antiseptic precautions. Everyone who has practised gastrostomy will have been struck with the simplicity of the operation. As a rule, the stomach is found without any trouble being experienced. The late Mr. Maunder, however, encountered a serious difficulty which caused him to open the transeverse colon instead of the stomach. To avoid a similar accident Schönborn has suggested that a small india-rubber bag should be fixed to the end of an œsophageal tube. As soon as the latter reaches the stomach the bag is distended. This brings the anterior wall of the stomach into the wound and the operation is clearly rendered easier. Of course this suggestion presupposes the permeability of the

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stricture, which is rarely the case, and when present would perhaps contra-indicate an operation. An attempt has been made to institute a comparison between œsophagostomy and gastrostomy. It would appear that they are applicable to different cases. Œsophagostomy may be appropriately employed in those cases where the obstruction is seated in the upper part of the gullet. Experience, however, teaches that these constitute the smallest class. It has been found that in nearly two-thirds of the cases of œsophageal cancer the disease is so situated as to render œsophagostomy inadmissible.

Some discussion has taken place in regard to the position which the gastric aperture should occupy. Langer,[3] arguing from physiological data, concludes that the fistula should be established in the cardiac portion, and not, as is frequently done, in the pyloric part of the organ. No doubt surgeons have made the opening in that portion of the viscus which presents, and I think it will be found that this is generally nearer the pyloric than cardiac extremity.

THE UNIVERSALITY OF CHOLERA.

BY DEPUTY SURG.-GEN. W. T. MOORE, C.I.E.

CHOLERA may be defined as a disease always present and frequently becoming epidemic, generally characterised by purging and vomiting, usually of a material resembling rice-water, commonly accompanied by cramps, and frequently resulting in suppression of urine and collapse. But the term cholera implies a principle which is repugnant to the disease; the term cholera signifies a flow of bile, but the want of bile is usually one of the most prominent peculiarities of the complaint. It is impossible, therefore, to use the term cholera without pointing out the absurdity of an expression which literally implies, not what it ordinarily is, but what it ordinarily is not. And this should be borne in mind, as tending in some degree to account for the numerous names under which cholera has been described, as a consequence of the numerous phases in which it develops itself. Allen Webb[2] long since remarked that much of the mystery and obscurity which attaches to cholera results from its having been regarded—since 1832 in Europe and since 1817 in India—as an entirely new and previously unheard-of malady; and he shows, by quotations from Snohruta, Wangohoo, and other ancient authors, that cholera is as old as India or China. "It is not always the same in its nature or effects. It is allied in its nature to some of the most desolating pestilences, as well as to some of the most common diseases." In its virulent form it begins, as Magendie observed, "in death." On the other hand, as with all other diseases, there may be a most mild and scarcely recognisable form of the malady. Of all writers, Macpherson[4] has, I think, most elaborately and satisfactorily shown that cholera is one of the most ancient diseases of which distinct descriptions exist, prevailing both in Europe and Asia from the earliest times. In support of the view of cholera having prevailed in early times in Europe, Macpherson refers to Hippocrates and Galen, who described a malady very similar to modern cholera; and he further demonstrates that cholera in one or other of its diverse forms has been described by successive European authors almost from the time of the ancients mentioned to the present date, and especially during the 14th, 15th, 16th, and 17th centuries. That cholera has been looked upon as a new disease in Europe since 1832 may be explained by the facts that medical writings of a reliable nature referring to former times were few, and that many of the writings extant, in consequence of the extraordinary variations which occur in the manifestations of the disease itself, do not describe that typical cholera which occurred in 1832, and which has come to be accepted as the only phase of the malady. Even analogous reasoning would teach that cholera prevailed in Europe and England in former times; for, as Surgeon-Major Waters[5] points out, considering that cholera is endemic only in countries where fevers of a malarious character are invariably to be found, and that these were common in England till a comparatively recent period—James I. and Cromwell having died of ague,—it may be inferred that when the latter prevailed in full virulent vigour, the former occurred in epidemic periodicity, as it does in India.

In support of the view of the antiquity of the malady in the East, there is the fact that the early Sanskrit writers were apparently well acquainted with cholera. In the Midan of Snohruta there is a description of a disease termed "vishuchuka" (meaning purging, vomiting, and fever), which was clearly cholera; while in other old Hindu medical works we have "jivat antiahat," meaning fever and incessant purging. Then there is the significant fact that all the languages of the peninsula of India have a time-honoured name for the disease. Further, it appears to have been well known to the Mahomedan conquerors as "haidse" or "haiza," and it has been shown that cholera prevailed among the Mahomedans of Delhi in 1326. There is also a record in Todd's "Rajasthan," that temples to "Oola Bebee," the goddess of cholera, were found by the first European visitors in India. Macpherson makes the pertinent observation that as it is certain the Portuguese found cholera in India soon after their arrival in 1509, especially at Goa in 1540, it is only reasonable to believe that it existed in India previously. Mr. Gaskoin translated from the Portuguese a distinct notice of the disease occurring in 1503, when, as testified by Gasper Corea, 20,000 men belonging to the army of Zamoryn, King of Calicut, died, "sudden-like with pain in the belly." But the first full account given by a European physician was by Garcia D'Orta, of Goa, who, in 1653, pointed out several varieties of cholera, much as they exist now. The ideas, therefore, which have been held by many, and as stated below, cannot be regarded as tenable—viz., that Bontius in 1630 was the first writer on cholera; that cholera is a comparatively recent disease; and that, as concluded by the Constantinople Cholera Congress of 1854, some change came into operation about the year 1817, giving rise to the first great Indian cholera epidemic.

Even assuming, as Bryden held, that Bontius in 1630 first described cholera, I have before me references to no less than fifteen distinct notices of the disease from that period to 1784. Dr. Waters, indeed, states there are no less than sixty separate and independent testimonies to the occurrence of cholera in India during the 16th and 17th centuries. Lastly, there is no doubt it was recognised in the Madras Medical Board's reports previous to 1817. The fact is, our knowledge of the diffusion of cholera in India in earlier times is imperfect and limited, as our knowledge of the country was then imperfect and limited; but that it did prevail previous to 1817 appears indisputable, although perhaps called by other names. For instance, the word *modesh*, derived from *modwa*, to tear, was adopted by the Portuguese, corrupted into *mort de chien*, and often applied indiscriminately to the different forms of cholera.

It is true that some of the writings on which reliance is placed both in Europe and India, to prove the antiquity of the disease, do not always describe the malady marked by suppression of urine, rice-water stools, and collapse, which in the present day is held to be true cholera. But this is only in accordance with the very numerous variations of the malady, as is sufficiently demonstrated by the number of names under which it has been described even in modern times, each term originating in some peculiar phase of the epidemic recorded. Thus we have in the writings of European authors the terms—Cholera Asiatica, asphyxia, algide, bilious, black, blue, dry, epidemic, endemic, febris, remittens, choleroidea, cholera foudroyante, malarious, malignant, nervous, nostras, pestiferous, hæmorrhagica, serous, simplex, spasmodic, sporadic, syncopal, and tetanic. There is also cholerine, choleriform, choleroid disease, choleroid fever or sweating sickness, and the choleroid cholic of the Himalayas, which Webb regarded as a connecting link between cholera and colic. There is also reason to believe that cholera has been described as "white dysentery" and as *fièvre pernicieuse*. Now all these are comparatively recent terms called into use by the varying nature of the malady. The disease appeared under different phases, and both in India and in Europe was described as it appeared, and therefore under a different appellation. There is indeed no disease in which the symptoms, although retaining certain characteristics, vary more. This variability of the affection was noticed on the first reputed invasion of cholera into Europe in 1832, when Dr. Pennick[6] pointed out how the epidemic in England differed from the disease in Russia. Allen Webb asked, in India, about

[3] Progrès Médical, Nov. 3rd, 1883.
[4] Pathologica Indica. [5] Annals of Cholera.
[5] Lecture on Epidemics at the Sassoon Institute, Bombay, 1884.
[6] Essay on Cholera, 1832.

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the same time, "Who can tell where cholera ends and plague begins, or distinguish between certain forms of fever and cholera?" Macpherson states that the disease is essentially the same, but the cholera of one season varies from that of another. Ziemssen says that almost every epidemic has its physiognomy. Sir Guyer Hunter writes: "As there are varying degrees of fever, so there are varying degrees of cholera. It may manifest itself as a slight looseness of the bowels, or as a sudden paralysis of the vaso-motor system."[7] Chevers states: "Familiar as I am with the cholera of Calcutta, the disease I treated during a greater part of 1874 was of a type altogether new to me; no two cases of the disease were precisely the same." And, again: "As the malarious poison produces all variations, from a fatal remittent to the mildest ague, so with the cholera poison."[8] And such is the experience of most of those who have had much to do with cholera. In Bombay in 1883 persons died suddenly from collapse, without vomiting or purging, or after one or two loose stools. In other epidemics all the symptoms of cholera have occurred except that the stools were tinged with blood, mixed with blood, or even dysenteric. Often the premonitory diarrhœa is absent, and sometimes there are no cramps. At other times there are cramps and no purging. Sometimes the stools are not like rice-water, but colourless like serum. The similarity of cholera to fever is sometimes so great that both diseases have been attributed to the same cause—malaria. Cholera in its commencement may simulate an attack of ague, or terminate as fever. This is especially the case with the cholera of Peshawur. Cholera may also be so mild that the symptoms are scarcely recognisable. In every epidemic of cholera a large number of persons suffer from diarrhœa, which is, indeed, cholera in its mildest form. All this, however, is merely in accordance with other zymotic diseases, none of which are distinguishable by constant and invariable characters. As Carpenter has observed: "The peculiar morbific type of disease germ may be derived from the operation of particular environments on ordinary saprophytes through a long succession of generations." Mere degree is not sufficient ground for considering a disease different in essential character. There are mild and severe degrees of catarrh, influenza, scarlet fever, diphtheria, typhoid, &c.; some so mild as to be scarcely recognisable; and the symptoms of such diseases are sufficiently variable to often render diagnosis uncertain. But it has become the custom to regard cholera as a disease marked by certain signs only, and which spreads epidemically; and to say a malady is not cholera when all these signs are not present, or even if it does not spread when they are present. This view I am not prepared to endorse. The variability of the types of all other zymotic diseases is fully recognised. No one would deny a particular case to be one of diphtheria, or typhoid, or measles, because the symptoms were mild, or because all the symptoms of a typical case were not present; and it is only reasonable that the same breadth of view should be accorded to cholera. Then it would be recognised as what it really is—viz., a disease occurring at all times and in all countries, although not in the same degree of violence. Then futile endeavours to keep out the cholera by quarantine would be abandoned; then the erroneous idea that the disease is always imported from India would be no longer held; then there would be a better chance, especially on the Continent, of the axiom being acted upon—viz., that the incidence of cholera is always greatest in the most insanitary localities.

THE PREVENTION OF CHOLERA.

BY SURGEON-GENERAL A. C. C. DE RENZY, C.B.

As the history of cholera among the coolies proceeding to Assam by the Brahmaputra steamers is replete with instruction on the subject of the prevention of cholera, I think the subjoined facts will be opportune at the present time. The history extends over a period of nearly thirty years, and the facts are so well authenticated that they may be accepted with confidence.

From the very commencement of emigration *vid* the Brahmaputra the coolies suffered from frequently recurring and disastrous epidemics of cholera, and about the year 1870 the loss of life was so terrible that Government was forced to investigate the circumstances, and in 1872 an Act of the legislative council was passed prescribing arrangements in minute detail for the sanitary protection of the coolies. The cubical space on board the steamers, the ventilation and cleanliness of the vessels, the food, clothing, water-supply, and medical attendance of the coolies were provided for. The voyage up the Brahmaputra lasted about seventeen days, and during the trip the coolies were inspected by the resident medical officers of three intermediate stations. But, notwithstanding all the precautions taken, the epidemics continued to be terribly destructive; and it was not at all an uncommon occurrence for from fifty to seventy coolies to die from cholera in the course of a voyage. As the Government had adopted all the precautionary measures that had been suggested, and the sanitary arrangements had been again and again reported as satisfactory, the epidemics had come to be regarded as inevitable. They were supposed to arise from various mysterious causes which were beyond human control—as climate, malaria, predisposition on the part of the coolies, mental depression due to the pain of separation from friends, &c. The emigration reports from year to year abound with explanations of this kind. Such was the state of the question when my connexion with it began in December, 1877, on my appointment as Sanitary Commissioner of Assam. The question had great interest for me, for many reasons. The terrible sufferings of the people appealed strongly to my sympathies. The prosperity of the province, too, was closely dependent on the prevention of the epidemics. Labour was the great want of the province, and cholera every year swept off thousands of labourers who had been imported at a cost of about 100 Rs. per head. Moreover, during the ten years I had been sanitary commissioner of the Punjaub, I had had great experience of cholera, and I had been led to the conclusion that with proper precautions the disease might very easily be prevented. My views on this subject had been fully recorded in the Sanitary Reports of the Punjaub for 1868 and 1869.

As my researches had led me to believe that cholera is almost always propagated through water, in seeking for an explanations of the epidemics among the coolies on board the Brahmaputra steamers I naturally turned my attention, in the first instance, to the water-supply. But I was assured on all hands that the water-supply was above suspicion. The coolies, I was told, were supplied with water pumped from the great river, and especial care was taken to pump it only in mid-stream. The water was stored in fine iron tanks. And in confirmation of the opinion that in this case the water was harmless, I was told that the native crews of the steamers, some sixty or seventy in number, used only the Brahmaputra water, and they were singularly exempt from cholera. In the period of twenty years I was told that there had not been half a dozen cases of cholera among the crews. The information accorded entirely with my own later experience. I was on board steamers on several occasions when great epidemics occurred among the coolies, but the crews, although they lay at night on the deck amongst coolies, escaped entirely. There was no sickness of any sort whatever among them. These facts, which admit of the fullest attestation, made a great impression on me. But perhaps a still more singular fact remains. A very considerable number of Europeans have within the last twenty years gone up the river on the same steamers with the coolies. This class was composed of men, women, and children, for the most part connected with the tea industry. Strange to say, notwithstanding the great susceptibility of Europeans to cholera, these passengers, who lived on the same decks with the coolies and were only separated from them by a curtain during the daytime, were almost entirely exempt from cholera. I heard of only three or four cases in a period of many years. The European passengers used Brahmaputra water, clarified with alum and filtered. The coolies' water was treated with alum; but they often used the water before the suspended matter had time to subside. Since then the European passengers and the crews, who were exempt from cholera, used the Brahmaputra water (the crews used it without any clarification or filtration); it was quite certain that the epidemics among the coolies were not due to the use of that water. I was greatly puzzled to find a clue to the enigma, when it occurred to me one morning during the progress of an epidemic to get up very early, just as the coolies were coming down from their sleeping deck, and take up my position in the stern of

[7] Report on Cholera in Egypt, 1883.
[8] Notes on Indian Diseases, Med. Times.

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the vessel where they stayed, and, without asking any questions, to observe their movements and doings. I very soon found what seemed to me a very satisfactory explanation of the mystery. I noticed the coolies crowding round two tubs half full of water, which were placed in the stern of the vessel, beside the entrance to the latrines. This water was intended to be used for ablution after defecation; but to my astonishment I saw the coolies rinsing their mouths with it, and even taking it away in their drinking vessels. I saw a woman washing her baby's clothing in a tub and coolies immediately after drinking the fouled water. The fact seemed to me so incredible that I brought Colonel (now Major-General) Sherer to witness the scene. Here, then, I surmised must be the explanation of the coolie epidemics. The water-tank had only one tap, and it was clear that 500 coolies, the number then on board, could not supply themselves with water from that one source; and as they had not the means of lifting water out of the river as the crew had, in their ignorance of the consequences they supplied themselves out of the polluted tubs. The tubs were replenished from time to time by a few bucketfuls of water raised by one of the crew, and when once they had been contaminated by the excreta of a coolie infected with cholera, they served for the culture of the virus and the circulation of it among other coolies. This discovery led me to study carefully all the arrangements connected with the supply of water to the coolies ashore as well as on board the steamers. I found the water-supply of the depôts in which the coolies were collected previous to embarkation in a most dangerous state. The depôts at Calcutta were situated in the northern portion of the town, to which the municipal water does not extend; but the Government orders were that a supply of drinking water was to be carried for the use of the coolies. The depôts, however, being about a mile from the nearest stand-pipe, the labour of carrying water such a distance was very great, and the temptation to evade the Government order was almost irresistible. As a matter of fact, on chemically testing some of the water I found conclusively that it was not municipal water, and that it must have been got from one of the innumerable filthy tanks in the vicinity of the depôts. Excepting the drinking water, all the other water used in the depôts was avowedly obtained from tanks of that character. One of these tanks was used for bathing and ablution by some 1500 coolies in the season, and as natives invariably rinse their mouths with the water they bathe in, the coolies must have swallowed the water of that tank very largely. These depôts were infested with cholera.

The water-supply of the depôt at Dhubri, a place some way up the Brahmaputra, was extremely bad. In the emigration season it was a mere stagnant backwater of the Brahmaputra, on the bank of which the cholera dead were buried, and, I may add, often disinterred by wild animals. I have seen vultures eating human remains and dropping fragments of them into the stagnant pool in which the coolies bathed, and at the same time took their drinking-water.

A third source of contamination was the water at the encamping grounds at which the coolies stayed on their march to the depôts at Dhubri; this water was in many places nothing but very foul ditch-water. At a place called Kanchrapara it was especially bad, as it was the effluent water of a washerman's village in which cholera is a perennial pest. I at once brought these matters to the notice of the Assam Government; but as the regulation of coolie emigration lay within the province of the Bengal Government, some time elapsed before any steps were taken to remedy the evils pointed out, and some of the evils remain in full force to the present time. The water-supply on board the steamers was improved; a pump was let into the side of the vessel and water was pumped into a long closed cistern provided with a number of taps, so arranged that it was physically impossible for a coolie to touch the contents of the cistern. Abundance of water was supplied for ablution fresh from the river, and the tubs were abolished altogether. At Dhubri a well was made, covered in and provided with a pump and a cistern with taps, but the work was done in a very unsatisfactory way, and in a letter of November 9th, 1882, from the deputy-commissioner, I learn that "the Dhubri well is not yet on a completely satisfactory footing; the water, though very much better, still continued to retain a slightly offensive smell until the other day, when its level sank altogether below the suction pipe of the pump, since which time the well has been out of use." In connexion with this state of the water-supply it is suggestive to note that in 1883 there were forty-three deaths from cholera among the coolies in the depôts at Dhubri.

In the Calcutta depôts makeshift arrangements, the best practicable under existing circumstances, were made, but under the system as it stands the most unremitting vigilance is required to prevent the use of contaminated water by the coolies. The water-supply at the encamping places remains as it was.

To recapitulate the changes made: 1. The water-supply on board the steamers was made satisfactory. 2. The water-supply at the depôts was improved, but is still far from satisfactory. 3. The water-supply at the encamping places remains unchanged, and is as bad as it can be. The improved water-supply on board the steamers came into operation in 1879, a year, I may add, of unparalleled mortality from cholera in Assam.

The following statistics show the annual death-rate among the coolies in the five years previous and in the five years subsequent to the change:—

Deaths per Cent. of Strength.

Previous to the Change.		Subsequent to the Change.	
1874	3·00	1879	0·81
1875	3·28	1880	0·42
1876	1·70	1881	0·88
1877	1·46	1882	0·65
1878	2·70	1883	0·65

In considering the above figures it is necessary to bear in mind that the saving of life during the last five years is considerably more than *prima facie* the figures represent. This arises from the fact that formerly when epidemics occurred it was the practice to land numbers of coolies at intermediate stations, and the deaths of these coolies were not included in the returns. In the last five years epidemics have been so infrequent that this practice has been very seldom resorted to. But taking the figures as they stand the reduction in the rate of mortality is very striking, and I think it impossible to attribute it to any other cause than the improvement of the water-supply.

I am bound, however, to state that Dr. Cuningham, the Sanitary Commissioner with the Government of India, disputes this conclusion. In his last report, that for 1882, which has just reached me, he thus expresses himself: "Para. 123. After enjoying a remarkable degree of immunity from the disease [cholera] for some time, the immigrant coolies again suffered on board the river steamers, and there were several outbreaks of cholera, those on the *Nepal* and *Sind* being attended with heavy mortality. The investigations which were made in the case of these and the other vessels concerned have only served to confirm the opinion expressed in former reports, and to show how hastily it had been assumed that the mere introducing of better arrangements for water-supply on board those steamers had almost entirely banished cholera from the coolies travelling on them." To this I would only reply that a reference to my Assam Sanitary Reports for 1878 and 1879 will show that I attributed the epidemics to defects in the water-supply at three points, viz.:—(1) On board the steamers, (2) in the depôts, and (3) at the encamping places. And as the defects indicated have been entirely removed at only one of the points, the results obtained are quite as much as could be reasonably expected. When coolies go on board infected at Dhubri it would be unreasonable to expect that the effect of the sanitary arrangements would prevent the development of cholera in them. All we have a right to expect is that the disease should be prevented from extending to those who arrive on board uninfected; that in fact these coolies should be put in the position of the native crews already referred to. And many of the incidents of the few outbreaks that have occurred within the last five years warrant the belief that this is attained. Since the water-supply on board the steamers was improved there have been three great epidemics of cholera in Bengal, the recruiting ground of the coolies, and Assam, the province to which they were proceeding, during 1879, 1882, and 1883. The epidemic of 1882 was the greatest that has occurred in Bengal for some years; but in spite of this the reduction in the rate of mortality of the coolies continued. It remains for Dr. Cuningham to assign a reasonable explanation of the reduction. In the earlier years of the experiment he attributed it to an abatement of epidemic influences, but that will not hold in the presence of the epidemics of 1882 and 1883.

It is, I think, greatly to be regretted that Government did

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not comply with my earnest request to make the experiment complete, as I believe it would have thrown invaluable light on many obscure points relating to cholera. Emigration *vid* Brahmaputra is assuming immense proportions. Last year 20,000 coolies passed up the river. This great tide of human life affords unequalled opportunities for the exact study of cholera; but they are not turned to account because Government are taught to believe that the spread of cholera is governed by general influences which are altogether beyond human control.

Meanwhile I think the facts stated warrant the following conclusions:—1. Cholera has very feeble, if any, power of propagating itself through the medium of the air, otherwise the immunity of the native crews and the European passengers would be inexplicable. 2. Water is its favourite medium. When the water-supply is secure against contamination, it is hardly possible for cholera to become epidemic. The second conclusion is strongly confirmed by the experience of Fort William. This fortress stands in the midst of a community from which cholera is never absent, and scarcely a year passes that one or two cases of cholera do not occur among the troops, but since the water-supply was placed on a satisfactory footing the disease seems quite incapable of spreading. The Royal Commission of 1859 gives the death-rate of the garrison for a long series of years as 68·96 per 1000, and for the ten years ending in 1856 as 102·35 per 1000. In the ten years ending in 1882 the death-rate was only 9·45 per 1000. In many respects the sanitary condition of the fort is far from satisfactory; but the water-supply being safe, cholera is disarmed.

ON THE

INFLUENCE OF SMALL-POX HOSPITALS.

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No. V.

IT cannot be too often or too clearly stated that the Report of Mr. Power to the Local Government Board in 1881 on the spread of small-pox in the neighbourhood of Fulham Hospital is the *fons et origo* of the theory now so warmly debated of the "distal aerial dissemination of small-pox." Sir Risdon Bennett does, indeed, say that "it singularly confirms the opinion he has entertained upon the subject in regard to the diffusion of contagion of small-pox from a central depôt of small-pox";[1] but I am not aware that he has anticipated Mr. Power by the publication of any such opinion, nor does he give the data on which it rests, unless they are contained in his answer to Question 4833, where the conveyance of smoke to long distances by the wind is cited as a parallel phenomenon; with the reservation, however, that "of course this opinion is more or less speculative"; and "what becomes of it [the particulate infectious matter] when it does pass out into the outer air I really cannot say, or what change it may undergo I cannot say."[2] Attempts have subsequently been made in various directions to utilise the theory for the explanation of outbreaks of small-pox, but as yet the facts are found to fit rather awkwardly into their assigned places, and refuse to lend themselves kindly in support of the new hypothesis. It is possible, of course, that in time facts may be forthcoming, sufficient in number and in significance, to prove that the infection of small-pox can be carried in an active state through the air to a distance of a mile or a mile and a half. All I would contend for at present is that such facts have not been recorded, and that the statistical tables on which so large a superstructure of theory has been raised are worthless when tested by a close and analytical investigation. The attention of sanitarians has at all events been fully awakened to the possibility of distal aerial infection; observation will be quickened, and well-observed cases must soon accumulate, if such are to be found; meanwhile there is a real danger that in some cases facts may be unconsciously twisted into conformity with a foregone conclusion.

In the present paper I had proposed to consider our knowledge of small-pox spread through the open air, independently of Mr. Power's report; and I had hoped that the eminent witnesses, representing every grade of the profession, who were examined before the Hospitals Commission, would have been able to furnish precise and trustworthy data on which their opinions had been based. Great, however, was my surprise and disappointment to find that on the important subject of distal aerial dissemination of small-pox, it is literally a case of *quot homines, tot sententiæ*, and that few indeed of the gentlemen under examination could give a reason for the faith that was in them. It will not be uninteresting, and it may be profitable, to examine the state of opinion at the present time on the limits of out-door aerial spread of small-pox as displayed in the pages of the Report.

Dr. Bingham, a medical officer for the Asylums Board, fixed the distance for infection at two or three feet;[3] Dr. Hill, of Birmingham, at five or six feet; Dr. Tatham, of Salford, at six to eight feet; and Dr. Grieve, a medical officer of the Asylums Board, at eight to ten feet."[4] Between ten and fifty feet we have: Dr. W. Squire, fifteen feet;[5] Dr. Brydges, thirty feet, but would recommend 100 feet as a sanitary zone;[6] and Dr. Markham, thirty feet[7] (Sir William Gull would consider thirty feet safe for a single case);[8] Dr. Gibbons, sixty feet;[9] Dr. Collie, seventy feet;[10] Dr. De Chaumont, whilst allowing that he has no exact evidence to go upon,[11] fixes 100 feet as a safe sanitary zone; Dr. T. Orme Dudfield[12] and Dr. W. Gayton[13] arrive at a similar conclusion. From 100 to 200 feet, we have Dr. Tripe insisting on 150 feet for any number of patients less than 100; whereas for 500 or 600 patients 500 or 600 feet and more might be required.[14] Dr. Munk,[15] as well as Dr. Gregory and Mr. Marson,[16] fix upon 150 feet as a safe distance; Dr. J. S. Bristowe comes in at 300 feet,[17] but has no facts. Sir William Gull also would have 300 feet[18] for 100 patients or more, but has no evidence of spread beyond thirty.[19] Beyond 300 feet we find no evidence until we come to Mr. A. Farr at 1320 feet,[20] and to Sir J. R. Bennett at 1500 feet,[21] who thinks, however, that infection, like small shot or smoke, might travel a mile or two.[22] Sir William Jenner would insist on 2640 feet round a small-pox hospital,[23] while Dr. George Buchanan,[24] Dr. Thorne Thorne, Mr. Simon,[25] and Mr. Power himself give in their adhesion to the theory that infection may be disseminated to a distance of 7000 or 8000 feet. Surgeon-General Bostock, a manager of the Metropolitan Asylums Board, tells us he once held that thirty feet was safe, but his faith has been shaken, and he now knows of no rule for regulating the distance.[26] Lastly, Mr. H. Stevens,[27] perhaps unduly stretching Mr. Power's hypothesis, says: "Taking as a standpoint that there is atmospheric distribution of small-pox as illustrated by what is believed to be the case at Fulham Hospital, if that atmospheric distribution of small-pox extends, say, over 300 yards, why not over as many miles, and it might happen with a favourable southerly breeze that a man at York would be hit by a small-pox pellet from the Fulham Hospital." This, however, is little more than an amplification of Sir J. R. Bennett's comparison between the passage of small-pox matter and the travelling of smoke from the Great Fire of London as far as Oxford, or his more startling belief[28] that small-pox poison might very possibly strike a man at a distance of fifty miles.

The large interval which will have been noticed as existing between 200 feet and a quarter of a mile indicates pretty accurately the effects of Mr. Power's Report, and will serve to distinguish the adherents of the new hypothesis of distal aerial infection from those who still cling to the old lines of belief. That small-pox infection can be communicated through the air is, so far as I am aware, denied by no one, and it is difficult to see the bearing of Sir Wm. Jenner's remark[29] "that the *onus probandi* should rest not on those who hold that it does spread by the air, but upon those who hold that it never does spread through the air."

The important question awaiting solution is not whether it ever does spread through the open air, but to what distance can the infection of small-pox be carried in an active state through the open air, and what circumstances, if any, tend to favour or retard its dispersion, or its powers of infecting? On these points there is abundance of theory, but a truly marvellous absence of facts. The voice of authority can

[1] Hosp. Com. Rep., Q. 4828. [2] Ibid., Q. 4834.

[3] Ibid., Q. 348. [4] Ibid., Q. 348. [5] Ibid., Q. 5020.
[6] Ibid., Qq. 677–679. [7] Ibid., Q. 348. [8] Ibid., Q. 4403.
[9] Ibid., Q. 348. [10] Ibid., Q. 2064. [11] Ibid., Qq. 2438, 2443.
[12] Ibid., Q. 1656. [13] Ibid., Q. 2865. [14] Ibid., Q. 2212.
[15] Ibid., Q. 4663. [16] Ibid., Q. 4711. [17] Ibid., Q. 522.
[18] Ibid., Q. 4812. [19] Ibid., Q. 4366. [20] Ibid., Q. 1934.
[21] Ibid., Q. 4841. [22] Ibid., Q. 4903. [23] Ibid., Q. 5339.
[24] Ibid., Q. 3782. [25] Ibid., Q. 4504. [26] Ibid., Q. 1377.
[27] Ibid., Q. 3443. [28] Ibid., Q. 4903. [29] Ibid., Q. 5888.

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clearly do nothing for the settlement of this question, and the assistance of collective investigation might be invoked with much advantage. Well observed and accurately recorded facts can almost be reckoned on the fingers, and have never, so far as I am aware, been collected. A few were given by witnesses before the Royal Commission, but the instances of infection spreading over a greater distance than fifty feet are few in number, and not all so carefully recorded as their importance would seem to warrant. Dr. Thorne mentions a case which was in all probability caught "by reason of the bedroom window being only five feet from one of the windows of a room which was used for the reception of patients";[30] and in another case the disease was probably contracted from infected bedding exposed in a garden some eleven or twelve feet from a public thoroughfare.[31] Dr. B. W. Richardson is quoted[32] as having traced infection from a single case of small-pox to a distance of thirty feet; and Dr. Munk gives an instance of a person being attacked by the disease fourteen days after having watched a patient's entry to Highgate Hospital at a distance of forty-one feet[33]; the proof of this, however, is not so absolute as Dr. Munk would have us suppose; for it is impossible to say that there may not have been previous exposure to infection at a few feet or even inches in a London street, and especially in proximity to a small-pox hospital. Dr. Septimus Gibbon gives a case of a clergyman who (in his opinion) caught the disease through burying a corpse, though standing at a distance of sixty feet from the coffin.[34] Mr. Forshall quotes an instance of a student in St. Joseph's Monastery[35] contracting small-pox at a distance probably of from sixty to ninety feet; and Dr. Gayton gives a case[36] of a child which was supposed to have caught small-pox from sitting at an open window sixty-three feet from the hospital wards. For all these cases there is evidence more or less reliable; but the most remarkable instance, if we except a suggestion thrown out by Sir William Jenner, which could not have been seriously meant, that the small-pox matter might have been carried two miles and a half by the wind[37]—is one quoted at second hand by Dr. Haygarth, where ten out of twelve carpenters were supposed to have caught small-pox from a source of infection across a body of water at a distance of 1500 feet![38]

Apart from the examples in the Blue Book I am unable to point to any data pretending to accuracy, if we except the experiments performed by Dr. O'Ryan about a hundred years ago, and quoted by Dr. Haygarth, which would reduce the infectious zone of small-pox to a distance of from two to three feet. Sir John Rose Cormack, indeed, has given[39] the results of an interesting investigation by Dr. Bertillon into the spread of small-pox from an annexe of the Hôtel Dieu in Paris, during the year 1879, but unfortunately no measurements are given, and conclusions are based upon the fallacy common to this report, and that of Mr. Power, of reckoning the percentage of deaths to inhabitants, without giving heed to the units of which the population is composed. That small-pox depôts may become the centres of small-pox spread seems unfortunately to have been proved both in Paris and in London, but it is a mere *petitio principii* to say that "the history of the spread of small-pox in the vicinity of the annexe of the Hôtel Dieu is the history of spread by epithelial drift, so to speak, which no system of police can intercept,"[40] especially when it is further stated on the very same page that "the mode of diffusion was probably to a large extent by personal communication, a circumstance which prevents an estimate being formed of the extent to which epithelial drift disseminated the disease."[41]

In the recent outbreak in Hackney, which has formed the subject of an interesting paper by the medical officer of health, Dr. Tripe, the same fallacy is repeated of applying purely statistical methods to numbers utterly inadequate, and without sufficient examination of the component units. In the first six days, Dr. Tripe tells us the cases in Hackney were as follows:—

	Radius.							
	¼-Mile.		½-Mile.		Mile.		Outside.
Cases	20	....	15	....	16	....	14
Population ..	10,000	....	30,000	....	60,000	....	100,000
Percentage on population	2·00	....	0·50	....	0·24	....	·0014

But it must be borne in mind, as Dr. Robert Fowler very pertinently remarks in his speech before the City of London Union Guardians, "Homerton Hospital was actually built because these diseases seemed to be always making their home in the neighbourhood," and we are told nothing of the houses or of the populations which cover the areas so arbitrarily marked out. It may be mentioned also incidentally that whereas twenty-eight cases were deemed sufficient to infect the neighbourhood in some occult manner in 1884, no harm had been known to result from eighty cases[42] in a previous epidemic, and this in spite of the laundry being so close to the road that, while washing was going on, spray from the tubs has actually splashed into the face of the medical officer of health while walking in the street.[43]

Instances of complete immunity from small-pox at comparately short distances have been already mentioned in my previous papers, and they might be multiplied indefinitely, but although worth noting as negative evidence, they must yield before one well-authenticated fact. If small-pox can be proved in any one instance to have spread through the open air to a distance of 200 or 300 feet, instances of immunity at any less distance are of little worth for the objects of this inquiry. That small-pox is the most active and virulent of all the infectious diseases seems generally admitted; also that it consists of solid particles of inconceivable minuteness thrown off into the air from the pustules, the breath, and probably by the excreta, though it is a singular fact that even under the most favourable circumstances for such a means of spread no extension of the disease seems to have been traced to the drains of a small-pox hospital.[44] That this particular matter can attach itself to the persons and clothes of healthy persons, and so be carried to long distances, is beyond dispute; it may also float through the wards of a hospital, or be blown through corridors for many feet, as noticed by Sir J. Rose Cormack[45] in Paris, and by others, as at Bradford Hospital, where the long closed corridor at one time acted very like a spout. It may also, according to Mr. Simon and Dr. Macgillivray,[46] remain still active after three years' sojourn in the fomites of a deserted cottage. On the other hand, there seems no doubt that its power for harm is weakened by distance; and it remains to examine the circumstances which hinder or favour its dispersion through the open air. The actual quantity required for infection has not, as far as I am aware, been ascertained; nor has the extent to which small-pox matter may be oxidised and rendered inert by the atmosphere under varying degrees of moisture or dryness. Common-sense would suggest that, apart from its destruction *in transitu*, the infectious particles would be carried further in the direction of the wind than in any other direction, and Dr. Bond[47] has measured the distances to which infection was apparently carried from house to house in this manner in two cases which occurred in his district, and finds them to be 53 and 107 feet respectively. But it is distinctly stated in more than one instance of small-pox spread that it has not been in the direction of the wind prevailing at the infection period. In the recent outbreak at Hackney, described by Dr. Tripe, the infection did not go with the wind, but in the opposite direction. In the outburst at Fulham in 1881, Mr. Power does not suggest that the direction of spread was influenced by the wind—a still and foggy atmosphere, devoid of ozone, with occasional light airs from every point of the compass, was considered to be the chief agency on that occasion in disseminating the infective particles. That solid particles should travel against or, so to speak, under the wind is so improbable that it lends additional weight to the suspicion that more earthly messengers have been engaged in the infective process, even though we find a difficulty in detecting them; and it would appear as reasonable to describe dynamite as aerially disseminated because no dynamitard has been detected in the act and brought to justice, as to attribute the dissemination of small-pox round a hospital to atmospheric agencies wherever a difficulty occurs in accounting otherwise for the origin of the disease.

Observation and direct experiment are sorely needed to settle some of the most elementary points connected with the spread of disease. What degree of concentration, for instance, is required in small-pox virus for infection through the air? Is the immunity observed, say at 200 feet,

[30] Ibid., Q. 1051. [31] Ibid., Q. 1091. [32] Ibid., Q. 346.
[33] Ibid., Q. 4588. [34] Ibid., Q. 348. [35] Ibid., Q. 3355.
[36] Ibid., Q. 2646. [37] Ibid., Q. 5364. [38] Ibid., Qq. 4919, 4963.
[39] Location and Administration of Special and General Hospitals in which Contagious Diseases are received.
[40] Op. cit., p. 11. [41] Op. cit., p. 8, note.
[42] Hosp. Com. Rep., Q. 2136. [43] Ibid., Q. 2308.
[44] Ibid., Qq. 2244, 2293. [45] Pamphlet, p. 5.
[46] Hosp. Com. Rep., Q. 4580.
[47] Report for the Gloucestershire Combined District, 1882.

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due to dispersion and simple dilution of the infectious particles, or to changes brought about by the oxidising processes in their passage through the air? Can we liken these particles thrown off by a patient to shot from a gun?[48] or should they not rather be compared to a charge of steam, or of hailstones, which in their passage would change their form or disappear? Mr. Power seems to think their transference is favoured by fog; and Dr. East, in a thesis which gained the gold medal of the University of Durham on "Hygrometricity, and the Spread of Specific Contagia," takes up a similar position, but no proofs are given. "At a time," he says, "when small-pox was not epidemic in the district, but there were over 100 patients under treatment in the Homerton Hospital, seven fresh cases came under my notice, all occurring within a quarter of a mile of the hospital; and although the most careful inquiries were instituted as to the possible modes by which the disease might have been contracted, none were discovered, and *I was forced to fall back on the assumption* that something had passed from the hospital to those affected, and *that the transit was through the air.*" Having then noticed that "a few weeks prior to the outbreak of these seven cases the hygrometric state of the atmosphere averaged eighty-nine degrees....., *I was led to the assumption* that there was probably in this fact a cause for the unusual incidence of small-pox in the neighbourhood about the hospital." On the other hand, we have Sir Wm. Gull[49] expressing an opinion that if the air were very dry the particles might travel further in an active state. Amidst such conflicting opinion it seems hard indeed to find any safe resting ground, and the Royal Commissioners have taken up an attitude so absolutely neutral as to leave the problem very much where they found it. "We feel," so runs the Report, "that so long as it is not proved that personal communication is adequate to the explanation of the whole spread of small-pox" (*when will this be possible?*), and so long as "distant atmospheric dissemination is not shown to be in the highest degree improbable, so long it is essential that in the construction and management of small-pox hospitals both sources of danger should be with the utmost care guarded against."[50] There may be reason to doubt whether these recommendations have been rigidly adhered to under the present regulations of the Asylums Board, by which fifty acute cases are admissible to each of the small-pox hospitals of the metropolis, but the admirable organisation recently introduced for the ambulance service in London, the increased care which is being exercised in the management of the hospitals devoted to infectious disease and the increased vigilance on the part of medical officers of health may, by excluding some of the gravest risks of infection, throw some light upon the spread which is admitted to take place from a small-pox hospital situated in a crowded locality. New facts will doubtless be forthcoming, and they must be carefully weighed, for the issues at stake are portentous. Should Mr. Power's theory be confirmed by additional and more accurate evidence, the position now taken up by the Asylums Board becomes untenable, and disaster could only be averted by a bold adoption of the circular hospitals, so admirably planned by Dr. J. Burdon Sanderson, and described before the Hospitals Commission, in which infection is consumed on the premises and its aerial dissemination rendered impossible.

I have already exceeded the allotted space, and must therefore content myself in conclusion by repeating a conviction, supported, as I believe, by the arguments and illustrations of my preceding papers, that no sufficient evidence has yet been adduced for the outdoor aerial dissemination of small-pox infection in an active state to a distance of 200 or even of 150 feet.

Cheltenham.

[48] Hosp. Com. Rep., Q. 4903. [49] Ibid., Q. 4361. [50] Ibid., p. xxv.

QUEEN'S COLLEGE, BELFAST.—The following have been awarded prizes at the termination of the summer session:—Botany—Senior Division: John Campbell, D. C. Smiley. Junior Division: C. E. Shaw, J. W. Moore, R. W. Haslett, J. M. Downer. Practical Chemistry: S. R. Collier, R. J. Ferguson, C. J. McVicker. Medical Jurisprudence: W. B. McQuilty, John Menary, J. K. Close, Andrew Buchanan and Samuel Moore (equal), A. S. Thompson. Midwifery: John Menary and C. W. J. Dunlop (equal), David Mark, Samuel Moore, Andrew Buchanan, Samuel Alexander and A. S. Thompson (equal).

A YEAR'S SURGICAL PRACTICE IN THE JAMSETJEE JEJEEBHOY HOSPITAL, BOMBAY.

By WELLINGTON GRAY,

PROFESSOR OF SURGERY, GRANT MEDICAL COLLEGE; SENIOR SURGEON TO THE HOSPITAL.

WITH the view of enabling the profession at home to judge of the kind and amount of surgical work that can be accomplished annually in a large native hospital in this country, I am induced to place before the readers of THE LANCET the following abstract, compiled from the returns and report of the Jamsetjee Jejeebhoy Hospital for the year 1883.

In this hospital one hundred and eight beds, or thereabouts, are set apart for surgical cases, and are in charge of the second surgeon, Surgeon W. K. Hatch, I.M.D., and myself. To give an idea of the circumstances under which we work I may mention that we are without skilled assistance of any kind; except when aided by the students during term time we have to attend to most of the petty details ourselves; while in cases of difficulty and doubt we have as a rule to rely on our own individual, or combined, judgment as circumstances may happen to require. I should mention, however, that fractures are put up and the first dressing usually applied to wounds by the apothecary on duty. We have a house-surgeon, a member of the subordinate medical department, but he is house-surgeon in name only; he does everything but house-surgeon's work as it is ordinarily understood in England and elsewhere. The enforced performance, by the surgeon himself, of work which in other hospitals is left to house-surgeons and dressers is no doubt for the benefit of the patients, but it takes up much of his time. The necessity also of having to depend so much on one's own unaided judgment in difficult or doubtful cases is not an unmixed evil: the practice at least engenders decision and self-reliance, courage in undertaking single-handed large and formidable operations, and readiness in emergencies. Until recently, too, nursing, as we now understand it, had no existence in this hospital; the sick, as regards the administration of medicines &c., were at the mercy of untrustworthy native servants; while the little comforts and attentions that add so materially to the welfare of a patient were unknown. All this is now changed, in the surgical wards at least, by the presence there of two of the All Saints sisters, who give their services voluntarily and gratuitously. Food and medicine are now given in accordance with instructions, the comfort of every patient is attended to, order is preserved in the wards, and in special cases urgent symptoms are watched for and brought to notice. It is hardly too much to say that patients who would have died under the old system recover under the new. I take advantage of this opportunity to bear testimony to the great and valuable services of the sisters.

The following list shows the number of admissions for different kinds of injuries during the year:—Fracture of the skull, 10; injuries of the spine and cord, 6; dislocations and fractures of facial bones, 12; fractured ribs, 15; fractures of the upper extremity, 81; dislocations of the upper extremity, 16; fractures of the lower extremity, 73; dislocations of the lower extremity, 12; multiple injury, 15; rupture of viscera, 3; burns and scalds (severe), 29; wounds of all kinds (severe), 198; snake-bite, 2; bites of animals other than snakes, 21. The greater number of these cases were of the ordinary kind, and presented no features of special importance. They were caused chiefly by falls, mill and street accidents, assaults, and the burns usually by the upsetting of paraffin lamps, women and children being the chief sufferers. Fractures in this country, as a rule, unite readily; a case of ununited fracture, indeed, is practically unknown in our hospital. In the treatment, we adhere generally to the old-fashioned simple splints, and have no reason to be dissatisfied with the results. Compound fractures, of which we receive many very bad cases, rarely give trouble, although I cannot say that we ever treat them after the strictly antiseptic method. The wound closes readily under ordinary dressings, combined with scrupulous cleanliness; and I am unable now to call to mind a single case during the past year where complications or delay have arisen.

One or two of the cases of multiple injury were of special interest. A man, aged sixty, fell head foremost down a

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steep staircase, striking his chin against the ground. He sustained simple fracture of the right humerus and left femur, compound fracture of the lower jaw, and fracture of the base of the skull, due to both condyles of the jaw having been driven through the glenoid fossæ. He died shortly after removal from hospital by his friends. In the second case a man fell on his feet from the top of a palm tree fifty feet high. Both calcanea and the spine in the lower part of the dorsal region were fractured, and he also sustained Colles' fracture on both sides. One of the latter was compound, with such extensive injury of the soft parts as to necessitate amputation. This patient died on the second day. In a third case the injuries were depressed fracture of the skull, fracture of the pelvis, and of one rib; the patient recovering without a bad symptom. The three cases of ruptured viscera were due to street accidents, and were all rapidly fatal. The organs injured were respectively the bladder, stomach, and lung; the two latter occurring in children.

We rarely see snake-bite in Bombay, poisonous snakes being now few and far between. Both the cases recorded were bites of the echis carinata. One simply came to the hospital to be dressed, and went away before any very acute symptoms had supervened; the other was admitted twelve days after the infliction of the injury, which was close to the elbow. Here an abscess had formed, while the greater part of both feet had become gangrenous. There was no history of the mucous hæmorrhages usual in such cases. Under careful nursing, good food, and appropriate local treatment the patient, a boy of twelve, quickly got well. Several persons suffering from dog-bite came to the hospital to have their wounds dressed, the injury in some instances having been undoubtedly inflicted by rabid animals, as we learned after careful inquiry. So far, however, no case of hydrophobia has turned up in consequence.

Few of the numerous cases of wounds admitted were of any special interest or importance. In one case of homicidal injury the weapon, a long sharp-pointed knife, entered the left side of the chest between the ninth and tenth ribs, notched the lower edge of the lung, passed through the diaphragm, and transfixed both spleen and stomach. The injury to the latter was at one time recognised during life, in consequence of some of its contents having escaped through the external wound. It happened to be full at the time the injury was inflicted. Another victim of the same murderer received a stab in the lower part of the abdomen, the knife entering just internal to the anterior superior iliac spine, passing through the mesentery, and then downwards to the sacro-sciatic foramen, dividing both the internal pudic and sciatic arteries; the small intestine, which protruded, was uninjured. The patient, a man of eighty, died on the second day. In a third victim, who died before he reached the hospital, death appears to have been instantaneous: the knife was driven in transversely between the fourth and fifth left ribs to a corresponding point on the opposite side. In its passage it laid open the right ventricle and notched the back of the sternum. We admit a large number of lacerated and contused wounds of the extremities from the cotton mills and the streets. Strange to say, these mill accidents are not more common now, with nearly fifty mills at work, than they were twelve or fifteen years ago, when there were only half a dozen. The reasonable interpretation of this is, I take it, that the operatives have learned how to take care of themselves. The treatment of these ugly injuries by antiseptic irrigation and iodoform gives very satisfactory results. Of late I have tried, with equally good results, a dressing of iodoform on dry lint, then a thick pad of oakum, and a tight bandage over all, the wound, of course, having first been purified as far as possible. No sutures are used. This dressing is not disturbed unless the thermometer shows unequivocal signs of suppuration having occurred. Some of the most unpromising cases have healed admirably under this treatment.

That scourge, traumatic tetanus, often renders our most careful treatment of wounds of no avail. We have a pretty constant average of twenty-five cases annually. Last year, however, we had only thirteen, and the year before eighteen. I am convinced that more rigorous attention to cleanliness and sanitary surroundings is one main cause of the falling off, as far, at least, as those cases which originate in the hospital are concerned. Still, in spite of all precautions, it continues to occur from time to time under the most unexpected circumstances. The mortality for all cases averages 80 per cent. I may note here that last year we had not a single case of pyæmia, or, with one exception, of any form of septic poisoning, and this notwithstanding the fact that strict Listerism was not once employed in the treatment of compound fracture or accidental wound.

Surgical Diseases.—These comprised principally abscess, ulcer, sinus and fistula, venereal diseases, stricture, affections of the generative organs, joint diseases, and caries and necrosis. I cannot say that many of these differed, either in peculiarities or treatment, from the ordinary run of such cases. As regards venereal diseases, I may mention that for some years past we have had a Contagious Diseases Act in force in the city of Bombay; and as an important fact in support of the policy of repression, and one not sufficiently recognised, I think it desirable to mention that sloughing and phagedænic chancres, which under previous conditions were frequently seen, are now practically things of the past so far as this hospital is concerned. I recollect that in former years many horrible, and even fatal examples, of sloughing phagedæna used to be admitted; last year, on the contrary, not a single case was seen, nor in this year up to the present date. In speaking on this question here I must be understood as holding to the belief that infection derived from a phagedænic chancre is a potent factor in the reproduction of that form. Civil and military statistics in this presidency tell us conclusively that if the Contagious Diseases Acts have accomplished nothing else, they have at least resulted in modifying the severity of primary lesions. Amongst affections of the generative organs, I have met with three cases of acute inflammation of the tunica vaginalis; or acute hydrocele it might be called. The disease was of only a week's duration, with great pain and tension, accompanied by fever; the tumour in each case was quite as large as a cocoa-nut; the fluid contents were slightly turbid, and the serous surface was covered with a thick velvety coating of lymph. With a free incision and a drainage-tube recovery quickly followed. Should further opportunities occur I shall investigate the subject more closely. In none of the cases was I able to assign the inflammation to any definite cause. A case of scrotal abdominal hæmatocele which occurred during the year has already been reported in THE LANCET of Sept. 22nd, 1883. One case of acute glossitis, ending in abscess, was treated.

Operative Surgery.—Last year there were performed 152 major and 2519 minor operations. Of large amputations 37 were performed, as shown in the accompanying table:—

	Primary.	Cured.	Died.	Secondary.	Cured.	Died.	Disease.	Cured.	Died.
Thigh	1	1	—	1	—	1	3	1	2
Knee	3	3	—	—	—	—	3	1	2
Leg	6	5	1	—	—	—	5	4	1
Foot	3	3	—	—	—	—	2	2	—
Shoulder	1	1	—	—	—	—	—	—	—
Arm	3	3	—	—	—	—	—	—	—
Forearm	4	2	2	—	—	—	—	—	—
Hand	2	2	—	—	—	—	—	—	—
Total	23	20	3	1	—	1	13	8	5

Nearly all the primary operations were for railway and machine accidents; the disease cases for joint affections and mycetoma. The first point to be noticed in this table is the disproportion between the mortality in primary amputations as compared with that after the operations for disease. The secondary thigh amputation was for a smash of the limb just above the knee, with compound fracture of the leg, the result of a tramcar accident. The patient declined operation till it was too late, and in a few days after it was performed he died of exhaustion. The same thing happened in two of the amputations for disease: the patients and their friends refused consent till the favourable moment had passed, and then pressed for operation—death following from exhaustion. All three were cases of knee-joint disease. Carden's operation was the one invariably chosen for the knee amputations of the year. We have given a fair trial also to disarticulation, but have come to the conclusion that the latter gives far better results, both as regards the process of healing and the condition of the stump. The one successful operation for disease was for mycetoma. The two fatal cases were for elephantiasis of the leg, with ulceration, and for knee-joint disease respectively: the first died from exhaustion, and the second from pulmonary thrombosis the day after operation.

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In the fatal case of primary leg amputation death resulted from spreading gangrene; but why the disease should have supervened in this particular case we were never able, after the closest investigation, to discover. The patient was young and healthy, the injury was quite local, and he was placed after operation in exceptionally good sanitary circumstances, far removed from any source of septic infection. The disease amputations were all for advanced caries of the ankle-joint and tarsus. Death in the unsuccessful case was due to tetanus. In one instance, although the patient suffered from phthisis in addition to the joint disease, and was much emaciated and reduced in strength, he yet made an excellent recovery, the wound healing by first intention. So complete, indeed, was the recovery, that when he came to hospital later on to show himself and to have his wooden leg altered, I found some difficulty in recognising him; the lung symptoms had to a great extent subsided, and he had grown quite fat and strong. I regard this example as additional proof, if such were needed, that the removal of a diseased limb in the case of a phthisical subject is, when judiciously resorted to, sound surgery. There is nothing particular to note about the foot, shoulder, and arm amputations: all did well. In the two fatal cases of amputation of the forearm death was due to other injuries; in one instance to fracture of the spine, and in the other to severe burns of the chest and abdomen. The injury to the arm in the latter case, as well as the burn, was caused by an explosion of gunpowder. In the treatment of amputation wounds I have tried many experiments, with the object of devising a trustworthy, cheap, and easily prepared antiseptic dressing. A good number of my experiments have succeeded, the wound healing by immediate union or by first intention; some have, however, failed. When sufficient materials have accumulated I shall communicate a paper with the results of my experience. I may say here, however, that the antiseptics which I regard with most favour at the present moment are corrosive sublimate and iodoform.

Lithotomy and Lithotrity.—Lateral lithotomy was performed twenty-six times during the year; seventeen of the patients were from fifteen to sixty years of age, the majority ranging from eighteen to twenty-five. Nine cases were children from three to fourteen. Of the adults two died, one aged sixty from kidney disease (cystic kidney), the other, a young man of eighteen, from exhaustion. In the latter case the symptoms had existed from childhood; the stone was large and the bladder much diseased, while the patient himself was ill-developed, more indeed like a child of ten, and was worn out by pain and irritation. One child died of small-pox, contracted when nearly convalescent after the operation. Nearly all the calculi were lithic acid; the largest weighed five ounces and nine grains, and the patient made a good recovery. The suprapubic operation was found necessary in one case, a very small, ill-developed girl of six. The stone, a large and very hard lithic acid one, was actually too bulky to pass the pelvic outlet. An attempt was made to crush the stone, but it resisted our strongest lithotrites. The high operation was therefore performed, but the child died exhausted on the fourth day. Lithotrity has seldom been practised in this hospital, not at all last year. Why this should be so I cannot precisely say. Hospitals are no doubt guided much by tradition as regards treatment, and our traditions favour lithotomy. We have reason, besides, to look upon it with favour, our results for many years past having been uniformly excellent—better than lithotrity. The old crushing operation, with many sittings, was never liked by native patients. They always expect to be cured at once, and we used to find great difficulty in inducing them to submit to the necessary delay; they could not understand the reason for repeated operations. Accordingly they much preferred cutting as more expeditious and, as far as our experience went, equally safe, if not safer. Even with the single-sitting operation, which, by the way, our native patients appreciate, our experience remains the same. Of the two operations, the mortality in 1882 was actually greater for crushing than for cutting. In the present year, however, I have taken to single-sitting lithotrity in adults, and so far with most satisfactory results.

Herniotomy.—This operation was performed on nine occasions for strangulated inguinal hernia; six cases recovered, and three died. In one instance death was due to tetanus, which came on after the patient was pronounced out of danger from the operation. In a second fatal case, a man of sixty, the gut was gangrenous, and, although the patient survived for nearly three weeks, he eventually succumbed to exhaustion. The third death was due to exhaustion, the patient being almost moribund at the time of operation. Cases of strangulated hernia, when operated on in time, do surprisingly well here. Could patients be only induced to come early enough for treatment the mortality would, I am convinced, be very small. In my experience peritonitis, even in the worst cases, is very rare; and a reduction without opening the sac is quite exceptional. As a rule, we now ligature and remove the sac. The radical cure of hernia by ligature and excision of the sac, with closure of the external ring by silver sutures, was undertaken in three cases; two of these were successful, and the third died of tetanus when well advanced towards recovery. The isolation and removal of the sac is one of the most troublesome operations I have performed.

Sixteen large tumours were removed, amongst them two scrotal ones. Neither of the latter was very large, and both cases did well. As compared with its frequency in Calcutta, the disease on this side of India is very rarely met with. There was nothing very remarkable about any of the others, with one exception, that of a sebaceous tumour of the scalp, which was large enough to hang down between the shoulders. Amongst miscellaneous operations, external urethrotomy was performed on three occasions, with successful results; castration, twice for cystic testicle and twice for hæmatocele; tracheotomy three times; and the penis was thrice amputated for epithelioma. In two of the latter cases the disease was so far advanced as to necessitate the removal of the whole organ. In one of them the scrotum was involved, and this, with both testicles, was also removed. The urethra in each case was fixed in the posterior angle of the wound, just in front of the anus, and with highly satisfactory results. Abdominal section was once performed for intestinal obstruction, supposed to be caused by the pressure of a large solid ovarian tumour on the ascending colon. The real cause of obstruction, however, was found to be a cancerous growth, involving the cæcum and ascending colon. This was removed and an artificial anus made, but the patient quickly succumbed. There was a large solid ovarian growth on each side. The case was in charge of my colleague, who will no doubt in time publish the particulars. During the year I met with one case of epithelioma of the upper lip in a woman.

Minor Operations.—Our hospital practice in this department of surgery is not inconsiderable. Last year, for example, there were 550 abscesses incised, 346 hydroceles tapped, forty-six fingers and toes amputated, thirty-seven circumcisions performed, and 1391 teeth extracted. Many other operations, too numerous to mention, were also done. As regards hydrocele, the treatment by injection of tincture of iodine is still successfully followed here; it is, at least, an exceedingly rare occurrence for one of our patients to present himself for a repetition of this treatment. Most of the minor operations are done by the senior students under my superintendence.

A word or two about *Anæsthetics*. Here we invariably use chloroform. It is administered on an average 500 times yearly, and, as far as I have been able to discover, we have not to record a single death against it. I have seen, however, more than one narrow escape. No apparatus is employed; it is given from a cone of lint held over the mouth and nose. Native patients come easily and quickly under its influence, and it is quite unusual for them to suffer from sickness after it. A few years since ether was largely tried, but had to be given up in consequence of the very severe and troublesome bronchitis which generally followed. I need hardly say that we are perfectly satisfied with chloroform and with our method of administration.

This short and imperfect account of a single year's surgical work in an Indian native hospital will at least show the profession at home that we are not idle, nor, in spite of many drawbacks and difficulties, I may venture to add, unsuccessful. There is here a large, and to a great extent unworked, field for scientific investigation and experiment, and my only regret is that, from causes unnecessary to mention, we have been able to accomplish so little.

ON the 31st ult. the Colchester new main drainage works, which have just been completed, were handed over to the Mayor of the borough, and accepted by him on behalf of the corporation. They have been constructed at a cost of £55,750.

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A CASE OF

SYPHILIS, AND SOME OF ITS EFFECTS.

TWO CASES OF INFECTION THROUGH THE FŒTUS, AND LOCOMOTOR ATAXY.

BY THOMPSON FORSTER, M.R.C.S., L.S.A.,
FORMERLY HOUSE-SURGEON TO THE MANCHESTER ROYAL INFIRMARY.

L. J. F——, a dark, phlegmatic, temperate man, aged thirty, of gentle disposition, fair intellectual power, and highly moral, excepting for a short time, sought advice in September, 1862. He had a small hard chancre, which was followed by enlarged hard glands in the groin. He remained in this condition for some weeks, when the glands gradually resumed their normal condition. In January, 1863, he suffered from slight sore-throat. The local treatment consisted in the application of nitrate of silver; mercury and iodide of potassium were prescribed, which were continued for four months, long after all symptoms of the disease had disappeared. From 1863 until the spring of 1882 he had no symptoms of syphilis. In January, 1865, he married a very healthy, strong girl. In April she had sores on the vulva, aborted in May, had ulcerated sore-throat, and was covered with a copper scaly rash. In May, 1866, a seven months' child was born, with dry wrinkled skin, and soon after had sore mouth, coppery rash, rough skin, snuffles, &c., and died in ten weeks. The mother gradually acquired, and continued to have, fair health, until May, 1868, being then pregnant, when she was suddenly seized with difficulty of breathing, and died before any medical aid could be obtained.

In May, 1872, L. J. F—— married again. His second wife was also a very healthy girl. She became pregnant in June, suffering from copper rash, debility, loss of flesh, and miscarried in November. The child lived a few hours only, was shrivelled, small, and apparently diseased. The mother recovered slowly, but did not become pregnant for some years. After consultation, although the opinions were opposed to it, I put her under a course of mercury and iodide of potassium in 1876, as well as her husband, for over two months. They both regained good health. In 1877 she became pregnant a second time, and in July, 1878, a healthy eight months' child was born. In January, 1879, she again became pregnant, a healthy child being born at full time in March, 1880. In January, 1881, L. J. F—— had a fall, the effects of which he felt for a time, and then they passed off. In the spring he began to show symptoms of locomotor ataxy; in the following winter numbness of the end of the thumb and finger, hesitation in speech, slow walk, loss of knee action, &c., were well marked. The symptoms rapidly increased in intensity, and he died in the autumn, after having suffered very severely from delusions. It was very difficult to make his immediate friends understand the gravity of the case. At a consultation in the spring the prognosis was rapid increase of disease and probable death.

Remarks.—I think this case worth recording from the length of time it was under observation and the many interesting points exhibited—namely, the effects of the mercury and iodide of potassium; the infection through fœtus in both cases, though modified in the second; the caution necessary in giving an opinion as to marriage after syphilitic infection; the curious way that L. J. F—— remained healthy personally as far as could be seen for the long period, yet infecting two others at different periods; his attack of locomotor ataxy and death, in spite of free treatment with mercury and iodide of potassium. During the case two physicians and one surgeon, very eminent in London, were consulted.

A NEW METHOD OF TREATING SPRAINS.

BY THOS. L. SHEARER, M.B., C.M. EDIN.

EVERYONE who has had sprains to treat in practice must have been at times annoyed by the slowness of recovery of the injured part. This is not so important in hospital patients, many of whom, enjoying the life diet &c. of these institutions, do not object to prolonged treatment; but in the wealthier classes in private practice the surgeon must often hear complaints that the injury is so long in recovering. I have had a considerable number of sprained limbs to treat, and, after employing the usual plans of treatment, was led to adopt a new agent—clay. The clay is simply that used for making bricks, free from gravel, dried, and finely pulverised in a mortar. The powdered clay is mixed with water so as to form a thick and moist consistence. This is spread on muslin to the depth of a quarter of an inch, and applied entirely around the part. Over this is placed a rubber roller bandage, just lightly enough to keep the dressing from shifting and to retain the moisture. At the end of twenty-four or thirty-six hours the dressing must be renewed. It may be well to relate a few cases by way of illustration.

CASE 1.—Mr. T——, aged fifty-eight, was thrown from his carriage, and in addition to other injuries, received a severe sprain of his ankle, completely incapacitating him from motion of any kind. The part was hard, swollen, intensely painful, and throbbing. The dressing, as above described, was applied, and in twenty-four hours the pain was almost entirely gone, and the swelling to a great degree had subsided. The dressing was renewed daily, and in eight days the patient was going about attending to his business. The part was free from pain and natural in every respect.

CASE 2.—Mr. McC——, aged sixty, slipped and sprained his ankle so severely as to confine him to bed. The treatment was the same as that employed in Case 1, and the patient was out and walking in the streets in ten days.

CASE 3.—Mrs. A——, aged seventy-four, in stepping from her carriage missed her footing, and twisted her left knee violently. In a few hours the part was greatly swollen, hot, throbbing, and painful; the least motion of the joint caused excruciating agony. Pressure over the ligament was especially painful. Next day I saw the patient, and applied the clay dressing. The day after the patient was much easier, the swelling rapidly subsiding. The pain was almost *nil*, and movement of the part was not followed by such distress. The lady was walking in her house in ten days after the injury.

Dr. Hewson, of Philadelphia, about ten years ago introduced earth as a means of treating fibroid tumours of the uterus, and also sprinkled burns with the dry earth, claiming that the tendency to deformity in the latter cases was lessened. However, I am not aware of sprains being previously dressed with clay, and it was thought as well to lay the efficacy of the method before the profession. A number of other cases could be cited, but they would simply be a repetition of those already mentioned. While speaking of clay, it would, perhaps, not be amiss to state that the powdered dried earth sprinkled on the surface of an ulcer, and adhesive straps applied over it, is a capital dressing for cases which are so weak that even the weakest ointments tend to break down the granulations.

Baltimore, U.S.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nullas autem estalia pro certo noscendi vias, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

BONY ANCHYLOSIS OF LOWER JAW; REMOVAL OF A WEDGE-SHAPED PIECE OF BONE ON EACH SIDE; RECOVERY, WITH GOOD MOVEMENT OF JAW.

(Under the care of Mr. SYDNEY JONES.)

FOR the following notes we are indebted to Mr. W. H. Battle, surgical registrar.

T. A. H——, aged eighteen, was admitted on Nov. 22nd, 1883. Family history and previous history good. When between two and three years of age patient fell from a window on to a stone pyramid. The medical man called in did not say for certain whether the jaw was broken or not, but treated the case as if it had been a fracture. When the bandages were removed it was found that the lower jaw was fixed and the patient was unable to open his mouth; there was, however, a small interval between the teeth in front, and this, it would seem, was maintained by corks in the course

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of treatment. Nothing more was done until the boy was about seven years old, when he was weekly put under chloroform and his jaws were separated a little each time, and boxwood plugs placed between them in the intervals. This treatment was continued for two or three months, at the end of which time the jaws were separated about half an inch in front, and the upper and lower back molars were just separated, but no more. The boy was, however, quite unable to move the jaw. He discontinued the use of the plugs after about another month, and the jaws gradually began to close again from behind forwards. Six months before admission the bicuspids were separated by about one-eighth of an inch, but afterwards quite closed. About three weeks before admission patient had some severe aching pain extending down the regions of the ascending rami of the jaw, lasting for two or three days, at the same time he noticed that several small pieces broke off his molar teeth; but he had noticed this before the pain, and the same thing occurred a week before admission, when he had a second attack of pain. His lower jaw had not grown in proportion to the rest of the face, and in consequence it appeared to recede more and more as the upper part of the face developed. Latterly he had taken nothing but liquid food, but when taking solid food he used to rub it between the tongue and the teeth or hard palate.

On admission it was noted that the patient was well nourished, but with a very small chin, and the lower jaw small, out of proportion to the face. He complained of inability to open his mouth. The lower jaw was firmly fixed, and no movement of it could be obtained. The upper incisor teeth projected about half an inch in front of the lower ones, leaving an opening through which the patient took his food. On the right side the upper canine teeth projected in front of the lower ones. The first upper bicuspid was wedged between the lower canine and first bicuspid, and seemed to be perfect. The second bicuspid was similarly wedged between the two lower bicuspids, but the greater part of the crown was gone. Behind this there were no teeth in either jaw, the gums being closely approximated as far back as the alveolar processes of the jaw extended; behind the alveolar processes an interval was present. On the left side the upper canine was free and some distance in front of the lower one; the lower canine was wedged between the two upper bicuspids, and all these teeth seemed to be entire; behind these there were what appeared to be two other teeth, but whether belonging to the upper or lower jaw was not apparent. As on the right side, the gums were closely approximated, and where the alveolar processes ended a similar interval existed. The two lower central incisors were absent, having been removed whilst the patient was formerly under treatment. Over the chin there was a linear scar, marking the position of the wound received at the time of the accident. On passing the finger backwards along the lower border of the jaw a notch could be felt at a point which corresponded to the junction of the horizontal and vertical portions, the latter projecting downwards a little. There was some pain on pressing over the right temporo-maxillary articulation. Otherwise the patient was healthy.

On Dec. 12th, the patient having been put under the influence of an anæsthetic, Mr. Sydney Jones, after removing some of the teeth to facilitate the introduction of the lever between the jaws, cut down on the temporo-maxillary articulation on the right side by means of an incision an inch and a half in length, and just below and parallel to the zygoma. In cutting down to the bone several vessels were divided and ligatured. After division of the masseter muscle the periosteum was separated from the bone; the condyle being firmly anchylosed to the zygoma and temporal bone, and quite immovable. A triangular wedge-shaped piece of bone, the base of the wedge being behind, was removed from the condylar process by means of the saw. The lower jaw was then found to be movable to a slight extent, and after the introduction of a lever between the jaws, the interval, which had only been half an inch, was increased to one inch and a half. The lever was then placed between the jaws on the left side, and they were likewise found to be capable of separation. On this account operation on the left side was postponed. A drainage-tube was inserted, the wound closed by interrupted silk ligatures, and dressed with iodoform dressing. Next day the patient complained of pain in both temporo-maxillary articulations, but was otherwise comfortable. Morning temperature 98°; evening 101·4°. On the afternoon of the 14th some slight forcible movement of the jaw was made, and after that, until the 18th, there was a pretty constant oozing of blood from the wound; on that day two of the stitches were removed, and the wound was injected with iced carbolic solution, iced carbolic solution being used also as a dressing. As this did not arrest the hæmorrhage, the remaining stitch was removed on the 19th, and the wound was thoroughly cleansed with iodoform. Before the wound was cleansed the temperature on several occasions had been above 100°, though not higher than 100·8°. On the 17th the patient spat some blood, but on that day only, and there was no clear evidence of its source. On the 20th there was a good deal of pus of a brownish colour, without odour.

From this time the progress was satisfactory; the wound gradually closed with diminishing discharge, and after about a week the patient was able to move his jaw voluntarily, though with some pain in the temporo-maxillary regions, greater on the right side. Chlorinated soda lotion was used as a dressing, and strapping to approximate the edges. At noon on the 21st the temperature was 101·2°; in the evening 100·4°. On the 22nd and 23rd, in the evening 100°. With these exceptions it had been normal or subnormal.

On Jan. 14th, 1884, the wound was completely healed. There was no pain on movement of the jaw, but the range of movement not having been so well maintained as the patient wished, it was decided to operate on the left side. The patient having been again anæsthetised, Mr. Sydney Jones proceeded to perform an operation on the left side similar to that which he had previously done on the right. In making the incision several small vessels required ligaturing, and on separation of the periosteum a similar condition of anchylosis was disclosed. By means of a saw and a bone forceps, a wedge-shaped piece of the jaw-bone was removed, with the effect that the jaws could be separated much more widely than had before been possible, and this opening was further increased by the use of the gag. The wound was closed with silk interrupted sutures, a drainage-tube inserted, and dressed antiseptically.

The patient had a good deal of pain for several days after the operation, and his face swelled much on the left side. On the 19th the stitches were very tense and there was some distension of the wound, which was filled with clot and slightly offensive in odour; there had been a good deal of oozing. Iodoform dressing was applied. The temperature on the 17th and 18th varied from 98·4° to 101·6°. On the 19th the morning temperature was 97·2°, evening temperature 99·6°. Slight oozing continued until the 21st. On the 25th the wound was looking healthy and the surrounding inflammatory swelling was much diminished. The jaw could be moved much more than before operation and without pain. There is slight displacement of the jaw to the right side. By the 31st the swelling of the face had disappeared and the wound was rapidly filling up.

From this time the patient frequently separated his jaws with the handle of a spatula. By this means the range and movement had increased. On Feb. 9th movement was entirely vertical and to the extent of about an inch, no lateral movement being possible. The masticating power was rather feeble, but this also had shown improvement, and the wound had healed. After Jan. 19th the temperature did not exceed 99·8°.

GUY'S HOSPITAL.

TWO CASES OF LUPUS; SCRAPING AND APPLICATION OF CARBOLIC ACID.

(Under the care of Mr. BRYANT.)

CASE 1. *Lupoid Papilla of Nose; Scraping and Application of Carbolic Acid; Cure.* (From notes by Mr. Sandol.)—W. S——, aged thirty-two, a soldier in the Life Guards, was admitted on March 7th, 1883. His mother died of cancer. Patient had had gonorrhœa, but not syphilis. He had recently returned from the Egyptian campaign. He first noticed two warts, one situated on the upper third of the bridge of the nose, and the other on the inner side of the nose. These first appeared three months before admission, and in boxing the warts got frequently knocked off, and ultimately an ulcer formed. On admission there was an irregular pinkish-looking papilla on the inner left side and upper third of the anterior surface of the bridge of the nose. This was covered with dry scaby crusts. Under chloroform the papilloma was scraped with a scalpel. There was very little bleeding, which was quite stopped by carbolic

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acid applied on little bits of lint. The nose was dressed and the surrounding parts washed with glycerine. Under the microscope sections of the material showed slightly enlarged papillæ covered with a somewhat thick layer of cuticle. All the tissue beneath the *rete* layer was thickly infiltrated with granulation tissue, especially round and between the vessels of the corium. It was indistinguishable from a well-marked case of lupus. The enlargement of the papilla was not at all a marked feature. On March 26th the patient left the hospital with the wound healed, except a spot about the size of a pea.

CASE 2. *Lupus of Face and Left Forearm; Scraping and Application of Carbolic Acid; rapid Convalescence.* (From notes by Mr. Fowler.)—Charles A——, aged fifteen, was admitted on Sept. 6th, 1882. His family were healthy. Two years ago he first noticed some little boils on the right side of his face; they spread quickly to the other side. He was in the London Hospital, where something was done under chloroform, and he was discharged cured. The disease returned, and he had been an out-patient to the London Hospital. On admission the patient had lupus of the face. The disease covered the nose, which was much flattened. It had spread thence symmetrically over both sides of the face, reaching down as far as the hyoid bone. On the right side it extended a short distance between the lobule of the ear and the mastoid process, and on the cheek reached up to the outer canthus, opposite which there was a large elliptical scab about an inch across. Opposite the angle of the lower jaw there was another smaller scab. On the left side it did not extend quite so far behind the ear or on to the forehead. There was a very small part on the chin free from disease, and on this was a small scab about the size of a pea. The angles of the mouth were rounded, the upper lip was everted, and the mucous membrane resembled the neighbouring skin, being whitish and shining. The lower eyelid was everted. The disease was marked by a well-defined red and swollen border. On the back of the left hand was a circular patch of granulation tissue, which was beginning to heal in the centre; it extended to the outer border of the hand and along the little finger as far as the first inter-phalangeal articulation, and along the ring finger for some distance. The metacarpo-phalangeal joint of the ring finger was destroyed, but movement was still left. The metacarpo-phalanx was destroyed, and the finger much thickened at its base. On the left forearm was a raised ring of granulations running round the wrist. On the arm was another patch. On the 12th, under chloroform, the left half of his face was scraped, and afterwards touched with pure carbolic acid and dressed with compound tincture of benzoin. On the 26th the right half of the face was similarly treated, but acid nitrate of mercury was used instead of carbolic acid. On the 29th the part touched with nitrate of mercury had sloughed. Part of the slough was removed. On Oct. 5th, on each side of the face and just below the zygoma was a long triangular raised area of granulation tissue; the granulations were red, uniform, and healthy. The nose and adjacent part of each cheek were covered with cicatricial tissue. The hand, forearm, and arm were about the same as when admitted. The wounds were dressed with cod-liver oil. On the 12th he was discharged. A fortnight later the wound on the cheeks was gradually cicatrising.

Medical Societies.

ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the Surgical Section of the Academy was held on May 9th.

The following living specimens were exhibited:—Two cases of Excision of the Knee, in youths aged eleven and thirteen years respectively, by the President; cases of Amputation at the Hip-joint, by Mr. Stokes and Mr. O'Grady. Card specimens were shown by Mr. Colles, Mr. Stokes, Dr. M'Ardle, Mr. Kendal Franks, Mr. O'Grady, and Mr. L. H. Ormsby.

Mr. L. H. ORMSBY read a paper on Acute Traumatic Malignancy, and detailed the history, progress, and result of four instructive cases in connexion with the subject. He endeavoured to prove that a distinct clinical set of malignant tumours rapidly following local injury might be classified under the term "acute traumatic malignancy," believing, as he did, that occasionally, under the stimulus of severe local irritation, the tissue elements, which under favourable circumstances would assume only the necessary activity for healthy repair, might take on a more prolific cell formation, ending in a very rapid development of malignant disease belonging to either the group of sarcomatous or carcinomatous formation. In his opinion, however, local irritation was not alone sufficient to account for the rapid development of such tumours, but it was an important factor when there was already an inherent tumour-forming diathesis present in the constitution and the local irritation or injury was accidentally received.—Mr. THOMSON, referring to the clinical aspect of the cases, said, if an operation were required at all, it should be done at such a distance from the seat of the disease as would render the return of it as remote as possible. In the great majority of those cases the disease returned sooner or later. That evening was exhibited a case in which Mr. Stokes had nearly three years ago performed amputation of the hip-joint with satisfactory result. The patient had been suffering from one of these tumours consequent on an injury to the thigh. After consultation the limb was amputated. Though the patient was in an extremely low condition, the result was satisfactory, and so improved did he now appear that there was no indication of a return of the disease. When the tumour existed in the tibia, the question was whether the patient should be subjected to amputation at the hip-joint or merely amputation through the shaft of the femur.—Mr. ORMSBY, in reply, said that the object to be aimed at was to go as high as possible above the seat of the disease. He had amputated at the upper third of the thigh, being afraid of subjecting the patient to the risk of amputation at the hip-joint.

Dr. E. H. BENNETT read the notes of a case of Excision of the Knee, having exhibited the patient at a previous meeting. The child, a girl, is now ten years old, and a period of nearly two years has elapsed since the operation. From early childhood she suffered from disease of the knee, which had led to suppuration with open abscesses. These healed, leaving the knee bent. She was then able to move about, although very lame, until six months before her admission to Sir Patrick Dun's Hospital, when the disease became re-established, and she could move only with the help of a stick, being unable to bear weight on the joint. Then sinuses appeared, and the child's health began to fail. The ordinary operation was performed, a great deal of bone being of necessity removed. The limb was placed in a plaster-of-Paris bandage, and the wounds closed, but the bones failed to unite. After seven months' treatment health was restored, and the limb could be flexed to a right angle, while the girl could stand on it without other support. She walked with trivial lameness, and could go up and down stairs without any difficulty.—Mr. THORNLEY STOKER said the best tribute he could pay to Dr. Bennett's observations would be to endeavour in his next case of excision of the knee to obtain a movable joint or a movable limb without a joint. He asked whether it was from theory or experience that the sections through the tibia and femur were made. It seemed better to fashion the surfaces so as to resemble naturally the upper surface of the tibia and the lower surface of the femur.—Mr. CORLEY thought that success in excision of the knee-joint depended on securing immobility, and on the apparatus employed for that purpose. If fibrous union could be secured without endangering the patient's chance of life, the proposed procedure would be justifiable, but the evidence would not justify their looking for a rigid limb.—Mr. THOMSON contended that the force of Mr. Corley's objection depended upon whether or not the wound was suppurating. Given a wound without suppuration, union almost immediately ensued. If the cut surfaces of the bones were closed in and the wound made subcutaneous, he saw no danger from commencing passive motion of a mild character at an early period. There was nothing impossible in looking for a movable joint, the surfaces being fashioned to resemble the original surfaces.—Mr. ORMSBY attributed the result more to good luck than good guidance. If passive motion were set up too soon in strumous subjects, the end would be amputation. At the same time he did not see why there should not be motion in the knee-joint as well as in the elbow-joint following resection.—The PRESIDENT, having seen the case, said the child had an admirable limb. He had at present a case of fibrous union. He would not set up passive motion, fearing the result would be amputation; and he agreed with Mr.

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Corley that he would not look for fibrous union, but would endeavour to obtain bony union, in which he had been successful.—Dr. BENNETT, replying, said he had attained his object in raising the question whether in dealing with excisions of the knee it was good surgery to have two strings to one's bow, rather than be bound down by the rigid rule of osseous union. He had not considered the question of shaping the surfaces. Leaving the patella he regarded as a source of danger, a focus of disease; but he would leave the tendon intact. The cases requiring the strictest rest were those rare ones of acute disease. The more suitable cases for excision of the knee-joint were those in which the disease had passed the acute stage, and where deformity existed, and for that class he would obtain a movable joint.

Dr. EDGAR FLYNN read a paper on Acute Traumatic Tetanus, and brought under notice a case which had been treated in St. Michael's Hospital, Kingstown. It was that of a labourer who had the middle and ring fingers of his right hand severely crushed. Symptoms of tetanus presented themselves on the fifth morning after the accident. The treatment relied on was half a grain of cannabis indica in the form of pill every second hour, with a mixture of twenty grains each of hydrate of chloral and bromide of potassium every fourth hour, to relieve the severity of the tetanic spasms. Inhalations of nitrite of amyl were used with very marked relief. Nutrient enemata, consisting of brandy, beef-tea, and opium, were given twice a day. Hypodermic injections of morphia were frequently given during the progress of the case, more especially at night. An ice-bag was applied to the spinal column. The patient underwent all the symptoms of acute traumatic tetanus in a marked form. He left the hospital six weeks and a half after receipt of the injury in good health, but very much emaciated.—Dr. F. A. NIXON mentioned an acute case in Mercer's Hospital, where the brother of the notorious Joe Brady, having suffered an injury to his foot and had his great toe amputated, recovered after a severe struggle for life.—Dr. M'ARDLE drew attention to five cases, two that were cured under Dr. Mapother's care and three fatal under his own. Dr. Mapother had administered thirty-grain doses of hydrate of chloral per rectum. In experimenting on the lower animals he used the electric current, and when applied from the nape of the neck to the middle of the lumbar region the spasms ceased. In his own cases the disease came on in one, two, and four days respectively after the injury.—Mr. THORNLEY STOKER'S experience was that nearly every case of tetanus occurring within eight or ten days after the injury died, and nearly every case that occurred twelve or fourteen days after the injury got well. He knew of no treatment that did any good in the acute stage.—Dr. M'ARDLE mentioned a case in which tetanus came on two months after the injury.—Dr. DOYLE said he had been called to see a case pronounced colic, but which he recognised as well-marked tetanus, and found that it arose from a neglected ulcer on the leg. Iodoform applications effected immediate improvement. Hydrate of chloral and bromide of potassium were administered in ten or fifteen grain doses every half hour, with or without morphia. The patient did remarkably well, and recovered.—Dr. BENNETT observed that where tetanus occurred two or three days after the injury, the cases were fatal; but where it did not, the disease must be subacute, and there was a fair chance of recovery. Where the wound was open, tetanus might at any time supervene. He had seen it occur in a case of compound fracture of the finger two months after the injury.—Mr. CORLEY commended Prof. Smith's classification—hyperacute, acute, and chronic. In the first the disease was immediate, and invariably fatal; the acute cases occupied the boundary line; and the chronic usually recovered. No doubt cases had recovered by nerve-stretching, but there was nothing more unphilosophic than stretching a nerve to cure disease of the spinal cord.—The PRESIDENT said the longest duration of any case he had seen was seventeen weeks, and the shortest was forty-eight hours. He had seen fatal cases of tetanus following burns thirteen days afterwards. In the case of a young girl in the City of Dublin Hospital during signs of tetanus, the treatment consisted of belladonna, hydrate of chloral, bromide of potassium, and ice to the spine; but as she was growing worse and dying, he stretched the median nerve, and the spasms ceasing, she recovered. In Dr. Flynn's case nerve-stretching had not had a trial, as both the great sciatic and anterior crural nerves ought to have been stretched.—Dr. FLYNN said the great sciatic nerve was stretched.

Reviews and Notices of Books.

The Elements of Physiological and Pathological Chemistry. A Handbook for Medical Students and Practitioners. By T. CRANSTOUN CHARLES, M.D., Lecturer on Practical Physiology at St. Thomas's Hospital. London: Smith, Elder, and Co. 1884.

THE interest taken at the present time in animal chemistry, as regards its relation to both the normal and morbid processes occurring in the body, is shown by the numerous works on the subject that during the last few years have been brought before the notice of the profession. Twelve years ago no work in the English language existed in which the various operations required for the separation of the products of the tissues and fluids of the body were succinctly described. The only works then available for the student were Day's Physiological Chemistry and the translation by the Sydenham Society of Neubauer and Vogel's work on the Urine. The former of these, however, merely gave an account of the chemical processes carried on in the economy, and no attempt was made to describe the procedures necessary for the analysis of the tissues, fluids, &c.; whilst Neubauer and Vogel's work was limited to the qualitative and quantitative examination of the urine. The first systematic work on physiological chemistry, which endeavoured to meet the want felt for a simple and comprehensive laboratory guide for the study of this subject, was supplied by Dr. Ralfe early in the year 1873, in his book entitled "Outlines of Physiological Chemistry," which was followed a few months later by the larger work edited by Prof. Burdon Sanderson, assisted by Prof. Klein, Prof. Michael Foster, and Dr. Brunton, and which is known as the Handbook for the Physiological Laboratory. In 1880 Professor Gamgee published the first volume of his work on Animal Chemistry, a work which is not only a laboratory guide, but also deals in a most thorough manner with the chemical processes of the organism, and which, when concluded, will be undoubtedly the most complete treatise on the subject in the English language. In the work now under notice, Dr. Charles presents us with an outline of the most important branches of physiological chemistry, as considered under the heads of Nutrition and Foods, Digestion and the Secretions concerned, the Chemistry of the Tissues, Organs, and remaining Secretions; the Excreta, the Fæces, and Urine. Evidently no pains have been spared to render the work complete and accurate; but the author throughout seems to have been struggling with the difficulty of writing for medical students and practitioners (his announced intention), at the same time seeking to make his work a standard book of reference. To us, indeed, the handbook appears of rather too advanced a character for "students and practitioners," and is likely to prove of more service to the advanced student who has made animal chemistry a special study, and who has overcome the elementary difficulties, than to one who relies on it for an introduction to this difficult and complex study. Apart from this, we can speak very favourably of the work, which will make a place for itself in the literature of the subject. One great merit of the book lies in the numerous tables of analyses and the references to German authorities, which will be found exceedingly useful to those who are making physiological and pathological chemistry a special study.

A Statistical Inquiry into the Nature and Treatment of Epilepsy. By A. HUGHES BENNETT, M.D. London: H. K. Lewis. 1884.

THIS little book is a collection of three papers which have already appeared in the medical journals during the past three years. It is a careful collection of well-recorded facts and an example of painstaking and conscientious research.

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It may well come under the category of those books which Bacon thinks worthy of being "chewed and digested."

The first chapter consists of a statistical inquiry into a variety of points in the etiology and symptomatology of the disease. This is so arranged that the percentage occurrence of the different phenomena is demonstrated. The second chapter is of special interest to the practical physician, and attempts to prove by precise numerical data the influence which the bromides exert upon the paroxysmal attacks of epilepsy. This is effected in the following manner. A large number of unselected cases form the basis of the observation. The details of each of these are carefully observed and recorded. The average number of seizures per month prior to treatment are noted, and the same is ascertained after the administration of the remedies. In this way no less than 117 cases have been under observation from periods varying from six months to four years, and elaborate tables are drawn up to show at a glance the result of the treatment. The general results of Dr. Bennett's experience are as follow: 1. "In 12·1 per cent. of epileptics the attacks were completely arrested during the whole period of treatment by the bromides." 2. "In 83·3 per cent. the attacks were greatly diminished both in number and severity." 3. "In 2·3 per cent. the treatment had no apparent effect." 4. "In 2·3 per cent. the number of attacks was augmented during the period of treatment."

The author, further, has constructed a number of special tables to show that under whatever circumstances epilepsy may exist, the general results of treatment appear to be the same, and he concludes that "the form of the disease, whether inherited or not, whether complicated or not, recent or chronic, in the young or in the old, in healthy or diseased persons, appeared in no way to influence treatment, the success being nearly in the same ratio under all these conditions."

In the third chapter the question of the effects of the prolonged administration of the bromides in epilepsy is discussed. The author points out that on this subject there is much difference of opinion, and this he thinks is due to the difficulty of distinguishing between the symptoms of epilepsy itself and the effects of bromide poisoning. As the result of his own experience of upwards of 300 cases he has come to the conclusion that the dangers supposed to attend the prolonged use of these drugs has been over-estimated. He furnishes a series of 141 cases, which have been under large doses of the bromides for continuous periods, varying from one to six years. These indicate that the proportion of toxic symptoms is comparatively small, while that of cases mentally and physically unimpaired is large. The writer is of opinion that the epileptic constitution is more tolerant of the effects of the bromides than is that of the healthy subject, and that bromism is always more prominently developed in the latter. He does not hazard any conclusion as to whether these remedies will finally eradicate the disease, but states his conviction that under favourable circumstances this is not impossible.

Medical Electricity. By A. DE WATTEVILLE, M.A., M.D. London: H. K. Lewis. 1884.

NOTWITHSTANDING extensive researches and a voluminous literature, it must be confessed that the science of electricity in its relations to medicine is a subject which still remains comparatively unrecognised in this country. In other countries, especially in Germany, electricity is unhesitatingly acknowledged to be an important agent in the diagnosis and treatment of disease. Here, however, even at the present time, there is an uneasy feeling amongst the profession that there is something, as the Scotch would say, "uncanny" about the proceedings, and a lurking feeling of distrust against those who advocate its claims. A careful study of the work before us will go far towards dissipating any lingering delusions in this direction. It will indicate to the reader that, far from this being a subject easy of comprehension or capable of popular adoption, it is one of a most complicated and intricate character, and demands knowledge of the most varied and extended nature. The author, Dr. de Watteville, has for many years devoted his attention to the study of electricity in all its branches, and more especially in its relation to physiology and medical science. His labours have been conducted in the disinterested spirit of honest inquiry, and for this reason he has gained the support and confidence of his medical brethren.

The book is conveniently divided into four chapters, treating of Electro-physics, Electro-physiology, Electro-diagnosis, and Electro-therapeutics. We are glad to see that in Chapter I. the author has omitted many of the illustrations of electrical instruments, which gave the first edition too much the appearance of an illustrated catalogue. His explanation of Ohm's Law, the electrical units and density of current, is clear and concise. The importance of the use of the galvanometer, or more properly Gaiffe's modification of the galvanoscope, is thoroughly explained. The advantage to be gained by the arrangement of the elements in series or simple circuits is aptly illustrated by numerical examples. He has adopted Erb's sizes of electrodes, so that the terms fine, medium, &c., have definite meanings.

The experiments or exercises described in the chapter on Electro-physiology if repeated by the student will prove a valuable means of acquiring a knowledge of the manipulations necessary for the practice of diagnosis and treatment by electricity.

The chapter on Electro-diagnosis is a natural continuation of the preceding one, because the description of electrical reactions of normal nerve and muscle forms a suitable introduction to the study of the reactions exhibited by the same tissues in diseased conditions.

In the chapter on Electro-therapeutics, Dr. de Watteville has described the *rationale* and methods of electrisation, and he has succeeded in his endeavours to avoid excessive enthusiasm. He says "it is not so much electricity which cures as its rational and skilful application, and the often used expression 'trying electricity' conveys about as much meaning as 'trying water,' without specifying whether the water is to be hot or cold, in the shape of ice or steam, applied externally or internally, and so forth."

Dr. de Watteville censures somewhat severely those who use the term "galvanisation of the sympathetic." He considers that this "offensive expression" is founded upon "erroneous physics, imaginary physiology, and fantastic pathology." In order to remedy these evils he adopts the term subaural galvanisation. The author has also endeavoured to remedy certain "mongrel, barbarous, and ungrammatical" expressions in the nomenclature of the subject. He considers that "cathode" should be spelt with a k, and that "cathodal" should be kathodic. These changes may have some *raison d'être*, but few will care to substitute hypokinesis and hyperkinesis for paralysis and spasm.

VENTILATION OF THE HOUSE OF COMMONS.—The Select Committee appointed to investigate the causes of the offensive smells recently complained of in the House of Commons presented their report on the 30th ult. They find, after careful consideration, that the ventilation and drainage of the building are in admirable condition, but that the Westminster drain and sewer which runs from Abingdon-street to the Thames Embankment is in such a condition as to constitute a nuisance. The committee recommend that the Local Government Board should instruct one of its inspectors to examine further into the matter, and that the committee should be reappointed next session to consider the inspector's report.

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BRITISH MEDICAL ASSOCIATION.

FIFTY-SECOND ANNUAL MEETING, HELD AT BELFAST, JULY AND AUGUST, 1884.

THE meeting of the British Medical Association in Belfast, which concluded last week, will long be remembered as one of the most enjoyable gatherings of that body. The members of the Association who were present repeatedly expressed their great gratification at the cordial reception they received, not only from the profession in Belfast but from the general public; while Belfast has reason to be proud not only that a local member of the profession was in the presidential chair, but that all the details of arrangements were so well carried out by the executive committee and the numerous secretaries of the various sub-committees. In THE LANCET of last week reference was so fully made to the admirable addresses of the President, Dr. Ord, and Prof. Redfern, that we need not advert to them. On Friday, the 1st inst., the

ADDRESS IN OBSTETRIC MEDICINE

was delivered by Dr. Kidd of Dublin, who said he should ask his audience to consider Puerperal Fever, mainly from a clinical point of view, referring to the laboratory experiments of scientists and pathologists to illustrate and explain the facts observed at the bedside, where alone disease can be studied. Dr. Kidd then proceeded to consider the various forms of the disease. He described the cases due to traumatic causes. He gave an account of Burdon Sanderson's researches, and said that there were two factors for the production of the poison in these cases—(*a*) the material capable of putrefaction, and (*b*) bacteria to effect putrefaction. The material capable of putrefaction is found in the shreds of connective tissue which die in the contused and lacerated wounds of the soft parts, and this is to be obviated by conducting the labour so as to lessen the amount of injury done. The access of the bacteria to the injured parts is to be cut off by cleanliness, ventilation, and disinfection. But as the germs may also come from other parts within the body to the point where the dead or dying tissue exists, and there set up putrefaction and the elaboration of the septic poison, the indication is to remove the products of decomposition as soon as possible. He then referred to another group of cases due to the retention within the uterus of organic substances, and to a set of cases due to phlebitis. The foregoing groups belong to the class Dr. Barnes calls autogenetic; but the cases Dr. Kidd next considered—i.e., epidemics—present a different clinical history, and seem to depend on entirely different causes. In epidemics the disease may manifest itself before labour has set in. It seizes great numbers at the same time; it observes cycles of development and decline, sometimes disappearing altogether for short or long periods. At its onset it proves fatal to almost all who are attacked; as it declines it becomes more mild in its character, and many of those attacked recover. In all these respects these cases resemble diseases specific in their nature and dependent for their development on the action of a specific epidemic influence. Dr. Kidd gave an account of several epidemics observed at different periods in Dublin, and arrived at the conclusion that there is a large group of puerperal cases that come strictly within the definition of epidemic disease, and that the epidemic thus constituted is a specific disease. He showed that scarlatina and other diseases may occur in the puerperal state, but they are not samples of puerperal fever. If you sow thistles you will grow thistles, and if you sow scarlatina the crop will be scarlatina. Finally, Dr. Kidd stated very fully the septicæmic theory—i.e., that puerperal fever is nothing else but poisoning with septic matter from the genital organs; but he said that this theory seemed to him defective. He sketched the very elaborate precautions which those who held this view recommend for the prevention of this disease, but he showed that the results claimed by them as due to these precautions may not be owing to these precautions alone, for the history of great hospitals, such as Vienna or Dublin, shows that puerperal fever will prevail and cause sad mortality at times, and disappear again, and that the conditions governing its movements have not yet been discovered. From 1857 to 1860, in the lying-in hospital at Vienna the mortality was slight, though disinfectants were not used, while during the three following years, in spite of the systematic and persistent employment of those agents, the death-rate once more assumed formidable proportions. Dr. Kidd concluded his admirable address, which will, we venture to think, long remain a classical paper on puerperal fever, by saying "Let us differ as to our theories as we may, we will all unite in the earnest desire that precautions may prove not only more efficient, but more permanent in their effects."

THE SECTIONS.

On Wednesday the sections all met, and at most of them there were opening addresses by the Presidents.

MEDICINE.

In this section there was a series of very interesting discussions.

1. Dr. George Johnson introduced the subject of Albuminuria in a very exhaustive address, in which he gave a general review of the condition, its consequences, and treatment, and illustrated his remarks by a series of microscopic preparations. He also demonstrated the picric acid test. Drs. Myrtle, Hadden, Thomas, and O'Connor took part in the discussion.

2. Dr. Douglas Powell gave a very elaborate address on the Causative Relations of Phthisis, in which he argued against its contagious nature. Dr. Ward Cousins, Prof. Gairdner, and Drs. Myrtle, Barr, Green, and O'Connor spoke in the debate.

3. A discussion on Rheumatoid Arthritis, opened by a paper of Dr. Duckworth's, read by Dr. Barlow, secretary of the section, was principally remarkable for the very original address of Dr. Gordon, Professor of Surgery in Queen's College, Belfast. Dr. Gordon said he had been studying this disease for thirty years, and the numerous specimens which he exhibited showed clearly the amount of close attention he had given to the subject. He believed it had no connexion with gout or rheumatism, but when it was present there were other evidences of senile changes—viz., atheroma of the vessels and fatty heart; consequently, he considered it to be a form of senile degeneration, but it was difficult to assign its exact cause. He did not think much could be done in the way of treatment; the only remedies he used were iodide of potassium and Fowler's solution. Dr. Gordon's speech impressed those who heard it as being the outcome of most careful study and close observation, and he was frequently applauded during its delivery.

SURGERY.

The opening address of the President (Sir William Mac Cormac) has already been referred to in these columns. There was a very instructive discussion on the treatment of Spinal Curvature, introduced by Prof. Sayre. A number of members followed with interesting remarks, some disagreeing with portions of Dr. Sayre's paper, while others concurred. Mr. Roth, Mr. Keetly, and other gentlemen spoke.

Among the papers read in this section we may mention that of Mr. Makins on Successful Suture of Small Intestine in a case of Fæcal Fistula; the Radical Cure of Hernia by Torsion of the Sac, by Mr. Ball; the Surgical Treatment of Hydatid Cyst of the Liver, by Mr. R. Richardson; and a paper on the Nature of Rifle-Bullet Wounds and the Principles of their Early Treatment, by Dr. Kirkes. Mr. Fagan gave a demonstration of his transport splint in the College grounds.

OBSTETRIC MEDICINE.

In this section, the President, Dr. Clement Godson, who used every exertion to make his department of the meeting a success, gave a very interesting opening address on the Surgical Aspect of Obstetrics and Gynæcology. He showed that it was impossible to practise either of these branches of medicine without "dabbling in surgery," and that it was absurd to argue that an accoucheur should be a physician pure and simple. He explained that a rule forbidding the obstetric physician to perform surgical operations existed in certain of the large London hospitals, and that, as a consequence, the obstetric staff were driven to seek appointments to special hospitals for the treatment of diseases of women to gain experience to enable them to teach in their schools.

A discussion on the Pathology and Treatment of Extra-uterine Fœtation was introduced by Mr. Lawson Tait, who came specially to Belfast for this purpose. A number of members spoke.

Dr. Atthill opened a discussion on the Treatment of

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Intra-uterine Disease, with special reference to the best mode of making appliances for the intra-uterine surface. Dr. Atthill's masterly paper was chiefly remarkable for recommending the injection of iodised phenol into the uterus in the treatment of suitable cases. Papers on the same subject were also contributed by Dr. More Madden and Dr. John W. Byers; and in the discussion which ensued Drs. Kidd, Smyly, and Reid took part.

In this section the President demonstrated the plan of using his four-bladed perforator, and Dr. Kidd showed his method of decapitating the child. Several other interesting papers were read.

PUBLIC MEDICINE.

In this section, the only one to which the public were admitted, there was a great deal of work done.

The President, Dr. Cameron, M.P., delivered a very able, exhaustive, and thoughtful address on the Cholera Microbe, and how to meet it. Papers were read by Dr. Johnston on the Prevention of Epidemics, by Dr. Cullimore on Quarantine, and by Dr. Hunt (New York) on Infectious Diseases. Dr. Kirkes read a very interesting paper on the Visit of the Egyptian Cholera Epidemic of 1883 to Port Said. Prof. Charles A. Cameron (Dublin) read a paper on Inspection of Meat Markets, which excited considerable interest. The discussion on Over-pressure in Schools was closed by the President, who remarked that something might be done by legislation to prevent the evils complained of, not by cutting down education, but by placing education on somewhat more rational lines.

PHARMACOLOGY AND THERAPEUTICS.

Dr. Maclagan, the President of this newly formed section, delivered an opening address on Methods of Therapeutic Research, after which there was an interesting discussion on the British Pharmacopœia, in which Dr. Shoemaker gave an account of the state of the Pharmacopœia in America. A resolution was passed calling for an improvement and revision of the present Pharmacopœia.

The Patent Medicines Stamp Act was brought under the notice of the section by the President, and eventually the following motion, proposed by Professor Hay (Aberdeen), and seconded by Dr. Leech, was unanimously carried:—"That in the opinion of this section the Patent Medicines Stamp Act should be abolished."

Dr. Shoemaker (Philadelphia), a delegate from the American Medical Association, gave a demonstration on New Oleates; and in the discussion which followed Dr. Finny and Dr. Walter Smith of Dublin took part. There was also a debate on Antipyretics, introduced by Dr. Collie (Homerton Fever Hospital), who dwelt on Cold Baths. Dr. Quinlan followed, speaking in reference to salicin, salicylates, quinine, and kairin. Dr. Ord and Prof. Gairdner also took part in this interesting and animated debate. There was finally a debate on Aspiration as a therapeutic agent; and a demonstration of the action of certain drugs on the frog's heart. There can be no doubt that this new section was a marked success.

PHYSIOLOGY AND PATHOLOGY.

In this section Dr. M'Vail read a very able paper on the Pathology of Pulmonary Emphysema, which was criticised by Professor Gairdner and others.

Dr. Alexander (Liverpool) gave a very scholarly address in opening the discussion on the Influence of the Nervous System on Normal and Abnormal Nutrition. Numerous papers were read in this section.

OPHTHALMOLOGY.

After the President had given his opening address on Mature Cataract and its Treatment by a new Operation,

Dr. Wolfe opened a discussion on the following question:—"Does the position of the section in Cataract operations influence Suppuration of the Cornea? If so, what part is played by Septic Infection?"

Dr. Brailey opened a discussion on the Explanation of the Advance of the Iris Periphery in the late stages of Glaucoma. A number of papers were read, and other discussions took place in this section.

PSYCHOLOGY.

Among other matters of interest in this section, Dr. Hack Tuke read a paper on Alcoholic Beverages in British Asylums, in which he narrated the result of an inquiry into the use of alcohol in asylums. Several superintendents approved of beer, while many did not. Alcohol was used as a medicine only in 22 asylums in England, in 13 in Scotland, and in 15 in Ireland—50 in all. Dr. Norman Kerr said that nearly one half of the English asylums had either wholly or partially discontinued the use of alcohol; there were 63 such institutions in all, and there had been either an entire or partial reduction in 29.

THE ANNUAL MUSEUM.

The annual museum, owing to the great exertions of Dr. O'Neill, was a decided success. The purely medical and surgical exhibits were shown in the anatomical rooms, while in the gymnasium and exhibition hall of the gardens appliances relating to sanitary science and public health were to be seen. The show of drugs and instruments was very extensive, Arnold and Sons, Coxeter, Weiss, Marr, Mayer and Meltzer, Wilson and Sons (Harrogate), Allen and Hanburys, Burroughs, Wellcome and Co., Calvert, Corbyn, Stacey and Co., Essinger and Neuberger, Sanitas Co., &c., being among the exhibitors. There was some very good hospital furniture, and filters, tricycles, a doctor's gig, carriage, &c. Dr. Clement Godson exhibited a thermostatic nurse for the bringing up of prematurely born infants, an account of which appeared recently in our columns. This apparatus excited great curiosity, and its mechanism was frequently explained by Dr. Godson to visitors to the museum.

LAST GENERAL MEETING.

At this meeting, after the adoption of various reports, special votes of thanks were passed to the President of Queen's College for allowing the use of the College for the meetings; to the Mayor; to the members of the Belfast and North of Ireland Branch, and the inhabitants of the town and neighbourhood; to the National Telephonic Company; to the honorary secretaries and others who had assisted in the entertainment of the members; and, lastly, to Dr. Cuming, the President of the Association.

The annual dinner was held in the Examination Hall of Queen's College, Professor Cuming presiding, on Thursday evening, July 31st; while on the Friday night the Mayor of Belfast, Sir David Taylor, gave a very brilliant reception in the Ulster Hall, at which there was a very numerous attendance. Dancing was commenced at half-past ten, and was continued into the early hours of Saturday.

On Saturday, which was a beautiful day, there were three excursions—one to the Giant's Causeway (at which there were between two and three hundred), another to Garun Tower, and a third to Newcastle.

The numerous social reunions have been a marked feature of the Belfast meeting. There were garden parties, "at homes," and other entertainments, to which the members of the Association and their friends were freely admitted.

"THE WASTE OF THE PROFESSION."

To the Editor of THE LANCET.

SIR,—Without attempting to guess what the average annual waste of the profession may be, permit me to point out a waste that has not been referred to either by Sir Lyon Playfair or by you. I mean the large loss caused by the retirement of medical men from active practice on account of age, ill-health, or other causes, and whose names would not of course figure in the annual return of deaths. I have no idea what this waste is, but no doubt it is considerable. Perhaps some of your correspondents could enlighten me; for so far as the public are concerned, it is a very important matter to know.—I am, Sir, yours, &c.,

T. F. O'DWYER, M.D.,
Surgeon-Major, Army Medical Department.

Junior United Service Club, August, 1884.

*** We quite agree with our correspondent that the mere deaths do not express the whole loss of active members of the profession in any year; but it requires little knowledge of either the circumstances or the disposition of medical men to be convinced that the number who retire is a comparatively small one.—ED. L.

THE Local Government Board for Ireland have sanctioned an increase in the salary of Dr. Agnew, of Lurgan Dispensary, by £20 yearly.

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THE LANCET.

LONDON: SATURDAY, AUGUST 9, 1884.

THE meeting at Berlin, on the 26th ult., of many of the leaders of our profession, including such men as Professors VIRCHOW and HIRSCH, to discuss the subject of cholera, and to listen to the history of his work by Dr. KOCH, is an occasion of more than passing interest. The conference and the masterly address with which it opened may almost be said to mark an epoch in the history of this disease. At a time when all Europe is alive to the subject, and when fears of a general epidemic are aroused, the demonstration of what promises to be a very fruitful discovery comes most opportunely. Without entertaining too sanguine a view, it is surely something to know that the methods of rigid investigation that have been so successfully applied to elucidate the nature of infective disease have been carried out so far with equal success in the case of cholera. It brings forcibly to mind the manner in which, from henceforth, all such diseases must be studied; their intimate nature must be made clear to us before we can hope to cope with their ravages. In the portion of his address yet published, the substance of which will be found elsewhere, Dr. KOCH has not approached the subject of the practical application of the gains to knowledge he has obtained. All will concur with his opening statement that without a sound basis of the knowledge of the essential nature of cholera all therapeutic and prophylactic efforts are vain—a truism too often disregarded even in these enlightened days! The work, in which KOCH himself has been one of the pioneers, that signalises the past decade has yet to bear its legitimate fruit in a rational treatment and a systematised attack against the conditions that favour the origin and spread of infective diseases; and the time will surely come when we shall no longer be content with enforcing the principles of sanitation, useful and fruitful as that labour is, but shall be possessed of measures aimed more directly against the causes of these diseases. To be sure, there are many who doubt the significance of the micro-organisms which appear to constitute the virus of so many of these diseases, and who believe that the parasitic theory is being pushed too far, blinding us to the broader features of epidemic influences. But evidence in support of that doctrine accumulates on all sides and grows stronger day by day. Mistakes, even grave errors, will often be made from lack of sufficient care in observation and experiment or from too hasty generalisation, but the main principle remains unshaken, the principle of zymosis.

Cholera is admittedly a zymotic disease, and the search after its organic germ or parasite has been carried on for more than forty years. Amongst the numerous alleged discoveries, HIRSCH mentions the "cryptogamic bodies, like ferment fungi," found by BOHM in the dejecta and intestines (1838); the "annular bodies" detected by BRITTAN and SWAYNE in the Bristol epidemic of 1849, an observation in part confirmed by HUGHES BENNETT of Edinburgh; the "vibrioes" of POUCHET; the "cercomonas" of DAVAINE; and the "small granular bodies composed of round cells resembling the bacterium termo," discovered by PACCINI in 1854 and 1856—an observation which, like that made by Dr. BRISTOWE and referred to in his letter we published last week, most harmonises with the present discovery of KOCH. HIRSCH also refers to the observation of M'CARTHY and and DOVE, of "large masses of cellular elements endowed with active power of movement," and the memorable researches of HALLIER, KLOB, and THOMÉ, with their refutation by DE BARY and COHN, and the equally inconclusive results obtained by CUNINGHAM and LEWIS. The importance of KOCH'S discovery is heightened by these previous attempts, and the great merit of his work is the fact that he has succeeded in differentiating from among all the numerous species of bacterial life that infest the intestinal canal one characteristic and constant form. He has been enabled to present the world with so consistent an account of the life-history of this cholera microbe as to overcome the scepticism born of previous failures. He has succeeded because he has adopted the methods above referred to—methods the value of which has not hitherto been properly appreciated in the country where cholera is indigenous. The despatch by our Government to India of two scientists well versed in these methods will serve to redeem us from that reproach.

In following Dr. KOCH'S remarks one is struck by the fact that in the majority of the cases examined by him he found evidence of severe inflammatory lesions of the intestinal mucous membrane, often with hæmorrhage; and he notes the rarity with which the intestinal contents are of the watery character so marked in the evacuations earlier in the disease. By the light of his microscopical investigations, it is not surprising that the intestines should suffer such severe lesions, although the general experience hitherto has been to the contrary; for he found accumulated within the tubular glands, and beneath the epithelium, an abundance of bacilli, to which were superadded many putrefactive bacteria. However, he succeeded in isolating the bacillus, and found it in the recent stools of acute cases, and in the linen soiled by choleraic dejecta. Its characters appear distinctive; shaped like a comma, and smaller in size than the tubercle bacillus, it grows with great luxuriance, and assumes the form of a spirillum. Indeed, Dr. KOCH appears more inclined now to regard the micro-organism as belonging to the genus spirillum rather than to that of bacillus, not only on these morphological grounds, but on the facts of its life-conditions. He always speaks of it as the "comma bacillus" (he seems careful not to use the term "cholera bacillus"), and that name expresses its most constant and obvious feature. The microbe has not been found in the blood or viscera other than the intestine; a fact not only explicable of the symptoms of cholera, but of its mode of propagation by means of ingesta.

Interesting as the discovery of a special organic form is, it is far more important to know the conditions that favour or prevent its development; and this part of the subject has been very fully gone into by KOCH. It will be seen that in many respects the comma bacillus differs from other bacteria. Thus it grows and multiplies in appropriate media with remarkable rapidity, and the characters of the colonies thus formed are different from those usually observed; whilst its

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behaviour in a gelatine medium is, so far as known, quite characteristic. It resists a considerable degree of cold; and although its vitality is affected by the withdrawal of air or oxygen, or the subjection to an atmosphere of carbonic acid, it appears to be not actually killed, but only rendered dormant. What, however, is of the first importance is the discovery that the comma bacillus cannot exist apart from moisture. Many bacilli when subjected to dryness still retain vitality, which is shown by replacing them in a moist nutrient medium; but this comma bacillus is actually killed outright by such exposure. It is needless to point out the practical bearing of this in the disinfection of linen soiled by the dejecta. Instead of placing such in so-called disinfecting fluids, it is enough to subject them to dry heat, for twenty-four hours at the longest. Dr. KOCH seems rather to deprecate the use of so-called disinfectants, which operate in destroying the putrefactive bacteria, but leave the comma bacillus free to luxuriate. For his observations have led him to the conclusion that the existence of putrefaction is just the condition that is most likely to arrest the growth of the specific bacillus, an observation full of suggestiveness. It would seem as if the actively growing and multiplying comma bacillus, which finds its lodgment in the intestinal mucosa, sets up those changes which prepare the way for the bacterial invasion that supplants the former. The soil is prepared for the putrefactive organisms, and the non-pathogenic bacteria enter into a struggle for existence with the pathogenic bacillus, and overcome it. If this be true, a considerable revolution will have to be made in preconceived ideas, and putrefaction will come to be regarded as opposed, and not as favourable, to the spread of cholera! We would not desire as yet to generalise so freely as this, but await with interest the further development of the problem by Dr. KOCH. His statements as to the amount of the various antiseptic agents requisite to check the development of the comma bacillus give ground for the assertion that the internal administration of such substances in cholera is beyond the reach of practical therapeutics. The amount of any of those agents that could be safely given would be far below that which could possibly act upon the luxuriant growth of the bacillus in the intestine. Such is the deduction from his research; and in its bare reasonableness it seems to overturn a host of vaunted specifics and modes of treatment, based, indeed, on the zymotic theory, but without a due appreciation of what that theory involves. It once more demonstrates that in prevention lies the main line of attack against cholera; the cure of the disease depends less upon any specific medicament than upon measures adopted to check the violence of the disease and to maintain the vital powers under its terribly exhausting effects.

WE propose to discuss briefly the important subject of reflex paralysis, on which an able paper has recently been read by Dr. NIXON before the Academy of Medicine in Ireland. As the matter is one about which volumes might be written, we think it would conduce to a better understanding of the various elements of the subject if we presented to our readers an exhaustive account—exhaustive not in the sense of abundant illustration by cases or in the employment of periphrasis, but complete so far as enumeration and exposition go of the chief views which may possibly be held with regard to reflex paralysis. It is first of all expedient to define what is meant by reflex paralysis. There would be no necessity to write this article on the subject if a perfect definition were possible, so that the reason of the lameness of the following definition may be at once apparent:—Reflex paralysis may be said to be a loss of motion or sensation in parts of the body physiologically remote from a disturbance produced by injury or disease of tissues supplied with nerves. As alleged instances of the occurrence of reflex paralysis, the following may be mentioned: amaurosis after affections of the fifth nerve; paralysis of orbital nerves following severe neuralgia of the trigeminus; paralysis of the third nerve after injury of the supra- or infra-orbital nerves; amaurosis coming on after irritation of the dental nerves; paralysis following wounds; and lastly, "reflex" paraplegia from diseases of the urinary organs, dysentery, and certain affections of the uterus. Let us take the case of paraplegia following on disease of some of the abdominal viscera and examine this combination of phenomena from every possible point of view. In doing this we think it advisable to say that we purposely avoid any typical instance of the phenomena in question, partly because we do not wish to be fettered by any subordinate considerations, and partly because we would indulge in as wide and full an examination as possible.

There can be but little doubt that in the majority of cases the paraplegia is due to an affection of the central nervous structures of the lumbar region of the spinal cord; the bilateral character of the palsy supports this view; and it is hardly likely that the nerve-trunks in their passage downwards and outwards could be equally affected. Admitting these considerations, the question arises as to how the lumbar region of the spinal cord gets damaged. The result may be brought about by the intervention of the process termed "inhibition." The simplest example we possess of this phenomenon may be inferred from an experiment on a headless frog. A bit of blotting-paper, moistened with acetic acid, placed on the inner aspect of the thigh, is soon followed by movements apparently directed to the removal of the offending paper. If whilst these movements are in progress one of the feet be tightly clamped the reflex action is done away with, is "inhibited." Here it would seem that a powerful afferent stimulus is directly able to arrest a nervous action; but we must be careful in drawing even this inference, for other explanations are possible. It may be that the stimulus acts by causing spasm of the vessels supplying some part of the reflex centres in question. So far we have been dealing with states of tissues which may be termed "functional."

The paraplegia, or rather myelitis, may be due to disease spreading along the nerves by means of mere continuity of tissue or by way of special lymphatics or bloodvessels—respectively an ascending neuritis, lymphangitis, or phlebitis. We forbear to increase the complexity of this group by further subdivision.

Again, it is conceivable that the abdominal mischief and paraplegia are merely coincident, or related only in the same way as a parent is to two children. If we may speak of genuine reflex paralysis, that term ought only to be employed to designate the loss of function which ensues when the

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agency at a distance acts without producing any demonstrably structural lesion. Sir WILLIAM GULL and others have shown that myelitis and consequent paraplegia may be set up from disease of the urinary organs, apparently as the direct result of propagation of inflammatory action either along the nerve trunks or venous channels. LEYDEN has corroborated these views by demonstrating the existence of ascending neuritis in some of these cases of paraplegia. It is still a moot point whether a continuous line of inflammation along the nerve trunks is necessary for the development of myelitis. TIESLER, FEINBERG, and HAYEM found that the application of various irritants to the sciatic nerves of animals was followed by paraplegia. Suppuration existed at the site of irritation of the nerve and another abscess was discovered also at the origin of the nerve from the spinal cord; the length of nerve intervening between the foci of purulent infiltration being apparently healthy. REMAK and KUSSMAUL thought from their observations that a chronic inflammation of the nerves in the pelvis might be produced by a phlegmon in this region without any myelitis—in fact, a simple descending neuritis. The central nervous apparatus of the lumbar region may be functionally ruined by the absorption of poisons locally produced, and acting as some of the alkaloids are supposed to do, proper nutrition being impossible in the presence of altered blood. The nerve-cells may be placed *hors de combat* not only by inhibition, but also by sheer exhaustion. To use a simile, we may imagine a jug full of water, with a tightly-fitting lid, to represent a loaded nerve-cell; the "vis nervosa" therein contained may be wasted or rendered of no use by completely emptying the jug (exhaustion) or by tightly closing the lid (inhibition). Proceeding further, it is easy to understand how these states of inaction may be brought about by many means; whether these means be from structural or functional defects influencing the nutrition of the nerve-cells, it is plain that every cause must act in one of the two ways, though the degree of exhaustion or inhibition may vary considerably.

THE attention attracted to the sanitary surroundings of the schoolboy of the present day, from the elementary board schools through all grades to the higher public schools of the country, has been quickened by the important Conference which met at the International Health Exhibition on the 30th ult., as well as by the first meeting of a new Association of Medical Officers of Schools held a few days previously, a report of which appears in our columns of August 2nd. To the important bearing of this subject we have been fully alive for many years past, as the contributions in our columns testify. In THE LANCET of Jan. 21st, 1871, the following words occur, "Both at the point of departure and the point of arrival a clean bill of health should be found for the schoolboy." At each of the meetings referred to prominence was given to the necessity for parents to be perfectly candid with the heads of schools on their boys' return from any infected locality; but we fail to see that equal prominence was given to the still greater necessity for heads of schools to be equally candid when their pupils return home during the existence of any infectious malady in their school. There would appear to be some risk that the new Association of Medical Officers of Schools, in their interest to protect their individual institutions, may exact undue restrictions on the pupils' return, and fail to see that parents and the public at large have an equal right to protection from the risks of infectious maladies, engendered or contracted among pupils at school at the approach of vacation time, being spread to their homes. Already we see danger of this; hence the prominence we desire to give to it. The authorities of every school should be required to state candidly to parents whenever an infectious malady arises in their establishment; and if it should exist on the approach of vacation time, the term should be extended beyond the period of possible incubation of the disease among the pupils generally, for the protection both of their families and of the public. How can such protection be best ensured? In the first instance, parents should make it a condition on sending their boys to any school that they be informed of the occurrence of any infectious malady among the pupils, and especially so on the approach of vacation time. This should not be with a view of removing boys from the infected area, but in order to cut off, as far as may be thought desirable, communications with home and regions outside the infected locality. We fully foresee the inconvenience this may occasionally give rise to in obliging school authorities to defer vacations for a brief period when infectious illness exists among the pupils; but we hold that schools should be made no exception to the accepted rule of civilised life, that the few must submit to occasional inconvenience for the sake of the welfare of the many.

In the communication made by the resident medical officer of Christ's Hospital, Mr. ALDER SMITH, at the Health Conference, it is stated that "the most important precaution to prevent infectious disease from entering and spreading in a school is undivided medical responsibility." In this sentence we think we detect a trace of dissatisfaction at the exercise of superior authority by the head master and house masters of our public schools over the medical officer, limiting the exercise of his free judgment, and often curtailing his usefulness. That the responsibility on matters of illness and hygiene should be strictly medical there can be no doubt; but we believe there is room, nay, a growing necessity, for that most useful division which would be afforded by the appointment at all our schools of one or more medical officers to attend the sick, and a public sanitary medical officer for the protection of the school and the district around. Such a system works well at Eton, Winchester, and Rugby. At Eton any of the local practitioners are called in by the house masters at their own choice; at Winchester two medical officers are appointed; while at Rugby one is in sole charge. Yet no inconvenience that we have ever heard of has arisen from this dual and triad attendance; on the contrary, we think that occasional consultations must be beneficial at schools as in private life. Over each of these establishments the sanitary authority of the district has jurisdiction, with their sanitary medical officer as adviser, for the good both of the school and the contiguous district. We believe there will be provided in due course a much more minute supervision of our public schools by an officer of health absolutely independent of and free from the authority of head master, of house masters, and the governing authority of schools, whatever it may be;

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an officer responsible to the local sanitary authority and through that authority to the Local Government Board. At no very distant time no building will be permitted to be occupied for school purposes, either private or public, which has not been inspected and approved by a public sanitary authority. We believe even more than this to be desirable in the interest of the schoolboy, and that there should be special and periodical inspections of all our schools, public and private, by officers of the sanitary department of the Local Government Board for all those functions in hygiene which are fast passing out of the sphere of the medical attendant on the sick.

DR. CULLINGWORTH, of Owens College, Manchester, calls attention to the evidence of epilepsy and the reasonable presumption of insanity in the case of JOSEPH JAMES DONNELLY, who had been sentenced to death for the murder of his sister and for severely wounding his mother, in a paroxysm of what may have been epileptic furor, and who has since been respited during Her Majesty's pleasure. We confess that it is always with suspicion we view the plea of insanity when propounded with the purpose of preventing the execution of a capital sentence. We think matters of this sort should be dealt with *finally* at the time of trial, or rather before it. After sentence has been pronounced there is so much motive for straining points in favour of a condemned murderer that a calm judgment is almost impossible. Nor do we think it expedient, in the interests of public safety, that there should be this last chance of escape open to criminals. At the same time it cannot be denied that there are instances in which there is need of revision of the decision at which a jury has arrived, and we are inclined to think this is a case in which inquiry was justified. There are, nevertheless, features in the case of DONNELLY that do not readily lend themselves to the presumption of his insanity. For example, while it is true, as pointed out by Dr. CULLINGWORTH, that the sister and mother attacked were not at the time so obnoxious to him as was his father, it cannot be forgotten that the sister had just refused to get him some water to drink, and, for the moment at least, she may therefore have been the object of his special animosity. It is necessary to bear in mind that in the most clearly marked cases of epileptic mania, there is generally an entire absence of motive or cause of quarrel! The maniac without preparation instantly attacks the nearest person, though he be his dearest friend.

There is, of course, a well-known class of cases in which the epileptic is simply irritable and quarrelsome, and liable to be strongly excited by the slightest provocation; but with regard to the irresponsibility of a person excited, even though there be disease at the bottom of his irritability, we are more than doubtful. We do not think the ill-temper and excitability caused by disease should be accepted as excuses for wrong-doing, or for that recklessness which leads a man to give way to his passion regardless of consequences. If the irascibility of epilepsy were to be regarded as a plea of excuse, we see no reason why the irascibility which is often caused by gout, or that peevishness characteristic of one stage and form of phthisis, and that which accompanies certain of the physiological processes and changes in life, should not also be so regarded. Science knows nothing of sentiment; and we cannot consent to strain points for the sake of what is called humanity. There is, doubtless, great need that the law should be amended in regard to the definition and determination of legal insanity; but we are of opinion that it is also desirable that an attempt should be made to arrive at a better and clearer understanding among ourselves on this subject. Too much is left to individual judgment in the matter, and individual judgment is always likely to be influenced by feeling. Again, medical men range themselves on either side of a suit or cause in which "insanity" is alleged and denied, as lawyers range themselves, but the lawyers at the bar are confronted by lawyers on the bench, who can check the ardour of professional partisanship. It is not so with the profession to which we belong. Unfortunately, there are no medical authorities in high places to whom justice can appeal for an impartial summing up of medical evidence or the just estimate of medical opinions. Medical men as experts cannot be regarded as witnesses to facts. So long as the law persists in so regarding them, there must needs be confusion and uncertainty. It is never a fact of which a legal tribunal can take cognisance—that any accused person is or is not insane. The sanity or insanity of any individual must always be a matter of opinion, and the evidence given by a medical man is an expression of that opinion. The best lawyer in the country is only an amateur, *qud* lawyer, when he attempts to pronounce judgment on the value of a medical opinion. He cannot possibly know anything about it. If he attempts to value the opinion before him he must either do so on the ground of the qualifications or the repute of the medical witness, or he must go outside the opinion given in evidence, and, forming an independent opinion of his own—necessarily a lay opinion—accept that which most closely coincides with the view he has formed. We are simply stating facts. We repeat that the sanity or insanity of no person can be a *fact;* it is a condition, not a quality, and therefore a matter of opinion, and all medical evidence is an expression of opinion. This being so, it is manifestly of the highest moment to determine among ourselves on what grounds and in what way our opinions are to be formed. Let us not wait for the reform of the laws which all desire, but simply settle this preliminary matter and make known the decision at which we have arrived. Such a procedure will not simply help the cause of justice, but tend to place our profession in the position it ought, sometimes at least, to occupy—namely, that of leading instead of following, as is too much our fashion, albeit we are not content.

A MELANCHOLY case of death from the drinking of carbolic acid, in mistake for beer, by a workman engaged in repairing drains at Forest-hill, indicates very strongly the need for greater precautions being taken by the local authorities in their method of supplying powerful disinfectants. The element of danger attending the supply of such agents with a free hand should be practically recognised by those charged with the important duty of distributing them.

AT the conference convened by the Medical Society and the National Health Society, the subject for discussion on the 1st inst. was Recreations and Gymnastics. After the reading of several papers, Sir James Paget maintained that the English system of gymnastics—namely, out-door games—was far superior to the German, Swedish, or any other system.

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Annotations.

"Ne quid nimis."

THE COLLEGE OF PHYSICIANS AND CHOLERA.

THE College of Physicians, thinking that the public in England may fairly look to them for advice and guidance, have issued instructions. They, above all things, recommend sanitary measures, pure water, free ventilation, avoidance of overcrowding, great cleanliness, and thorough drainage. They point out the danger of excess in eating and drinking. Milk and also drinking water should be boiled; vessels used for food should be cleansed with boiling water. Persons engaged about cholera patients are not, *with proper precautions*, more liable to the disease. Of these precautions extreme cleanliness and the use of disinfectants, such as carbolic acid, are the principal. House-to-house visitation should be organised and temporary hospitals established. These hospitals should be numerous rather than large. Any unusual looseness of the bowels ought to be promptly attended to. Medical advice should be sought, and meanwhile ordinary medicines, such as chalk mixture and cinnamon powder, may be taken. These instructions are perhaps mild and trite, but they are sensible; and, as the most of them apply to other diseases as well as cholera, they cannot be accepted too gratefully by the public.

SANITARY CONDITION OF CALCUTTA.

THE sanitary condition of Calcutta continues in a very unsatisfactory state. Cholera and small-pox are spreading, and in April the death-rate of the city had risen to 50·3 per 1000 of the population. The municipal commissioners have declined to accept the offer, made to them by the Lieutenant-Governor, of a reduction of about one and a quarter lacs of rupees in the police tax on condition that the municipality should expend annually a lac on sanitary works and improvements in addition to the sum already devoted to that purpose. This decision has roused the European residents to action, and a memorial is to be presented to the Lieutenant-Governor, urging him to appoint a special "commission, under Section 28 of the Municipal Act, with the object of furnishing the Government with a substantial report on the broad question of sanitary and structural reform in the city." It appears to us to be imperative on the Government to take some prompt and efficient measures to overcome the apathy and selfish delay of the commissioners. When the lives of so many are endangered by the disgraceful state of the "bustees," it is clearly impossible to allow the interests of house-owners to interfere with measures of public sanitation. Mr. Justice Cunningham, in a letter published in the *Englishman*, says: "The ravages of disease and death in the miserable localities are chronic, constant, and enormous, and the needless misery and loss of life thus wantonly and persistently inflicted on the poor and unprotected portion of the inhabitants is a crime of which we ought to purge our consciences without delay." Surgeon-General Payne, in a letter to Mr. Cunningham, points out, in our opinion correctly, as one of the chief causes of this unsatisfactory state of things, "that there is no sanitary administration in Calcutta, where there is a large administrative body whose most important duty is the protection of the public health, and all sorts of municipal committees. Where there are numbers there can be no sense of responsibility, which alone is fatal to administration." Dr. Payne suggests that an independent committee should be appointed to study the wants of Calcutta, and steps taken to secure that their plans be carried out. "No good can come of general admonitions, or of lecturing seventy-two men on responsibility which human nature does not permit any individual among them to feel; or of accepting budget allotments as a guarantee for good work, with no critic to tell us whether the money is devoted to the work of the greatest urgency." He at the same time points out how much may be done, and ought to be done, in the way of self-help, especially in enforcing vaccination and revaccination among servants and *employés* in large establishments. "If every head of a house, or an office, or a firm in Calcutta were to declare that after a given day no person should enter his premises who had not been vaccinated within a certain period, there would be better protection in a month than any number of memorials can confer, and the Corporation would derive more help in their work than any order or sanction of Government can give them." We trust that the Lieutenant-Governor may see his way to adopt such measures as shall prove adequate to enforce the prompt action requisite in the interests of the public, and to entrust the charge of the sanitary arrangements of Calcutta to a small but efficient body of experts, armed with powers to carry out such improvements as they may deem necessary to ensure the health of the general population.

THE ADDRESS IN THE OPHTHALMOLOGICAL SECTION AT BELFAST.

DR. MCKEOWN occupied the greater part of his address to the ophthalmologists who have congregated at Belfast with an account of his method of treating and operating on cataracts. This method consists in the injection of water into the capsule of the lens at a temperature at or about that of the body. He justly remarks that in any new operative procedure the most minute particulars are of consequence—and in the present case these details are wanting,—but so far as we are able to judge from the account of his address, he appears to recommend the extraction of the lens in all cases of cataract, whether mature or immature, and that he trusts to the removal of the cortical substance, which is so often a cause of secondary cataract, by means of the intra-capsular injection of water. The plan is feasible enough, but we would suggest the employment of what is termed by the histologists normal solution—i.e., a 0·75 per cent. solution of common salt—rather than pure water. He thinks that by this means all cortical substances may, with care, be washed away; but in the report of his speech some remarks are made which are at present difficult to understand, and require elucidation. Thus he speaks of the introduction within the capsule of a needle attached to an ordinary hypodermic syringe, and remarks that "if there be any part of the lens substance easily disturbed, the injection usually ruptures the capsule a little at the point of puncture, and washes out a good deal of cortex." Is Dr. McKeown speaking of an ordinary extraction? If so, we should think the lens substance was considerably disturbed. If not, does Dr. McKeown inject water into the globe without any escape being possible for the excess, and under these circumstances, how much can he inject? Is not this a dangerous proceeding?

INTESTINAL SEPTICÆMIA.

THE possibility of septicæmia occurring as the result of absorption of putrid material developed in the intestine has been the subject of inquiry by Gaspard, Stich, Piorry, and others. A case of some interest has been narrated in detail by MM. Lépine and Mollière in No. 29 of the *Lyon Médical*. The patient, a man aged forty-four, was first under the care of the latter gentleman for a strangulated gangrenous hernia of the right inguinal region. It was deemed advisable to make an artificial anus, and it turned out that this unnatural opening led into the ascending colon, and not into the small intestine. All was going on well for

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months, when one day, without any obvious cause, the patient became delirious, a scarlatiniform rash appeared on the whole surface of the body, the pulse increased in frequency, the pupils became greatly dilated, but there was no pyrexia. On account of the appearance of these symptoms the patient was transferred to the medical care of M. Lépine. The fauces were not inflamed, though the throat was said by the patient to be dry, but no lymphatic enlargement could be detected. The rash did not disappear. The symptoms could not be laid to the charge of belladonna or any other medicament, for the patient had not taken any drug whatever. Zuelzer and Sonneschein have extracted from putrid liquids a ptomaine giving rise to all the toxic properties of atropine; and M. Lépine, bearing this and the condition of the intestine in mind, diagnosed "auto-intoxication par une ptomaine atropique." This hypothesis fully explained the strongly dilated pupils and scarlatiniform rash and other symptoms, as well as an intense conjunctivitis which appeared later on, as did also an irregular pyrexia. The man died of asthenia. The necropsy revealed a horrible state of the large intestine beyond the artificial anus. The colon contained a putty-like mass, extremely fetid, and it is said of an odour *sui generis*. It seemed that the washings of the bowels, which had repeatedly been made, were totally inefficacious.

CHOLERA AND CREMATION.

AMONG the objections to cremation the risk of practising it on bodies not really but apparently dead has often been urged, particularly in Southern Europe, where, except in special cases, burial follows so rapidly on the certified cessation of life. This objection has just been revived with some force, coincidently with the recall of public attention to Pacini's remarkable paper on "Morte apparente, l'ultimo Stadio del Colera Asiatico" (apparent death, the last stage of Asiatic cholera). There are, according to the Tuscan pathologist, four stages in the course of this malady:—1. The premonitory stage, in which the intestinal transudation produces diarrhœa or, instead, gives rise to intestinal borborygmi from the reabsorption of the liquid transuded. 2. The hydrorrhagic stage, in which the intestinal transudation, becoming excessive, begins to cause diminution of the aqueous part of the blood and of the tissues, producing, when this is not retained in the intestine, the dejections properly so called. 3. The algid or asphyxial stage, in which, the aqueous part of the blood diminishing more and more, followed by diminution of the circulatory movement and all the other functions depending on it, the intestinal transudation also diminishes and the dejections cease. 4. Stage of apparent death, in which the intestinal transudation is on the point of ceasing, with the circulation of the blood and with life. In this last stage the circulation has not really ceased, as it usually does in ordinary cases of syncope and asphyxia, but is only reduced to extreme slowness; as a proof of which may be cited the fact that in cholera patients assumed to be dead ("nei pretesi cadaveri dei colerosi"), very often not only the temperature rises, but even the cyanosis disappears on the sanguineous stasis of the cutaneous capillaries resolving itself. The pathological induction by which Pacini arrives at his thesis, and the therapeutic doctrine he bases on it, would be more in place in another annotation; at present it will suffice to indicate the cases of apparent death he adduces, and the admonition it conveys to the advocates of immediate burial or immediate cremation. Prof. Betti, in the cholera epidemic which ravaged Florence in 1854, recorded several cases of marked rise of temperature, disappearance of cyanosis, and muscular movements of the upper, and especially the lower, extremities in bodies certified as dead. One of these, three-quarters of an hour after death, flexed and extended the forearms, clutched in his hand the bulb of the thermometer, and carried the arms from the side of the trunk on to the thorax. More remarkable movements of the muscles were observed in a woman just announced as dead of cholera on whom the Cæsarean operation was performed, the diaphragm being seen to ascend and descend. Puccinotti (the author of the classic "History of Medicine"), contemporarily with Betti, records similar phenomena in the same epidemic; while at Naples in the same year cases certified as dead and given over to the undertaker were rescued within a few minutes of interment. The narrow escape of one such case in the last cholera epidemic at Naples is recorded in the *Gazzetta d'Italia* of September 28th, 1873, the fortunate patient's name being Alfonso Lascala. "On a prouvé," writes Dr. le Bon ("De la Mort Apparente," Paris, 1866), "qu'on enterrait beaucoup de cholériques susceptibles d'être rendus à la vie."

SARCOMA OF THE OVARY AND OMENTUM SUCCESSFULLY REMOVED.

Il Morgagni, for June last, published a report by Dr. Cosmo Spadaro, of a successful operation performed by Professor A. d'Antona for sarcoma of the right ovary and of the omentum. The patient, A. S——, aged fifteen, from Salerno, was admitted into Professor Cantani's clinique last February. She first menstruated the previous July, and again in August, but not since. In September (five months before admission) she noticed in the right iliac fossa a tumour as large as a hen's egg. It grew rapidly, but only gave trouble by its weight. The tumour, largely lobulated and solid, filled the right iliac fossa, and extended up into the corresponding hypochondrium, the ascending colon being scarcely perceptible on percussion. The operation was performed on April 3rd. The omentum was extensively adherent, and its vessels were much enlarged. The pedicle, which was a long one, was tied, and dropped into the pelvis. Another tumour, as large as an orange, was then noticed between the folds of the omentum, and adhering to the great curvature of the stomach. That tumour having also been removed, and some vessels which fed it tied, the abdominal cavity was closed with ten sutures. Some febrile symptoms supervened, but abated in the course of thirty-six hours. Half the sutures were removed on the fourth day, and the remainder on the eighth. The patient was fully convalescent, and sat up in bed, on the tenth day. The tumour weighed sixteen pounds, and on section proved characteristically sarcomatous, and in one part encephaloid.

A CHAPTER OF ACCIDENTS.

THE case of which the following account is a brief description presents many points of interest, not only from a pathological, but also from a clinical and practical, point of view. The patient was a man aged twenty, who had a large tumour of the face, supposed to have been due to the extension of a malignant naso-pharyngeal polypus. An operation had already been performed, and the superior maxillary bone removed. When first seen by M. Verneuil the new growth was excessively vascular, and a distinct bruit was to be heard like that found in cases of arterio-venous aneurysm. As the tumour appeared to consist largely of erectile tissue, many surgeons who saw the case with M. Verneuil advised the employment of irritant injections with a view to setting up inflammation, and, it was hoped, subsequent atrophy. The result of the injections was not a happy one; much inflammation ensued, and frequent bleeding took place, the tumour increased in size and the patient's health obviously declined. Whilst matters were at this pass M. Verneuil resolved to ligature the common carotid on the same side of the neck as the tumour, with the object of controlling the hæmorrhage and relieving the inflammation.

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For a brief period these objects were attained, but a large abscess formed in the tissues of the tumour, and finally burst outwards through the skin. Again, there was an interval of comparative comfort for the patient. At the end of this, however, an attack of erysipelas set in. The ligature came away on the fourteenth day, but the wound did not completely heal. Notwithstanding much local treatment, many sloughs and a piece of the carotid artery twelve millimetres long came away from the wound, and frequent hæmorrhage from this site ended in the death of sufferer. At the autopsy the sphenoid fossa was found to have been penetrated by the tumour, so that a projection the size of a nut was seen in the cranial cavity. The distal end of the carotid artery was perfectly obliterated; but a long search was needed before the remains of the cardiac end could be found in the putrid tissues of the wound. There was a recent thrombosis of the internal jugular vein; the vagus nerve is said to have been intact. All the viscera were healthy, if exception be made of a fatty liver. There were no metastatic abscesses. The brain was slightly inflamed at that part which was in contact with the tumour.

THE BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.

THE annual report issued by Dr. Thomas Savage, who has just entered into office as honorary secretary of this Society, is a highly satisfactory document. The members are 280, with a capital of £10,130. The annual average for the last five years shows grants, £390; income from investments, £370; total income, £679; total expenditure, £431; excess of total income over grants, £289; excess of total income over total expenditure, £248. In this prosperous institution the court of directors are able to answer promptly and with judicious liberality all deserving claims under their rules, and at the same time to add to their investments with a safe margin for eventualities. The subscriptions of a member close on reaching a total of £22 1*s.*; and for this comparative trifle two annuitants, widows of members, have received respectively the handsome totals of £1125 and £1247 10*s.* With such substantial advantages, it is not a little remarkable that the roll does not exceed 280, when the wide area from which members are eligible is taken into account. The Society's second rule provides that "any registered medical practitioner, regularly practising his profession within fifty miles of Birmingham, or within the distance of ten miles of the residence of any corresponding member, shall be eligible as a member of this Society."

TYPHOID FEVER AND PERFORATION OF THE GALL-BLADDER.

IN medical diagnosis we frequently have to deal with a question of probabilities. There can be no doubt, however, that a little more logic and less hazard are needed in dealing with clinical problems. M. Barbe has recently recorded the case of a man, aged twenty-six, who, whilst suffering from an attack of chronic jaundice, certainly due to obstruction of the bile-duct from a stone, appears to have been unfortunate enough to develop the signs and symptoms of typhoid fever. From the report given we gather that the fever, the nature of which cannot be called in question, was at about the eighth day of its course when the symptoms of peritonitis set in and the patient succumbed. At the necropsy the lymphatic structures of the small intestine, cæcum, ascending colon, and *stomach* were greatly swollen and even already partially ulcerated. It may be mentioned that the patient vomited black matter, and it would appear that this was altered blood derived from the ulceration of the lymphatic follicles in the stomach. The spleen was enlarged and diffluent. The liver was large, yet little stained with bile, notwithstanding the obstruction of the bile-duct, yellowish in places, tough, and resistant to the knife. The gall-bladder was found to be shrunken and empty of bile, but adherent to the transverse colon, and contained a large calculus. After laying it open an ulceration of greyish-black colour was seen at the base of the viscus; in two places the ulceration had gone on to perforation. M. Barbe discusses the relationship of the ulceration of the gall-bladder to the calculus and typhoid fever. Seeing that there was such a general affection of the lymphatic structures of the gastro-intestinal mucous membrane, and seeing that this affection had gone on to ulceration not only in the intestines, but also in the stomach, we think there exists considerable probability that the disease of the gall-bladder was largely due to the poison of typhoid fever. That the ulceration in the gall-bladder should have been deeper than elsewhere, and so attended with more serious consequences, is, perhaps, only to be expected from the presumably greater irritation resulting from the presence of a calculus as compared with whatever food might have been ingested and brought into contact with the tissues of the stomach and intestine.

SMALL-POX IN THE DIAMOND FIELDS.

THE pestilence still rages with undiminished virulence. White men and natives alike are falling victims to it. The area of distribution is unfortunately a very wide one, and for this reason the resources of the authorities are taxed to the utmost. From the local press we gather that Drs. Jameson and Wolff still maintain that the disease is not small-pox, and decline to admit that it is generally infectious and contagious. We sincerely trust the report does not correctly give the position of Drs. Jameson and Wolff with regard to an epidemic which has almost universally been declared to be small-pox. It matters but little now whether they consider it as such or as varicella. The wind has been sown and now the whirlwind is being reaped. It is to be hoped that the wreckage will be less than we fear is probable. The Cape Government has stated in Parliament that the only powers it possesses are, first, that of granting permission to the local authorities to raise means wherewith to arrest and stamp out the plague, and secondly, that of proceeding against those who on affidavit can be shown through wilful or culpable negligence to have been the cause of injury to the community. It is a sorry state of affairs that the Central Executive finds itself in, if its action is thus limited by the statute law. Cannot a short measure be passed giving greater control to the Sanitary Board? Clearly something is needed, if success is to be deserved, much less demanded.

CAPITAL PUNISHMENT IN FRANCE.

AT length it is beginning to be recognised in France that the brain of a decapitated criminal lives, and consciousness is maintained, for an appreciable time, which to the victim may seem an age, after death—an opinion we strongly expressed many years ago. This ghastly *fact*—as we have no doubt it is—being perceived, it is beginning to be felt that executions cannot any longer be carried out by the guillotine. Prussic acid is now proposed. If instantaneous death be desired, this is clearly inadmissible. The period taken to terminate life by poison of any kind must needs vary greatly with the individual. In not a small proportion of instances we fancy death by prussic acid would be considerably protracted, and although long dying is not so horrible as living after death—so to say—yet it is strongly opposed to the interests of humanity to protract the agony of a fellow-creature dying by the hand of justice. Electricity is another agent suggested. We doubt the pos-

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sibility of applying this agent so as to destroy life instantly. We confess that, looking at the matter all round, we incline to think that hanging, when properly performed, destroys consciousness more rapidly and prevents its return more effectually than any other mode of death which justice can employ. It is against the bungling way of hanging we protest, not against the method of executing itself. That is, on the whole, the best, we are convinced.

THE ACCIDENT TO LADY SHUCKBURGH.

OUR readers will have seen in the daily papers accounts of a serious accident by which the life of Lady Shuckburgh has been placed in some danger from the bite of a mad dog. The wound, no doubt, has received prompt and careful attention, and we sincerely hope that evil consequences may be averted. It is, moreover, consoling for all in similar circumstances to know that bites of rabid dogs, even if not treated, do not invariably cause hydrophobia. The case before us, with the bite still recent, is one of those in which Professor Pasteur, in his recent communication on rabies before the Paris Academy of Sciences, held out a guarded hope of immunity by early inoculation with a modified virus. His words are worth quoting. After describing his researches, he says: "On this point [the suppression of hydrophobia by inoculation after a rabid bite] the first experiments which I have conducted give the greatest hopes of success. Thanks to the duration of incubation of rabies resulting from a bite, I have every reason to believe that one can surely bring about a protected state in the person bitten before the disease has had time to develop itself. While these first experiments give much colour to this view, it is necessary to multiply indefinitely such tests in the lower animals before therapeutic science will be hardy enough to extend their action to the human subject." It may be added that since these words were spoken M. Pasteur has shown, by an extended and apparently conclusive experiment, that his method of inoculation is protective in the case of dogs against the bites of rabid members of their own species.

THE GASTRIC SECRETION OF THE FŒTUS.

IT has been shown that if sulphindigotate of soda or iodide of potassium be given to a rabbit towards the end of pregnancy, these chemicals are always present in the liquor amnii, and have been occasionally discovered in the stomachs of the embryos. This latter fact has hitherto been explained as being the result of swallowing liquor amnii by the fœtus, and indeed has been cited as a proof that the fœtus does swallow liquor amnii under normal conditions. The absence of these salts from the rest of the body of the fœtus, or their extremely minute proportions if present, seemed to negative the idea of their secretion into the stomach from the fœtal blood. This subject has lately engaged the attention of Dr. Krukenberg, of Bonn, who proved first that iodide of potassium was as constantly found in the stomach as in the liquor amnii after subcutaneous injection in guinea-pigs and rabbits towards the end of pregnancy. He afterwards found that in guinea-pigs less advanced in pregnancy, the chorionic fluid (between chorion and amnion) contained the salt, and not the liquor amnii, while in this case also the stomach contained the iodide. This negatived the idea of fœtal deglutition and confirmed that of gastric secretion from the fœtal blood. The same results followed in rabbits before the final third of pregnancy, and in a cat and a bitch at the end of pregnancy the iodide was found to be present in the stomach but absent from the allantoic and amniotic fluid, and entirely or almost entirely absent from the fœtal tissues. He therefore concludes that the presence of the salt in the stomachs of immature fœtuses of rabbits and guinea-pigs (in which the liquor amnii does contain it) is explained by the cases of mature embryos of those animals, in which the liquor amnii does not contain it while the stomach does, and that in all cases it is essentially secreted from the fœtal blood. It seems probable that easily diffusible substances pass into the fœtus and are excreted from its stomach far more copiously than has been imagined. The great difference of excretion of the salt into the chorionic or amniotic fluid in different animals, or even in the same animal at different stages of pregnancy, is remarkable, and furnishes an additional proof of the danger of arguments from analogy.

THE RECENT CASE OF CHOLERA AT ALEXANDRIA.

A CORRESPONDENT at Cairo writes: The facts relative to the recent case of cholera are very simple, and were certainly not enough to cause a scare in Alexandria. It appears that an Austrian woman cook, aged forty, living in an Italian restaurant, had suffered from diarrhœa for a few weeks before July 13th, for which she had been treated by a medical man, and which did not prevent her from working as usual. On the night of the 13th she is stated to have had forty rice-water motions, accompanied twice by vomiting. She was taken to the European hospital early on the morning of the 14th, and had neither vomiting nor diarrhœa for several hours. Her condition on this morning was described by all the doctors who saw her as follows: facies choleraica, loss of voice, fall of temperature, foul tongue, intense thirst, severe cramp in calves and thighs, complete suppression of urine, collapsed pulse, and great mental anxiety. These symptoms abated slightly towards evening, when there was one liquid motion, followed for a time by very severe cramp in the thighs. On the 15th there was no more vomiting, the diarrhœa was insignificant, the voice had partly recovered its strength, and the cramps and suppression of urine had disappeared. Thereupon four doctors signed a bulletin to the effect that the case was one of "cholera nostras," and a fifth doctor stated that he would wait until the complete cure of the patient before affixing his name to the diagnosis. The patient is now convalescent, and there has been no suspicion of a second case. A case of cholera occurred, however, on board a French steamer in quarantine at Alexandria. The sick man and all the passengers were sent to the lazaretto, and the quarantine term was raised from seven days to ten. The whole official world of Egypt flocks to Alexandria this week to pay its respects to the Khedive, and to enjoy all forms of Bairam feasting. Fortunately for the general health, those who are most likely to give way to immoderate excess are not those who are now strictly observing the thirty days' fast. The health of the English army continues remarkably good; there being about 8 per cent. of sickness, of which 3 per cent. are due to venereal disease.

CRIMINAL ABORTION.

AN adjourned inquiry was held at University College Hospital, on July 31st, touching the death of Mary Trumble, aged thirty-two. The deceased was a single woman. Some nine years previous to her death she gave birth to a child still living. Her late illness commenced on or about July 10th, when she complained of diarrhœa and a bilious attack. On the 14th a medical man was called in, and he attended the deceased until her admission into hospital on the 20th. Up to that time it was supposed she was suffering from typhoid fever, and neither the doctor nor nurse suspected the actual state of affairs. Mr. Woolbert, the house-physician at University College Hospital, finding the woman in a moribund condition, was unable to make a definite diagnosis, but expressed his opinion that abortion might have taken place, and, acting upon that opinion, refused to give a death certificate

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without having first made a post-mortem examination. The coroner, Dr. Danford Thomas, on the facts being laid before him, ordered an inquest to be held. On the first day of the hearing Mr. Woolbert detailed the nature of a number of wounds he discovered, and also other evidence which in his judgment conclusively proved that an abortion had been obtained by forcible means. There were two punctured wounds external to the vulva, such as might have been made with a knitting-needle or some such instrument. The vagina was extensively lacerated and bruised. The uterus together with the ovaries weighed thirteen ounces. On examining the interior a flocculent appearance was observed at the posterior part, clearly pointing to a placental attachment. Opposite this, and quite unconnected with it, was a rugged, broken surface of smaller dimensions. There were no anatomical signs of typhoid fever. As some little doubt was cast upon Mr. Woolbert's conclusions, the coroner ordered Mr. Pepper to investigate the case, and report the result at the adjourned inquest. This gentleman deposed that he entirely agreed with Mr. Woolbert that an instrumental abortion had been procured. He had ascertained that the wounds above described had been inflicted some days prior to death; he further found a small lacerated wound in the uterus, three-quarters of an inch from the external os, and in a direct line with the larger one on the anterior surface. In one ovary was a corpus luteum, measuring half by a quarter of an inch. Mr. Pepper stated he was quite certain that an abortion had been induced by violence, and that the injuries had been done by some one other than deceased. He was further of opinion that the instrument had been used by a person having some anatomical knowledge of the parts, as it had been steered directly through the os into the uterine cavity. He attributed the wound and bruises about the vagina and vulva to the clumsiness or nervousness of the operator. The cause of death was metro-peritonitis and septicæmia. It is matter of regret that the real condition of the deceased was not discovered during her lifetime, as then measures might have been taken with a view to combat the dangers which threatened and afterwards destroyed her life. Moreover, the means of bringing the perpetrator of the crime to justice were then ready to hand; now, with the death of the victim, the only reasonable expectation of doing so has vanished.

EASY LIQUEFACTION OF OXYGEN.

IT will be remembered that Messrs. Wroblewski and Olszewski some time ago succeeded in liquefying oxygen by the use of ethylene. M. Cailletet has searched for and found a body having a still lower boiling point than ethylene, and by means of which oxygen can be very readily liquefied. This substance is simply formene or marsh gas, which under slight pressure and cooled in ethylene, boiling under the ordinary atmospheric pressure, is resolved into an extremely mobile, colourless liquid, which in passing again into a gaseous state causes such a lowering of temperature that oxygen in its neighbourhood is immediately liquefied.

THE REPEAL OF THE PATENT MEDICINES STAMP ACT.

AT the recent meeting of the British Medical Association the following resolution, proposed by Professor Matthew Hay and seconded by Dr. Leech of Manchester, was adopted:—"That in the opinion of the section of Pharmacology and Therapeutics of the British Medical Association it is highly desirable that the Patent Medicines Stamp Act should be repealed, for the following reasons: (1) It is unjust to impose a tax on medicines; (2) the Act as recently interpreted promises greatly to impede the importation and use, especially in hospital practice, of medicines of foreign origin; (3) the Government label issued under the Stamp Act is taken advantage of by patent medicine manufacturers to give the appearance of Government endorsement to their productions, and lead the public to suppose that the properties of the medicines are sanctioned by authority." This resolution was brought before the final general meeting, and was referred to the Council to consider what action should be taken in the matter.

HOSPITAL SUNDAY FUND, 1884.

IT is gratifying to have to report that a sum in excess, by £100 or £200, of that of any previous year has been raised by the religious community of the metropolis in aid of the great cause of hospitals. Over £31,000 has to be distributed—viz., £29,026 to hospitals and £2257 to dispensaries. The generally satisfactory state of the institutions may be gathered from the fact that in only one instance was it necessary for the Committee of Distribution to press for the attendance of a deputation. The growing need for the fund and for its development is shown in the fact that forty-three more institutions than were assisted at the commencement of the fund will receive an award from the collection of this year. In conformity with Law XII., 4 per cent. of the total amount of collections—viz., £1400—is ordered to be set aside for the purchase of surgical appliances.

THE metropolitan police courts are, it is satisfactory to note, affording evidence of some degree of activity on the part of the vestries in respect of insanitary dwellings. During the last few days, magistrates' orders have been obtained for the abatement of nuisances and for the supply of arrangements and conditions essential to the health of the inhabitants of dilapidated houses.

WE are asked to state that the mural tablet to be erected in the Royal Victoria Hospital, Netley, in memory of the officers of the Army Medical Department who lost their lives in the Afghan and Zulu wars, has been designed and sculptured by Count Gleichen, and can be viewed between the hours of 11 and 6 at Count Gleichen's studio, St. James's Palace.

A CORRESPONDENT to the *Dumfries and Galloway Standard*, using the *nom de plume* "Sanitas," calls attention to the fact that the Crichton Institute and Southern Counties Asylum draw their water supplies from a well which has for its chief feeding-ground rocks over which the whole sewage of the town is supposed to pass.

A LUNACY COMMISSION consisting of eight members has been appointed by the Government of Victoria to inquire into and report upon the state and condition of asylums for the insane and inebriate, both public and private, in the colony. The first public meeting of the Commission was held on June 3rd.

THE Dewsbury guardians have withdrawn from their untenable position. At a meeting of the board on the 1st inst. they appointed public vaccinators for Mirfield and Thornhill. This submission on their part puts an end to the legal proceedings instituted against them by the Local Government Board.

WE learn that Drs. Klein and Heneage Gibbes sailed for India on Wednesday last in the Peninsular and Oriental steamship *Ancona*.

THE death is announced of Dr. Moreau, the distinguished alienist, and the pupil of Esquirol, in his eighty-first year.

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THE Queen, with her characteristic grace and kindness, along with the Princess Beatrice, paid a visit to Dr. and Mrs. Royle at their villa during Her Majesty's stay at Claremont. This was the only house in the neighbourhood thus honoured by the Royal presence.

THE Queen has been pleased to appoint Sir Prescott Gardiner Hewett, Bart., F.R.S., to be one of Her Majesty's Serjeant-Surgeons in Ordinary, in the room of Mr. Cæsar H. Hawkins, F.R.S., deceased.

DR. THOMAS COLLINS has been re-elected representative on the Medical Council for the Apothecaries' Hall of Ireland for the ensuing year.

MR. CORLEY has been elected a Member of Council of the Royal College of Surgeons in Ireland. He was unopposed.

DR. KOCH ON THE CHOLERA.

AN important and influential conference[1] upon cholera was opened in Berlin at the Imperial Board of Health on the evening of July 26th. There were present Drs. v. Bergmann, Coler, Eulenberg, B. Fränkel, Gaffky, Hirsch, Koch, Leyden, S. Neumann, Pistor, Schubert, Skreczka, Struck, Virchow, and Wolffhügel. The conference had been called at the instance of the Berlin Medical Society, whose President, Prof. Virchow, explained that it was thought advisable Dr. Koch should in the first instance give a demonstration of his work before a smaller body than the whole Society, so that the proceedings might be fully reported in the medical press. He mentioned that Herr Director Lucanus and President Sydow had expressed their regret at being unable to be present, as well as many others, including Drs. von Lauer, von Frerichs, Mehlhausen, and Kersandt. Before the meeting Dr. Koch exhibited microscopical specimens and drawings of the cholera bacillus, and demonstrated the method of its preparation and cultivation. The preparations included specimens of choleraic dejections dried on covering glasses, stained with fuchsin or methyl-blue, and examined with oil immersion, one-twelfth, and Abbe's condenser; also sections of intestine preserved in absolute alcohol, and stained with methyl-blue. There were also cultures in gelatin, &c.

Dr. KOCH commenced by remarking that what was required for the prevention of cholera was a scientific basis. Many and diverse views as to its mode of diffusion and infection prevailed, but they furnished no safe ground for prophylaxis. On the one hand, it was held that cholera is a specific disease originating in India; on the other, that it may arise spontaneously in any country and own no specific cause. One view regards the infection to be conveyed only by the patient and his surroundings; the other that it is spread by merchandise, by healthy individuals, and by atmospheric currents. There is a like discrepancy in the views on the possibility of its diffusion by drinking water, on the influence of conditions of soil, on the question whether the dejecta contain the poison or not, and on the duration of the incubation period. No progress was possible in combating the disease until these root questions of the etiology of cholera are decided. Hitherto the advances in knowledge upon the etiology of other infective diseases have done little towards the etiology of cholera. These advances have been made within the last ten years, during which time no opportunity—at least not in Europe—has occurred to pursue researches; and in India, where there is abundant material for such research, no one has undertaken the task. The opportunity given by the outbreak of cholera in Egypt last year to study the disease before it reached European soil was taken advantage of by various Governments, who sent expeditions for the purpose. He had the honour to take part in one of these, and in accepting it he well knew the difficulties of the task before him, for hardly anything was known about the cholera poison, or where it should be sought; whether it was to be found only in the intestinal canal, or in the blood, or elsewhere. Nor was it known whether it was of bacterial nature, or fungoid, or an animal parasite—e.g., an amœba. But other difficulties appeared in an unexpected direction. From the accounts given in text-books he had imagined that the cholera intestine would show very slight changes, and would be filled with a clear "rice-water" fluid. He had not fully recollected the conditions met with in post-mortem examinations he had formerly made, and was therefore at first surprised to meet with quite a different state of things. For he soon found that in a large majority of cases remarkably severe lesions were present in the intestines. In other cases the changes were slighter, and eventually he met with some which to a certain extent corresponded with the type described in text-books. But it was some time, and after many inspections, before he was enabled to correctly interpret the varied changes met with. In spite of a most careful examination of all other organs and of the blood, nothing was found to establish the presence of an infective material, and attention was finally concentrated on the intestinal conditions. There were cases in which the lower segment of the small intestine, most marked immediately above the ileo-cæcal valve, extending thence upwards, was of a dark-reddish-brown colour, the mucous membrane being covered with superficial hæmorrhages. In many cases the mucous membrane appeared to be superficially necrosed, and covered with diphtheritic patches. The intestinal contents in such cases were not colourless, but consisted of a sanguinolent, ichorous, putrid fluid. Other cases showed a gradual transition to a less marked change. The redness was less intense, and was in patches, whilst in others the injection was limited to the margins of the follicular and Peyerian glands, giving an appearance which is quite peculiar to cholera. In comparatively few cases were the changes so slight as to consist in a somewhat swollen and opaque condition of the superficial layers of the mucous membrane, with delicate rosy-red injection, and some prominence of the solitary follicles and Peyer's patches. In such cases the intestinal contents were colourless, but resembling meal-soup rather than rice-water. In only a solitary instance were the contents watery and mucoid. Microscopical examination of the intestine and its contents revealed, especially in the cases where the margins of Peyer's patches were reddened, a considerable invasion of bacteria, occurring partly within the tubular glands, partly between the epithelium and basement membrane, and in some parts deeper still. Then he found cases in which, besides bacteria of one definite and constant form, there were others also accumulated within and around the tubular glands, of various size, some short and thick, others very fine; and he soon concluded that he had to do here with a primary invasion of pathogenic bacilli, which, as it were, prepared the tissues for the entrance of the non-pathogenic forms; just as he had observed in the necrotic, diphtheritic changes in the intestinal mucosa and in typhoid ulcers. Passing to speak of the microscopical characters of the contents of the bowel, Dr. Koch said that owing to the sanguinolent and putrescent character of these in the cases first examined, no conclusion was arrived at for some time. Thus he found multitudes of bacteria of various kinds, rendering it impossible to distinguish any special forms; and it was not until he had examined two acute and uncomplicated cases, before hæmorrhage had occurred, and where the evacuation had not decomposed, that he found more abundantly the kind of organism which had been seen so richly in the intestinal mucosa. He then proceeded to describe the characters of this bacterium. It is smaller than the tubercle bacillus, being only about half or at most two-thirds the size of the latter, but much more plump, thicker, and slightly curved. As a rule, the curve is no more than that of a comma (,) but sometimes it assumes a semicircular shape, and he has seen it forming a double curve like an S; these two variations from the normal being suggestive of the junction of two individual bacilli. In cultures there always appears a remarkably free development of comma shaped bacilli. These bacilli often grow out to form long threads, not in the manner of anthrax

[1] A detailed report is published in the Berliner Klinische Wochenschrift of Aug. 4th.

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bacilli, nor with a simple undulating form, but assuming the shape of delicate long spirals, a corkscrew shape, reminding one very forcibly of the spirochæte of relapsing fever. Indeed, it would be difficult to distinguish the two if placed side by side. On account of this developmental change, he doubted if the cholera organism should be ranked with bacilli; it is rather a transitional form between the bacillus and the spirillum. Possibly it is a true spirillum, portions of which appear in the comma shape, much as in other spirilla—e.g., spirilla undula, which do not always form complete spirals, but consist only of more or less curved rods. The comma bacilli thrive well in meat infusion, growing in it with great rapidity. By examining microscopically a drop of this broth culture the bacilli are seen in active movement, swarming at the margins of the drop, interspersed with the spiral threads, which are also apparently mobile. They grow also in other fluids—e.g., very abundantly in milk, without coagulating it or changing its appearance. Also in blood serum they grow very richly. Another good nutrient medium is gelatine, wherein the comma bacilli form colonies of a perfectly characteristic kind, different from those of any other form of bacteria. The colony when very young appears as a pale and small spot, not completely spherical as other bacterial colonies in gelatine are wont to be, but with a more or less irregular protruding or jagged contour. It also very soon takes on a somewhat granular appearance. As the colony increases the granular character becomes more marked, until it seems to be made up of highly refractile granules, like a mass of particles of glass. In its further growth the gelatine is liquefied in the vicinity of the colony, which at the same time sinks down deeper into the gelatine mass, and makes a small thread-like excavation in the gelatine, in the centre of which the colony appears as a small white point. This, again, is peculiar; it is never seen, at least so marked, with any other bacterium. And a similar appearance is produced when gelatine is inoculated with a pure culture of this bacillus, the gelatine liquefying at the seat of inoculation, and the small colony continually enlarging; but above it there occurs the excavated spot, like a bubble of air floating over the bacillary colony. It gives the impression that the bacillus growth not only liquefies the gelatine, but causes a rapid evaporation of the fluid so formed. Many bacteria also have the power of so liquefying gelatine with which they are inoculated, but never do they produce such an excavation with the bladder-like cavity on the surface. Another peculiarity was the slowness with which the gelatine liquefied, and the narrow limits of this liquefaction in the case of a gelatine disc. Cultures of the comma bacillus were also made in Agar-Agar jelly, which is not liquefied by them. On potato these bacilli grow like those of glanders, forming a greyish-brown layer on the surface. The comma bacilli thrive best at temperatures between 30° and 40° C., but they are not very sensitive to low temperatures, their growth not being prevented until 17° or 16° C. is reached. In this respect they agree with anthrax bacilli. Koch made an experiment to ascertain whether a very low temperature not merely checked development but killed them, and subjected the comma bacilli to a temperature of – 10° C. They were then completely frozen, but yet retained vitality, growing in gelatine afterwards. Other experiments, by excluding air from the gelatine cultures, or placing them under an exhausted bell jar or in an atmosphere of carbonic acid, went to prove that they required air and oxygen for their growth; but the deprivation did not kill them, since on removing them from these conditions they again began to grow. The growth of these bacilli is exceptionally rapid, quickly attaining its height, and after a brief stationary period as quickly terminating. The dying bacilli lose their shape, sometimes appearing shrivelled, sometimes swollen, and then staining very slightly or not at all. The special features of their vegetation are best seen when substances which also contain other forms of bacteria are taken—e.g., the intestinal contents or choleraic evacuations mixed with moistened earth or linen and kept damp. The comma bacilli in these conditions multiply with great rapidity so as to far outnumber the other forms of bacteria, which at first might have been in far greater abundance. This state of affairs does not last long; in two or three days the comma bacilli begin to die off, and the other bacteria to multiply. Precisely the same thing takes place in the intestine, where, after the rapid initial vegetation is over, and when exudation of blood occurs into the bowel, the comma bacilli disappear and putrefactive bacteria predominate. Whether the occurrence of putrefaction is inimical to the comma bacilli has not been proved, but from analogy it is very probable. At any rate, it is important to know this for certain, for if it be so then the comma bacilli will not thrive in a cesspit, and then further disinfection would be unnecessary. These bacilli thrive best in fluids containing a certain amount of nutriment. Experiments have not yet shown the limits in this respect, but Koch has found them capable of growing in meat broth diluted ten times. Again, if the nutrient medium become acid in reaction their growth is checked, at least in gelatine and meat infusion; but, singularly enough, they continue to grow on the surface of boiled potato which has become acid, showing that all acids are not equally obnoxious to them. But here, as with other substances which hinder their growth, they do not kill the bacilli. Davaine has shown that iodine is a strong bactericide. He experimented with anthrax bacilli in water to which iodine was added, and the bacilli were destroyed. But practically the organisms have to be dealt with in the alkaline contents of the bowel, or in the blood or fluids of the tissues, where iodine cannot remain in the free state. Koch found that the addition of an aqueous solution of iodine (1 in 4000) to meat infusion, in the proportion of 1 in 10, did not in the least interfere with the growth of the bacilli in that medium. He did not pursue this line of inquiry, seeing that in practice larger quantities of iodine than that could not be given. Alcohol first checks the development of the comma bacilli when it is mixed with the nutrient fluid in the proportion of 1 in 10, a degree of concentration which renders it impracticable for treatment. Common salt was added to the extent of 2 per cent., without influencing the growth of the bacilli. Sulphate of iron, in the proportion of 2 per cent., checks this growth, probably by precipitating albuminates from the fluids, and possibly also by its acid reaction; certainly it does not seem to have any specific disinfecting action—i.e., in destroying the bacilli. Indeed, Koch thinks that the admixture of sulphate of iron with fæcal matter may arrest putrefaction and really remove what may be the most destructive process to the comma bacilli. Hence he would distinguish between substances which merely arrest putrefaction and those which are bactericidal; for the former may simply serve the purpose of preserving the infective virus. Among other substances which prevent the growth of the comma bacilli may be mentioned: alum, in solutions of the strength 1 in 100; camphor, 1 in 300; carbolic acid, 1 in 400; oil of peppermint, 1 in 2000; sulphate of copper, 1 in 2500 (a remedy much employed, but how much would really be needed merely to hinder the growth of the bacilli in the intestine!); quinine, 1 in 5000; and sublimate, 1 in 100,000. In contrast with the foregoing measures for preventing the growth of these bacilli is the striking fact that they are readily killed by drying. This fact is proved by merely drying a small drop of material containing the bacilli on a cover-glass, and then placing this over some of the fluid on a glass slide. With anthrax bacilli vitality is retained for nearly a week; whereas, the comma bacillus appears to be killed in a very short time. Thus it was found that although vitality was retained—depending largely upon the number of bacilli—for a short time, yet withdrawal of the nutrient fluid for an hour or even less often sufficed; and it never happened that the bacilli retained vitality after a deprivation lasting twenty-four hours. These results would seem to point to the fact that the comma bacillus does not, like the organisms of anthrax and vaccinia, pass into the resting state (Dauer-zustande) by drying; and if so it is one of the most important facts in the etiology of cholera. Much, however, remains to be done, especially with regard to the soiled linen of cholera patients being kept in a damp state. He found that in soiled articles, when dried for a time, varying from twenty-four hours and upwards, the comma bacilli were quite destroyed. Nor was the destruction delayed by placing choleraic excreta in or upon earth, dry or moist, or mixed with stagnant water. In gelatine cultures the comma bacilli can be cultivated for six weeks, and also in blood serum, milk, and potato, where anthrax bacilli rapidly form spores. But a resting state of the comma bacilli has never been met with—a very exceptional thing in the case of bacilli; and another reason why the organism must be regarded rather as a spirillum than a bacillus. For the spirilla require only a fluid medium, and do not, like the anthrax bacilli, thrive in the dry state. It is quite unlikely that a resting state of the comma bacillus will ever be discovered; and, moreover, its absence harmonises with our knowledge of cholera etiology.

(To be continued.)

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THE

BIOLOGICAL LABORATORY AT THE HEALTH EXHIBITION.

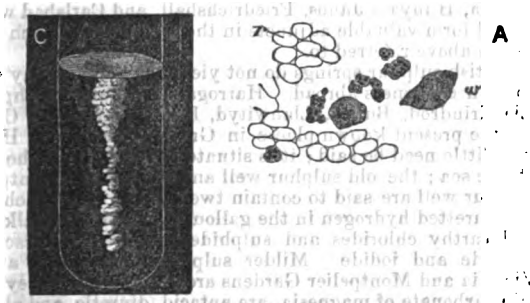
WE propose, in a series of articles, to place before our readers descriptions and illustrations of the chief objects for inspection in the Biological Laboratory of the International Health Exhibition, so ably directed by Mr. Watson Cheyne. In presenting these articles we have aimed at as much brevity as is consistent with lucidity, and have attempted to render the information as interesting and clear as possible by the employment of neat woodcuts. Thus we hope that most of what is at present really known on the subject of bacterial pathology will be brought together in so small a compass as shall be within the limits of leisure which are afforded even to busy practitioners. Moreover, it is our wish to make these articles serve as a catalogue *de luxe* to the Biological Laboratory, our desire, also, being to stimulate the study of the objects themselves.

MICROCOCCUS TETRAGENUS.

This organism is frequently present in phthisical sputa, when destruction of the lung is making rapid progress. When unstained, it closely resembles Sarcinæ. When stained, the groups of which it is composed are seen to be made up of micrococci arranged in fours, the individual cocci lying at regular distances from one another, embedded in a faintly staining hyaline substance. The average diameter of a group of four is about one-third that of a red blood-corpuscle.

In test-tube cultivations[1] (C, Fig. 1), the colonies present

FIG. 1.



A, Blood of a guinea-pig which died six days after inoculation. Objective $\frac{1}{10}$ in. *r*, Red corpuscles, unstained. *w*, White corpuscles. C, Test-tube cultivation in gelatinised meat infusion.[1]

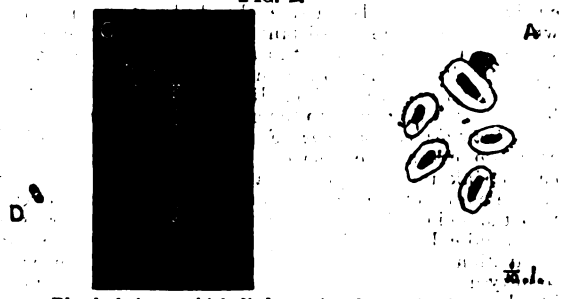
large, clearly defined, cushion-like masses along the course of the needle, which grow to a considerable size. When the micrococcus is inoculated into guinea-pigs and mice, they die in from two to ten days. The characteristic groups of four are found in the capillaries of all the organs, and generally large masses occur, which, when they form in the spleen, may burst through the peritoneal coat and set up peritonitis. The organism does not affect rabbits.

THE BACILLUS OF CHICKEN CHOLERA.

This is a disease of poultry. It is characterised by an inflammation of the duodenum attended with hæmorrhage, and the affected animal becomes profoundly drowsy. The blood is found to contain very minute bacilli, which have the peculiarity of staining deeply at the ends, while the tract between remains unstained, except at the surface. (Fig. 2, D.)

Test-tube cultivations (Fig. 2, C) show minute globular colonies, which never attain any considerable dimensions. They form an opaque growth, marking out the track of the needle. Fowls and pigeons inoculated from the cultivations

FIG. 2.

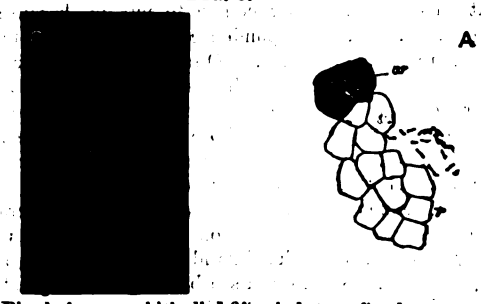


A, Blood of pigeon which died seventeen hours after inoculation from a cultivation of this bacillus. The minute bacilli are seen adhering to the oval nucleated blood-corpuscles. Objective $\frac{1}{10}$ in. C, Test-tube cultivation. D, Diagram of a single bacillus, to show the deeply staining ends, and the faintly stained band between them.

generally die in the course of from seventeen to twenty hours, and the bacilli are found in great numbers in the blood.

BACILLUS OF MOUSE SEPTICÆMIA.

FIG. 3.



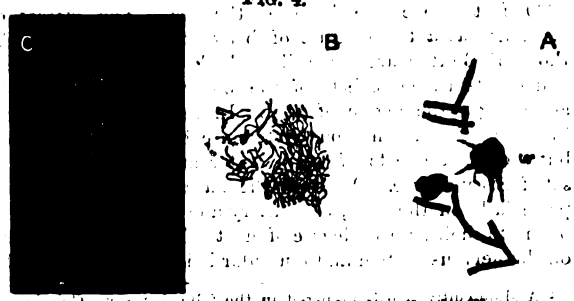
A, Blood of mouse which died fifty-six hours after inoculation. Objective $\frac{1}{10}$ in. *r*, Red corpuscles, unstained. *w*, A white corpuscle, stained. C, Test-tube cultivation.

The bacilli of mouse septicæmia are frequently present in decomposing fluids. They are very minute, measuring ·8 to 1 μ in length (Fig. 3, A).

Test-tube cultivations (Fig. 3, C) present a very delicate haziness round the track of the inoculating needle, which contrast strikingly with the opaque colonies formed by other organisms. When the bacillus is inoculated into house mice they die in from forty to seventy-two hours, and the bacilli are found in the blood, frequently within the white corpuscles. The bacillus only affects rabbits and guinea-pigs locally; when inoculated into the ear redness and swelling are produced, which spread over the ear, and disappear in five or six days. After an attack of the disease the rabbit is found to be incapable of being again infected, at least for some time.

BACILLUS ANTHRACIS.

FIG. 4.



A, Blood of an animal inoculated with the bacillus anthracis. Objective $\frac{1}{10}$ in. B, Appearance of the border of a growing patch of anthrax [illegible] (see footnote 2), objective $\frac{1}{10}$ in. C, [illegible].

This disease affects sheep, cattle, and other animals. In man it takes the form of "woolsorters' disease" and

[1] Test-tube cultivations are prepared as follows. Gelatinised meat infusion is introduced into a test-tube which has been plugged with cotton-wool and sterilised by heat. The whole is then steamed for half an hour on three successive days, and allowed to solidify. When a cultivation is started, a sterilised platinum needle is dipped into the material to be examined, and then plunged into the preparation in the tube, the cotton-wool plug being removed for the purpose. The organisms thus introduced grow along the track of the needle.

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"malignant carbuncle." The bacilli are present in the blood in large numbers. In the case of malignant carbuncle they are found in the tissues of the affected part. The organism is one of the largest bacilli, and when grown on cultivating materials outside the body it forms spores, which are extremely resistant to heat and chemical antiseptics. The spores are not formed in the living body.

Slide cultivations[2] show a mass of fine threads, towards the periphery of which the individual chains of bacilli may be seen extending out into the gelatine (Fig. 4, B).

In *test tube cultivations* (Fig. 4, C) the growth of the organism causes the gelatine to become liquid, and the bacilli sink in the liquid as a light flocculent precipitate. At the border of the liquid, where the growing bacilli extend into the solid gelatine, fine branching filaments are seen. Many animals are affected by it. The smallest trace of a cultivation inoculated into a mouse kills it in from twenty to forty hours; and the bacilli are found abundantly in the blood and swollen spleen.

HOME HEALTH RESORTS.

IT is not our intention, in writing this article on Health Resorts at Home, to recommend any particular set of places. The aim we have in view is to justify and amplify by a statement of facts, in more or less detail, the position which we took up in our last issue but one. We are persuaded that this is the proper course to pursue, because of the large amount of correspondence which the annotation referred to brought forth. Our readers will remember that our contention was that spas and places of health resort existed at home in sufficient abundance and in essential quality equal to those on the Continent. Individuals and families who are on the look-out for suitable places had better consult their ordinary medical advisers. Though we may not enter largely into the consideration of the excellent watering-places on the south and east coasts, we by no means infer that inland resorts are to be preferred to the seaside. Sea air and sea bathing are unquestionably powerful agencies in invigorating the constitution in large classes of individuals not necessarily coming under the category of invalids. First of all, it is necessary to point out that a residence at any of the spas implies considerably more than the mere taking of the waters or baths. The patient is influenced by many other agencies, each of which must be taken into consideration in any particular case. Change of climate, scene, diet, exercise, social habits, and occupation, and travelling, all play their part in the good results of so-called balneo-therapeutics.

Let us suppose that the doctor advises a course of simple thermal waters, say, for cases of chronic rheumatism, gout, or affections believed to be related in some way to these diatheses. The Continent being closed, where can the patient be sent? Bath and Buxton both possess fine hot springs. The former city has only a slight elevation, about 100 feet; the latter place is nearly 1000 feet above the level of the sea. The waters of Bath are at a temperature of between 100° and 120° F., those of Buxton are generally a little over 80°. The local and constitutional effects of the waters vary considerably according to the degree of heat. In the waters of Buxton the circulation and nervous system are but little influenced, but the other effects of warm water are all obtained in a satisfactory degree. At Bath the natural waters act more powerfully on the skin, circulatory and nervous apparatus, owing to their greater degree of heat. The soothing effects on the nervous system and muscular irritability are perfectly obtained with *warm*, rather than *tepid* or *hot* baths of water—that is, at a temperature of about 98°. Common salt or muriated saline waters may be had in plenty in England. There is Droitwich, perhaps the strongest of all brines, and possessing good arrangements; Nantwich, Middlewich, Woodhall, and Harrogate. Leamington and Cheltenham likewise contain common salt, in addition to sulphate of soda. Woodhall is very rich in iodides. These waters are of great value in deficient action of the skin; in tendencies to rheumatic fever or bronchitis; in cases of retarded convalescence from acute and chronic illness; in swelling of joints, the results of inflammatory action; in various chronic disorders of the system, such as scrofula and sluggish conditions of the digestive organs. The places named may be regarded as substitutes for Kissingen, Homburg, Kreuznach, Pyrmont, Wiesbaden, Baden-Baden, and other Continental spas.

With regard to alkaline waters it must be confessed that, so far as is at present known, there are no natural British waters which are so rich in the essential element (carbonate of soda) as some of the French and German springs. But where the alkaline waters are specially indicated, as in many forms of dyspepsia, gout, tendency to gall-stones, diabetes, and chronic catarrhal states, the imported waters of Vichy, Apollinaris, Bilin, or Wilhelmsquelle may be employed in conjunction with residence at one or other of the English resorts. Of waters whose chief constituent is either sulphate of soda or magnesia the British Isles possess their fair share. Leamington, Cheltenham, Scarborough, Purton Spa, and Epsom all rejoice in springs of a bitter taste, and containing the sulphates in greater or less proportion. The waters of the first two places mentioned are also rich in common salt. The bitter waters are valuable in habits of constipation with sluggish portal circulation, in tendency to hæmorrhoids, in congestion and enlargement of the liver and spleen, in some varieties of dyspepsia, in gall-stones, lithæmia, and diabetes. Stout plethoric persons do better on these waters than on the muriated saline waters. Here it is but just to mention that Pullna, Hunyadi János, Friedrichshall, and Carlsbad waters would form valuable adjuncts in the treatment of such cases as are above referred to.

British sulphur springs do not yield the palm in any sense to their congeners abroad. Harrogate, Moffat, Strathpeffer, Llandrindrod, Builth, Llanwityd, Lisdoonvarna (co. Clare), are the present known places in Great Britain. Of Harrogate little need be said; it is situate 600 feet above the level of the sea; the old sulphur well and the strong Montpelier sulphur well are said to contain twenty-five cubic inches of sulphuretted hydrogen in the gallon of water, with alkaline and earthy chlorides and sulphides, as well as traces of bromide and iodide. Milder sulphuretted springs at the Victoria and Montpelier Gardens are also in use; they contain carbonate of magnesia, are antacid, diuretic, and alterative. The social resources of Harrogate and the pleasant climate attract many classes of invalids, but the most suitable cases for treatment by the waters are—dyspepsia with inactivity of liver and bowels, especially when due to high living; constipation, obesity, swellings of joints and glands, chronic skin diseases, gout, rheumatism, and syphilis; some cases of disordered menstruation, and also some of incipient phthisis, may be sent to Harrogate with advantage. Moffat, in the upper part of Annandale, is 850 feet above the level of the sea, with a good climate and picturesque surroundings. The cold waters contain two and a half cubic inches of sulphuretted hydrogen in the pint of water, also twenty-two grains of chloride and two grains of sulphate of soda. Strathpeffer is a rising spa in Ross-shire, and has several cold sulphur springs as well as chalybeate waters of some value, as Mr. Berkeley Hill pointed out in the last volume of THE LANCET, p. 703. Llandrindrod, Builth, and Llanwityd are situate in Radnorshire; the climate at these places is pure and bracing. Chalybeate waters may be found fairly pure at Tunbridge Wells, Strathpeffer, and Harrogate. At Brighton there is a spring, now but little used, which contains sulphate of iron in small amount. Malvern, Bournemouth, Sandown, and many other health resorts possess chalybeate waters more or less available. The various forms of anæmia are most benefited by these waters, especially when the "poorness of blood" is due to hæmorrhage, suppuration, and previous acute or chronic disease. The chylopoietic viscera must, however, be in good working order. In anæmia associated with congestive states of the liver and intestines, a previous course of saline water is generally indicated. Cases of

[2] A slide cultivation is prepared in the following way. Gelatinised meat infusion which has been rendered sterile by heat is poured on a sterilised glass slide, and allowed to solidify. A sterilised platinum wire is then dipped into a growth of the organism which is to be examined, and drawn rapidly over the surface of the preparation on the slide. The bacteria are sown at intervals along the track of the wire, and as they grow form characteristic colonies. They may be observed in process of growth under the lower powers of the microscope.

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neuralgia, sterility, and impotency may be benefited by the use of the iron waters, which act by invigorating the whole constitution.

Earthy and calcareous waters, so called, are rather scarce in Great Britain. The waters of Bath, Buxton, and Bristol, however, contain a certain proportion of the carbonates and sulphate of lime and carbonate of magnesia. These waters are of value in digestive troubles with tendency to acidity and diarrhœa. They may be employed in osteomalacia, rickets, and tuberculosis, and in some cases of eczema and psoriasis. Ilkeatone, near Nottingham, is a sparkling water, the carbonic acid of which holds carbonates of lime and magnesia in solution.

We cannot conclude this brief outline without expressing our belief that the increasing call for home health resorts would be followed by a great improvement of already existing spas, with a further development of their resources, and, moreover, looking to the geological conformation of these islands, we are strongly of opinion that judicious borings would lead to the discovery of deeply rolling watercourses, the waters of which might be rich in many of the constituents in which British waters in present use are wanting.

CHOLERA AND QUARANTINE.

THE cholera epidemic in the south of France still continues to subside, both in Marseilles and Toulon, and also in the other localities to which it had spread. In Italy the imported disease makes no substantial headway, and it may be hoped that with due sanitary precautions it will not now do so. Two further arrivals of infected vessels in this country have so far been unattended with any harm. At Cardiff the orders of the Local Government Board have been fully complied with in the case of the recently arrived vessels on which deaths had occurred since leaving Marseilles, and the system on which the Government relies has proved successful.

Two systems have now been fully tested. A large number of European countries, notably Italy and Spain, have trusted to the old quarantine measures with sanitary cordons. England, Switzerland, Germany, Austria, Holland, and Belgium have left their ports and their land boundaries free from these antiquated encumbrances. All the latter countries have hitherto remained free from the infection, although in our own country alone has the alternative system of inspection and isolation been in any way put to the test. Of the two countries where quarantine has been relied on, Spain has hitherto remained free from imported cholera; but in Italy, where the sanitary cordon has been maintained with the utmost stringency practicable, and where the lazarettos still contain some thousands of persons who entered the country quite free from infection, the disease has spread to a number of neighbouring places, and has already caused some thirty deaths. This result has led many Italians to inquire whether the quarantine game is worth the candle. The *Opinione* points to the fact that the country has surrounded itself with a Chinese wall, but that the disease has, notwithstanding, found an entrance; whilst the countries trusting to the system of inspection and isolation which received the assent of the last Vienna Conference have entirely escaped. Hygienically, nothing has been gained to Italy; whereas, commercially, the loss has been great. And not only so, but the very lazarettos themselves are so disgracefully organised from a health point of view, that the Italians are by no means clear that these institutions have not themselves tended to bring about the very conditions favourable to the development of the cholera poison by the aggregation of large numbers of persons under circumstances of the most unwholesome sort. Filth in its various and most offensive forms seems to reign along the line of this cordon, which is misnamed "sanitary," and persons who have been detained there have sickened and died in consequence, some after they have been permitted to leave. We thus have over again, although on a much smaller scale, the Egyptian experience of 1883—namely, stringent quarantine measures, and cholera not only passing through them as if they did not exist, but in all probability aggravated by their very existence. All modern experience thus tends to prove the wisdom of the English system, and it is highly probable that the abandonment of quarantine, as hitherto carried out, may, as regards many European countries, be the outcome of the epidemic of 1884.

It has been ascertained that cholera made its appearance at Marseilles last year, a case of cholera, followed by death having occurred at the hospital, in a room containing numerous other patients. The disease made a good many victims. The mayor, who was immediately advised of the fact, proceeded to the hospital. Energetic measures were taken to prevent further contagion, and in order to avoid panic in the town the mayor solicited and secured the silence of all persons aware of the facts. The head surgeon, two house surgeons, a warder, and two sisters of mercy took an oath to divulge nothing, and this oath was strictly kept till the 4th inst., when the circumstance was made known to the Medical Committee. Dr. Poucel delivered an address on the 6th inst. to the Medical Society of Marseilles on the Propagation of Cholera. He inclines to think, with Dr. Colin, in opposition to Dr. Koch's theory, that the germs are conveyed in the air. Dr. Jules Patras, a medical man attached to the Bureau d'Assistance, has succumbed to the epidemic after an illness of only a few hours. He is the first physician in Marseilles who has been struck down by cholera. At Rome the total number of persons in quarantine on the 5th inst. was 3025. At Toulon further complications are threatening, typhoid fever and small-pox having made their appearance among the convalescents at the Bon Rencontre and St. Mandrier establishments.

The health of Paris continues to be satisfactory, the deaths during the week ending the 2nd inst. being 993, as compared with 1062 in the previous week. One death was attributed by the medical men to cholera, the victim being a worker in copper. He was carefully isolated. There were four fatal cases of diarrhœa. The number of strangers leaving Paris is still slightly in excess of the arrivals—viz, 23,489, against 22,314. This is, of course, very unusual at this season.

A Bill has been introduced by Mr. Gray, M.P., with a view to making better provision against cholera and other epidemic diseases.

On the 30th ult. Professor de Chaumont made an exhaustive inquiry as to the sanitary precautions taken in Portsmouth town and garrison in view of a possible outbreak of cholera. The result of the inquiry is believed to be satisfactory, but it will not be known until the official report is made.

Some uneasiness has been caused at Northampton by an outbreak of English cholera. The town all the summer through has been suffering from scarcity of water. In their extremity the inhabitants have had recourse to impure springs, and the sewers have given off noxious exhalations for want of flushing. Several members of the family in which cholera first broke out have been affected.

QUARANTINE AND INFECTED PORTS.

NOTICES to the following effect have been published in the *London Gazette* of the 1st and 5th inst.:—

A quarantine of five days is imposed at the frontier of the Tyrol on all persons entering Italy.

Vessels with cholera patients on board, and bound for Norwegian ports, are to be taken by the pilots to the quarantine station at Christiansund.

All vessels arriving at Gibraltar from France are required to quit the port without communication, save under special circumstances.

At Constantinople the quarantine on arrivals from France has been raised to fifteen days, and on arrivals from Brindisi, Trieste, Leghorn, Spezzia, and the Black Sea ports to ten days. Travellers from the above and other infected ports will not be allowed to disembark at Scutari until they have completed quarantine in Corfu.

Arrivals at Teneriffe of vessels from British possessions in the Mediterranean which have sailed since July 16th will be subjected to quarantine.

The quarantine at Bagdad against arrivals from Bedra Jassan and neighbourhood has been removed.

A PLOT of ground, five acres in extent, has just been secured at Bolton-le-Moors on which to build a convalescent home, for the erection and endowment of which £30,000 was in 1870 left by the late Mr. Stephen Blair.

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CASSAN *VERSUS* FYFE.

THE report of a trial of great interest and of grave importance to medical men, at the recent assizes at Lincoln, has reached us. Judging from the report, the facts are briefly these. The action was for slander, in which Mr. Theodore Cassan, L.R.C.P. Edin., M.R.C.S., of Gainsborough, was the plaintiff, and Dr. George Fyfe, of the same place, was the defendant. It is not without interest to notice some of the antecedents of these gentlemen. Mr. Cassan, before settling in Gainsborough, had been house-surgeon of the Training Hospital at Tottenham and house-surgeon of the Royal South Hants Infirmary. Dr. Fyfe had been house-surgeon of the Edinburgh Infirmary, and also of the Chester Infirmary. Clearly they are both gentlemen of experience in surgery, and should be alike capable of appreciating the difficulties and amenities of surgical practice. The slander complained of will appear from a brief statement of the case. On Friday, Feb. 1st, about half-past twelve in the day, Mr. Cassan, who is surgeon to the Britannia Sick Club, with about 1800 or 1900 members, and giving its surgeon about £360 a year, was applied to at his surgery by a member of the club named Howard, suffering with retention from old stricture of the urethra. Mr. Cassan had attended Howard in similar circumstances three years before. On this occasion matters were made worse by recent drinking, and by Howard being actually under the influence of drink when he first applied for relief of retention. Mr. Cassan at first failed to pass a catheter, but after giving Howard a draught composed of bromide and henbane, and enjoining half an hour's rest, succeeded without any difficulty whatever. He emptied the bladder completely, and gave the patient some medicine. He also told him that he was in a bad state, and advised him to go into the Lincoln Infirmary at once. The next day he called at Howard's house, used the catheter, and repeated his advice to go to the hospital. This he refused to do, saying that Mr. Cassan had pulled him through before, and would do so again. On Sunday, according to Mr. Cassan's account, Howard was much better, and had passed a good deal of urine. He did so in his presence. He still had symptoms of great constitutional disturbance, such as might be expected in a man of his habits, with an old stricture. On the Monday Mr. Cassan found him "much worse." He had much pain; he had passed no urine since the previous evening; he was very drowsy, and his pulse was failing. Mr. Cassan again introduced the catheter and emptied the bladder. He came to the conclusion that the patient would die. On Tuesday he was visited by Mr. Cassan's qualified assistant, Mr. Tatham, but refused to have the catheter passed, saying that he had voided urine in the bath. On Wednesday, when the assistant called again, Mr. Tatham found that Dr. Fyfe had been called in. On Thursday the patient died. The action for slander arose out of reports of the language held by Dr. Fyfe in regard to the previous treatment adopted by Mr. Cassan. About this there was the discrepancy, not unusual, between what the patient's friends reported (and in this case confirmed by other evidence of persons officially connected with the club) the doctor had said to them, and what he admitted having said. According to the former version, Dr. Fyfe had said that in the course of his experience he had never seen a man more shamefully treated; that the penis was black; that instruments must have been forced; and that the internal injuries done by these must have been as great as the external. Mr. Wharton, the vice-chairman of the club, said that Dr. Fyfe said to him, in answer to a question, that he "thought he could have cured the patient, and that any competent surgeon could have done so if he had been called in at first." When Mr. Cassan heard of these reports, he immediately applied to Dr. Fyfe by note for an explanation of them and a denial. He did this early on the Sunday morning following Howard's death, with the hope partly of securing a post-mortem examination before the funeral, which was to be held on that day. The envelope carrying Mr. Cassan's letter was returned by Dr. Fyfe with the following reply in pencil:—

"DEAR SIR,—I know nothing of the reports you allude to.—Yours faithfully, GEORGE FYFE."

The case became more serious for Mr. Cassan as the reports and complaints of the widow and friends reached the committee and officers of the club. The club appointed a committee to inquire into the facts, and the evidence of the widow and of one or two friends, and of the vice-chairman of the club and other officers, made the case a very long one, and, as it proved, serious in its conclusion. It is due to Dr. Fyfe to say that he disavowed many of the strong statements attributed to him, and that he declared that the accounts he received of the relief afforded by Mr. Cassan were much less favourable than those given in the evidence of the plaintiff and his assistant. He did not admit having said he could have "cured" the patient, only that he could have "relieved" him. In the end the Judge ruled that the statements attributed to Dr. Fyfe had not been proved, except, perhaps, such as were made to the representatives of the club. And—here is the serious part of the trial—he decided that these were not volunteered, that they were elicited as answers to questions, and that therefore they were "privileged." The question of privilege is one of law: for a judge, and not for a jury. Accordingly, his Lordship took it into his own hands, and directed the jury to find for the defendant, but agreed to stay execution for a fortnight, within which time notice of appeal must be given.

As leave has been granted for an appeal, and the matter is therefore *sub judice*, we reserve comment on the above important case.

ARMY MEDICAL SCHOOL, NETLEY.

THE forty-eighth session of the above school terminated on the 4th inst., when the results of the final examinations for commissions in the Medical Departments of the British and Indian Services were declared, the prizes awarded, and the business of the term concluded.

Lieut.-General Sir George Willis, K.C.B., commanding the southern district, attended by his staff and the principal medical officer of the district, arrived at Netley from Southsea at 12.30 P.M., and immediately proceeded to the lecture hall, where the staff of Netley Hospital and their guests, with the professors of the school and other visitors, were assembled. The Director-General of the Medical Department and the Physician to the Council of India were unable to attend, and we regret to say that Surgeon-General Murray, principal medical officer of the Royal Victoria Hospital, was also absent from indisposition.

The usual official documents reporting the work of the session were read, with the names of the surgeons on probation for both services reported fit to receive commissions according to the list printed in another column. It will be seen that the Herbert Prize of £20, the Montefiore Medal, with the same sum in money for Military Surgery, and the Martin Memorial Gold Medal for Military Medicine were won by Mr. J. H. T. Walsh, of H.M. Indian Service. The second Montefiore Prize for Military Surgery was gained by Mr. G. B. Russell, of the Army Medical Department. The Parkes Memorial Bronze Medal for Hygiene was awarded to Mr. C. Birt, of the same service. Mr. H. Hendley, of H.M. Indian Service, was the successful competitor for the Director-General's prize for Pathology.

Sir GEORGE WILLIS, after presenting the prizes, addressed the gentlemen whose course of study at Netley had been successfully ended. The General offered them his hearty congratulations, and in the kindest manner gave them some useful hints as to their future career in the service, the result of much experience in peace and war, urging them never to relax their efforts to keep abreast of a constantly advancing profession; reminding them that, like officers in other branches of the service, their efforts in this direction would, under recently published regulations be tested before promotion. Sir George hoped they would cultivate good relations with other branches of the service, by whom their skilful services would be appreciated, and wished them, one and all, a successful and honourable career.

Professor LONGMORE repeated the good wishes and congratulations of himself and his colleagues, and in their name bade them a hearty farewell, declaring the business of the session ended.

The company then adjourned to the handsome mess room of the department, where a sumptuous luncheon was served. Among the guests were some of the officers of two ships of the United States Navy; one the *Lancaster*, bearing the flag of Rear Admiral Nicoll Ludlow

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HEALTH IN WORKSHOPS.

ON the 31st ult., Mr. J. B. Lakeman, inspector under the Factory Acts, delivered an address in the lecture-room at the Health Exhibition on this subject. He stated that as a nation this country was very backward in sanitative education, and that the laws of ventilation were sadly neglected by employers of labour. Needle-makers, file-makers, grinders, and moulders suffered in lungs to the extent of 50 per cent., flint-cutters of 80 per cent., grindstone-makers of 40 per cent., cigar-makers of 36 per cent., weavers of 25 per cent. (the fibre of cotton being most injurious), brush-makers of 49 per cent., and hat-makers of 15 per cent. (the dust from cheap hats being more injurious than that from the fine felt). Speaking of the want of ventilation and sanitation in factories, he said that in this category they should exclude textile mills, not generally, but particularly. He advocated, however, that all factories should be placed on the same level, as the law said should be the case. Coming to the trades under the Act of 1867, such as printers, bookbinders, bakers, artificial flower makers, and dyers, Mr. Lakeman mentioned that these industries in many cases were not conducted under proper lines of ventilation, and referred to the great importance of pure air in keeping workers in health, remarking that the conditions of work in closely confined, overcrowded, and ill-ventilated workshops was something unbearable, and the consequences were fatal to robust life. In the course of the address the author described, with the aid of a diagram and practical experiments, what he regarded as a proper system of ventilation.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5851 births and 3909 deaths were registered during the week ending the 2nd inst. The annual rate of mortality in these towns, which in the six preceding weeks had increased from 18·7 to 24·9 per 1000, declined last week to 23·3. During the first five weeks of the current quarter the death-rate in these towns averaged 22·8 per 1000, against 23·1, 19·3, and 20·6 in the corresponding periods of 1881, 1882, and 1883. The lowest rates in these towns last week were 12·7 in Huddersfield, 14·5 in Bristol, and 15·2 in Plymouth. The rates in the other towns ranged upwards to 28·7 in Leicester, 28·9 in Liverpool, 31·2 in Norwich, and 34·6 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which in the two preceding weeks had been 1257 and 1246, further fell last week to 1035; these included 689 from diarrhœa, 109 from measles, 76 from whooping-cough, 74 from scarlet fever, 46 from "fever" (principally enteric), 21 from diphtheria, and 18 from small-pox. These diseases caused the lowest death-rates last week in Birkenhead and Huddersfield, and the highest rates in Bolton, Leicester, and Preston. The highest rates of mortality from diarrhœa were recorded in Nottingham, Norwich, Salford, Leicester, and Preston; from measles in Blackburn and Bolton; from whooping-cough in Leeds and Sunderland; from scarlet fever in Sheffield and Cardiff; and from "fever" in Blackburn and Halifax. The 21 deaths from diphtheria in the twenty-eight towns last week included 16 in London. Small-pox caused 17 deaths in Greater London (exclusive of 8 metropolitan cases registered outside Registration London), 2 in Liverpool, 2 in Hull, 2 in Sunderland, and 1 in Sheffield. The number of small-pox patients in the metropolitan asylums hospitals situated in and around London, which had declined from 1368 to 1035 in the three preceding weeks, had further declined to 892 at the end of last week; the number of new cases admitted to these hospitals also fell to 66 last week, from numbers declining from 354 to 105 in the six previous weeks. The Highgate Small-pox Hospital contained 45 patients on Saturday last, 2 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had declined from 231 to 159 in the four previous weeks, rose last week to 196, and exceeded the corrected average by 17. The causes of 79, or only 2·0 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Bristol, and in four other smaller towns. The largest proportions of uncertified deaths were recorded in Oldham, Birkenhead, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 21·0, 22·8, and 23·3 per 1000 in the three preceding weeks, declined to 20·6 in the week ending the 2nd inst.; and was 2·9 below the mean rate during the same week in the twenty-eight large English towns. The rates last week in the Scotch towns ranged from 13·4 and 14·1 in Perth and Leith, to 22·3 in Paisley and 24·4 in Glasgow. The 498 deaths in the eight towns included 40 which were referred to diarrhœal diseases, 23 to whooping-cough, 16 to measles, 11 to scarlet fever, 3 to "fever," 2 to diphtheria, and not one to small-pox; in all, 95 deaths resulted from these principal zymotic diseases, against 116 and 85 in the two preceding weeks. These 95 deaths were equal to an annual rate of 3·9 per 1000, which was 2·3 below the mean rate from the same diseases in the twenty-eight English towns. The deaths referred to diarrhœal diseases, which had been 57 and 43 in the two previous weeks, further declined to 40, but exceeded the number in the corresponding week of last year by 7; they included 21 in Glasgow, 8 in Edinburgh, and 4 in Dundee. The rate of mortality from diarrhœa last week in the Scotch towns did not exceed 1·7 per 1000, against 4·1 in the large English towns. The 23 deaths from whooping-cough slightly exceeded the number in the preceding week, and included 12 in Glasgow, 7 in Edinburgh, and 3 in Greenock. The 16 fatal cases of measles considerably exceeded those registered in recent weeks; 10 occurred in Glasgow and 4 in Dundee. The 11 deaths from scarlet fever, which also showed an increase, included 8 in Glasgow, where all the 3 fatal cases of "fever," as well as the 2 of diphtheria, were also recorded. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 66 and 89 in the two preceding weeks, declined last week to 66, and were 10 below the number returned in the corresponding week of last year. The causes of 76, or more than 15 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had declined in the three preceding weeks from 22·3 to 19·3 per 1000, rose again to 23·0 in the week ending the 2nd inst. During the first five weeks of the current quarter the death-rate in the city averaged 21·5 per 1000, the rate during the same period being equal to 22·9 in London and 17·3 in Edinburgh. The 155 deaths in Dublin showed an increase of 25 upon the declining numbers in recent weeks, and included 22 which were referred to the principal zymotic diseases, against 24 and 16 in the two preceding weeks; of these, 11 resulted from diarrhœal diseases, 6 from "fever" (typhus, enteric, or simple), 5 from scarlet fever, and not one from small-pox, measles, diphtheria, or whooping-cough. These 22 deaths were equal to an annual rate of 3·3 per 1000, the rate from the same diseases being 6·1 in London and 3·6 in Edinburgh. The 11 deaths from diarrhœal diseases considerably exceeded the numbers in recent weeks; the fatal cases of "fever" also showed an increase, while the 5 deaths referred to scarlet fever corresponded with the numbers in each of the two preceding weeks. Seven inquest cases and 4 deaths from violence were registered in the city last week; and 48 deaths were recorded in public institutions. The deaths of infants showed a marked excess, owing principally to the increased prevalence of summer diarrhœa, while the deaths of elderly persons were fewer than those returned in recent weeks. The causes of 23, or nearly 15 per cent., of the deaths registered during the week were not certified.

PUBLIC HEALH IN SWITZERLAND.

THE Swiss Statistical Bureau has just issued its official return of mortality statistics for the principal towns of Switzerland, relating to the three months ending June last. The return embraces all the Swiss towns having a population exceeding ten thousand persons (fifteen in number), and

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having an aggregate population of rather less than half a million of persons. The mean annual death-rate during the quarter in these towns was 24·7 per 1000, and was 1·3 below the mean rate in the same towns in the corresponding quarters of the eight years 1876–83. With reference to the recent prevalence of zymotic disease in Switzerland, it may be noted that, excepting only typhoid fever, it showed a decline last quarter, somewhat similar to the decline in the general death-rate. It is necessary, however, to refer to the epidemic of typhoid fever which has recently been so fatal in some parts of the country. The deaths from this disease in the fifteen Swiss towns were 228 in the second quarter of this year, against 64, 41, and 18 in the three preceding corresponding quarters. These 228 deaths were equal to an annual death-rate of 2·0 per 1000 in the Swiss towns, which was six times the rate from "fever" in the twenty-eight English towns during the same period. The epidemic was mainly confined to two centres of infection. In Zurich and its suburbs, with a population of 82,846 persons, the deaths from typhoid fever were 127, equal to 7·3 per 1000; while in Geneva and its suburbs, with a population of 70,765, the fatal cases were 82, and equal to 4·6 per 1000. In the thirteen other towns the deaths from this disease in the three months did not exceed nineteen. Towards the end of June the epidemic of typhoid fever in Geneva and Zurich had almost died out. More recently, however, a recrudescence has occurred in Geneva and its suburbs, and the recorded deaths from this disease, which had been 1 and 3 in the first two weeks of July, further rose to 10 in the third week of that month.

THE SERVICES.

THE COMPOSITION OF MEDICAL BOARDS.

A circular of the Government of India, Military Department, notifies a change in the composition of medical boards for the examination of officers of the Indian service proceeding on furlough on medical certificate, whether within or beyond Indian limits. Under the regulations now superseded, an officer of the Indian service, who can be granted furlough for a longer period than an officer of the British service, had to appear before a local medical board, presided over by an administrative medical officer, at the headquarters of divisions and districts, except in emergent cases, when a special medical board could be convened by the officer commanding the station. It has now been decided that all officers of the Indian service are in future to appear before local medical boards, composed of such officers as are available on the spot, subject to the conditions detailed in section 13 of the Regulations for the Medical Department, Bengal, 1882.

ARMY MEDICAL DEPARTMENT.—Brigade Surgeon Randolph Webb, to be Deputy Surgeon-General, vice W. Stewart, M.D., granted retired pay; Brigade Surgeon Richard Chapman Lofthouse, M.D., is granted retired pay, with the honorary rank of Deputy Surgeon-General; Surgeon-Major Albert Stanley Knight Prescott, to be Brigade Surgeon, vice R. O. Hayden, retired upon temporary half-pay; Surgeon-Major John Colahan, M.D., to be Brigade Surgeon, vice R. Webb, promoted; Surgeon-Major Thomas Walsh, to be Brigade Surgeon, vice J. H. Whittaker, granted retired pay; Surgeon-Major David Arthur Leslie, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon.

ADMIRALTY.—Staff Surgeon Alexander Scott has been placed on the retired list of his rank.

The following appointments have been made:—Surgeon George J. Fogerty to Chatham Dockyard; Surgeon James S. Wray to the *Banterer*; Surgeon William M. Rae to the *Mistletoe*; Fleet Surgeon W. J. Eames, additional, to the *President*; and Staff Surgeon T. L. Horner, additional, to the *President*.

RIFLE VOLUNTEERS.—1st Cambridgeshire: John Parkinson Atkinson, Gent., M.D., to be Acting Surgeon.—1st Dumbartonshire: Acting Surgeon James Stevenson, M.B., resigns his appointment.—4th Lancashire: William Mitchell Roocroft, Gent., to be Acting Surgeon.—3rd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry): Surgeons Henry William Livett and William Harford Glover Phelps, M.D., are granted the honorary rank of Surgeon-Major.—1st Stirlingshire: Alexander Duncan Fraser, Gent., M.B., to be Acting Surgeon.

Correspondence.

"Audi alteram partem."

CHESELDEN AND LITHOTOMY.

To the Editor of THE LANCET.

SIR,—Although Cheselden has been dead upwards of 130 years, perhaps you may find space in your columns for some extracts from the minutes of meetings of the governors of St. George's Hospital relative to him and the performance of lithotomy. The first surgeons to that hospital were appointed on October 19th, 1733—viz., Amyand and Dickens (serjeant surgeons) and Mr. Wilkie; and on the 22nd Cheselden, then surgeon to St. Thomas's Hospital and lithotomist to the Westminster (then Infirmary) Hospital, was appointed surgeon also, and, as it would appear, solely to perform lithotomy; for at a court of governors held on April 1st, 1737, the minutes state:—"Mr. Cheselden, who had from the foundation of the hospital cut the patients for the stone, now desiring to resign, and proposing that another surgeon be chosen for that operation—resolved, that the thanks of the court be given to Mr. Cheselden for his great care and trouble in and about the operation aforesaid." It was then proposed that a court be called to supply his place, and on April 22nd "the court resolved, on the motion of Mr. Ranby, after proper consideration, that it would be of most advantage to the patients, and more to the credit of the hospital, that one only of the surgeons in ordinary be chosen to succeed him; thereupon Mr. David Middleton was unanimously chosen to succeed him. Mr. Middleton was called in, and accepted the office with thanks." At a court held on April 6th, 1745, "David Middleton, Esq., having informed the court that he desired to resign the particular operation for cutting for the stone, as confined to him, but to perform the same in his turn with the other surgeons of this house—ordered, that the consideration of proper persons to perform that operation be referred to the next court"; and on April 27th "it was ordered that the operation of cutting for the stone be left to such of the surgeons of this hospital as think proper to perform the same." Cæsar Hawkins, so eminent as a lithotomist, had then been ten years surgeon to the hospital. In 1864 I saw at an engraver's a plate of a portrait of Cheselden, and, on asking how it came there, I was informed that it had been sent to be destroyed by a relative who was affronted at the little interest taken by the medical profession in the memory of her ancestor. I requested leave to have an impression taken before the destruction, which was courteously granted me. The copy, taken one hundred and eleven years after the likeness was executed, I presented to the Royal Medical and Chirurgical Society, as well as one of his works containing his own autograph and that of Prout and Brodie. Cheselden was appointed surgeon to the Royal Hospital at Chelsea in 1737, where he died on April 10th, 1752. A handsome tomb was placed over his grave in the burial-ground of that hospital. On visiting it lately I found it fast going to decay: a little cutting of the stone might still preserve some memorial of this eminent surgeon. Next to him is buried Sir Everard Home, also surgeon to this hospital. I am, Sir, your obedient servant,

Savile-row, August 4th, 1884. CHARLES HAWKINS.

P.S.—I have presented to the Royal Medical and Chirurgical Society H. Dekker's "Exercitationes Practicæ," edition 1695. At page 193 there is depicted an operation of removing a crushed calculus. I should like opinions as to what this operation was.

THE CHOLERA.

To the Editor of THE LANCET.

SIR,—The subject of cholera is of perennial moment, but it never was more so, we might say, than at the present juncture, in consequence of its prevalence in France. In reference to a letter published in your current issue by Dr. John Roche, retired list of Her Majesty's Indian Medical Service, it should be noted that the malarial view of its etiology is by no means a novel one, as it was forcibly brought under the notice of the profession by Dr. Scriven, retired list of the Indian Medical Service, as long back as 1866 (*vide*

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THE LANCET of that year, vol. ii., p. 184, *et seq*); and about twelve years ago I remember reading its revival in the columns of a contemporary medical journal, by Dr. Smith. It was under the assumption of a malarial origin of the malady that quinine was indicated and prescribed by mouth and subcutaneously, but it has signally failed to answer, and that reason alone ought, *pro tanto*, to cast into oblivion a view, or a theory, or whatever else we may call it, which has been found to be erroneous. I need scarcely mention in this connexion the absence—or, at any rate, comparative immunity—of cholera in many malarious regions, not only of India, while at other non-malarious places it rages with considerable virulence. That the malarial theory of the origin of cholera is now exploded cannot be gainsaid. Evidence is not wanting to prove that in healthy (non-malarious) regions, such as in some of the tea plantations in India, cholera has frequently been rife, from being imported, of course, while fevers of an ague type have been conspicuous by their absence. Mr. Vincent Richards, medical officer of emigrants, cites some interesting instances of importation among the coolies (labourers) emigrated to the tea gardens in Assam from foci of infection. (*Indian Medical Gazette*, April and May, 1881; and Jan. 1884.) I cannot understand how or for what reason Dr. Roche attributes to Sir Joseph Fayrer his support of the malarial hypothesis, for *I do* not remember reading anywhere his advocacy of such a view. One of his last utterances on the subject was at the International Medical Congress at Amsterdam recently, and he is then reported to have said that he "felt that after twenty-four years' experience he was totally and absolutely ignorant of the cause of the disease." It is idle to rest on that belief in these days of advance, when the germ theory of disease is making such rapid strides; but while we may be duly indebted to modern workers, we cannot forget former ones in the same field of research, for Mr. C. Macnamara long ago advanced this view of the origin of cholera and its propagation. And subsequently Drs. Lewis and Cunningham have tended to confirm that view, though without succeeding in discovering a particular and characteristic virus of cholera. Concerning the germ theory view and my own observations on cholera in the new-born, Dr. Roche writes:—"The cholera witnessed by Dr. Lucas in new-born children discards at a stroke the fungus theory." Now, I venture to hold that that circumstance, on the contrary, tends to afford a great support to the germ theory view. The cholera virus containing the bacilli would appear to have infected the babes through the maternal and placental circulation before birth in some instances, and in others after birth, through the mammary secretion. The doctrine of evolution is fast throwing aside all notions and dogmas concerning origin *de novo* or spontaneous generation alike of disease as of creatures in the animal and vegetable kingdoms. It is, therefore, hardly tenable, I beg respectfully to observe, to write as he does: "I trust no one believes that cholera or its contagium existed in the Ark as a specific thing; this being granted, it follows that cholera may under extraordinary and exceptional circumstances arise spontaneously." Now, might we question that which is rendered a premise for his argument, what scientific evidence have we that such a thing as the Flood or Deluge took place, and that Noah and his people, his mammals, birds, and reptiles, alone were saved in the Ark?

Dr. Roche says that he is ready to swallow "any amount of Prof. Koch's bacilli, provided they are well washed in distilled water until the colour of the permanganate is slowly affected." As Koch is now exhibiting the bacilli at Paris from cases which occurred at Toulon and Marseilles, Dr. Roche, by proceeding to Paris, will have an opportunity of trying the experiment he refers to. At the same time, I trust he will not undertake so fatal an experiment, and make an untimely call on his friends to mourn their loss.

I am, Sir, yours truly,

Edinburgh, July 21st, 1884. JOHN C. LUCAS.

To the Editor of THE LANCET.

SIR,—A considerable amount of discussion is going on at the present time in France and elsewhere as regards the propagation of cholera by the agency of the air. A residence of several years in India and experience gained in several severe epidemics of that disease must be my apology for asking you to be so good as to insert the following remarks in your valuable journal, as facts coming under my own notice, and proving, I think, that the agency of the air in the diffusion of cholera may sometimes exist as the chief, if not only, factor.

From what is known of the whole life of the lowest organisms, it is undoubted that they possess the faculty of living in the air, as well as when attached to different solid substances, but they lead a much less active life, and their capacity for increase is much diminished outside of fluids; developing, however, dangerous energy when moistened, as seen in the infection of those who had been employed in washing the linen or other articles used by cholera patients. In my own experience, I have seen cholera cases appear simultaneously in various houses and barracks at a station where none existed before, and where none existed within a very great distance from the locality. And not only did these cases appear all within the same hour, usually in the night time, but, taking a line from the house on the outermost part of the station, it was found that the epidemic followed a straight or sometimes a diagonal course through the whole place, as if wafted through the open doors or windows in a current of air, and, seizing its victim or victims, passed on to the next building straight in its direction, leaving those to the right or left untouched, to attack those in the succeeding house. In one instance I saw a cholera epidemic follow the occurrence of a dust storm in India, which broke on the Rock of Gwalior one afternoon in the month of June, 1867, after skirting the cantonment of Morar, some four miles away. It was accompanied by rain and hail, dust and sand, with a high wind, and it passed away as rapidly as it appeared, but directly after its passage cholera broke out, attacking simultaneously the European and native soldiers in the barracks of the fortress on its summit, as also men employed at work on various parts of the Rock. Not a single case of cholera existed either in the town of Gwalior, in Morar, or in any of the villages for a great distance round, nor had done so for a considerable time previously; and I may add that this same phenomenon was observed in 1881 at the same place by the medical officer then in charge of the fortress, confirming what I myself had observed fourteen years before; this can only be put down as an outbreak of the disease occasioned by the transport thither of the cholera germs by the agency of the air, its dangerous qualities being probably heightened by the rain falling at the time.

I am, Sir, yours truly,

W. WAKEFIELD, M.D. Univ. Glasg. & Paris,

July 21st, 1884. Late Army Medical Department.

"THE LOSS OF THE MEDICAL BILL."

To the Editor of THE LANCET.

SIR,—As some victories are hardly distinguishable from defeats, so some apparent losses turn out in the end to be real gains, and among these latter I agree with you in thinking that we must reckon the loss of the Medical Bill. As proposed to be amended (?) by Sir Lyon Playfair, it would have provided for an examining board in each division of the kingdom, to be kept up as a standard of what such boards should be; while at the same time, by the device of appointing coadjutor examiners to university and conjoint board examinations, it would have rendered it unnecessary for a single student to pass the new boards. In at least two divisions of the kingdom it would clearly have been the interest, and probably the desire, of those bodies whose representatives formed the divisional boards to ensure the failure of the new examining boards, while, failure or no failure, the examinations must have continued to be held while the Act remained in force, and the double expense of these and the coadjutor examiners must have come out of the pockets of somebody in the profession or of those just entering it. It would surely have been a great misfortune to have had such a system as this fixed upon us for the next quarter of a century or so, and no pains should, I think, be spared to prevent the possibility of such a calamity occurring next session. Personally I am of opinion that the Government Bill, even without Sir L. Playfair's amendment, was seriously defective in that it attempted too much in one direction and too little in another. I agree with Dr. Farquharson's speech on the second reading, that the Bill would probably have injured, if not ruined, the corporations; and I do not think that in England, at any rate, there is any desire to see these bodies either ruined or seriously injured,

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nor have I seen any evidence of such desire on the part of the profession in Scotland or Ireland. On the other hand, the Bill touched the radical defect of the Medical Council—i.e., its non-representative character—with such a tender hand that I doubt very much if for practical purposes there would have been a pin to choose between the old Council and the new. At a time when some two millions of uneducated agricultural labourers are about to get votes for the election of representatives in the body which governs the nation, it seems to me a little absurd that it should be offered as a great boon to twenty thousand members of a learned profession that they should have the right to elect less than one-fourth of the body which governs their own profession. Let us go in for a thoroughly representative Council first, and our difficulties in obtaining other necessary reforms will be very much diminished.

I am, Sir, yours truly,

Dulwich, August 2nd, 1884. H. NELSON HARDY.

DISINFECTANTS.

To the Editor of THE LANCET.

SIR,—In your Paris correspondent's letter of July 26th, various experiments by M. Pasteur to determine the efficacy of different disinfectants are recorded.

Some years ago, when I was medical officer of health, I conducted some similar experiments by exposing vaccinia lymph in small chambers to the influence of various disinfectants. The results of these experiments were embodied in my Government report. The disinfectants I used were sulphurous anhydride chlorine, euchlorine, carbolic acid, and sanitas. Owing to the passing of the Cruelty to Animals Act, I had to test the lymph on the babies brought for vaccination; the difficulty in obtaining the consent of the mothers prevented me from carrying the experiments to a satisfactory conclusion, but as far as they went they appeared to point to euchlorine as being by far the most powerful. There are at least two distinct classes of disinfectants: those that kill the microbes (germicides), as corrosive sublimate; and those that destroy or consume the germ by setting free nascent oxygen or ozone. Fresh air, containing as it does free ozone, acts in this way. As each molecule of euchlorine sets free four atoms of oxygen in the nascent condition, thus $Cl_2O_3 + XCl + H_2O = 2HCl + XCl + 4O$, it is probably the most powerful of its class. The free chlorine that it contains doubtless, also, contributes to its efficacy. Euchlorine is a mixture of free chlorine, or chlorine very loosely combined, and chlorous oxide, Cl_2O_3, and is prepared by pouring strong hydrochloric acid on potassium chlorate and applying a gentle heat. I usually placed a small basin containing the chlorate in a large one full of boiling water, and on pouring in the hydrochloric acid the euchlorine was freely given off. The practical experience of several years' use in all cases of fever fully bore out the theoretical experiments, that in euchlorine we have a cheap, simple, and effective disinfectant.

I am, Sir, yours truly,

T. HATFIELD WALKER, L.R.C.P.

Newcastle-on-Tyne, July, 1884.

NORTH LONDON CONSUMPTION HOSPITAL.

To the Editor of THE LANCET.

SIR,—My attention has been drawn to an annotation in THE LANCET of July 12th, headed as above. The writer insinuates that the abuses of the last fifteen years are due to a committee over which I have had control.

The facts are: (1) That neither I nor the medical staff have had *any* voice in the management since 1868; (2) that all present attempts at reform owe their origin entirely to the exertions of the medical staff; and (3) that many years ago objection was made to the committee by the physicians *against* the printed addresses of the staff *without effect*. As delegate of the medical staff to the committee of management, I assert without reserve that the printing of the out-patients' letters *without* their addresses will be most satisfactory to every member of the medical staff.

I am, Sir, yours obediently,

GODWIN TIMMS, M.D. Lond.

THE Library of the Obstetrical Society will be closed from August 18th to September 18th

BIRMINGHAM.

(From our own Correspondent.)

QUEEN'S COLLEGE.

THE appointment of a Professor of Anatomy who will give his undivided attention to the duties has given universal satisfaction among the friends of the school. Even those who were at first unwilling to sink vested interests see now that much good is likely to accrue to the College by this arrangement. With three demonstrators, all highly qualified and trained in teaching, the anatomical department ought to be second to none, and able to compete with others where the advantage was formerly theirs.

BIRMINGHAM ASSIZES.

After many years' agitation, much perseverance and considerable energy, the town now enjoys the privilege of a distinct court of assize. The first opening was made on the 4th inst., an awkward day for business purposes, being Bank Holiday. Owing to the absence of a separate court, the assizes were held in the Council-house, which has been fitted up and adapted for the occasion. It cannot be said to be a success from a health point of view, for the ventilation is necessarily defective and the transmission of sound bad, and very trying for those whose attention must be fixed for a length of time on important issues. It is proposed to build new courts, a site having already been marked out; but in these times of trade depression the authorities look askance at any large expenditure of money, or, if wishing to indulge, are reminded of a vigilant body of ratepayers, who view with suspicion any movements in this direction for the present. Still, the new courts must ultimately come as a matter of convenience; and now that Birmingham has the advantage of this important concession, it is but a sequence that adequate provision should be made for the proper transaction of the duties pertaining thereto.

THE NEW EYE HOSPITAL.

The new premises of this charity were opened on the 24th ult. by Lady Leigh, in the presence of a large number of friends and visitors. The large and spacious building was tastefully decorated, and much interest was exhibited in the proceedings. The new hospital has accommodation for 70 in-patients, and room for 200 or 300 out-patients daily, the two departments being kept entirely distinct. The cost of the whole will be about £20,000, of which £5000 was given by one donor. The Eye Hospital has ever stood high in public esteem, and has drawn its patients from a very wide area throughout the Midland Counties. It is hoped, therefore, that the deficiency announced of £4000 will be supplied without resorting to more than earnest appeals to the charitable public, who in this town have always most willingly supported the institutions for the relief of suffering and disease.

UNPARDONABLE STUPIDITY.

The Borough Coroner held an inquest a few days ago on the body of a child, who had met with its death from gross carelessness, in a manner almost incredible in this enlightened age. A woman having attended the Queen's Hospital was supplied with medicine for her ailment. The child of a neighbour in the same court was taken ill, and in the wisdom of the friends it was thought that the mixture prescribed for the woman would do it good; accordingly the unfortunate child was dosed with this, was seized with convulsions and died. The mixture turned out to be iron and strychnine. A more roundabout method of treatment could hardly be conceived, and the result showed how ignorant amateurs base their conclusions upon a very slender and treacherous foundation.

MANCHESTER.

(From our own Correspondent.)

HOSPITAL AMBULANCE.

A FEW months since a resolution was adopted by the Board of the Royal Infirmary to the effect that a horse ambulance should be acquired and worked on the plan adopted in some of the large towns in America and also in

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Liverpool, whereby serious cases of accident or sudden illness are sent for and removed by the hospital authorities, and the proposed experiment here had been looked forward to with some little interest. At the last monthly meeting of the Board, however, this resolution, on the motion of Sir Joseph Heron, the Town Clerk, was rescinded, and the ambulance will not be obtained, at all events for the present. The chief argument used was that Manchester already is provided with ample provision of a similar character in connexion with the police force, there being no less than seventeen admirably constructed hand ambulances on wheels, kept at the various stations and available at any time, day or night; and on the occasion of the recent railway disaster they rendered most effectual assistance in removing the sufferers from the station to the infirmary.

THE ROYAL INFIRMARY.

The annual meeting of the trustees of the infirmary was held on the 31st ult., when the annual report and statement of accounts were adopted. The latter show that the total income of the infirmary, with its allied institutions the fever hospital, the convalescent hospital, and the lunatic asylum, amounted to £62,027 for the past year. The income exceeded the expenditure at the infirmary, the asylum, and the fever hospital, but at the convalescent hospital the income fell below the expenditure by £1740, so that this institution still continues to be a heavy burden on the infirmary funds. The fever hospital has been unusually full during the past twelve months, due to a somewhat prolonged epidemic of scarlatina, and its resources have been somewhat taxed to provide accommodation for all the cases, and it is in contemplation shortly to extend the buildings there. Some meetings have been recently held to consider the desirability of relieving the infirmary of the responsibility of providing accommodation for the infectious diseases of the city, and of handing over the fever hospital to the health authorities of the corporation, but at the meeting alluded to above it was resolved, on the motion of Dr. Renaud, seconded by Mr. Schuster, "That in the opinion of this meeting it is desirable that the future exclusive control of Monsall Fever Hospital should be retained by the infirmary board, provided that a *modus vivendi* can be arranged with the Corporation of Manchester and the health authorities of the surrounding districts."

At the Salford Fever Hospital the accommodation has also been found to be insufficient, and application is about to be made to the Local Government Board for permission to spend £1000 in extending the Wilton Hospital.

NATIONAL VETERINARY ASSOCIATION.

During last week the second general meeting of the National Veterinary Association was held at Owens College, under the presidency of Mr. Thomas Greaves, F.R.C.V.S. The meeting was well attended by veterinary surgeons from various parts of the country, amongst them being Professor Walley, Dr. Fleming, Professor Williams of Edinburgh, J. McCall of Glasgow, and others. The President, in his opening address, dwelt upon the important part which he hoped the Association was in the future destined to play in raising the tone of the veterinary profession. It was the outcome of the various Veterinary Associations which had sprung up in different places during the past few years, and it was intended to follow in great measure the lines of the British Medical Association. Various papers were read, followed by discussion, many of the subjects having considerable interest for the medical profession, such as "Public Health as affected by Food-supply obtained from Animals," by Dr. McCall. The members dined together at the Grand Hotel, and several members of the medical profession were present as visitors.

At the last meeting of the Board of Guardians the subject of provision for infectious diseases was discussed, and it was suggested that buildings be erected near the wrrk-house sufficient to accommodate at least thirty patients.

THE body of the gentleman who recently died from heart disease on the West Pier, at Brighton, after chasing the man who had stolen his watch, has been identified as that of Mr. Alexander Cunningham Tweedie, aged sixty-two, a surgeon, of Caversham-road, Kentish-town, London. At the inquest held before the Deputy Borough Coroner, a verdict was returned in accordance with the medical testimony.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Lords, on Tuesday, the Criminals Lunatic Bill was read a second time, and the Cholera Hospitals (Ireland) Bill was read a third time and passed. The report of amendments on the Canal Boats Act (1877) Amendments Bill was brought up and agreed to.

State of the Thames.

Lord Forbes called attention to the condition of the Thames, and recommended that the Aylesbury system should be applied to London sewage. Lord Dalhousie, in reply, observed that the Local Government Board had been calling the attention of the Metropolitan Board to the foul state of the river, and that owing to expensive deodorisation a slight improvement had been effected.

In the House of Commons, on Thursday, Sir J. M'Garel Hogg stated to Mr. A. M'Arthur that several plans for the disposal of the sewage had been considered by the Metropolitan Board, but none had been judged satisfactory.

School Pressure.

On Friday, Mr. Mundella assured Mr. Talbot that the Education Department was satisfied that the new code and the instructions to the inspectors would do all that could be done by the department to prevent over-pressure. The London School Board had put all their pupil teachers on half time, and the provincial School Boards were doing their best. He saw no present necessity for an inquiry into the subject.

Ramleh Barracks.

Lord Hartington, in reply to Mr. Ross, stated that a large amount of sanitary work had been carried out in Ramleh Barracks, and although the sick-rate was high (185 out of 1303), the principal medical officer did not attribute that to the state of the barracks.

The Patent Medicines Stamp Act.

Mr. Childers, in replying to Mr. T. P. O'Connor, said of course the patent medicines stamp was not a Government guarantee of the safety and purity of the medicine; but he was disposed to think that the French practice would, perhaps, be followed with advantage. He had no information that a large number of deaths occurred annually from poisonous patent medicines, nor that the Stamp Act had been condemned by the authoritative organs of the medical profession. He could hold out no hope at present of the repeal of the tax, which brought in £160,000 a year.

Royal Commissions.

Mr. Chamberlain stated that the Royal Commission on Merchant Shipping would not extend its inquiry to the sanitary provision of emigrants. Sir C. Dilke stated that the Royal Commission on Dwellings of the Poor had finished its inquiry as to the condition of rural parts of England and Wales.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON. — The following gentlemen were admitted Members of the College on July 31st:—

Pitt, George Newton, M.D.Camb., St. Thomas's-street.
Sieley, Richard, M.B.Lond., Park-row.
Younger, Edward George, M.D.Brux., Hanwell.

On the same day the following candidates were admitted Licentiates of the College:—

Airth, George Leslie, M.D.Toronto, St. Peter-street.
Banham, William Wilfred, Worsborough Dale, Barnsley.
Barritt, Gilbert Lacy, Waterside, Todmorden.
Bateman, Fredk. Augustus Newton, Pall-mall.
Beardmore, George Russell, Upper-street.
Beaumont, Edgar, Gipsy-hill.
Bell, James Francis, Vicar's-road.
Biden, Charles Walter, St. Mary's-road.
Bowhay, Albert, Gunnislake, Tavistock.
Brogden, Richard William, The Grove, Clapham-road.
Bronstorph, Ernest Ebenezer, M.D.Montreal, Philpot-street.
Brown, Wm. McEnery, M.D.Toronto, St. Peter-street.
Castor, Richard Henderson, Ainger-road.
Chambers, Herbert William, Lowestoft.
Collins, Arthur Ward, Rainhill, Prescot.
Collins, George William, Adelaide-road.
Collyer, James Ralph, Enfield.
Craddock, Sidney Ernest, Milman-street.

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Davies, John Charles, Rhos, Ruabon.
De Montbrun, Pedro Louis, Porteus.
Evans, Cadwallader Edwards, Westbury-on-Trym.
Forster, Thomas Frederick, Guilford-street.
Fotherby, H. Arthur, St. George's Infirmary, Fulham-road.
Fowler, Alfred Henderson, Guy's Hospital.
Gostling, Thomas Preston, University College Hospital.
Greene, Edward Campbell, Rowan-road.
Hale, Charles Henry, Elgin-road.
Harvey, James, Larkall-lane.
Hillaby, Arthur, Manor-road.
Hitchins, Thomas Johns, Broadfield, Crawley.
Humphreys, Francis Rowland, Guy's Hospital.
Hunt, Edwin Guy, Guilford-street.
Jones, Richard Nelson, Baron-court Chambers.
Keele, John Rushworth, Southampton.
Kent, Herbert Arthur, Salisbury.
Kolapurvala, Jamsetjee Framjee, Malpas-road.
Laicaca, Cawas, Whitehall-gardens.
Lichfield, James William, Talgarth-road.
Marriott, John, Percy-circus.
Mirza, Jafarkuli Faredunbeg, Richmond-road.
Molesworth, Robert Everard, Belmont-road.
Murray, Geo. Alfred Everitt, St. Bartholomew's Hospital.
Openshaw, Thomas Horrocks, Poplar Hospital.
Oram, Percy Sprague, Amhurst-road.
Parrott, Thomas Godfrey, Aylesbury.
Price, John Dudley, Waddam's Pool, Dudley.
Reilly, Charles Cooper, Denbigh-street.
Roberts, James Reid, Vernon Chambers.
Roberts, Owen William, Cambridge-gardens.
Salvage, John Valentine, Lancaster-road.
Sharp, Charles John, Normanby-place, Liverpool.
Shaw, Harry Charles Costello, Kingston-on-Thames.
Smith, Edward Arnold Cloete, Shooters-hill.
Smith, Howard Lyon, Tellington-park.
Southcombe, Arthur Geo., St. Bartholomew's Hospital.
Stevenson, John, Tachbrook-street.
Stewart, Andrew, M.D. Montreal, Great Coram-street.
Thurston, Hugh Champneys, Nicholas-street.
Trevan, Fredk. Adolphus, Melville Hospital, Chatham.
Trevor, Robert, Halsey-street.
Watkins, Arthur Muriel, Guilford-street.
West, John Arthur, Bickley Park.
Williams, Ezra Herbert, M.D. Toronto, St. Peter's-road.
Wilson, Arthur Henry, Abercromby-square, Liverpool.

COLLEGE EXAMINERS.—The following gentlemen have been appointed Examiners for the ensuing year:—Chemistry and Chemical Physics: Chas. Rumley Alder Wright, D.Sc., Chas. Wm. Heaton, F.I.C., Thomas Stevenson, M.D., Albert James Bernays, Ph.D. Materia Medica, Medical Botany, and Pharmacy: Evan Buchanan Baxter, M.D., Frederick Thomas Roberts, M.D., Thomas Lauder Brunton, M.D., John Mitchell Bruce, M.D. Physiology: William Henry Allchin, M.B., David Ferrier, M.D., Herbert Watney, M.D., John Harley, M.D. Osteology and Anatomy: William Anderson, F.R.C.S., L.R.C.P., Robert E. Carrington, M.D., James Anderson, M.D., Henry Morris, F.R.C.S., L.R.C.P. Medical Anatomy and Principles and Practice of Medicine: Sydney Ringer, M.D., William Howship Dickinson, M.D., William H. Broadbent, M.D., William Selby Church, M.D. Midwifery and Diseases Peculiar to Women: William Smoult Playfair, M.D., John Williams, M.D., John Baptiste Potter, M.D., James Watt Black, M.D. Surgical Anatomy and Principles and Practice of Surgery: Sydney Jones, F.R.C.S., John Couper, F.R.C.S., Alfred Willett, F.R.C.S., Thomas Bryant, F.R.C.S.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 31st ult.:—

Baillie, Robert Alexander, Blackheath.
Blight, William Lyne, Sladesbridge.
Chapman, Harry Cecil, St. Mary's-terrace.
Drew, Arthur John, Gloucester-place.
France, Edward, Sheffield.
Heath, Charles Joseph, Cromwell-road.
Hiddingh, William Henry, Balham.
Maher, Charles H., L.K.Q.C.P.I., Sydney, New South Wales.
Percival, Frank, Leinster-square.
Pinches, William Hooper, L.R.C.P. Edin., Fulham.
Scott, Alfred Langston, L.S.A., Dunmow, Essex.
Smith, J. A. Phin, Granville-square.
Stewart, Arthur Hastings, Colville-terrace.
Tomlins, William Henry, L.S.A., Rutland-street.
Tratman, Frank, Bristol.
Wilkin, Griffith Charles, Hyde-park-street.

Admitted Members of the College on the 1st inst.:—

Arkle, Charles Joseph, L.S.A., West Derby, Liverpool.
Caleb, Clement Cornelius, M.B. Durham, Allahabad.
David, Evan Thomas, L.S.A., Pontypridd.
Gilks, Norton Gilbert, L.S.A., Leominster.
Hill, Rowland, L.S.A., Beeralston.
Kidd, Leonard Joseph, Cambridge-street.
Pring, Frederick Arthur, L.S.A., Exeter.
Wright, William Henry, L.K.Q.C.P.I., Liverpool.

Admitted Members of the College on the 4th inst.:—

Appleton, Harry, L.S.A., Granville-square.
Haw, Walter Herbert, L.S.A., Cape of Good Hope.
Livermore, William L., L.S.A., Finsbury-park.
Marriott, John, L.R.C.P. Lond., Leicester.
Penny, Edmund John, L.S.A., Dorchester.
Sherrington, Charles Scott, L.R.C.P. Lond., Ipswich.
Squire, Walter Perfect, Torquay.

Admitted Members of the College on the 5th inst.:—

Bolton, George Augustus, Surbiton.
Gray, J. P. William, L.S.A., Barnsbury-park.
Guilding, Lansdown Murray, L.S.A., Reading.
Marshall, W. L. Wright, L.S.A., Brixton-rise.
Phillips, Ernest Willmer, L.S.A., Brighton.
Roberts, J. S. Hughes, L.S.A., Swansea.
Wey, Alfred Cox, L.S.A., Plymouth.
Windley, William, L.S.A., Nottingham.

Admitted Members of the College on the 6th inst.:—

Beddoes, Thomas Pugh, Church Stretton.
Cropley, Henry, L.S.A., Swaton, Lincolnshire.
Foot, Ernest George, L.S.A., Bigbury, Devon.
Mackenzie, H. W. Gavin, M.B. Cantab., St. Stephen's-terrace.
Weaver, William George, L.S.A., Hereford.

At the examinations for the diploma of Membership of the College, which have just been brought to a close, St. Bartholomew's sent 53 candidates; University College, 39; Guy's, 27; St. George's, 23; King's College, 19; St. Thomas's, 15; London, 15; Charing-cross, 13; Middlesex, 13; St. Mary's, 12; and Westminster, 11. Of the Provincial schools, Manchester took the lead with 24; Cambridge, 13; Leeds, 11; Birmingham, 8; Bristol, 8; Liverpool, 7; Newcastle, 5; and Sheffield, 3. Edinburgh and Glasgow sent respectively 21 and 4; Dublin, 3; Madras 2; Calcutta 1; Bombay, 1; McGill College, Montreal, 3; Toronto, 2; and Amsterdam, 1.

COLLEGIATE HONOUR.—On Tuesday last the honorary gold medal of the Royal College of Surgeons was unanimously awarded to Sir Erasmus Wilson, Bart., a Fellow and past President of the College, in recognition of his liberal contributions to the Museum, in the endowment of the Pathological Curatorship, and in the foundation of the Professorship with which his name is associated. This medal, which was founded in 1800, has only been awarded on six previous occasions; and, curiously enough, the first to receive it was another of the same name, Professor James Wilson, in 1822. Mr. James Parkinson obtained it in 1825; Mr. Joseph Swan, a former member of the Council, in 1834; Dr. George Bennett, of Sydney, in 1869; Dr. H. L. Crowther; and, in 1876, Dr. F. B. Peacock.

REMOVAL FROM THE MEMBERSHIP.—At a meeting of the Council on the 5th inst. the following resolution was carried unanimously: "That in the opinion of the Council the advertisements and publications issued by Mr. George Washington Evans are, in the terms of clause 2, section xvii. of the Bye-laws, 'prejudicial to the interest,' and 'derogatory to the honour of the College,' and 'disgraceful to the profession of surgery,' and that, in consequence of the issue thereof by him, he be removed from being a Member of the College."

UNIVERSITY OF LONDON.—The following candidates have passed the recent Preliminary Scientific (M.B.) Examinations:—

FIRST DIVISION.—James Cameron (Ph.), Univ. Edin.; John David Cruickshank (Ph.), Guy's Hosp. and private tuition; J. Lacy Firth,* W. J. Hancock,* and J. Sinclair McGowan,* Owens Coll.; E. Hambury Hankin, Frank Spiller Locke, Bedford Pierce, E. Noel Reichast, and John Wilkie,* St. Barthol. Hosp.; Alfred Parkin, Yorkshire Coll.; Ransom Pickard and C. Hubert Roberts, Univ. Coll.

SECOND DIVISION.—C. Francis Abbott,* H. Carpenter Bristowe, W. Macdonald Helsham, F. Maurice House, E. Augustus Roberts, and Reginald Vaughan Solly, St. Thomas's Hosp.; Frederic W. Abbott, Charing-cross Hosp. and private study; J. Hill Abram, Univ. Coll. and Roy. Infirm. School of Medicine, Liverpool; Magnus Adler, private study; Theodore Baker,* F. Richardson Blaxall, A. Wilson Boning, H. G. Graham Cook, C. Seymour Dowdell, H. E. Durham, H. Muir Evans, W. Solteau Fenwick, Hilarion M. Fernando,* R. Foster Gill, Kenneth McLaren, Chandi Charan Sen, Henry Sharman, W. W. Hunt Tate, E. Olive Turner, G. B. Mower White, W. G. Willoughby, Ernest Wills, and Charles Wilson, Univ. Coll.; H. Stanley Ballance* and H. A. Lepthairia Pope, King's Coll.; R. Attwood Beaver, School of Medicine and Univ. Coll., Liverpool; A. J. Bennett, St. Barthol. Hosp. and private study; Annette Matilda Benson (Z.), Newnham Coll., Camb., and private study and tuition; A. E. Berry, F. H. Warburton Cottam, G. E. Fryer (Ph.), T. Ashton Goodfellow, Henry Langdale, Robert Ellis Lord,* Richard H. Read, and Edward Herbert Robinson (Ph.), Owens College; William Jenner Best (Ph.), Cavendish College, Cambridge, and private tuition; Robert Bird, Thomas J. Dyall, Alfred M. Gledden (Ph.), Thomas E. Spencer, and Herbert Williams, St. Barthol. Hosp.; F. Frost Blackman,* private study; Bokenham, Thomas Jessop, St. Barthol. Hosp. and private study; George Goss Borrett,* Harry Corner, W. Thomason Grenfell, A. D. Percival Hodges, Charles R. Killick,* and J. K. Warry, London Hospital; Arthur Boulton, Epsom Coll. and private tuition; Richard Oxley Bowman,* Old Trafford School and Owens Coll.; William Branson,* Firth Coll. and School of Medicine, Sheffield, and private study; James Buchanan and William J. Cameron, Queen's College, Belfast; H. Ambrose Burrowes, Univ. College, Liverpool; C. Mackinnon Clark, St. George's Hospital; J. Hazelwood Clayton, Arthur Gerard Irvine, G. Saint Johnston, Alfred Kingsland, and Harold Mason, Mason Coll., Birmingham; Francis H. Cooke (Ph.), University Coll. and private study; George H. Cooke,* Owens College and private

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study; Henry Scarborough Cooper,* Westminster Hospital; T. P. Cowen, private study; Abel Davies, Univ. Colls. Aberystwith and Cardiff; Cyril S. Davis, A. Downing Fripp, H. Vigers Hickman, A. Byrn Hudson, G. Lyjus Kemp, W. Job Maillard,* Charles J. Martin,* Albert E. Norburn, and C. Frederic Routh, Guy's Hospital; Bertrand E. Dawson, Univ. Coll. and private tuition; P. Rashleigh Dodwell (Z.), Univ. Coll. and private study; Percy J. Duncan, Ronald T. Graveley, Henry E. Knight, and Sidney B. Smith, Epsom Coll.; Robert H. Elliot, private tuition; Harry W. Elphick,* Epsom and Univ. Colls.; George Sinclair Farquharson, Univ. Coll. and London Hosp.; Fredk. A. Field,* private study; Ernest E. Francis, St. Barthol. Hosp. and private tuition; Gerald Dudley Freer (Ph.), Queen's and Mason Colls., Birmingham; Arthur E. Giles,* Owens College and private study; William Gordon,* Trinity Coll., Cambridge; J. Temperley Grey, Samuel Wolferstan Morgan, and William Taylor (Z.), Univ. Coll., Bristol; John Arthur Hayward, Univ. Coll. and private study; Thomas Johnson,* Normal Sch. of Sci., S. Kensington, and private study; E. Lloyd Jones,* Unattached Camb. Univ.; Harold A. Kidd, St. Mary's Hosp.; Charles R. Lane, Yorkshire Coll., Leeds; Hans H. Mack, London Hosp. and private study; R. Devereux Mothersole, Guy's Hospital and private study; Berkeley G. A. Moynihan, Yorkshire Coll. and Leeds Sch. of Medicine; C. Octavius Parsons, St. Thomas's Hosp. and private study; T. Wilkenee Piper,* St. John's Coll., Battersea, and Univ. Coll.; Cecil Price-Jones, Univ. Coll. and Guy's Hosp.; G. H. Drummond Robinson, private study and tuition; Charles E. Smith, private study and tuition; Daniel Benham Spence, London Hosp. and private study and tuition; Christopher P. Spink, Leeds Med. Sch. and Yorkshire Coll.; Theodore M. Stiles, Bristol Med. Sch. and Univ. Coll.; Sidney S. Swift, Liverpool Roy. Infirm. Sch. of Med.; Herbert J. Thomas, Bristol Med. Sch.; Robert H. Tompsett, Crewkerne Sch. and Univ. Coll.; Francis W. Tunnicliffe, St. Barthol. Hosp. and private tuition; Frederic J. Webb,* Roy. Coll. of Sci., Dublin, and private tuition and study; Joseph Wright, Yorkshire, Coll., Leeds.

CHEMISTRY ONLY.—Launcelot W. Andrews, St. Barthol. Hosp.; John Edwin Wood, B.A., Yorkshire Coll., Leeds.

EXPERIMENTAL PHYSICS ONLY.—George Dines Parker, St. Barthol. Hosp.; Edward Posnett, Yorkshire Coll., Leeds, and private tuition; Robert Ward, Bristol Med. Sch. and private tuition.

BOTANY ONLY.—Henry E. Leigh Canney, Univ. Coll.; David T. Jones, Cyrus Legg, and David Foulkes Roberts, Guy's Hosp.

ZOOLOGY ONLY.—James J. Buist, St. Barthol. Hosp.; E. Delacourt Kell, London International and Univ. Colls.; Thomas Wilson Smith, Guy's Hosp.; Fredk. W. Stokes, Queen's and Mason's Colleges, Birmingham.

* Also passed in the Mathematics of the Intermediate Examination in Science, and have thus become admissible to the B.Sc. Examination.
(Ph.) Postponed their Examination in Physics.
(Z.) Postponed their Examination in Zoology.

UNIVERSITY OF GLASGOW.—The following candidates have obtained the under-mentioned degrees during the summer session, 1884:—

DOCTOR OF MEDICINE.

Allan, Robert, M.B., Scotland.
Boyd, J. Dunlop, M.B., Austral.
Donald, David, M.B., Scotland.
Hargreaves, Mark K., M.B., Eng.
Goff, John, M.B., Scotland.
Lewis, J. Robertson, M.B., Scot.
Middleton, G. S., M.A., M.D., Scot.
Miller, Robert, M.B., Scotland.
Morrison, Wm., M.B., "
Macphee, Angus, M.B., "
Smith, P. C., M.A., M.B., "
Steven, J. L., M.B., "
Thomson, James, M.B., "
Wills, James, M.B., "

BACHELOR OF MEDICINE AND MASTER IN SURGERY.

Auld, Alexander G., Scotland.
Bamber, Harry, "
Beveridge, John, "
‡Blakely, William T., "
Brown, William, "
Brown, William, "
‡Brown, William M., "
Brownlee, John Innes, S. Africa.
Clark, George, Scotland.
Cowie, James, "
Crawford, James, "
Cullen, William, "
Cumming, J. B., South Africa.
Cunningham, John, Scotland.
Dobie, Henry E. N., China.
Ecklin, William, Scotland.
Findlay, James, "
‡Finlay, David, "
Frew, Alexander, "
‡Fulton, Andrew B., "
†Greener, Michael H., England.
*Hawthorne, C. O., "
Hinshelwood, J., M.A., Scotland.
Jack, Alexander, "
Kelly, Hugh, "
Kendall, Francis E., England.
Keogh, Arthur G., Australia.
Kerr, John A., Scotland.
Killoch, Matthew, "
King, Charles G., "
Kirkpatrick, A., "
Livingstone, R. "
Marquis, Duncan, "
Marshall, W. G., M.A., Scotland.
Mason, Henry, England.
Mathie-Morton, J. M., Scotland.
‡Miller, Robert G., "
Montgomery, A. N., "
‡Murdoch, Andrew, "
Murdoch, J. W. A., "
Macarthur, Benj. W., "
Macentrey, D., M.A., Scotland.
M'Cracken, William, "
M'Creadie, William, "
‡M'Culloch, T. C., "
Macdonald, Roderick, "
MacDougall, Alex., "
MacGilvray, Duncan, "
Mackenzie, Ernest, England.
Mackinnon, C., M.A., Scotland.
Mackintosh, D. J., "
Mackphail, Digby M., Jamaica.
Macrae, Alex. M., Scotland.
Paterson, Alexander B., India.
‡Peacock, Alexander, Scotland.
Pretsell, William G., "
Ralley, James, "
Rankin, William, Ireland.
Reddie, John O., Scotland.
Ritchie, John, England.
Robertson, Alexander, Scotland.
Russell, Frank, "
Rutherford, H., M.A., "
Scott, Gavin S., "
‡Scott, Robert, Australia.
Semple, Miller, Scotland.
Service, R. M., "
Sharman, Mark, England.
Shaw, James, Scotland.
Sinclair, John, "
Smith, W. M., "
Somerville, W. F., M.A., Scotld.
Spence, Walter W., "
Taylor, Francis, "
Taylor, William C., Australia.
Thornley, Joseph, England.
Todd, George B., Scotland.
Watt, Allan, "
White, John, "
†Wilson, George, "
‡Wilson, J., M.A., B.Sc., Scotland.

* Honours; gained also the Brunton Memorial Prize of £10, awarded to the most distinguished Medical Graduate of the year (1884).
† High Commendation. ‡ Commendation.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following candidates passed the Final Examination at the July sittings of the Examiners, and were admitted Licentiates of the Faculty:—

Barnett, F. S., Stoke Newington.
Barry, D. M., West Drayton.
Boothman, Alex. C., Glasgow.
Fairley, Saml. B., Birmingham.
Goodwin, A. G., Glasgow.
Jameson, David, Newtonards.
Margesmont, John G., Ceylon.
Taylor, Alfred, Bolton.
Wilkinson, Ernest W. C., Glasgow.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following candidates passed the recent Final Examination for the double qualification, and were admitted Licentiates of the Faculty and of the College:—

Anderson, John G., Glasgow.
Drysdale, William, "
Forrest, J. S., "
Hallock, S., Edinburgh.
Johnson, O., "
Jones, J., Glasgow.
Jones, W., "
Morgan, Rees, Glasgow.
Necon, J. T., "
Owen, John H. "

BRITISH MEDICAL SERVICE.—The following is a list of Surgeons on Probation in the Medical Department of the British Army who were successful at both the recent London and Netley examinations. The marks shown are those which were gained at the London examination; the order of position of these gentlemen is not affected by the marks gained at the Netley examination:—

	Marks.		Marks.
J. R. Barefoot	2440	J. I. P. Doyle	2145
R. H. Clement	2420	N. Manders	2120
G. D. Hunter	2335	L. R. Colledge	2110
W. C. Beevor	2300	S. F. Freyer	2075
L. E. Anderson	2275	†C. Birt	2070
*G. B. Russell	2250	R. S. F. Henderson	2020
A. E. C. Spence	2220	H. Mitchell	2000
J. R. Mullins	2200	S. Butterworth	1990
R. J. McCormack	2186	C. J. Holmes	1930
H. N. Thompson	2169	I. R. Lane	1920

* Gained the Montefiore second prize.
† Gained the Parkes' Memorial Bronze Medal.

INDIAN MEDICAL SERVICE.—The following is a list of Surgeons on Probation in this service who were successful at both the London and Netley examinations. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown below:—

	Marks.		Marks
*J. H. T. Walsh	5517	G. H. Fink	4423
†H. Hendley	4879	W. G. P. Alpin	4146
H. E. Banatvala	4696		

* Gained the Herbert Prize of £20, with the Montefiore Medal and Prize of 20 guineas, and the Martin Memorial Gold Medal.
† Gained the Director-General's Prize in Pathology.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on July 31st:—

Brookfield, Samuel, Dresden, Staffordshire.
Carrington, William Henry, St. Thomas's-street.
Fowler, Thomas Webb, Summer-lane, Birmingham.
Hall, Gilbert Capel, Bath-row, Birmingham.
Haw, Walter Herbert, Mecklenburgh-street.
Lane, Frank, Bedford-road, Tottenham.
Marshall, William Lawrence Wright, Brixton-rise.
Pinniger, Charles Lever, Bennett-park, Blackheath.
Wright, Frank Marsh, Bottesford, Nottingham.

The following gentleman also on the same day passed the Primary Professional Examination:—

Lavies, Harry Brandreth, King's College Hospital.

GUY'S HOSPITAL.—The Library of this Hospital will be closed on Monday, August 11th, and reopened on Monday, September 1st.

UNIVERSITY OF EDINBURGH.—In the Edinburgh University pass list, as published last week, the name "J. D. Davies," should have been D. Davies Jones.

MR. SAMUEL MORLEY, M.P., President of the London Temperance Hospital, has forwarded to the funds of that institution a donation of £500.

NEW MAGISTRATE.—Mr. T. H. Bartleet, F.R.C.S., has been placed on the Commission of the Peace, and qualified last Monday at the opening of the first Birmingham Assizes.

ON the 31st ult., at Chelmsford, one of "the Peculiar People" was found guilty of the manslaughter of his daughter by neglecting to call in medical aid in an illness from which she died, and sentenced to one month's imprisonment.

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PRIZES FOR SURGICAL ESSAYS.—The Medico-Surgical Society of Bologna has offered two prizes of 500 lires each. The first prize is for the best essay on "The Surgical Treatment of Pulmonary Cavities"; the subject for the second prize is, "The Surgery of Diseases of the Stomach." The essays must be written in Italian, French, or Latin.

THE JAFFRAY HOSPITAL.—At a meeting of the Committee of the Birmingham General Hospital, held last week, a letter was read from Mr. Jaffray, offering to devote, for the purposes of the Jaffray Suburban Hospital, four acres of land, in addition to the site already given by him. The gift was accepted with thanks.

STATE OF THE THAMES.—On the 2nd inst. a committee of the Metropolitan Board of Works inspected the Thames at Woolwich, and were gratified to find that the measures of deodorisation of the metropolitan sewage recently adopted at the outfalls have proved successful. The water presented its normal appearance, and there were no offensive smells on the banks or on the stream.

SUICIDE OF A MEDICAL MAN.—The Liverpool papers announce the death, by the inhalation of chloroform, of Dr. G. J. Jones, at Adelaide. The deceased was found, on the morning of June 22nd, in bed with a piece of sponge which had contained chloroform pressed against his nostrils, and quite dead. Letters in the room showed that the cause of death was not accidental.

APOTHECARIES' HALL OF IRELAND.—The following have been elected office-bearers for the ensuing year:—Governor: Thomas Collins. Deputy Governor: Robert Montgomery. Court of Directors and Examiners: E. A. Bolland, John Evans, A. Harvey, Charles Holmes, Charles H. Leet, C. F. Moore, H. P. Nolan, R. G. O'Flaherty, E. J. O'Neill, Sir G. B. Owens, John Ryan, James Shaw, and George Wyse. Representative on the General Medical Council: T. Collins.

THE IRISH GRADUATES' ASSOCIATION.—The annual meeting of this Association was held on the 30th ult. in the Queen's College, Belfast, presided over by Prof. William Stokes, of Dublin. A vote of thanks was passed to Dr. Yeo, late President; and Prof. Foster, of Birmingham, was unanimously selected as President for next year. Dr. Frazer, having resigned as hon. secretary, has been replaced by Dr. James Stewart, of Clifton. In the evening the annual dinner was held, which was well attended.

THE SANITARY INSTITUTE OF GREAT BRITAIN.—The autumn congress, 1884, will assemble at Dublin from September 30th to October 4th, 1884. The exhibition of sanitary apparatus and appliances in connexion with the congress will be held in the Royal Dublin Society's Buildings, Ball's-bridge, and will be open from September 30th to October 18th. In addition to the opening address by Sir R. Rawlinson, addresses will be given by Dr. T. W. Grimshaw, Mr. C. P. Cotton, Dr. Alfred Carpenter, and Dr. C. A. Cameron.

CITY PROVIDENT DISPENSARY.—The seventh annual meeting of the governors of this institution was held on the 31st ult. The attendances at the dispensary since July, 1877, has been over 19,300, while the home visits have amounted to close on 1500. In the surgical appliance branch, with regard to which no letter of recommendation is required, and no charge for surgical advice made, nearly 4800 instruments have been supplied since the institution of the Society. It appeared that at the commencement of last month the institution was about £300 in debt.

THE LATE MR. CÆSAR HAWKINS.—At the meeting of the weekly board of St. George's Hospital on July 23rd, 1884, the death of Mr. Cæsar Hawkins having been reported by the secretary, the following resolution was unanimously adopted:—"The weekly board of St. George's Hospital beg to express to Mrs. Cæsar Hawkins their sincere sympathy with her on the loss of her husband. The governors of St. George's Hospital, with feelings of gratitude for Mr. Cæsar Hawkins' eminent services, during a period of fifty-five years, as surgeon, teacher, and trustee, feel confident that the institution, in whose interests he worked for so many years, will continue to profit by an association with his character and name, whilst the public has the advantage of there being a large number of medical practitioners educated by him, and the medical profession by the example of his life, exhibited, as it was, in great scientific and intellectual qualifications, ever accompanied by a highly honourable and most gentleman-like bearing."

METROPOLITAN SEWAGE DISCHARGE.—The members of the Royal Commission on Metropolitan Sewage Discharge met on Thursday, and proceeded to inspect the river in a steamer placed at their disposal by the Thames Conservancy. They embarked at Gravesend at noon, and went below the Nore, returning to Woolwich in the evening, where they landed. The inspection lasted seven hours. There were present Lord Bramwell, Colonel C. B. Ewart, R.E., Dr. F. de Chaumont, Mr. Thomas Stevenson, M.D., and Mr. James Abernethy, F.R.S.E.

BOLINGBROKE HOUSE PAY HOSPITAL.—At a special meeting of the managing committee of this hospital held on August 2nd, it was resolved to open its wards and private rooms for patients sent in under the care of any registered medical practitioner. Hitherto the patients have been attended by an honorary visiting staff, who have given for three years past a constant and efficient attendance at the hospital. At the meeting referred to these gentlemen very kindly facilitated the trial of the new experiment by placing their resignation in the hands of the managing committee.

EPSOM COLLEGE.—The annual distribution of prizes to the students of this college, commonly known as Founders' Day, took place on the 30th ult. After the distribution of prizes by Sir Joseph Fayrer, the head master announced that the governors of St. Mary's Hospital had decided to offer a scholarship of the value of 100 guineas for competition among the students of Epsom College, who must be sons of medical men. The hospital staff of St. Thomas's have also decided to offer a free scholarship to the pupils in the College who had passed either in the first class or in honours at the Preliminary Scientific M.D. at London University.

AMBULANCE INSPECTION.—The inspection of the Ambulance Company of the Tower Hamlets Rifle Brigade took place at the head-quarters, Shaftesbury-street, on August 2nd, the inspecting officer being Surgeon W. E. Webb, M.B., A.M.D. The company was commanded by Surgeon Platt, assisted by Acting Surgeons White and Waterhouse, and consisted of a sergeant instructor and sixteen rank and file; making four stretcher detachments. The various movements incidental to stretcher drill were creditably carried out, and at the termination of the parade, Surgeon Webb expressed his gratification at the manner in which the drill had been executed, and also of the efficiency and intelligence which the bearers had displayed in applying the different dressings.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ADAMS, GEORGE, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Bedminster Rural Sanitary District.

ASHE, WILLIAM CONYNGHAM, L.R.C.S.I., has been appointed Honorary Surgeon to the Newcastle Infirmary, New South Wales.

BARLING, HARRY GILBERT, M.B.Lond., F.R.C.S Eng., has been appointed Demonstrator of Anatomy to Queen's Hospital, Birmingham.

BARON, BARCLAY J., M.B., C.M., has been appointed Physician to the Bristol General Hospital, vice G. F. Burder, M.D., F.R.C.P., resigned.

BIDEN, CHARLES W., M.R.C.S., L.R.C.P.Lond., has been appointed House-Surgeon to the Children's Hospital, Paddington-green, vice F. T. Hebb, M.R.C.S., resigned.

BIRCH, DE BURGH, M.D., F.R.S.E., has been appointed Professor of Physiology in the Yorkshire College, Leeds.

BLUMER, F. MILNES, B.A.Dunelm, M.B., C.M.Ed., has been appointed Assistant House-Surgeon to the Cumberland Infirmary, Carlisle, vice H. H. Brown, M.B., C.M., resigned.

BURDER, GEORGE FORSTER, M.D.Aber., F.R.C.P.Lond., M.R.C.S., has been appointed Consulting-Physician to the Bristol General Hospital.

BURROWS, C. W. GRIMES, M.R.C.S., L.S.A.Lond., has been appointed Public Vaccinator for the Thornhill District of the Dewsbury Union.

DUTTON, WILLIAM HENRY, M.B., M.Ch.Ed., M.R.C.S., has been appointed Resident Medical Officer to the Castlemaine Hospital, Victoria.

EATON, JOSEPH, M.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Rathcoole Dispensary, vice McEvoy, resigned.

EMINSON, LUTHER, L.F.P.S.Glasg., L.S.A.Lond., has been appointed Medical Officer for the Haxey District of the Gainsborough Union.

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FOX, FORTESCUE, M.B.Lond., M.R.C.S. (late House-Physician at the London Hospital), has been appointed by the Duchess of Sutherland Resident Physician at the Strathpeffer Spa, Ross-shire, N.B.

FOX, GEORGE, L.R.C.P.Ed., M.R.C.S., has been appointed Resident Medical Officer to the Sydney Hospital.

HADDEN, WALTER BAUGH, M.D.Lond., M.R.C.P., has been appointed Physician to the Royal Hospital for Children and Women.

HASLAM, WILLIAM FREDERICK, F.R.C.S.Eng., L.S.A.Lond., has been appointed Demonstrator of Anatomy to Queen's College, Birmingham.

HOUGH, C. H., M.R.C.S., has been appointed Surgeon to the Derbyshire General Infirmary, vice J. Wright Baker, M.R.C.S., L.S.A.Lond., resigned.

HUDSON, T. J., M.D., L.R.C.P.Lond., has been appointed Medical Examiner to the Wesleyan and General Assurance Company, and to the Pearl Life Assurance Company, Leeds District.

HUMPHRY, LAURENCE, M.A., M.B.Camb., M.R.C.S., has been appointed Assistant-Physician to Addenbrooke's Hospital, Cambridge.

LEY, HENRY J., M.B. & C.M.Ed., M.R.C.S., has been appointed Resident Surgeon to the Birmingham General Dispensary.

LLOYD, G. JORDAN, M.B., M.S.Durh., F.R.C.S.Eng., has been appointed Demonstrator of Anatomy to the Queen's Hospital, Birmingham.

LOFTHOUSE, ARTHUR, M.R.C.S. & L.S.A.Lond., has been appointed Assistant Medical Officer to the County Lunatic Asylum, Snenton, Nottingham.

MACALISTER, DONALD, M.A., M.B.Camb., M.R.C.P.Lond., has been appointed Physician to Addenbrooke's Hospital, Cambridge, vice Dr. Paget, resigned.

PITT, GEORGE NEWTON, M.A., M.D.Cantab., M.R.C.P., has been appointed Assistant-Physician to the East London Hospital for Children and Dispensary for Women, Shadwell, E., vice Francis Warner, M.D.Lond., F.R.C.P., resigned.

SOUTER, JOHN CLEMENT, M.D., Ch.M.Aber., has been appointed Government Medical Officer and Vaccinator for the District of Gulgong, New South Wales.

SPROULLE, H. MAGINNISS, M.B., B.Ch.Dub., has been appointed Public Vaccinator for the Mirfield District of the Dewsbury Union.

STRUGNELL, WALTER T., M.R.C.S., L.S.A.Lond., has been appointed Senior House-Surgeon to the Metropolitan Free Hospital, vice A. S. Nance, resigned.

Births, Marriages, and Deaths.

BIRTHS.

COUPLAND.—On the 2nd inst., at Weymouth-street, Portland-place, the wife of Sidney Coupland, M.D., F.R.C.P., of a son.

HUNT.—On the 4th inst., at Palace-gardens-terrace, the wife of Bertram Hunt, M.B. Univ. Coll., Oxford, of a son.

SHAPTER.—On the 29th ult., at Barnfield-crescent, Exeter, the wife of Lewis Shapter, M.D., of a daughter.

YOUNG.—On the 30th ult., at Rose-bank, Merton-road, Bootle, the wife of T. F. Young, L.K.Q.C.P.I., M.R.C.S., of a son.

MARRIAGES.

ATKINSON—CHASE.—On the 30th ult., at Kenilworth, Miles Christopher Atkinson, M.D., son of the Rev. J. C. Atkinson, Vicar of Danby, Yorkshire, to Annie Hale Chase, youngest daughter of T. A. N. Chase, Esq., Madras Civil Service (retired), of Avon Lodge, Milverton, Warwickshire.

CANTLIE—BROWN.—On the 30th ult., at St. Martin's Church, Trafalgar-square, James Cantlie, M.A., M.B., F.R.C.S., of Charing-cross Hospital, to Mabel, eldest daughter of Robert Barclay Brown, of Barnes, Surrey.

NEALE—THOMSON.—On the 28th ult., at Edinburgh, J. Headley Neale, M.B., of London-road, Leicester, to Carrie, youngest daughter of the late Captain John Thomson, H.E.I.C.S., of Cromarty, N.B., and granddaughter of the late Rev. John Thomson, of Duddingston Manse, Midlothian.

PARDINGTON—DICK.—On the 2nd inst., at St. Mary's, Putney, by the Hon. and Rev. Robert Henley, George Lucas Pardington, M.D., eldest son of George Pardington, of The Moor, Hereford, to Elizabeth Jessie, eldest daughter of William Bruce Dick, of Carlton House, Putney-hill, S.W.

TWEEDY—POTTINGER.—On the 5th inst., at St. John's Church, Forest-hill, by the Rev. William Martin, George Alfred Tweedy, Bengal Civil Service, to Margaret, second daughter of Dr. R. Pottinger, R.N., Inspector-General of Hospitals and Fleets.

DEATHS.

GREGORY.—On the 1st inst., at Northernhay-place, Exeter, Bradley Gregory, Fleet Surgeon, R.N. (retired), aged 47.

JENKINS.—On the 31st ult., at Fawley, Hants, Robert Walker Jenkins, M.R.C.S. & L.S.A.Lond., Medical Officer of Health for the New Forest Rural District, formerly of Philpot-lane and Charlotte-street, Bedford-square, London.

MARSHALL.—On the 31st ult., at Tisbury-road, West Brighton, George Henry Marshall, M.D., F.R.C.S., late of Birmingham, and Kington, Herefordshire, in his 71st year.

RENTON.—On the 31st ult., at Rothesay-place, Edinburgh, Robert Renton, M.D., F.R.C.P.E., in his 91st year.

STEWART.—On the 4th inst., at Brunswick-terrace, Pendleton, Florence, the dearly loved wife of Alexander Stewart, M.D., and youngest daughter of the late John Shaw, M.R.C.S., of Attercliffe, Sheffield, aged 30.

TWEEDIE.—On the 4th inst., at Brighton, suddenly, Alexander Cunningham Tweedie, Surgeon (late of Galashiels, N.B.), in his 61st year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 1st, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Aug. 1	30·10	N.E.	66	64	116	88	61	..	Hazy
" 2	29·93	S.W.	78	66	123	85	61	..	Fine
" 3	30·20	W.	64	57	113	72	55	..	Fine
" 4	30·23	W.	63	57	113	76	53	..	Cloudy
" 5	30·25	S.W.	63	58	116	79	54	..	Hazy
" 6	30·14	S.E.	67	61	119	86	56	..	Hazy
" 7	30·03	E.	70	64	115	82	59	..	Hazy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

A HEALTH RESORT IN PRE-TUBERCULAR PHTHISIS.

KLOSTERS in the Grisons is strongly recommended by our Swiss contemporary *Gesundheit* in cases of phthisis, especially in the pre-tubercular stage. It lies 1200 metres (4000 Swiss feet) above the sea-level, and is already well known for its coolness in summer, and for its advantages as a station for the Alpine tourist. In the neighbourhood of the Silvretta glacier expands the mighty mountain landscape in which, protected against the north wind, and luxuriating in the most verdant vegetation, Klosters, with its pure, exhilarating, restorative air, offers peculiar attractions to the convalescent, and particularly to the incipient phthisical. As a "Vorstation" for Davos-am-plats and the Upper Engadine it is coming into peculiar favour.

THE subject of *Dr. Nixon's* paper is treated in our present number.

PNEUMONIC HEMIPLEGIA.

To the Editor of THE LANCET.

SIR,—In connexion with the case of Pneumonic Hemiplegia reported in THE LANCET of May 10th, you may, perhaps, think the following case worthy of notice in your journal:—An elderly lady had been under my care for some time, suffering from chronic bronchitis, accompanied with great debility. Suddenly pain seized her in the left side, and coincidentally the temperature rose about two degrees and a half. On examination pneumonia of a limited portion of the left lung was noticed. Three days after a mitral systolic murmur became clearly audible. Shortly after this she was taken with dizziness, fixed eyes, and all the symptoms of an apoplectic seizure. The mouth was drawn to the right, and there was paralysis of the left side of the body, with muffled and indistinct speech. At the time of the fit the apex murmur had become very loud. The patient, under the most careful nursing, speedily rallied from the stroke, the left leg quickly regained its motor power, the left arm remaining helpless somewhat longer. She was improving very satisfactorily, when suddenly her breathing became rapid, and the systolic apex murmur, which had become all but inaudible, again became very loud. From this time, which was about six weeks after the convalescence commenced, she slowly sank, although she rallied occasionally for a short time under the treatment. A few days before her death she suddenly became speechless, and lost all power over the tongue; there was no loss of sensation or motion in any other part of the body. The murmur at the apex continued very loud quite up to the last.

I am, Sir, yours faithfully,

Street, Somerset, Aug. 6th, 1884. ARTHUR CLARKE.

E. M.—The work could no doubt be obtained through Messrs. Sampson Low and Co., Fleet-street.

J. C. L.—It would serve no useful purpose to revive the controversy.

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Enquirer.—The Government Education Code for 1883 and 1884 requires the minimum space allotted to each child to be eighty cubic feet. A room 25 ft. long, 16 ft. broad, and 10 ft. high would afford the minimum space for fifty children; but this amount we think insufficient. The minimum space to each child should be 110 cubic feet, with a considerable roof area above the calculated space when practicable; otherwise the atmosphere is apt to become stuffy. A room 30 ft. long, 20 ft. broad, and 15 ft. high to the ceiling or roof-plate would be a suitable size for fifty children, and the air of this should be constantly changed by efficient cross ventilation.

L.R.C.S.E. has not enclosed his card.

CHOLERA AND THE THAMES.

To the Editor of THE LANCET.

SIR,—The indifference of the public to a matter of such vital importance as the disposal and utilisation of the vast sewage of London has long been a source of profound astonishment to me. I am glad to see that at last the very serious question of reform in this particular is being discussed in the columns of the press. Rather more than a year ago, after considerable difficulty in obtaining any information on the subject, I wrote to the press calling attention to the state of the Thames, advocating a change, and recommending, as the best I could hear of M. Liernur's separate system, although I was aware of the many objections attached to it. Some little time later appeared a full report in a London paper of a visit paid by the Lord Mayor and Corporation of London to the Aylesbury works of the A B C Company. From the satisfactory nature of this report it seemed to me as if no further difficulty could exist with regard to the sewage question. The company undertakes to deal with the sewage at the outfall, and there, by a series of chemical processes, convert it into a dry, portable, inodorous guano form of manure, leaving an effluent so harmless that fish live comfortably in it, and so palatable that an adventurous alderman, tasting it at the visit referred to, pronounced it very little inferior to ordinary drinking water. Now, what possible objection can there be to disposing of the filth in the Thames by these clean, simple, and effectual processes? On the threshold of inquiry I am met by a portentous Cerberus—the question of expense. An extended sale of the native guano would be necessary to render the affair self-supporting, and I hear the British farmer, entrenched behind his usual barricade of prejudice, refuses to accept the new manufacture even as a gift, or to apply it to his fields! Remembering the active hostility of some, and the passive, incredulous disgust of others, which attended my late father's earliest use of Peruvian guano, it would be unwise to expect in the present comatose state of the agricultural interest a prosperous fate for any new, or suggestion of a new, remedy, especially at a time when a theory of leaving weeds in possession is cheerfully accepted on the assumption that they retain valuable nitrates which would be lost under a system of rapid cropping and deep cultivation. Happy Liebig! who did not live to hear the virtues of twitch, landbine, and thistles recounted and believed in. How long agriculture will remain in its present condition of semi-paralysis time alone must show; but I fear it will also show the creeping evil extending to every other branch of industry, and to the individual welfare of every member of the community. Upon the prosperous state of agriculture depends the entire prosperity of the nation. Since, however, agriculture can, or will, give no support to the A B C Company in removing from the midst of London its festering mass of inconceivable filth and peril, would not the Londoners allow a modest rate to be levied on them for the purpose? By paying heavy rates for new bridges, handsome streets, and improved systems of lighting, and at the same time neglecting to attend to the disposal of their sewage, the Londoners are in the position of householders who crowd their rooms with elegant and expensive furniture, while allowing the kitchen sink to overflow and poison the whole family. The expedient of throwing chloride of lime into the Thames to deodorise the daily accumulating fifteen to eighteen feet of sewage mud, for all the permanent effect it is likely to have, reminds one of Sidney Smith's story of the child who, when stroking the turtle and asked what she was doing it for, replied, "To please the turtle." "My dear," answered the humourist, "you might as well stroke the dome of St. Paul's to tickle the dean and chapter." I suppose there is nothing for it but to wait until some enormous sacrifice of life and property convinces the authorities that evaded duties and neglected responsibilities return with annihilating force upon those who, from indolence and short-sightedness, sit down passively or obstructively in the presence of evils demanding immediate redress.—I am, Sir, yours faithfully,

Earl's Colne, Essex, July 22nd, 1884. ISABELLA MECHI.

Dr. M. F. Gavin.—The book could no doubt be obtained through Mr. Nock, Bloomsbury-street, London, W.C.

PREVENTION OF "HARVEST BUMPS."

To the Editor of THE LANCET.

SIR,—Children during this hot weather seem terribly troubled with the attacks of the acarus autumnalis. "Harvest bumps" are omnipresent, and restful nights become impossible. Can you or any medical brother suggest any efficient means of preventing these attacks, which reduce so much the enjoyment by our little people of their healthful out-door summer life?—Yours faithfully,

CORNELIUS B. FOX, M.D., F.R.C.P.

Rosemount, Ilfracombe, Aug. 5th, 1884.

INHERITED SENTIMENT.

PROFESSOR SEELEY, in an article on "Goethe," published in the August number of the *Contemporary Review* offers the following interesting remarks on the subject of inherited sentiment:—"Some of those who watched Rossetti at his work thought they discovered that he did not regard his own imaginations seriously . . . . Similarly, Mr. James remarks of Hawthorne that it would be a great mistake to infer from the constant recurrence in his romances of the ideas of sin, retribution, and the stricken conscience, that Hawthorne himself was under the influence of such sombre ideas, the truth being that he was an easy-going, contented, and comfortable man. But Hawthorne's puritanic ancestors took these ideas seriously, and Rossetti's Italian ancestors in like manner furnished the beliefs which in their secondary form suggested Rossetti's pictures and poems. Of all artists, it is Scott who is richest in this kind of inherited sentiment. The shrewd, good-natured, somewhat worldly Scotch lawyer lives in a world of grandiose thoughts, opinions, sentiments, and convictions, out of which he composes at his ease a whole literature; and yet if you ask him what he thinks of these thoughts, opinions, sentiments, and convictions, he can only smile and evade the question. 'Superstition,' he says candidly, 'is very picturesque, and I make it at times stand me in good stead, but I never allow it to interfere with interest or convenience.' They were serious enough to his ancestors, these ideas of clannish devotion, of chivalry, of witchcraft and demonology; but to him they have come simply by inheritance. All he knows is that when he unlocks the ample chambers of his imagination he finds them there; that they work up into capital stories, if hardly fit for practical use; that, in short, they are the old furniture of the house in which Nature has placed him."

Mr. T. William Hughes.—We can see no valid reason for our correspondent not charging.

"GOING TO THE WASH."

To the Editor of THE LANCET.

SIR,—While, as a matter of course, you will agree that cleanliness is an important part of preventive medicine, you will no doubt as readily admit that the earlier in the week the humble housewife gets through her wash, and the sooner her richer neighbour who can afford to "put out" everything sends the soiled linen of the household away, the better will it be for the health of the families concerned. Now, as travellers through the suburbs of London are aware, the laundrymen and women make Monday their grand collecting-day for soiled linen, and many of them send round properly appointed carts and vans. But there is another, and perhaps larger, class of laundry people who cannot, or do not, use conveyances for this purpose, but who send girls or women (mostly to fetch the bundles and baskets. Naturally enough, when long distances have to be traversed by these women, they avail themselves of the cheap rides to be had from point to point by 'bus, rail, or tram-car, and, no doubt with a view to the safe custody of their burdens, they take them inside the vehicle, whatever it is. The atmosphere of our crowded public conveyances is always sufficiently offensive without further contamination by the odours of foul linen, which in warm, wet, and muggy weather are very perceptible. I have on one or two occasions "made myself so disagreeable" as to protest against the conveyance of bundles of dirty linen in omnibuses; and perhaps, if you will again ventilate the subject (for I believe you have done so on previous occasions), it will stimulate others to take exception to the practice. The London General Omnibus Company and the tramway companies should give strict orders to their servants against the practice, which I am sure you will condemn most strongly. To say nothing of the offensive smell of the linen cast by people in good health, who is to say what amount of infection is spread by the presence in the bundles of which I complain of bed or body linen which has been in contact with a fever or small-pox patient

The importance of this subject must be my excuse for troubling you with this letter. I am, Sir, yours faithfully,

L. J. DESSURNE.

London Central Club, New Bridge-street, E.C., July 29th, 1884.

Miss Bromley.—Nothing would be gained by publishing the letter. The views of the public on the question do not coincide with those of the medical profession.

L.R.C.S.E.—Yes, undoubtedly.

Mr. John E. Howe, M.B.—The paper will be inserted in an early number.

PRICKLY HEAT.

To the Editor of THE LANCET.

SIR,—Referring to Mr. Wharton's article in the current number of THE LANCET on "Prickly Heat," I may remark that in a recent voyage to the East several cases of this affection came under my notice. I found that warm applications of bicarbonate of soda with a small quantity each of carbolic and hydrocyanic acids gave speedy relief in every case. My first cases were treated with cold applications; but on one occasion, having used hot water, which happened to be more handy, for the solution, I was much struck with the speedy relief afforded, and employed it in each subsequent case.—Yours faithfully,

Austin Friars, E.C., Aug. 2nd, 1884. KENNETH MILLICAN.

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O. S. W.—It is usual to get a fee of a guinea for certifying as to the mental condition of a pauper. Whether or not in the present case our correspondent's services must go unremunerated depends upon the terms of the contract, which is not before us. He cannot be compelled to give evidence without subpœna, or having been bound over to appear at an adjourned hearing of a case. If summoned, he must give evidence as to facts, even if a fee is not paid in advance.

Prudentia.—The list can be taken as only a rough indication of the number of practitioners in the colony.

Mr. Frank Taylor.—*Berliner Klinische Wochenschrift* and *Progrès Médical*.

Progrès is referred to THE LANCET of June 14th, p. 1106.

"INFANTILE DISEASE AND MORTALITY."

To the Editor of THE LANCET.

SIR,—I think the letter of Mr. Tomkins deserves more than passing reference. The evil that he points out is one of national importance, and one that demands the utmost effort of every medical man, by his advice, to lessen. The public look to us for guidance in such matters; and if we were, in our relations to mothers, expectant and otherwise, to impress upon them the dangers of improper management of the infant in its early days, I question whether eventually the death-rate in infant life would not be very much lessened. To show the frightful mortality in early life, let us take the total death-rate (say) for 1882. In the whole of England and Wales during that year 516,813 died, and out of that number 125,147 were infants under the age of one year! Here is a slaughter of the innocents that would have delighted the heart of Herod or Attila, one-fourth of all the deaths occurring in the first twelve months of life. Imagine such a mortality among sheep or cattle. What preventive legislation there would be, to be sure! If the mortality continued at this pace, the duration of human life would be about five years on the average; but happily it does not, for fewer die in the next four years of existence than in the first one.

Now, what are the causes of this frightful infant sacrifice? The greatest undoubtedly are dry-nursing and improper food. Dr. Zoul, coroner for New York, says that "if one hundred infants are put out to dry-nurse, and every care taken, in less than three months seventy will be dead." If this be so, and I believe it is, here is the prolific cause; and until mothers are taught that there is no proper food for their offspring until the period of teething has commenced save their own milk, so will it continue. There is no more difficult task than rearing healthy children on artificial food; it is not too much to say that it is impossible. The evil of dry-nursing their infants has spread from the upper to the lowest strata of society; the feeding-bottle has been the curse of this generation, and it has been the means of bringing out hundreds of patent foods, every one of which is utterly unsuitable for the purpose it is advertised for—an additional evil. We all know that an infant cannot digest anything but milk; and still we see our patients daily dosing them with pap, gruel, bread, &c., when they are a few days old, and thinking this is the correct thing. "Dirty bottles, sour decomposing milk, bread, pap, gruel, soothing syrups, indigestion, malnutrition, and death" might truly be the epitaph written over the untimely grave of many a poor atom of humanity. The dangers of over-suckling are a very trivial affair, and where one child dies from that cause five hundred die from the other.

Personally, I cannot blame myself for being lax in my advice to mothers, and I have even taken the trouble to write a shilling book[1] to teach them how to feed their little ones. But unless every medical man does his share in such a merciful work the mortality will continue, and a coming generation of rickety, consumptive, ill-nourished children will rise up in judgment against us. Must we go to the brute creation for lessons? Does the young calf eat hay, or the bitch feed its offspring on meat? Nature and instinct are the truest guides; and if the dictates of fashion and prejudice are allowed to warp maternal duties and feelings, the curse will surely follow.

I am, Sir, yours truly,

Aug. 4th, 1884. NATHANIEL EDWARD DAVIES.

Mr. J. Holdrich Williamson, M.R.C.S.—The letter scarcely calls for notice at our hands.

T. E. B.—"under the circumstances," must excuse us from replying to his query.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—Will you permit me to correct a slight error in your account of the meeting of the Medical Officer of Schools Association on the 24th ult. I did not state (as reported) that in my opinion the certificates obtained from parents as to the recent exposure of school children to known sources of infectious disease were utterly worthless. On the contrary, I expressed my belief in the great value and importance of requiring such certificates to be properly filled in and signed by the parent or guardian upon each occasion of the child's return to school; and I should still hold such certificates to be of value, even though their influence were limited to directing the parent's attention to sanitary precautions, the necessity for which may otherwise be too easily ignored or forgotten.

I am, Sir, yours faithfully,

Hertford, Aug. 6th, 1884. C. E. SHELLY.

[1] "Nursery Hints" (London: Chatto and Windus). [illegible]—ED.

MEDICAL STUDENTS IN GERMANY.

THE following figures show the number of medical students at the chief German universities during this term:—Berlin, 224, including 20 from America, 6 from Asia, and 2 from Africa; Jena, 162; Bonn, 239; Königsberg, 267; Halle, 282; Göttingen, 189; Giessen, 126; Tübingen, 224; Strassburg, 172. The autumn cyclus of the holiday course of lectures for practising medical men will take place at Berlin from Sept. 24th to the end of October.

A M.D. of Twenty Years' Standing.—There is one fatal objection to our correspondent's proposals: they are utterly impracticable. Let him reflect on the impossibility of passing a Medical Bill through Parliament with the most moderate proposals, and he will see the impracticability of such suggestions as he makes.

Dr. James Tidy.—The card should be forwarded to the bodies from which the person in question obtained his qualification, with a request that they will administer reproof. As regards the public, there is nothing to hope for but increased intelligence as to the meaning of thorough vaccination.

FATAL CASE OF ACUTE INVAGINATION OF ILEUM.

To the Editor of THE LANCET.

SIR,—The record of the following typical case may be worthy of a place in your esteemed journal.

Alice J——, aged eight years, was one of three children; the remaining two, aged respectively fourteen and sixteen years, were healthy. The mother was healthy, but the father had died at the age of thirty-six years of chronic phthisis. Alice was tall for her age, thin, and dark; her health was good and her bowels regular; her appetite for meat was indifferent, but for farinaceous food it was good. On July 15th she ate some cherries. On the next day her bowels were confined; otherwise she seemed well, and went as usual to school; she, however, refused her lunch, and, seeming ill, was sent home at twelve o'clock. A medical man saw her on the same day, and prescribed a purge. I saw the patient on the 16th; she then complained of abdominal pain, incessant vomiting, and constipation. Treatment was adopted, and she was ordered to bed. I again saw her in bed on July 21st. Her condition was worse than when first seen. She lay on her back, with the right leg flexed on the abdomen, complaining much of abdominal pain. Her arms were tossed about, and dark circles surrounded her eyes. The skin was cold and clammy, the face anxious and pinched-looking, and the tongue dry and brown; the pulse was small, fast, and feeble, and the respirations quick and shallow. There was incessant vomiting, the vomited matter being yellow and smelling offensive. The abdomen was distended, chiefly towards the middle line; large veins wandered over the integument of the chest and abdomen (a point noticed by the child's mother); the surface of the abdomen was irregularly undulated, due to distended coils of small intestine beneath. Deep down to the left of the cæcum, and almost at right angles to it, one could feel an elongated, firm, and tender mass obscurely through the intervening tissues. Neither gas, fæces, mucus, nor blood passed through the anus. Thirst was intense. On the evening of the 22nd the pain ceased, and on the following morning the vomiting ceased. In the evening the patient was drowsy, and there was a leaden hue of surface; the skin of exposed parts felt rough, and seemed obscurely papular about the face, and especially on the forehead. The patient died quietly on the night of the 24th.

The treatment consisted in perfect rest, eight-minim doses of tincture of opium, iced liquid diet given often in minute doses, voluminous injections of water, and afterwards of oil. During the last twenty-four hours before death opium was withheld. Operation was refused.

The condition of the body on examination twenty hours after death was as follows. Distended coils of small intestine rose into the incision; the large intestine throughout was collapsed and contracted. To the left of the cæcum lay a dark, hard, elongated tumour, consisting of the last six inches of the ileum, the left and upper three inches being invaginated into the right or cæcal portion; the peritoneal surfaces were glued together by recent lymph; the muscular coats were swollen and softened. The whole was of a purple colour. In undoing the invagination the softened bowel gave way to a small extent. The ileo-cæcal valve was not involved. There were no signs of general peritonitis.—I am, Sir, yours obediently,

JOHN MCMUNN, L.R.C.P., L.R.C.S.Ed.

Park-lane-terrace, Aug. 1st, 1884.

Mr. J. Wrixon.—Technically, perhaps not; but we know of no law which would make it easy to prosecute a gentleman with the qualification mentioned, and using the title now employed by any Licentiate of a College of Physicians who pleases to do so.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Shelly, Hertford; Dr. Shuttleworth; Dr. Luffan, Cashel; Mr. A. Clarke; Mr. Bride, Runcorn; Mr. Benham, London; Mr. Simpson, London; Dr. Wilson, Cheltenham; Dr. Platt, London; Mrs. Mechi, Earl's Colne; Mr. Herring, Builth; Mr. N. E. Davies, Sherborne; Dr. R. Maclaren, Carlisle; Dr. Weber, Stockton, California; Dr. Swallow, London; Mr. T. Forster, Manchester; Dr. De Renzy; Dr. Savage, London; Dr. Hope, Liverpool; Dr. C. Fox, Ilfracombe; Dr. Lediard,

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LETTERS, *each with enclosure*, are also acknowledged from—Mr. Cole, Holywell; Mr. Grant, Birmingham; Messrs. Smith and Co., London; Dr. Finch, Salisbury; Messrs. Hoffnung and Co., London; Mr. Parkinson, Tunbridge Wells; Mr. Farley, Ontario; Mr. Beaman, Ashton; Mr. Cuckson, Gainsborough; Messrs. Maclehose and Son, Glasgow; Dr. Eberle, Thirsk; Mr. Head, Balaban; Mr. White, Bayswater; Dr. Lawrence, Chepstow; Messrs. Oliver and Boyd, Edinburgh; Mr. Green, Woodbridge; Dr. Edwards, Harold; Mr. Turner, Knowle; Dr. Watters, Gloucester; Messrs. Hawkes and Co., Birmingham; Mr. Smale, Macclesfield; Rev. A. J. D'Orsey, London; Mr. Mellin, Peckham; Mr. Davenport, London; Messrs. Squire and Co., London; Mr. Delaney, Southgate; Mr. Maycock, Leamington; Mrs. Arminson; Mr. Hodgkins, Oxford; Mr. Godfrey, Isle of Wight; Mr. Nicholls; Dr. Dowse, London; Mr. Eastwood, Blackburn; Mr. Woodman, New Malden; Messrs. Burroughs and Co., London; Mr. Hamilton, Dromahair; Mr. Haywood, Manchester; Mr. Coombe, Sheffield; Mr. Ernst, London; Mr. Dalby, London; Dr. Ash, London; Dr. Clitheroe, Peckham; Mr. Morgan, Stoke Newington; Mr. Husband, Leeds; Mr. Boyce, Shrewsbury; Mrs. Bedingfeld, Pimlico; Mr. Lamb, Allbrighton; Mr. Walker, Aberdeen; Mr. Roy, Jersey; Mr. Bard, Maidstone; Mr. Cæsar, London; Mr. Perry, Dartford; Dr. Hill, Oldham; Mr. Harrop, Middleton; H. G., Balham; Dr. H. W., Clapham; Omega, Weybridge; Medicus, Bayswater; Veritas; M. L.; Nolan, Birmingham; W. S., Durham; Medicus, Standish; Medicus, Ketton; M.D., Swanage; Delta, London; H. S., Limehouse; L. R.; M. N. O.; Zeta; V. M., Camberwell; M.D., London; T. J. H., Streatham; Medicus, Whitchurch; J. B., Rotherham; Veritas, Leicester; H. S., Weybridge; Alpha, Penistone; Veritas, Aberdeen; H. G., London; F. G., Leicester; K.; R. S., Epperstone; Medicus, Bristol; Medicus, Brighton; G. B., Bristol; A. R.; Lady Principal, Leeds; Dunstan, Rugeley; Telegraph, Bristol; Domas; C. D.

South Wales Daily News, Liverpool Courier, Pioneer, Calcutta Englishman, Maryborough Chronicle, Glasgow News, Retford Times, New Ross Standard, Kimberley Independent, Kimberley Diamond Fields Advertiser, Tapanui Courier, Guernsey Advertiser, Factory News, Dumfries and Galloway Standard, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, August 12.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, August 13.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, August 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday August, 15.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, August 16.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M

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ABSTRACT OF AN ADDRESS ON THE INTERNATIONAL COLLECTIVE INVESTIGATION OF DISEASE.[1]

By SIR WM. W. GULL, BART., M.D., F.R.S.

GENTLEMEN, FRIENDS, AND COLLEAGUES,—I esteem it a great honour to be deputed to address you on this occasion, and on a matter which promises to contribute to the advancement of medical knowledge by a wider and fuller method than has yet been sufficiently attempted. The subject of my address is the institution of an International Collective Investigation of Disease. This object, I need not say, is intimately connected with the main purpose of these Congresses, if not indeed in the natural course of things an integral part of them. At present we come together as individual cultivators, and practitioners of medical science, each contributing his quota to our knowledge on this or that subject which may or may not have been selected for thesis and discussion beforehand. Nor are our labours even under these conditions without excellent results. But a feeling is growing and already widespread, that by a more organised combination, a more intimate and better co-operation, not only the members of these Congresses, but all the working members of our profession throughout the civilised world, might sooner or later be organised into a body of fellow-workers, associated for collecting information on medical questions over the widest area. There is, perhaps, no profession which enforces upon its individual members so strongly as does Medicine the necessity of continued observation and intellectual cultivation, and there is no means by which this cultivation can be so well promoted as by meetings like the present, and by the active organisations in the form of committees or sub-committees which we hope and anticipate may spring from them. The human intellect in its single and separate operation may produce wonderful results. Yet isolated as a man may seem to be in the intellectual labour which occupies him, he makes but little progress apart from the aid and co-operation of other minds which have worked and are working in the same direction. And though doubtless it will always be the privilege of the highest intelligences to clear the boundaries of knowledge and to throw the rays of their genius into the surrounding darkness, yet all must be agreed on the great and almost supreme value of the intellectual co-operation of less gifted minds in the simple observation of facts, and especially when the needed facts are scattered over a wide field. However much apart, as I say, a man may seem in the work of his intellect, he is really much less so than he seems to be, for as we cannot refer the strength of our bodies to any particular food that we have taken, so neither can we track the thoughts of our minds to the sources whence they may have been fed; and if our social nature has been raised from savagery to civilisation by social combinations, it is even more necessary that our intellectual nature should be helped in its growth and nurture by such intercourse and association as are here presented, and which we now propose further to advance. Our great countryman, Bacon, has not generally been well received in the school of German philosophy, so that I must use some caution in citing him in favour of intellectual combinations in pursuit of the sciences. Still, on thinking over the bearings of collective investigation of disease, I could not but feel that although three centuries have elapsed since he broached this question, and little has been done in it since, we might be about to realise his idea of a Novum Organon, the formation of a new intellectual machine for removing and overcoming the obstacles of our medical progress. The purpose we have before us is no less than this, to enlarge and methodise intellectual co-operation, whereby not only the active but the at present inactive faculties of observation of the wide-spread members of our profession may be combined into one or more lines of energy. I am not unmindful how much this presupposes; how it assumes the combination of exact observation and record, with refined criticism and analysis; how it demands the highest scientific perception, with the humble collection of the meanest facts; how, in fine, it means the development of intellectual combination into many forms of organisation which should be not one but many instruments of research. Such a forecast may perhaps lead us to exclaim, "Who is sufficient for these things?" Yet happily the answer is near; time, though short for the individual, is inexhaustible in the race: the intellect is in its infancy, its powers of growth unexhausted; and to these in their evolution there appears to be no limit. The work to be done is unchangeable, and there are eager and willing workers in all lands, who only need the encouragement and direction of the master-minds of medical science to set them to work. Happily, the phenomena which demand our investigation, though complicated and transient, are, it need not be said, the result of unchangeable laws. The capriciousness of Nature, as we speak of it, is but the weakness of our own sense and understanding, and its so-called mystery and obscurity but the darkness in ourselves. The physiologist and the pathologist have to admit that not even in the caprices of man is there capriciousness; that mental caprices have their organic basis; that the whims, the fancies, and the prejudices of the human mind, not less than the changing activities of the functions of his body, or the revolution of the earth on which he lives, are but the resultants of unvarying laws, unchangeable as the fixity of the stars on which he gazes with wonder and admiration. We may therefore have this encouragement, that when any of our work is done, however small and trifling it may seem, it is done and settled for all time, or at least so long as the laws of organisation remain what they are; that the clearing of a fact in respect of disease will remain an imperishable inheritance of knowledge to those who follow us, so long as there is disease in the world. We may support our labours, therefore, with a feeling of surety that the problem before us is a settled problem, however difficult its solution. Nature will not delude us, however much we may delude ourselves.

A superficial survey of the sections of this Congress shows that the student of medicine occupies a unique position in the pursuit of knowledge. For instance, if I turn the leaves of the programme I find that the section of Anatomy invites attention to cell nucleus and cell division, the lowest unit of organisation; and the section of Psychiatry to the psychic-epileptic equivalent, which, as one will deny, stretches to the other pole of knowledge; hence, surely no man more needs to lay hold of the unchanging idea of law than the student of medicine, as he ranges from one extreme of observation to another. In the international investigation of disease, the prevalence of mental disorders in different nations will be a subject of inquiry. Also the forms which these maladies take, according to nationality, occupation, stratum of society in which they occur, &c.; the use of stimulants—alcohol, opium, hemp, tobacco, &c. This work obviously lies not only in the physical and physiological conditions of life, but in their intimate correlatives, the facts of psychology. The thoughts of the student of medicine must, therefore, range from the atoms that build up the textures to the hopes that make the man; and even, perhaps, further than this, for in most of us the unsatisfied mind cannot answer itself with the measurables and ponderables of physical science, however much it may admit that all else is dependent upon them, but will strive to go behind appearances and feelings to the substratum of their existence, and cannot find rest for its foot until it traces their relation to an unchangeable first cause. Du Bois Reymond might well remark that the problem of organisation would be comparatively easy if it were unattended with feeling and thought. That it would then, as it were, present us only with an astronomical problem in which the atoms of things would, after the manner of the heavenly bodies, move on in their several orbits in lines which science might hope to deal with. For it is within the scope of science, even as we now understand it, to track an atom of oxygen, nitrogen, hydrogen, or carbon through its synthesis in a plant to its combination in the elements of brain or muscle, and still on to its resolution and return into its original form, with corresponding evolution of force. But when this shall have been done, we have learnt nothing of pain, nothing of emotion, nothing, indeed, of the science of many of the common facts with which medicine has to deal every day.

[1] Delivered at the International Medical Congress, held at Copenhagen in August, 1884.

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How different would be the problem for the physician if disease were unattended by pain or emotion, if the patient were indeed patient as unorganised materials are; if there were no hopes or fears on the part of the object to be dealt with, and no embarrassment on the part of the practitioner from desire to please as well as to heal! Quacks would then be banished to limbo. The course of nature could be watched until the equilibrium of health was attained, and the temptations to polypharmacy would be no more. But then, on the other hand, we should have nothing to do with life in its higher form, which is our ever-abiding problem, and we should miss the stimulus of affection, which, like a constant trade wind, carries us forward—at least the majority of us. If for these preliminary remarks I need any apology, might I not say that I have come from the country of Newton and Harvey, that I have travelled by the home of Spinoza, and that I am speaking in the presence of the countrymen of Descartes and Leibnitz.

Gentlemen, I do not appear here to-day on my own behalf, but on behalf of the Collective Investigation Committee of the British Medical Association. For some years past, and especially during the last four years, it has been felt that the aims of this great Association might be advanced to a higher point by establishing an organised plan of medical observation amongst its members, and, already, sub-committees to the number of fifty, comprising as many as a thousand members, have been established to carry forward this proposition. I am deputed by the Central Committee of this Association to ask you to-day to extend this combination by establishing an International Committee for the Collective Investigation of Disease, and I trust this may commend itself to the Congress. Such an International Committee would have objects entirely germane to the recognised purposes of the Congress itself. Probably one might go even further, and say that such an International Committee should form an integral part of these International Medical Congresses, and that their operation would in time become one of the most fertile sources of international medical advancement. I am happy to think that but little argument will be required in this assembly to commend this proposition to your favour. Already in Berlin the Verein für innere Medicin has adopted the principle, and has established a committee after the pattern of the British committee, to carry forward the work. The President of the Society, Professor Frerichs, has given his entire adhesion to the movement, and Professor Leyden has accepted the presidentship of the committee itself, which includes also very distinguished names; and I hope that one or more of our colleagues from Berlin will to-day add a few words in favour of the proposition I am called upon to make. In putting arguments forward for the establishment of a National Collective Investigation in its more limited form, it was permissible to insist upon minor advantages to be expected from such association—I refer to its educational value, since it could not but happen that every co-operating member would learn much from the investigations proposed; and that whilst he promoted science he would no less promote his own intellectual status. Amongst the subjects suggesting themselves to us in England in near relation to this matter was the formation of life-histories and family-histories in respect of disease, and these could only be obtained through the family physician. If such histories could be widely and accurately recorded, the natural associations of different forms of disease in individuals and families would be made evident, and might afford suggestions as to pathological relations not now suspected, relations between diseases which are separated in Nosological Treatises but associated in Nature. This mode of inquiry, through family history, would open a wide page for the record of the *pathology of ailments;* a page than which there is none more interesting to the practitioner of medicine, since seven-tenths of his work and perhaps more than this lie in efforts to correct physiological deficiences and to maintain some near approach to the equilibrium of health, which a feeble organism unaided cannot reach. On this part of the field it is that we can study the relations between functional and organic diseases, especially in the range of nervous affections, where the degenerative tissue changes in one individual of a family may be compared with the physiological disturbances in another. It is also in these family histories that we might hope to have elucidated the difficulties of *correlated pathologies.* Why, for instance, in a numerous family, whose members are living under the same conditions, one or two should become the subjects of pulmonary phthisis, one or two the victims of rheumatism, another of epilepsy, whilst the others maintain a healthy equilibrium. If such a history should be repeated in ten thousand families or in a hundred thousand, we surely might hope, by careful collation of the facts, to come to the groundwork of these differences, and to determine the rule which separates the epileptic and the rheumatic from the inroads of phthisis. So much for the more limited though not less important advantages of National Collective Investigation, but in an International Collective Investigation the ground widens very much, not only from the different intellectual characters of its working members, but also from the greater variety under which disease presents itself.

The first gain, no doubt, will be from the intercourse and reaction of different national modes of thought, with and upon each other. It need not be said that the ways in which any subject may be viewed do not depend upon the subject itself, but upon the varied capacity of the minds brought into relation to it. Minds evolved during ages under special local and national conditions, and education in lines of their own, cannot fail to give new direction and shape to the questions proposed for solution. All will admit that in the daily routine of practice facts are occurring that are worthy of record, and that medical science loses much by the want of such record. By the combinations proposed, what are now casual and wasted observations would be methodised and stored for arrangement, comparison, and deduction. The English Committee has proceeded as follows:—Having first determined certain subjects for collective investigation, cards of queries have been framed and distributed through the different sections, leaving each member to select such subject or subjects as he might prefer.

The clinical subjects which at present have been selected are acute pneumonia, chorea, acute rhematism, diphtheria, and inherited syphilis. Cards of queries have been issued on each of these subjects, and each card is accompanied by a memorandum stating the object of the particular inquiry, and directing the attention of the observer to the queries proposed. These memoranda are of the first importance in this movement. It is on them that our hopes of success must be grounded. It is intended that they should indicate the defective state of our knowledge in the subjects brought forward for investigation. In doing this their value to the profession, and to the progress of our knowledge, is almost incalculable. It is no small matter to have set before us in a simple manner what the present state of our knowledge is, the defects which have to be made good, and the inquiries likely to lead to such a result. Text-books on medicine will herafter have to follow something of this leading. Hitherto, and for the most part, they have aimed too much at satisfying the reader, and, in order to make the treatises complete, have assumed a knowledge both in pathology and therapeutics too little justified by fact, and so have hindered, rather than promoted, our progress. These memoranda are intended to be critical suggestions and suggestive criticisms on the state of knowledge respecting the subjects brought forward; they are the centre of the proposed system. It may fairly be expected that each issue of them will be more exact and incisive. The successful framing of them is the one important object to be attained. Through them the influence of the more advanced intellects in the profession will extend through the whole of it, and will reach its most scattered and distant members. Nor can we doubt but that there will be a reaction from the periphery to the centre, maintaining a living cycle of active mental co-operation. Who can limit the effect of such action and reaction, or deny that there will thus arise new energy and new genius? for, happily, the cultivation of science need not remain the privilege of professors and teachers, but may become the common inheritance of all.

The volumes I hold in my hand are the first published records of the collective investigations in England. They contain reports and memoranda on the communicability of phthisis, acute pneumonia, chorea, acute rhematism, and diphtheria. I would refer, by way of illustration of my remarks on memoranda, to the memorandum on acute rheumatism. This recites our deficiencies on the etiology of this disease, and might also include its pathology; the exceptional ways in which rheumatism occasionally developes; its probable relation to the state of the nervous system; the new aspect of the pathology of joint-affections in relation to the spinal cord; the relation of the intensity of the rheumatic affection to anæmia; its clinical relation to tonsillitis; the intercurrent affections of the skin; and, last, but, un-

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happily, not least, the treatment. I might add, however, not as a criticism but as a suggestion, than an exhaustive memorandum on acute rheumatism, showing the real state of our knowledge respecting this disease in all its relations, and the more than vagueness of our treatment of it, would have a value which I should find it difficult to express. Long-standing prejudices, which for the most part are entertained and fostered as if they were established and confirmed experience, would go down before the exposition of such a memorandum and its results in international collective investigation, as dry leaves before an autumn wind.

Whilst our English Association has, as I have described, put forward several subjects for collective inquiry with the memoranda and questions I have named, our German colleagues have determined upon a somewhat different method. They have selected but one subject for investigation, thinking it better to exhaust that before taking up a second or third; and they have naturally selected a subject which at the moment prominently occupies the attention of the profession in all lands—I mean pulmonary phthisis. Upon this they have proposed four points for solution: (1) The heredity of the disease; (2) the communicability of the disease; (3) the cure of the disease; (4) the transition of pneumonia into phthisis. These propositions are accompanied with many questions of detail which I will mention presently. The English Committee, at the beginning of last year, also proposed as a question for Collective Investigation the communicability of phthisis, and have reported upon it. The German inquiry is not yet reported upon. The important discovery of Koch that there is a specific organism associated with pulmonary tubercle, and his infection experiments, have naturally excited the greatest interest respecting the communicability of the disease. It is well known that at different times and in different ways the contagiousness of phthisis has been confidently believed in; and, as Professor Ewald remarked at a meeting of the Verein für innere Medicin, observers in America, in England, and in Germany, have supported the belief in the contagiousness of phthisis by important records respecting it. Still, until Koch's discovery, the professional mind was very much asleep about it, or with only now and then a half-waking dream. The English Collective Investigation Committee have put forward the question of communicability in the simplest form, "Yes" or "No;" as follows: "Have you observed any case or cases in which pulmonary phthisis appeared to be communicated from one to another? Please answer Yes or No." It will be observed that this is not a mere voting question as to a man's belief, but whether he has observed any case or cases of the apparent communicability of the disease. "Out of the 1078 members of the Association who returned answers to the questions issued on this subject, at least 261 believed they had seen cases of phthisis which have originated in communication from one person to another; about 39 more have seen cases which have made them doubtful whether phthisis may not be so communicated; while 105 have offered facts and arguments which seem to them to negative such a view. One hundred and fifty-eight of the affirmative returns refer exclusively to cases observed between husband and wife. Communication between husband and wife is mentioned, together with other cases in 34 of the remaining returns. So that 192 observers report cases of supposed communication of phthisis occurring between husband and wife." There are also a number of special returns where the disease seems to have spread from patient to nurse, and from friend to friend. I am not here of course to discuss the pathology of phthisis or of its communicability from person to person, but to argue for the advantages of collective research. And, perhaps, no subject could be selected better to demonstrate these advantages than the supposed contagiousness of phthisis. By extending the inquiry over a wide area, the recurrence of striking cases of apparent communicability are repeated over and over again, and, must naturally impress the mind more than a case or two occurring in individual experience. The Committee, therefore, justly remark in their report, that they hope that this first step in collective investigation into one of the most important questions connected with the etiology of phthisis will be of value in leading to more open-mindedness in the discussion of disputed questions of experience and observation. We shall await with interest the report of the Berlin Committee, for its Cards and Queries is much beyond that of "Yes" or "No." It presents seven sections:—(1) General questions as to the history of the family of the patient the subject of phthisis; (2) Antecedents of the family; (3) Previous diseases of the patient, as, for instance, whether of phthisical habit or not, what diseases preceded the development of phthisis, as scrofula, measles, whooping-cough, chlorosis, &c.; (4) On the question of heredity follow queries on health of parents: Either dead of phthisis, and when? Have they suffered from scrofula, disease of the bones, lung diseases not phthisical, as pneumonia, pleurisy, gangrene, bronchitis, &c.? Were the grandparents or parents related in blood? Age of father or mother at the birth of the patient? Were they sober or not? &c.; (5) On contagiousness or communicability—was the disease taken from husband by wife? or from wife by husband? when the malady began? was the communicability between brothers and sisters, or relatives or servants? was the contagion from residence in prisons, establishments for the insane, barracks or infirmaries, &c.? was the infection by residence, clothing, or beds? by nourishment, as through the milk of scrofulous animals or consumptive nurses, &c.? (6) On the curability, including only such cases where at least two years had elapsed from the beginning of the disease—where did the arrest or cure seem to begin? did this come from the improvement of the general condition? are cough and expectoration gone? have the physical conditions altered, and in what way, &c.? (7) On the transition of pneumonia into phthisis—the day of the beginning of the pneumonia? its seat, as at base, apex, or middle of lung, &c.? right or left lung? expectoration—sanguineous? rusty? grass-green, &c.? signs of re-convalescence? when the first signs of tubercle occurred? &c. &c.

In the time at my disposal it is impossible to sketch, even in outline, the number of subjects which claim attention. The committees of the different sections, as the work progresses, will select their subjects from their own point of view; some with a broader purpose will take the more common maladies, and the more curious the rarer ones. One of our English colleagues would have concise descriptions of rare maladies, prepared as an entomologist would have them prepared, of newly-discovered insects, printing distinguishing features in italics. He instances rhinescleroma; Hebra's prurigo; morphœa; Alibert's keloid of scars; Addison's disease; Hodgkin's disease; cretinoid state in the adult (myxœdema); congenital absence of special bones (such as radius and tibia, with associated portions of carpus or tarsus); cases of spina bifida, illustrating either results of treatment or survival without it; cases of sacral tumour; cases of the recurring iritis in young persons; aneurysms in the orbit; the osteitis deformans of Paget; disease of joints in ataxy; (Charcot's joint disease); non-malignant growths in the tongue; hemiglossitis; and Kaposi's disease.

The arguments for these more curious inquiries are not far to seek, since diseases which are rare in some countries may be frequent in others, and by their frequency afford the required ground for the study of their pathology. I might instance the glandular and elephantoid diseases of China, and the successful labours of Manson and Mayers, which have traced them to the presence of the *filaria sanguinis hominis*, producing lymphatic obstructions and filarial thromboses. The elucidation of such a piece of pathology, though the disease be limited to China, must have a good influence on the whole medical mind in breaking down preconceived opinions, and in showing that we cannot go too far afield for our knowledge. It supplies, moreover, a further argument for the International Collective Investigation of Disease.

Gentlemen, whilst I thank you for the favour with which you have received this address, I cannot but express my deep sense of the imperfect way in which I have set forth the greatness and importance of my subject. I can now but commend the matter to your good efforts, assured that, through them, success will not be wanting.

PETITION FOR INCORPORATION.—A petition has been presented to Her Majesty in Council by the Earl of Jersey and others, and the Chancellor, masters, and scholars of the University of Oxford, praying for the grant of a charter for the incorporation of the president and governors of the Radcliffe Infirmary, Oxford. They have been referred to a Committee of the Privy Council, by whom they will be considered on September 25th. A petition has also been addressed to Her Majesty in Council by Dr. Henry J. Littlejohn and others, praying that a charter of incorporation may be granted to the Queen's College, Edinburgh.

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ABSTRACT OF A Lecture ON THE REARING OF HAND-FED INFANTS.

BY EDMUND OWEN, F.R.C.S.,
SURGEON TO ST. MARY'S HOSPITAL, AND TO THE CHILDREN'S HOSPITAL, GREAT ORMOND STREET.

ON August 1st Mr. Edmund Owen delivered a lecture on this subject at the International Health Exhibition. The chair was occupied by Dr. Charles West, who, in introducing the lecturer, made an eloquent address upon the sacred duty of mothers suckling their own infants. He severely criticised the system of wet-nursing, by which one infant was robbed of its birthright for the sake of another, whose wealthy and indifferent mother might be shirking her responsibility from mere indolence.

Mr. Owen remarked that probably almost everyone would agree with the truth of the general proposition, that for the first half-year of infant life the mother's milk should be the only food for babes; but where a poor woman has to leave her infant in order to earn money for the support of her husband, or where the lady of fashion finds that the claims of society are so strong as to efface the sweet duties of motherhood, the question had to be answered as to the best artificial food. The physiological chemist brought in his answer: having made an analysis of human milk, he prepared a patent food which, he thought, ought to be even superior to the original article; but his compound was never absolutely fresh, and, when reared on it infants were too apt to grow weak and flabby; most likely it contained some starchy element which found no representative in human milk; he might almost as well put in fine sawdust.

The lecturer said that he was apprehensive lest preserved milk should entirely usurp the place of fresh milk in the nursery. At present it was far too widely employed; and he entirely failed to see how it could form a more wholesome diet for infants—as some maintained it did—than the fresh article. He could no more believe this than that the adult would thrive better on tinned American meat than on fresh sirloin. For babies, cow's milk, which should be always fresh, should be mixed with an equal or *even greater bulk* of warm water, in which a lump of white sugar and a pinch of salt had been dissolved; the fresh milk was an excellent antiscorbutic, and was therefore always needed. Often, when he had been assured that cow's milk could not be retained by the infant stomach, he had been able to demonstrate to the contrary by mixing even as much as double the quantity of water with it. In summer lime-water might be added to the mixture.

As regarded feeding-bottles, Mr. Owen said that the old-fashioned long straight one, with the short indiarubber nipple, and with no tube at all, was the best; and he wished that, in their search for the antique, mothers would revert to the use of the ancient feeder. With this the infant could be fed only when the nurse had the bottle in her hand, so that the child's meals would be given at regular intervals and for a definite time, and under close watching. The very worst kind of feeder was that now in general use; he had heard it called by one well competent to form an opinion on the matter "the lazy nurse's bottle." It was not so easily kept clean as the slipper-bottle, and was liable to many and serious abuses. Infants should be fed at regular intervals, and if they vomit after their milk, they should be fed on smaller quantities, given at shorter intervals. As a rule, for the first month the bottle should be given every two hours, gradually increasing the interval to three and eventually to four hours. As time went on, less and less water should be added to the milk. Too often infants were fed simply because they cried. True, the infant has "no language but a cry," but the cry may mean that the stomach is already overloaded. Before the end of the first year infants should be entirely weaned from the bottle; they should then have daily a little undercooked meat pounded into a pulp, to which some gravy and salt have been added. Potato finely mashed and covered with gravy, an egg, or a little milk pudding, may vary the diet. But on no account should they be allowed any wine, beer, tea, or coffee, though they may have cocoa and milk. The meals should be given regularly; children should not be allowed to "pick" at bread-and-butter, cakes, and sweetmeats in the intervals.

Having criticised unfavourably the absurd fashion of bunching all the little child's clothes around the middle of its body, the lecturer pleaded that here, at any rate, there was great need for a "scheme of redistribution." The body should be evenly covered. Children could not be hardened by cold baths or by any other exposure to cold; only the very fit could survive such severe treatment. Like flowers and fruit, they loved warmth and sunlight; and when he had a sick child under observation he made it one of his first cares to have the cot placed in a sunny part of the room. In England people did not seem to know the value of sunlight; the Italians did, however, and their common saying was to the effect that "where the sun does not go the doctor does." The sun's rays have a destructive influence on suspicious or baneful gases; but to such vapours children should never be exposed. No bath, sink, or closet should be allowed near the nursery; many children fell victims to a neglect of this first law of domestic sanitation. Everything about them should be sweet and fresh, and there should be no carpets nor bed or window-hangings to interfere with the free circulation of the air. On no account should the infant be taken to sleep in its mother's bed; the coroner for Central Middlesex holds a hundred and twenty inquests every year on infants who have thus perished. If the weather be very cold, a warm brick or bottle wrapped in flannel might be tucked in under the clothes of the cot. For ensuring appetite, digestion, and sleep, the infant should be taken out of doors each day when the weather is fine; and every day, unless a bitter wind is blowing, or it is foggy, the window should be thrown open for a while, as fresh air in the house is an absolute necessity. A well-managed babe should close its eyes as certainly as does a mechanical wax-doll as soon as it is laid down for sleep. The small hours of the night and the unhappy husband need never be disturbed by cradle-songs and lullabys. It was only a home-sick sugar-planter who cried "Rock me to sleep, mother!" and probably if an infant could speak it would never be heard repeating the request.

In conclusion, the lecturer likened his discourse to a badly-made net, in which the irregularly-sized meshes were represented by the many faults of omission and commission. Still, he did not fear the net breaking under the test of practical experience. Indeed, the greater the strain it was thus called upon to bear, the more productive would he consider this his cast. And he was of opinion that if the great Health Exhibition did nothing more than direct public attention to the unsatisfactory environment of hand-fed infants, history would still be fully justified in regarding it as one of the most important national successes of the nineteenth century.

THE PATHOLOGY AND TREATMENT OF CHOLERA.

BY ALEXANDER HARKIN, M.D., F.R.C.S.,
CONSULTING PHYSICIAN TO THE MATER INFIRMORUM HOSPITAL, BELFAST.

THE subject of cholera in all its relations has, from its near approach to our shores, become of pressing importance. Great attention has been properly given to its etiology and prophylaxis; but as, notwithstanding all our efforts, we may not succeed in keeping the enemy at bay or combating him at long range, as he may possibly break into our camp and challenge us to a hand-to-hand encounter, it is all important that we decide with what weapons we shall be armed for the fray. As matters stand, there is no reliable programme, no authoritative pronouncement by our medical corporations, as to the best method of procedure; and thus it falls to the lot of individuals to formulate their views and to advocate their adoption, on the grounds of practical experience or scientific teaching. But that I have had lengthened experience in the treatment of cholera, dating from its second advent in this country up till its latest appearance, having been pupil and assistant to my venerated friend Dr. Henry MacCormac, in the Belfast Cholera Hospital, and because I have some important observations of an original nature to submit, I should not possibly have undertaken the present task.

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Whatever the primary or the remote cause of an attack of cholera, whether miasm or bacillus, the influence of the nervous system becomes rapidly manifested. The prominent symptoms of purging and vomiting appear to be due to an abnormal condition of the nerves supplying the stomach and bowels; the choleraic voice, the vertigo, tremors, and muscular cramps betray their nervous origin; the symptoms of collapse are evidently caused by great irritation of the sympathetic system; while to the influence of the vaso-motor system may be attributed the depression of the functions of respiration and circulation—the chief dangers of the disease. We may recognise additional evidence of nervous agency in the sudden deaths which occur in every epidemic, when men are stricken down fatally after one or two hours' illness, as if poisoned by prussic acid or the concentrated virus of the upas tree, and in those rapid recoveries that we often witness, forbidding the idea of any serious complication or organic affection having caused or accompanied the most lethal symptoms. Under such circumstances, it is evident that our exertions should be directed towards combating the nervous factors in the disease.

The disease and its treatment naturally divide themselves into three stages: the preliminary, or diarrhœal; the stage of violent purging and vomiting, and cramps; and that of collapse.

For the diarrhœa nothing in my experience answers so well as dilute sulphuric acid, which should be administered every hour in doses of twenty to thirty drops in some agreeable menstruum, with mustard or turpentine epithems to the abdominal region, and iced water when available *ad libitum*. Should the second stage supervene, it is necessary to take decisive steps lest the third rapidly develop.

It is in the second stage that my peculiar experience becomes available. Physiologists teach that the phenomena of vomiting and purging depend altogether upon the nervous mechanism of the organs affected. According to Michael Foster, "the dilatation of the cardiac orifice is caused, in part at least, by efferent impulses descending the vagi, since, when these are cut, real vomiting with discharge of the gastric contents is difficult, through want of readiness in the dilatation. Since the vagus acts as an efferent nerve in causing the dilatation of the cardiac orifice so essential to the act of vomiting, it is difficult to eliminate the share taken by the vagus as an afferent nerve carrying up impulses from the stomach to the vomiting centre" (pages 275-6). The influence of the vagus is thus demonstrated in the act of vomiting, both as an afferent and an efferent conductor of nervous energy. Kolman, too, quoted by Hall,[1] has shown that the right pneumogastric supplies the whole of the small intestines. "This is an inhibitory nerve," he says; "and Moreau and Lauder Brunton have demonstrated that the division of all the nerves going to a portion of intestine is followed by the secretion of a fluid just like rice-water stools of cholera. May not the stimulation," Hall continues, "of the inhibitory vagus be followed by results much the same as if the sympathetic supplying the small intestine were paralysed?" In accordance with these physiological views, I have latterly treated every case of English cholera in the second stage by remedies applied to the pneumogastric nerve in the cervical region, with the satisfactory result of putting an end at once to the profuse vomiting and purging so characteristic of this stage. Arguing from its controlling effect in extreme cases of English cholera and cholera infantum, which our best authors say differ only in degree from the Asiatic type, I have every confidence that it will prove equally useful should the latter epidemic gain a footing in this country. There is another important indication, which will be subserved by counter-irritation over the vagus—viz., the restoration of the cardio-inhibitory function of that nerve; thus the violent contraction of the heart will be controlled, the expansive power of its cavities restored, and the congestion of the pulmonary and arterial system put an end to. The application I have always used is the epispastic solution of the Pharmacopœia applied freely with a brush behind the ear and in the neck as far as the angle of the lower jaw. No matter how violent the vomiting or purging, I have never failed in stopping both by this application; a stimulating effect is produced at once, and with it all gastric disturbances cease.

For the stage of collapse, which, according to Claude Bernard, is due to great irritation and hypertrophy of the sympathetic nervous system, Dr. Hall, who has seen a large amount of cholera in India,[2] proposed to the Royal Medical and Chirurgical Society of London, on October 13th, 1874, a plan of treatment which received the approval of the Society, as well as of Sir Joseph Fayrer, who was present. He recommends the subcutaneous injection of a solution of chloral hydrate, 10 grains in 100 parts of water, in four or five different places, according to the size of the syringe. If reaction does not commence in an hour, he injects again. The sedative soothes the contracted nerves, and relaxes the contracted vessels; the blood is once more uniformly distributed, and consequently the pulse reappears at the wrist, the cramps and abdominal pains subside, sleep is induced, the respiration becomes regular, the discharges lessen, the face fills out, the voice becomes stronger, and the natural secretions are restored. Mr. Higginson, in his report to the Deputy Commissioner at Keri, Oude, states that he has treated nineteen cases of cholera according to Dr. Hall's method, of whom seventeen recovered, being about 89 per cent of cures. For purposes of illustration I append a statement of two cases out of many which I treated during last autumn.

CASE 1. *English Cholera.*—Constable C—— sent for me on Sept. 18th, 1883, at 8.30 A.M. I found him in the act of vomiting, with small quick pulse, violent cramps, fœcid, palpitation of the heart, great debility, faintness, and coldness of the extremities. He was purged at frequent intervals, and the dejections were of the rice-water characteristic. He informed me that when on duty in the police-cells at 4 A.M. that day, he was attacked with profuse vomiting, followed in an hour by violent purging, with cramps, an attack occurring about every fifteen minutes. I did not order him any medicine, but painted him at once in the hollow behind the ears down to the angle of the jaw with an epispastic solution, assuring him that he would not have any return of his symptoms. I visited him again at 10.30 A.M., and found him quite convalescent, not having had any sickness or suffering, as I predicted.

CASE 2. *Cholera Infantum.*—On Sept. 24th, 1883, I was summoned to see a child living in Upton-street, Belfast, aged twenty months, at 11.30 P.M. I found it lying on its face across its mother's knee, with its arms and legs lying listlessly at either side; it was purging and vomiting at the same time. The child was almost pulseless, and was cold and feeble. The mother informed me that it had sickness at 6 P.M., and that it had vomited at least every quarter of an hour till the time of my arrival. She attributed its illness to a mess of soup which it had taken the previous day. She had administered milk with lime-water without any benefit. I did not recommend any medicine, but, having had the child placed on its back, I painted it with the blistering fluid behind both ears, informing the mother that from that moment both vomiting and purging would cease. Soon after the application of the remedy the child began to improve, the heat returned to the extremities, and at the end of half an hour it was fast asleep, when I left for the night. Calling at 10 A.M. the next day, I saw the child in its mother's arms looking quite lively and well. As I foretold, both vomiting and purging had instantaneously ceased.

There is no need of multiplying examples; these two are the representatives of a great number, irrespective of cases of bilious vomiting and gastritis from alcoholism, similarly and successfully treated.

In the cases related I applied the remedy behind both ears; in several others I found the single application behind the right ear sufficient for the purpose; and this appears to me preferable to the double blister, as, from its powerful inhibitory effect upon the heart as well as upon the abdominal viscera, the modified application is perhaps the safer. In these cases of severe suffering anyone can understand the satisfaction that is felt when he is justified in saying, "Permit me to apply this external remedy, and all your troubles will at once depart."

[1] British Medical Journal, vol. II., 1874, p. 600.

[2] Ibid., vol. II., 1874, p. 654.

THE LOWER THAMES VALLEY SEWAGE.—On the 4th inst. Sir Charles Dilke signed a minute ordering a general inquiry into the drainage of the Lower Thames Valley, which has been rendered necessary owing to the Select Committee of the House of Commons having rejected the scheme of the Joint Board for the Drainage of the Lower Thames Valley.

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THE MENTAL ELEMENT IN THE ETIOLOGY OF GOUT.

BY J. MORTIMER GRANVILLE, M.D., M.R.C.P.

RATHER more than three years ago[1] I drew attention to this interesting and important subject. At that date the *rôle* of the cerebrum in the development of gout was scarcely recognised, and the part which the nervous system, as a whole, plays in the malady, although beginning to attract attention, had scarcely asserted its claim to consideration. A communication from Dr. Dyce Duckworth, made to me subsequently to the appearance of my letter in THE LANCET, brought to my knowledge the fact that he had discussed what I may, perhaps, call the cerebro-spinal hypothesis with his well-known care and ability. Other English writers, of course, had treated the subject from the neurological standpoint, but Dr. Dyce Duckworth's concise paper cast the facts and deductions in a practical form with great perspicuity. During the last three years progress has been made in the physiology—I will not use that unsatisfactory and misleading term *pathology*—of the disease, and I think I may now fairly claim that the view I dared to propound—namely, that a uric acid centre, either eliminative or destructive (Bernard or Pavy, in principle, *mutatis mutandis*) exists, and is, probably, located beneath the floor of the fourth ventricle, not far from, and in functional relation with, the so-called "diabetic" and polyuric centres. On the Continent and in America, if not yet in England, my view is accepted. My present purpose is limited to the recognition of two clinical facts and the making of one therapeutic suggestion.

An "attack" of gout is particularly likely to occur, in the gouty subject, at either of two mental or cerebral crises. First, on the eve of a great mental effort, when the brain is, as it were, charged to the highest point of tension with what, for want of a better term, we call nervous energy. The type of a paroxysm so occurring is likely to be "nervous," with severe neuralgic pains, if the patient be neurotic, or visceral in the sense of attacking one of the large organs if he be robust and of an active habit. Second, an attack of gout is likely to occur at the end of an intellectual effort, when the centres are exhausted; and in this case it may take the form of an epileptiform fit or syncope, followed by a more or less prolonged depression; or it may rapidly develop into a formulated arthritis of the ordinary type. In the break down before action I think the cerebral strength itself gives way; while in the paroxysm after exertion the attack occurs because the inhibitory control of the cerebral centres over the medullary, spinal, and organic centres is suddenly suspended. The attack of gout has, so to say, been kept in abeyance during the period of cerebral activity, and breaks out immediately this ends. The former class of cases is the most serious, and attacks of this class go far to prove the existence of a neurosis, for which the patient will require to be specially treated. The second class of cases is one in which the malady proper, rather than the patient, if I may so express myself, demands the practitioner's greatest attention.

The therapeutic suggestion I have to make is that the treatment of gout in all its forms should be based on the recognition that the uric acid can only be got rid of by a process of oxygenation, and that it must pass off by the kidneys, never by the bowels. Purgatives in gout are always harmful in direct proportion as they promote the discharge of fluid from the intestinal surface and leave the renal secretion concentrated, so that the uric acid, which requires a very large proportion of fluid for its solution, blocks the tubes of the kidneys in the form of crystals. One reason for the specially frequent occurrence of these attacks in warm weather is the loss of fluid by perspiration, and consequent concentration of the kidney excretion. If uric acid can crystallise, it *will*. I would only add that I am obtaining marked and satisfactory results in acute and subacute gout from the use of the following mixture. It relieves the pain almost immediately, reduces swellings, and raises the proportion of urea in the urine—as readily estimated by the hypo-bromite test—from 50 to 100 per cent. in a few hours. I *never* use colchicum, and I do not get either organic complications or serious depression. I do not starve my patients, or cut off their supplies of nitrogenous food; because I believe a vigorously trophic state is physiologically necessary to facilitate the oxidation of the uric acid, and to secure the due and rapid elimination of the products of disassimilation, as urea. I have now employed this formula in a very large number of cases, and with so much success, that I cannot hesitate to urge its consideration on my fellow practitioners:—Ammonii chloridi, ʒiv.; potassæ chloratis, ʒij.; glycerini, ʒxii.; tincturæ iodi, ʒij.; aquæ ad ʒxii. Misce. Fiat mistura, cujus sumantur cochlearia duo magna tertia, quarta, vel sexta quaque hora.

Welbeck-street, W.

[1] THE LANCET, April 23rd, 1881.

CASE OF

TETANUS TREATED BY HYDRATE OF CHLORAL; RECOVERY.

BY JAMES TAYLOR, F.R.C.S.,
SENIOR SURGEON TO THE CHESTER GENERAL INFIRMARY.

THE following case is recorded for the purpose of showing the power that chloral has over the convulsions of tetanus, and also the extent to which the drug may be given in such cases. Several times during the illness we considered anxiously whether we were justified in administering chloral so freely, but when we stopped it the tetanic symptoms became in a very short time so severe that we were compelled to resort to it again.

Mr. J——, aged forty-two, came under the care of Dr. John Roberts and myself, suffering from a malignant growth at the anus, which I removed on January 31st, 1884. He progressed favourably until February 9th, when he complained of tenderness about the jaws, which he attributed to eating a tough mutton chop. On the 11th he complained of being unable to open his mouth, and his masseters were rigid. Opium was given. On the 13th he was much worse. Any attempt to swallow brought on an attack of choking. The opium was stopped, and fifteen grains of hydrate of chloral given every three hours; in the evening this was increased to twenty grains every three hours. On the 16th, the spasmodic condition being much relieved, the chloral was stopped. On the morning of the 17th bromide of ammonium was prescribed. At 7.30 P.M. he was suddenly seized with violent general convulsions, which occurred every five minutes; his abdominal muscles were completely rigid; during the convulsions he screamed in agony; there was opisthotonos. twenty grains of chloral were given, and repeated at 8.30 P.M. At 9 P.M. the convulsions ceased, leaving him rigid. The chloral was continued every three hours until the evening of the 18th, when, the rigidity having passed off, it was again stopped.—19th: Cramp in the left side; ten grains of chloral were given. At 11.30 A.M. cramp in the thighs occurred, the hamstrings being very tense; he had twenty grains of chloral. At 8.30 P.M. there was violent trepidation of the legs when he rested on his heels; ten grains of chloral were given every three hours. On the 20th the least movement brought on violent trepidation. On the 21st he was very restless; constant trepidation existed, which was worse in the left calf; heart's action very irregular.—22nd: Very restless; irregularity of heart's action great. Stopped chloral, and gave him opium and carbonate of ammonia.—8.30 P.M.: Heart's action better, but intermittent.—23rd (10 A.M.): Violent general convulsions every few minutes, with great rigidity. Twenty grains of chloral and inhalation of chloroform. The convulsions had somewhat diminished at 12 noon. At 12.45 the chloral (twenty grains) was repeated, and was given every two hours.—24th: Restless and delirious; no violent convulsions. Chloral every four hours.—26th: Has had only slight spasmodic attacks the last two days. Was not to have the chloral unless more severe attacks occurred.—27th: Trepidation very severe, and pain in feet. Chloral thirty grains.—28th: Pulse very irregular. To have as little chloral as possible.—29th: Very restless; tongue very dry.

Until March 4th the patient was obliged to have twenty grains of chloral three or four times daily. Owing to the extreme irregularity of the heart's action and the constant delirium, the chloral was stopped on the morning of the 4th. At 7.30 P.M. he was suddenly attacked with violent general convulsions, and twenty grains of chloral were given; at 9 P.M. the convulsions occurred every few minutes, and

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twenty-five grains of chloral were administered. The convulsions ceased in half-an-hour, the extreme rigidity leaving first the left leg, then the right, and then the back. On the 5th twenty grains of chloral were given every six hours. On the 6th and 7th the cramp was troublesome but there were no violent convulsions. On the 8th chloral was given every seven hours, and on the 9th every eight hours. On the 10th the dose was reduced to fifteen grains every ten hours. On the 11th there was return of severe cramp in the abdominal muscles, but twenty grains of chloral relieved it in a few minutes. On the 13th fifteen grains of chloral were given every nine hours, and on the 14th every twelve hours. On the 17th the patient only had chloral once in twenty-four hours. On the 18th there was still pain in in the leg, but he felt much better. The appetite was voracious, but he could not masticate on account of stiffness of the jaw. On the 20th no chloral was administered. Recovery was uninterrupted after this. On the 31st the only remnant of the tetanus was a feeling of weakness in the left leg. From February 13th to March 19th he had taken six ounces and three drachms and a half of chloral.

ACUTE MANIA TREATED WITH HYOSCYAMIN.

By C. THEODORE EWART, M.B., M.Ch. Aber.

I HAVE tried this alkaloid in twelve cases of acute mania, and have found it answer admirably. Although there is nothing novel in what I have to state regarding its action, I thought it might be of some interest to give the following six cases.

CASE 1.—C. A——, male, aged sixty-one; not epileptic. About every fourth month he suffers from delusional mania, which lasts for two months. During this period he is very noisy, shouting loudly or muttering incoherently. He sleeps but little. After these brain storms he becomes quiet and tractable. Thinking that hyoscyamin might shorten the attack, I ordered one grain. Although the sleep produced was very profound, the breathing stertorous, and the paralysis most marked, the pulse throughout was good, beating steadily and regularly. I decided, however, in future to give a smaller dose. The attack was not shortened by any appreciable length of time.

CASE 2.—F. W——, male, aged thirty-six, well-built and muscular. Formerly in the Artillery; served in India for a few years. Has had sunstroke. Is epileptic. Tongue furred and bowels constipated. Is so violent and excited that he has had to be placed in seclusion; struck one of the attendants severely. Ordered three-quarters of a grain of hyoscyamin at bedtime. Was sleeping quietly in ten minutes. Awoke in the morning much quieter, although still suffering from delusions. Gave an aperient draught. Kept in seclusion three days, and then allowed out into the grounds.

CASE 3.—J. C——, male, aged forty-four. Not epileptic. Supposed cause, a fall. Tongue coated, breath offensive, and bowels constipated. Is very noisy and excited. Had to be placed in seclusion. Beat the door continually, fancying he was crushing blackberries. Imagined he had met God and the devil; the latter he knocked down. Ordered three-quarters of a grain of hyoscyamin. Was asleep in a short time. Passed a quiet night; more rational in conversation. Gave an aperient draught. In four days he was allowed out.

CASE 4.—G. B——, male, aged thirty-eight. Supposed cause, religion. Not epileptic. Most noisy and unmanageable; converses in a loud tone with imaginary persons; face flushed; excited expression of eyes; required four attendants to restrain him. Ordered three-quarters of a grain of hyoscyamin. Within a quarter of an hour he was sleeping profoundly, and did not awake till 6 A.M., having had twelve hours' refreshing sleep. More quiet. Had to be fed twice. Repeated the draught at bedtime. On the third day he was sent to the infirmary ward, as he was suffering from an inflamed knee. Very deluded, but is free from excitement.

CASE 5.—W. E——, male, aged forty-four. Is epileptic. Suffering from an outburst of maniacal excitement, endangering the safety of the other inmates. Placed in seclusion. Given half a grain of hyoscyamin, which produced deep and prolonged sleep. Much quieter on waking. Allowed out the following day.

CASE 6.—B. P——, male, aged fifty. Not epileptic. A noisy, troublesome patient at times; broke a couple of mirrors, and attacked the attendants. Placed in seclusion. Ordered three-quarters of a grain of hyoscyamin, causing deep sleep. Awoke in the morning quiet. Allowed out.

It is, I think, the better plan to give a large dose at once than to administer smaller ones at intervals; for in the cases which are most benefited by this drug the difficulty is to get the patient to take more than one dose, and to frequently disturb only tends to make his excitement greater. There is no danger in three-quarter-grain doses, nor is nausea or sickness produced. The pulse at first is very much quickened and stronger, and then gradually gets slower and loses strength. The face is flushed and the pupils greatly dilated by its stimulating action on the peripheral ends of the sympathetic. The breathing is in a few cases stertorous, but in the majority quiet. On waking, spectral illusions are apt to be present. When given in small doses the sleep procured is very restless and disturbed.

The conclusion I draw from the result of the treatment of these cases is, that hyoscyamin is undoubtedly of great service in certain cases of mania where the patient is violent and cannot be restrained. It is certain in its action, quieting the patient within a quarter of an hour after administration, through its effect on the nervous system. The sleep produced is very deep, and the muscular power greatly weakened by its direct paralysing action on the spinal cord. Whether this drug has any curative effect or not it would be difficult to say; but I imagine it is chiefly through the complete rest produced that its beneficial action is seen. There is no doubt that lengthened sleep in cases of acute mania does good, and the longer a patient continues in an acutely excited state the greater is the danger of permanent mental injury. After repose the patient awakes refreshed, and with greater strength to withstand mental excitement. An objection to the use of hyoscyamin is that it is so very expensive; I am therefore trying the far cheaper sulphate of atropia. The preparation I have used was obtained from the General Apothecaries' Company, and contained four grains to the ounce.

Fisherton House Asylum, Salisbury.

ON A NEW FORM OF INHALER.

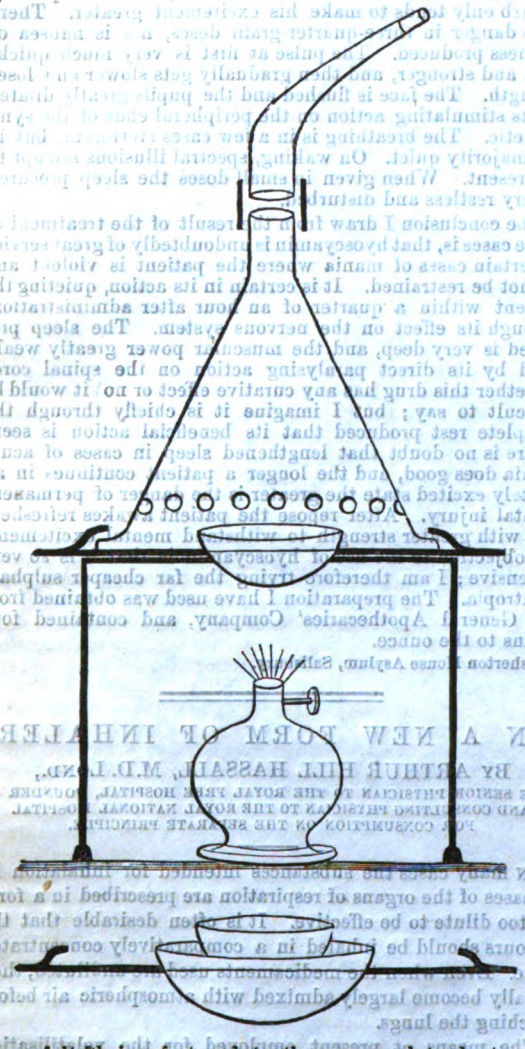
By ARTHUR HILL HASSALL, M.D. Lond.,
LATE SENIOR PHYSICIAN TO THE ROYAL FREE HOSPITAL, FOUNDER OF AND CONSULTING PHYSICIAN TO THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION ON THE SEPARATE PRINCIPLE.

IN many cases the substances intended for inhalation in diseases of the organs of respiration are prescribed in a form far too dilute to be effective. It is often desirable that the vapours should be inhaled in a comparatively concentrated state. Even when the medicaments used are undiluted, they usually become largely admixed with atmospheric air before reaching the lungs.

The means at present employed for the volatilisation and inhalation in a concentrated form of the vapours of certain substances are often very defective. Thus iodine and carbolic acid are sometimes vaporised from a porcelain or metal plate placed near the patient; in this way the greater part of the fumes are lost in the air of the apartment, and the small portion really inhaled is diluted many thousand times. I have therefore devised a very simple apparatus for the accomplishment of the object desired. Its several parts are shown in the subjoined figure. It is suited alike for solids and liquids; and when an increase of temperature above that of the air is required, this is obtained by applying the lamp either directly to the capsule containing the substance or through the medium of the small water bath. One great recommendation of the apparatus is its absolute cleanliness. There is no probability, unless it is used in the most careless way, of its becoming contaminated with bacilli, and hence there is no risk of infection or re-infection, such as may happen when flexible tubes and mouth-pieces enter into the structure of the apparatus employed, and especially when more than one person makes use of such an inhaler. Such contingency constitutes a real danger, and one not usually realised.

The figures almost explain themselves, yet it may be well to give a brief general description. The apparatus

consists of a small spirit lamp, furnished with a fine rack, so that the flame can be nicely adjusted; a quadrangular stand; two pieces of copper sheeting, with a central aperture in each; a small copper water-bath; two small porcelain dishes; a funnel of glass or other suitable material, furnished with openings below for the admission of air; and a glass mouth-piece, which may be used or not, as may be required. The funnel should turn up at the bottom, so as to



allow of its being fastened to the copper plates by two or three simple springs. This apparatus is specially suited for the vaporisation of carbolic acid, creasote, iodine, thymol, eucalyptol, pine oil, and many other substances. The porcelain capsules should have a diameter of 1¾ in.; the water bath 2¾ in.; the base of the funnel 3½ in.; and the length of the mouth-piece should be about 4 in.

San Remo.

REPORT OF A CASE OF FIBROID UTERINE TUMOUR.

OPERATION; EXTIRPATION OF UTERUS; RECOVERY.

By JAMES DODD SWALLOW, M.D., M.R.C.S.

MRS. J. W——, aged thirty-seven, resides in the country. She was married eighteen months ago, and shortly afterwards began to notice enlargement of the abdomen, which during the last eight or ten months has become very marked, her general health being fairly good. The catamenia have been profuse, and she has lately become very thin and emaciated. During the last three months she has had pain in the right iliac region, much increased by walking or standing. In the early part of July last she came to London for advice. On examination, I found the abdomen was distended to about the size of the seventh month of pregnancy, and that it contained a large, solid, morbid growth. The outlines of the uterus could be easily defined; it extended upwards to within an inch and a half of the ensiform cartilage, and was perfectly movable, hard, and non-fluctuating. In each iliac region could be felt a mass of about the size of a small cricket-ball. Each of these was movable, and appeared to be either an independent growth or to be attached to the principal tumour by a peduncle. On examination per vaginam, the os uteri was found to be drawn up and tilted over to the right side; the sound passed with difficulty five inches; the uterus was quite movable. The diagnosis arrived at was fibroid tumour of the uterus, with two secondary tumours, one in each iliac region. In consultation with Mr. Sydney Jones (who after careful examination confirmed this diagnosis), removal was decided upon, and this mainly in consequence of the rapidly increasing growth, the excessive monthly loss, the pain, and the progressive emaciation of the patient. On July 13th, the patient being placed under ether by Mr. Osborn of St. Thomas's Hospital, Mr. Sydney Jones operated, antiseptic precautions being carefully observed. The abdominal cavity was easily reached by an incision about five or six inches long. Great care was required at the lower part of the incision, on account of the bladder being drawn up considerably by the growth of the tumour (the base of the bladder was drawn up fully two inches above the os pubis). The bladder was dissected off the front of the uterus, and the lateral connexions of the tumour were divided, after ligaturing with double thread. The neck of the uterus below the large fibroid was elongated, and formed a comparatively narrow peduncle above the os. The enlarged uterus, with five or six pedunculated fibroids, and the ovaries, were tilted forwards out of the abdomen, and the neck was transfixed by a needle carrying a double thread of Belgian twist. The threads were firmly tied, one on each side, and the neck of the uterus divided just above the os. Another strong silk ligature was made to surround the peduncle at the situation of the double thread. Very little blood was lost during the operation. The edges of the abdominal wound were brought together by silk and catgut sutures alternately, and all was securely packed with antiseptic dressings. After the operation a subcutaneous injection of morphia was given, and the patient put to bed. The sickness continued for twenty-four hours. She was ordered to suck ice at intervals, and morphia was injected night and morning; catheterism every eight hours. This treatment was continued until July 16th, three days after the operation, when my note is as follows:—The patient is now free from sickness. Temperature (10 A.M.) 100°; pulse 90. Sleeps well, is cheerful, and has had no pain. There is a bloody discharge from the vagina; no tympanites. Ordered to take a teaspoonful of iced milk frequently, and to suck ice.—18th: The milk, having produced sickness, to be discontinued, and ice alone to be sucked. — 19th: No sickness. Temperature (10 A.M.) 100·2°; pulse 94. Has passed a good night. Ordered to have a teaspoonful of Brand's extract of beef occasionally, and to continue the ice and morphia injections night and morning.—21st: The patient is doing well. Temperature (10 A.M.) 101°; pulse 100. The first dressings and the silk sutures were removed; wound almost healed; walls of abdomen supported by broad straps of plaster. The bowels having been cleared by enemata, she was allowed to take beef-tea, milk, and three ounces of port wine during the day. The patient complains of no pain, sleeps without morphia, and says she feels quite well. During the next few days her progress was somewhat interfered with by vomiting and inability to take much nourishment. — 28th (fifteen days after the operation): Dressings removed; wound quite dry, except here and there; the patient sleeps well, and takes nourishment; bowels relieved daily; allowed to sit up for an hour.—30th: Some swelling of the foot and calf of the leg; temperature and pulse normal.—Aug. 3rd (three weeks after the operation): Except some swelling of the left foot and calf, the patient is well; takes food, wine, and stout with relish. To wear a well-fitting belt.

The points of special interest in this case appear to be: first, the great ease with which the tumour was exposed, detached from surrounding parts, and removed (as after dissecting the bladder from the front of the uterus, and separating the lateral connexions, the tumour was easily

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drawn forwards from the abdomen, and a comparatively narrow peduncle had to be dealt with); secondly, the patient being kept under the influence of morphia; and thirdly, being allowed to take scarcely anything but ice for seven or eight days after the operation.

Clapham, S.W.

A CASE OF
DIABETES TREATED BY PILOCARPINE.

BY T. CAWLEY EAGER, L.R.C.P. ED., M.R.C.S.

T. H——, a prison warder, aged forty-three years, first consulted me on Jan. 1st, 1882. I had known the patient for some years, and was much struck by his altered appearance. When I last saw him, some six or eight months before, he was a healthy robust looking man, but he had become pale and wasted and had a tired and worn look. His previous history was good till November, 1881, when he was under treatment for an abscess in the right hand, which was followed by boils, more or less severe in character, about the body generally, and since that time he had been getting thinner and weaker. His symptoms in January, 1882, were a *feeling* of failing health, great thirst, and a frequent passage of urine; this disturbed him several times during the night. The appetite had been better than usual, but the food seemed to do him no good, for he had been constantly growing thinner, his weight now being 179 lb., against the normal weight of 222 lb. On questioning him more closely, he told me he was passing sixteen pints of urine in the twenty-four hours, that he had entirely lost all sexual appetite and power, and that he felt utterly weary and worn out; in fact, the man's appearance, as he lolled in a chair, with rounded shoulders and drooping head, quite bore out his statement. The skin was dry and harsh, the tongue red and glazed, the mouth dry and clammy, the gums and lips covered with sticky mucus, and the bowels confined; the sight, however, was not affected in any way, his vision being perfect. On examining the urine, I found the specific gravity to be 1040, and containing, as shown by Trommer's test and subsequently verified by Roberts' fermentation method, an abundance of sugar.

I ordered a diet of butcher's meat, poultry, and fish; green vegetables, such as cabbage, spinach, and cauliflower; cheese; eggs, especially the white of the egg; Van Abbot's gluten bread, with or without butter; tea, with a little milk or cream, and sweetened with glycerine if necessary; seltzer, soda, or potash water, with five ounces of whisky or brandy; and also claret. The medicinal treatment was as follows:—One-twentieth of a grain of hydrochlorate of pilocarpine and one grain of sulphate of potash, to be placed dry on the tongue three times a day; five grains of pepsina porci and twenty minims of dilute hydrochloric acid, in an ounce of peppermint water, to be taken three times a day. A soap-and-water enema to be used daily if the bowels are not opened.

Under this treatment the patient began quickly to improve; within a month there was a marked lessening of the quantity of the urine passed, and of the amount of sugar it contained, and also a gain of 7 lb. in weight. The pilocarpine powders were taken regularly for six months, and the pepsine mixture for nine months, when both were stopped and no further medicines were given. The patient was seen at gradually lengthening intervals until July, 1883. The diet had been persevered with until this date, when the gluten bread was discontinued, brown bread or crusts of a well-baked loaf being substituted. Cocoa was allowed, as also a few turnips and carrots, and if the symptoms did not return in a month potatoes in moderation were to be added; but no sugar was permitted to be taken. Up to March of the present year the improvement had continued, the weight being then 207 lb., and the urine normal both in quantity and quality; all harshness of the skin had disappeared, the sexual appetite and power had returned, and to all intents and purposes the man was well.

Remarks.—This case at the commencement appeared to be a most unfavourable one; indeed, I did not hesitate to tell the patient that I thought most gravely of his condition. Fortunately for him he was most conscientious in carrying out the course of treatment I advised him to pursue, and did not relax it except when I gave him permission. It will be observed that no preparation of opium was given, for though codeia undoubtedly has the power of reducing the quantity of urine, it does so very frequently at the expense of the appetite, for the patient will often be found to become weaker and lose weight by its continuance. My reason for pursuing the treatment I adopted was by means of the pilocarpine to relieve thirst by promoting salivation, and thus diminish the quantity of urine, thereby increasing the weight and hence restoring bodily vigour. One of our great troubles in diabetes is the difficulty in getting patients to persevere in a treatment so monotonous, so that one rarely has a chance of recording an apparent recovery, especially in cases where there is so much loss of weight and such a quantity of sugar excreted.

Woking, Surrey.

MISPLACEMENTS OF THE UTERUS.

BY CHARLES E. FITZGERALD, M.D. ST. AND., &c.

AT the present moment, when so great a diversity of opinion exists among our leading gynæcologists as to the importance or non-importance of misplacements of the uterus, it is useful to appeal from theory to fact; and with this object it may not be uninteresting to cite the following two cases, as tending to show that some misplacements of the womb are not always devoid of serious or even disastrous consequences.

C. E——, aged twenty-seven years, unmarried. The patient had attempted suicide by strangulation. On my arrival I found her face much swollen, and of a livid bluish-red, with numerous petechiæ and patches of extravasated blood, and the conjunctival vessels ruptured—in fact, the usual appearances of strangulation. There was intense despondency and hysterical weeping, and a firm determination to refuse food. The tongue was foul, and the pulse rapid and compressible. The bowels were obstinately constipated, and the menses had been suppressed for six months. She expressed regret that she had been prevented from hanging herself, and exhibited great dislike to her mother, to whom she had been greatly attached. Her condition was one of profound melancholia. I ordered her a dose of calomel, and a brisk purge, to be followed by a mixture of sodium bromide and henbane, and compelled her to swallow some strong beef-tea. At my next visit I found her only very slightly better, although the medicine had acted well. As she still obstinately refused to take food, I again forced some beef-tea down her throat. I expressed an opinion that the uterus might possibly be at fault, and at her mother's request made a vaginal examination. I found a condition of extreme retroflexion and retroversion, the fundus being very low down and pressing on the rectum. With some difficulty I introduced a sound and replaced the uterus (the patient struggling and howling like a wild animal meanwhile), and kept it in place with a vulcanite Hodge pessary. Immediately the womb was in its place the patient became calm and quiet. The next day I found her quite sensible, calm, and smiling, though the face was still much swollen and congested. The menstrual flow had occurred in the night. She was taking her food readily, and was again affectionate to her mother. She told me she thought she "must have been mad to have behaved as she had done." This young lady remained perfectly well for more than two months, at the end of which time she came again to me complaining of depression of spirits, malaise, &c. I found the uterus again somewhat retroflexed, and that she required a rather longer pessary. She has continued well ever since.

F. G——, aged twenty-two, unmarried. When first seen she was suffering from profuse menorrhagia, which had persisted more or less, and with scarcely a day's intermission, for eighteen months. The pulse was weak and rapid. There were great prostration and general weakness. The face and skin were blanched, and the expression anxious. The gums and lips were bloodless, and the patient could not leave the horizontal position without fainting. She was ordered one-drachm doses of the liquid extract of viburnum opulus, and ice externally and internally, and by these means the hæmorrhage was, with difficulty, checked. On the third day I examined her, and found the uterus retroflexed at an acute angle, very much congested, and low down in the pelvis. I at once rectified the position, and introduced a

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Hodge pessary, which retained the organ in position. The hæmorrhage ceased almost immediately, and did not return until the next menstrual period, and was then unusually profuse, during which she took first ergot and then tincture of iron. I kept this patient under observation for one more period, which was, however, quite natural. I then withdrew the pessary, and she returned home and has kept well ever since. This young lady had been under treatment for many months before I saw her, and had taken large quantities of iron, gallic acid, lead, ergot, &c., without effect.

Although I could quote many cases from my note-book where misplacements of the womb have produced grave symptoms, and which have rapidly subsided when the organ has been replaced and supported by a well-fitting pessary, I should not wish it to be thought that I overrate the importance of uterine misplacements. On the contrary, I believe that in many cases they exist without causing any manifest inconvenience; and I am of opinion that all the manipulations, injections, pessaries, &c., which are sometimes thought necessary in the treatment of these cases are worse than useless, and only tend to aggravate and encourage that morbid and self-conscious frame of mind which is so often found in women suffering from womb complaints. That there are, on the other hand, cases of misplacement requiring active mechanical and other treatment I do not for a moment doubt, and I think this is conclusively proved by the cases above quoted. It is, after all, a question of judgment; for while some cases should be judiciously treated, others should be as judiciously left alone. When there is no active congestion of the uterus due to obstructed circulation, no menorrhagia, no severe pain, no injurious consequences from pressure on the rectum or bladder, no bar to conception—in fact, merely a flexion due to relaxed ligaments and dependent on a condition of general weakness or ill-health, then the uterus may safely be left alone. When, however, the reverse conditions exist, then we should be deterred by no sentiment—or, worse still, by no fashion—from active and appropriate treatment.

Folkestone.

A Mirror of HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nullam etenim scalpi pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WEST LONDON HOSPITAL.

RUPTURE OF THE TEGUMENTARY AND OTHER COVERINGS OF AN INGUINAL HERNIA THROUGH THE CICATRIX OF AN OLD INCISION FOR THE RELIEF OF STRANGULATION; PROTRUSION OF MORE THAN THREE FEET OF INTESTINES; REDUCTION; RECOVERY; REMARKS.

(Under the care of Mr. KEETLEY).

FOR the notes of this rare and remarkable case we are indebted to Mr. W. Milne Anderson, M.B., C.M., house-surgeon.

J. H——, a coal carter, aged fifty-six, was admitted on April 1st, 1884. He had suffered from a left inguinal hernia for twenty years, and was operated on for strangulation about five years ago. About 3 P.M. on April 1st, he was jumping off his cart, when he suddenly felt something give way, and on examining himself found part of his intestines protruding from the seat of his rupture. He left his cart in charge of a policeman, and, supporting the gut with his hands, walked a quarter of a mile to see a surgeon, who wrapped a piece of lint round the part and ordered him to go off to the hospital at once. On leaving the surgery he walked back to the place where he left his waggon, and then took a cab to the hospital.

State on admission.—On examination, his clothes and skin were found to be covered with coal dust. Lying on his abdomen were three coils of small intestine, slightly reddened and congested. Each coil was fully a foot in length. The pulse was good, and the patient did not appear to be suffering much pain. He was immediately put under ether, and Mr. Keetley, who happened to be in the hospital at the time, proceeded to operate. The surrounding parts were washed, and pieces of lint soaked in boracic lotion placed in the abdomen and round about the rupture. Each fold of gut was carefully sponged with boracic acid lotion, and then protected with a piece of lint soaked in the same. When the bowel was thoroughly cleansed, an attempt was made to reduce it, but this was found to be impossible until the rent had been enlarged a little and the ring nicked. Considerable manipulation was required to return so great a length of bowel into the abdominal cavity. The wound was a clean tear about two inches long, and seemed to be through the site of the old incision. The skin around the rent was shaved and thoroughly washed with a solution of perchloride of mercury. The neck of the sac was stitched up with catgut, as also were the pillars of the ring. An attempt was made to separate the sac, but unsuccessfully, owing to the intimate blending of all the coverings of the hernia. The opposite surfaces were therefore brought together by deep sutures and buttons. A drainage-tube was inserted, and the skin brought together with silver wire. An antiseptic dressing was applied, a pad of iodoform gauze being next the wound. The patient was put to bed and an opiate given. He was allowed nothing save ice to suck for twenty-four hours.

He passed a good night, was free from pain, and had no sickness. Next morning the temperature was 100·6°. About 4 P.M. a wineglassful of milk was ordered every two hours in ice. Evening temperature 100°. On the 3rd patient said he felt comfortable. Temperature 99°. The bowels had been opened freely. A nutrient enema was given every six hours. The evening temperature was 100°. On the 5th, as he complained of feeling uncomfortable after enemata, they were left off, and low diet ordered. Evening temperature 100°. On the 6th he passed a restless night, the temperature on the morning of the 7th being 100°. The wound was dressed for the first time. There was a slight discharge of pus along the deep button sutures, which were removed, as also were the superficial ones, and the drainage-tube was shortened. He passed a good night. On the 10th the temperature was 100°. The wound was dressed again. There was a considerable discharge of pus from the site of the button sutures. Several incisions were made, and three small drainage-tubes inserted.

From this time the wound was dressed daily, the temperature varying between 99° and 101°. On April 22nd the temperature rose to 102°. The wound was injected daily with a lotion of sulphate of zinc and subnitrate of bismuth. The discharge became less, but, the temperature still keeping about 100°, the sinuses were slit up, scraped, and packed with iodoform gauze on May 9th. After this the temperature fell to normal, the wound gradually healed, and he left the hospital with his hernia radically cured on June 11th.

Remarks by Mr. KEETLEY.—This case is interesting from (1) the rarity of the accident, (2) the length of time during which many feet of intestine remained in contact with the air and with the patient's grimy trousers and shirt without any peritonitis resulting, and (3) the contrasted behaviour of the parts internal and external to the hernial opening respectively. The only similar case with which I am acquainted was that of a lady of whom I heard the late Mr. Holmes Coote relate that the coverings of her umbilical hernia ruptured spontaneously while she was returning from a dinner at Richmond. Mr. Coote was sent for to her house in town, and replaced the escaped intestines. The patient recovered completely. Of course there have been many cases of recovery after the escape of intestine through a wound. The case above recorded would tend to show that the peritoneum is either not very susceptible to ordinary as distinguished from specific septic infection, or that at least it is easily disinfected. That a smooth thin membrane like the peritoneum should be much more easily and speedily asepticised than the thick irregular skin crowded with glands, and in the pubic region studded with hair follicles, is what would be naturally expected; and I was not much surprised to see the extra-peritoneal wound suppurate. The sutures of the neck of the sac and of the ring completely isolated and protected the abdominal cavity and its contents, which were never affected by the suppuration in and about the old sac. Considering the great length of intestine which had escaped (at first glance it looked as though there must be more outside than inside the abdomen), the process of reduction

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was easy. But one end was passed back far more easily than the other, and almost all the escaped intestine was passed back in one direction, one inch after another being pushed in by the forefinger or the fingers of one hand and kept in by those of the other. Boracic lotion was used for the cleaning and aspepticising of the intestine, because there was reason to expect that the cleaning and replacement would occupy a long time, for which reason carbolic lotion was objectionable both on account of its irritating qualities and the danger of poisoning; but the extra-abdominal parts where the suppuration eventually took place were treated both with carbolic and corrosive sublimate lotion (1 in 1000).

WOLVERHAMPTON AND SOUTH STAFFORDSHIRE GENERAL HOSPITAL.

BUFFER ACCIDENT; DEATH; NECROPSY, REVEALING TWO RUPTURES OF THE DIAPHRAGM AND PROTRUSION OF THE RIGHT LOBE OF THE LIVER, THE SPLEEN, AND THE STOMACH INTO THE THORACIC CAVITY; LACERATION OF SPLEEN AND KIDNEYS.

(Under the care of Mr. KOUGH.)

FOR the following notes we are indebted to Mr. J. W. Batterham, B.S. Lond., house-surgeon.

J. J——, aged twenty-six, while at work as a "shunter" on July 24th, 1884, at 12·30 A.M., was crushed between a railway engine and the buffer of a "goods" van. When admitted into the hospital half-an-hour after the accident, he was conscious, and complained of thirst and of great pain over the lower part of the abdomen. The skin generally was cold and pallid but the face was of a dusky hue. The pulse was just perceptible. No fracture of the ribs or pelvis was discovered; the abdominal walls were extremely retracted; there was dulness on percussion over the hypogastrium and the flanks. A few drops of bloody urine were drawn off by catheter. The patient had no desire to pass urine. There was no vomiting or retching, and only once did the patient complain of nausea. He became rapidly weaker, and died about two hours after admission.

Necropsy, thirty-six hours after death.—A few abrasions were noticed on the trunk and thighs. There was very little post-mortem congestion of the dependent parts, the skin being remarkably exsanguine. Abundant punctiform ecchymoses were noticed over the upper sternal region, neck, and face; these ecchymoses ended abruptly about the middle of the forehead, being absent over the part presumably covered by the cap. There was a slight effusion of blood beneath the skin of the eyelids, as well as beneath the ocular and palpebral conjunction. On opening the thorax about two pints of blood escaped from the pleural cavities. The heart, which contained very little blood, was normal in appearance. No ecchymosis of the pericardium or endocardium was noticed. The lungs were shrunken, crepitant, and bloodless. On removing the thoracic viscera, subpleural extravasations were seen about the roots of both lungs and beneath the right costal pleura. Two extensive lacerations of the diaphragm were now apparent, one about five or six inches long, extending across the right division of the central tendon; and a second, about an inch less in extent, extending through the muscular fibres behind the left division of the tendinous portion. Protruding through the rent on the right side was the posterior half of the right lobe of the liver. This portion of the liver was devoid of peritoneal covering, which appeared to have been reflected from it as it was thrust through the ruptured diaphragm. On the under surface of the right lobe was a small laceration an inch long and half an inch deep. Through the rent on the left side of the diaphragm had passed the spleen and the stomach. The latter, which was partially distended by fluid food, was intact. The left kidney was found lying in the rent. Very little blood was found free in the abdominal cavity, but there was extensive retro-peritoneal extravasation around the duodenum and kidneys. Both kidneys and spleen, more especially the former, presented lacerations extending in a radiate manner from the hilus. The pancreas was not lacerated, but presented several interstitial hæmorrhages. The intestines, which were almost empty, were unruptured, and no part except the duodenum showed any signs of bruising. The bladder was intact, and contained about two ounces of bloody urine.

Reviews and Notices of Books.

Practical Manual of Diseases of Women and Uterine Therapeutics for Students and Practitioners. By H. MACNAUGHTON JONES, M.D. Pp. 410. London: Baillière. 1884.

THE task which the author has set himself is an exceptionally difficult one; it has not, in our judgment, been yet satisfactorily accomplished, and the work before us forms no exception to the rule. Dr. Jones does not seem to have laid out his work so as to apportion a suitable space to each subject, some parts being treated more or less at length and with long quotations, while other important questions are reduced to mere lists. Again, possibly out of regard for sensitive feelings, essentially contradictory opinions are endorsed, the author's own views being thereby rendered inscrutable. He indulges in spirited denunciation of inventors of pessaries, and yet describes them and figures them by the score. He repeatedly asserts that this or that operation will not be described, as it is unsuitable for the general practitioner, and yet, for example, says such things as the following: "Simple incision of the lower part of the cervix has frequently to be resorted to, and is a step that must constantly fall to the lot of every practitioner"; the application of nitric acid to the cavity of the uterus "is a simple step that any intelligent practitioner should be able to carry out." We also quote the following: "In young anæmic or chlorotic girls a vaginal examination is, as a rule, not necessary." (We should think not, indeed!) "Only when, from other symptoms, we are led to suspect some inflammatory condition, or a version or flexion, is a digital examination called for." And this in spite of the fact that 75 per cent. of all nulliparous women have anteverted or anteflexed uteri! Dr. Duncan is said to associate spasmodic dysmenorrhœa with versions and flexions—a statement which we leave to that gentleman, who is quite capable of fighting his own battles. The figures are not a redeeming feature, and some of them, representing nude women in various postures, quite unnecessary. But we cannot omit to mention, in conclusion, that the author does really commit himself to an opinion adverse to intra-uterine stems; and that the preface contains several unimpeachable medico-ethical sentiments. The glairy transparent cervical plug once again figures as the enemy of the human race; which reminds us of the dictum of the American orator with regard to woman—that "Had it not been for female woman, few of us would be here at the present time."

Poisons; their Effects and Detection. A Manual for the use of Analytical Chemists and Experts. By ALEXANDER WYNTER BLYTH, M.R.C.S., F.C.S., Public Analyst for the County of Devon, and Medical Officer of Health and Public Analyst for St. Marylebone. London: Charles Griffin and Co. 1884.

THIS is a companion volume to the author's well-known work on Foods, and they together constitute a new edition of his Practical Chemistry. The reason for the change of title is obvious. The present appellation is distinctive, and avoids the possibility of confusion with works of a different scope and character, which might with equal propriety be classed under the head of Practical Chemistry. The new volume, like its predecessor, opens with an historical account of the subject, an excellent *résumé* being given of old poison lore. This is followed by a number of useful tables, one of them being devoted to an analysis of 1000 cases of suicide which occurred in England between the years 1871 and 1880. Opium, it appears, is in this country responsible for over 40 per cent. of the total deaths from all kinds of poisons. This is a higher percentage than prevails in

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any other European nation. In France poisoning by opium and morphia accounts for only about 1 per cent., whilst in Denmark, Sweden, Switzerland, and Germany the proportion is equally low. Our high mortality, says Mr. Wynter Blyth, arises in great measure from the pernicious practice, both of the hard-working English mother and the baby-farmer, of giving infants "soothing syrups," "infants' friends," "infants' preservatives," "nurses' drops," and the like, to allay restlessness, and keep them during the greater part of their existence asleep. A long list is given of patent medicines containing opium, from which it appears that in many cases the proportion of the active drug is much higher than in any pharmaceutical preparation. A good and clear account is given of the ptomaines, or cadaveric alkaloids, a subject which has of late attracted much attention both here and abroad. The various kinds of snake-poison are dealt with in an able manner, much of the information being evidently the result of personal observation. The mydriatic alkaloids are fully discussed in all their bearings, and their antagonists, physostigmine, pilocarpine, and muscarine, receive due notice. The information is, as a rule, up to date, care having been taken to include several of the newer remedial agents, such as guebracho, and its active principles, aspedosperminé and guebrachine. In some cases the author has unfortunately overlooked important papers, and in one or two instances has omitted nearly all reference to the physiological action of the drug. The chapter on the Treatment of Cases of Poisoning is poor, and requires careful revision; but taking the work as a whole, it may be said to be worthy of the author's high reputation.

A Treatise on Chemistry. By H. E. ROSCOE, F.R.S., and C. SCHORLEMMER, F.R.S., Professors of Chemistry in the Victoria University, Owens College, Manchester. Vol. III. Part 2. London: Macmillan and Co. 1884.

The Principles of Theoretical Chemistry, with special reference to the Constitution of Chemical Compounds. By IRA REMSEN, M.D., Ph.D., Professor of Chemistry in the John Hopkins University. Second Edition. London: Baillière, Tindall, and Cox. 1884.

A Short Text-book of Inorganic Chemistry. By Dr. HERMAN KOLBE, Professor of Chemistry in the University of Leipzig. Translated and edited by T. S. HUMPIDGE, Ph.D., B.Sc.Lond., Professor of Chemistry and Physics in the University College of Wales, Aberystwyth. London: Longmans and Co. 1884.

A Text-book of Inorganic Chemistry. By Professor VICTOR VON RICHTER, of the University of Breslau. Authorised Translation of the Third German Edition, by EDGAR F. SMITH, A.M., Ph.D., Professor of Chemistry in Wittenberg College, Springfield, Ohio. London: Henry Kimpton. 1884.

THE fifth volume of Roscoe and Schorlemmer's treatise continues, but by no means finishes, the history of organic chemistry. It would seem, indeed, as if two more volumes would be required, and we trust they will appear with as little delay as possible, for a complete treatise on organic chemistry is very much wanted. Among the groups described in the present volume may be noticed as particularly important to our readers those which include oxalic, lactic, succinic, malic, tartaric, citric, and oleic acids, the uric series, the glycerides, the drying oils, and, above all, the carbohydrates, which are excellently arranged and described. The high merit of the previous volumes is fully maintained, the historical sketches have been prepared with great care, and the bibliography is exceedingly rich. Everyone interested in chemistry will want the book, and all will feel grateful for it.

There is really very little to say about the three elementary text-books whose titles are given above. Each possesses great merit, and each would be an absolute treasure if there were not already so many of the same kind in existence.

Professor Remsen's little book is a second edition, which proves that in America, at any rate, its value has been recognised. The second part, dealing with the constitution of chemical compounds, is, we think, the best.

Professor Kolbe has given to the German and Professor Humpidge to the English student a guide in which theory and description are well balanced. It is intended as an aid to students attending a course of lectures; and the author, in his preface, gives some wise and opportune remarks, the results of great experience, on the value of lectures and their limits of usefulness. He says: "A necessary condition for using a text-book of chemistry successfully is attention and continuous attendance at the lectures. Students in Arts who have not regularly attended a course of lectures may be able to read up afterwards what they have missed; but a lecture which has not been attended by a student of chemistry cannot be made up by mere reading; neither the notes of the lectures by other students, which ought to be extremely few, nor a text-book, can serve as a substitute for what has not been heard. The chemist has to learn, not by reading nor by hearing alone, but by hearing and seeing. A person who has not *seen* the phenomena produced by the union of oxygen and hydrogen, for example, can have no clear conception of them, nor of the chemical change that accompanies them. Nothing is more foolish than the opinion which I have often heard from young medical students that chemistry can be studied from books alone [we presume the translator means books *only*], like other subjects; that facts which are learnt by heart can take the place of general principles only partially understood." With this, and with much that follows, we entirely agree. The general principles of the science can only be taught by lectures aided by reading, for no student can verify fundamental laws by experiment. In fact, to quote Professor Kolbe once more: "To enumerate many chemical facts loads the memory with ballast, and tends to learning by rote instead of clear perception and after-thought." It will be seen from the above extracts that the translation is not very elegant. It appears, however, to be on the whole clear and accurate.

Professor von Richter's manual has not fared quite so well in the hands of the translator. Some glaring errors disfigure the English version—notably, the repeated use of the words methyl and ethyl, instead of methane and ethane, on pages 142–144. The book is, however, in several respects original, and we note with special approval the section on crystallography, and the account of, and frequent allusions to, thermochemistry, a branch of the science much neglected in English books, but of rapidly increasing importance. We are sorry to see that both Professor Remsen and Professor Kolbe attribute the interesting periodic law of atomic weights to Mendelejeff, instead of to John Newlands, who was its real discoverer.

The London Water-supply—Past, Present, and Future. By G. PHILLIPS BEVAN, F.S.S. London: Edward Stanford.

AT a time when changes in the organisation by which London is supplied with water are being so much discussed, this little work has an interest beyond that which it would otherwise secure on its own merits, for in a compact form it gives an account of the ancient and modern methods by which the metropolis has been supplied, together with many important and useful details as to the existing water companies, concerning whose operations and proceedings it is so important that Londoners should be well informed. Whilst our London supply tends to diminish, the demand for water is on the increase, and hence the author considers the feasibility of procuring the needed further supply—first, from the Thames basin, and, secondly, by means of one or other of the north country schemes that have been advocated. Whatever steps may be taken in the direction of

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purification of sewage, the fact remains that the sewage of nearly a million and a half of people has, after being submitted to certain processes, to find its way into the Thames valley, and hence Mr. Bevan describes in detail the several alternative schemes of supply, feeling confident that to one of these London will ere long have to turn.

SOME INTERNATIONAL HEALTH LITERATURE.

London: William Clowes and Sons.

Accidental Injuries. By JAMES CANTLIE, F.R.C.S.—This handbook is intended as a guide from which the public may learn how to render efficient aid at the moment of injury. The book is illustrated with good woodcuts, and has an index easy of reference. The instructions given are very excellent, and conveyed in language as free as possible from technicality.

Dress. By E. W. GODWIN, F.S.A.—The method on which this book is constructed is the historical; the history of dress is said to be curiously parallel with that of architecture. "As speaking involves poetry and music, as architecture involves painting and sculpture, so dressing involves in principle all these." The dress of civilised nations may be broadly divided into two great classes, the loose and the tight. This primary distinction is, no doubt, owing to climate. The highest type of the first class is seen in the Greek chiton and himation, as represented in sculpture and on vases, of 450-350 B.C. The highest type of the second is found in the effigies and paintings of England and France about 1250 A.D. This book deals chiefly with the artistic aspect of dress, and contains a large amount of information, with sixty-eight capital illustrations.

Athletics. By Rev. E. WARRE, M.A.—This is a very good little book indeed; everyone should read it. We shall content ourselves with quoting a sentence from the chapter on Advice to Reading Men. To all who are working for an examination the author says, "Your brain, in order that it may do its work, will require a continual supply, and that a large supply, of good arterial blood. What are you doing about your heart and lungs?"

Alcoholic Drinks. By JOHN THUDICHUM, M.D. A large amount of information is brought together in this handbook; but the reader does not meet with much encouragement to proceed with his subject, owing mainly to the uninteresting manner in which the matter is presented. We are in agreement with the sense of the author's last paragraph, which is to the effect that liqueurs are frequently offered at a price many times their value.

Infectious Disease. By SHIRLEY MURPHY.—The origin, behaviour, and means of prevention of infectious disease is here treated in a popular manner with great success. We hope that the book will be widely read, not only from a desire to further the diffusion of useful knowledge, but also from a belief that such diffusion would tend to lighten the task of the doctor, who has often to battle with the passive resistance of the friends of his patients in dealing with cases of infectious disease. Moreover, the dangers from contagion which constantly surround the individual cannot be better averted than by the personal possession of information concerning them.

Diet in relation to Health and Work. By A. W. BLYTH, M.R.C.S.—The arrangement of this book is systematic. The material is conveyed in plain language. A great deal of instruction is brought together in the small compass of ninety-two pages. Five tables of reference showing the percentage composition of various articles of diet are not the least valuable part of the work. The chapter on the Principles of Diet is likely to prove interesting to a large section of readers of popular works.

Healthy Nurseries and Bedrooms. By Mrs. GLADSTONE.—This brief essay will assuredly be read with profit by all who have watch and ward of children. In a very modest preface the authoress claims for the work but little originality, having thought it well to bring together in a convenient form information derived from many trustworthy sources. In this she has succeeded admirably. Dr. Champneys has given his aid in the chapter on the Lying-in Room.

New Inventions.

THE ATMONEMETOR, OR SPRAY-PRODUCER.

THE apparatus figured below, introduced by Dr. Wright of Old Burlington-street, consists of a bottle to which is attached a syringe. This is worked by pressure of the thumb on a spiral spring fixed round a piston-rod. The air thus driven displaces a small portion of the fluid contents of the bottle, and forces it along a horizontal tube, at the end of which it is discharged through very minute orifices, and is distributed in finely divided spray. Though suitable for



other purposes, the instrument is primarily intended for use in throat diseases, and to facilitate employment in these cases the tube is furnished with a plate beneath, which serves as a tongue depressor. The Atmonemetor is a very convenient instrument, as it can be held firmly and worked with one hand. In its construction, also, it is free from soft and perishable material, and is thus available in any climate. It is made by Messrs. Krohne and Sesemann.

"PHYSIOLOGY OF THE FEET."

To the Editor of THE LANCET.

SIR,—I am sorry to have misunderstood Mr. Ellis's remarks on the above subject, since it appears that we agree as to the facts, and differ only in our views of what ought to be. One should be cautious in accepting a theory which does not accord with daily experience. I must, therefore, hold my present opinion until it has been distinctly shown that untrained savages place the toes down first, not only when walking on stones or thorns, but also on smooth ground. Even then it would not follow that we ought to imitate them; our distant ancestors walked on all fours, but it has long ceased to be right to do so. The act of letting the heel gradually down from the toe and afterwards raising it complicates the act of walking in a way quite unnecessary under ordinary circumstances. If I have to walk among tin-tacks or the like, I certainly place the toes down first; but then I keep the heel off the ground entirely, finding it most comfortable to put down as little of the foot as possible.

I am, Sir, yours faithfully,

August 10th, 1884. FOSTER ALLEN.

THE POLLUTION OF THE WITHAM.—On the 6th inst. Mr. Harrison, an Inspector of the Local Government Board, held an inquiry with respect to an application by the Corporation of Lincoln for the consent of the Local Government Board to proceedings being taken against a firm of tanners for polluting the Upper Witham. After hearing evidence, the Commissioner said he thought it very desirable that the matter should be arranged, and after some discussion, it was decided to adjourn the inquiry until Oct. 1st, with a view to that course being taken.

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THE LANCET.

LONDON: SATURDAY, AUGUST 16, 1884.

THE subject chosen by Dr. KIDD for his address before the meeting of the British Medical Association at Belfast—Puerperal Fever—is one, in whatever manner it be treated, or from whatever point of view examined, whose interest never fails; for the importance and value of the lives of its victims, the peculiar circumstances in which it makes its attacks, and the degree of uncertainty surrounding its cause and origin, together with the fear and loathing with which it is regarded, will always make it a subject of the greatest interest to the obstetrician and general practitioner. At all periods no little time and labour have been devoted to its study, but during recent years this study has been pursued with a method and a care never devoted to the subject in previous times; and the results obtained, though they have by no means fully cleared up the nature and mode of origin of the disease, yet have done much to further our knowledge of them, and, paradoxical as it may seem, much more towards their treatment, both preventive and curative.

The tendency of modern research has been to show that childbed fever is the result of septic infection; that there is no specific puerperal fever occurring epidemically, like small-pox and scarlet fever; that other fevers and the acute specific fevers may attack lying-in women and run their usual course, or become complicated by so-called puerperal fever or septicæmia; and that there are cases in which severe febrile symptoms may arise in consequence of the injuries sustained by the pelvic organs during labour, such fevers being independent of septic influences. Dr. KIDD appears to be at one with the majority of obstetricians with respect to much that is believed about these affections; but he discards the septicæmic and believes in the specific character of the fever, or of certain cases of it; and in his address at Belfast he brought forward some of the evidence upon which this view is based. In the brief time at his disposal it was impossible for him to marshal all the evidence at his command in support of his view; at the same time, fully aware of the tendency of modern research, he cannot have failed to produce some of the strongest and the most unanswerable evidence in his possession, with a view to stem the tide of modern error; and it is to this part of his address that we would more particularly direct attention.

This form he illustrates and describes under "epidemics" of puerperal fever. "In the case [epidemics] we have now to consider," he says, "the disease may manifest itself before labour has set in. It seizes great numbers at the same time; it observes cycles of development and decline, sometimes disappearing altogether for short or long periods; at its onset it proves fatal to almost all who are attacked by it; as it declines, it becomes more mild in its character, and many of those attacked recover." Then Dr. KIDD illustrates this statement by a case, and by the history of the outbreak of puerperal fever in Dublin in 1854–5, as given by the late Dr. MCCLINTOCK. In the case related by Dr. KIDD, fever set in before labour, and three days after labour diarrhœa, pain, and vomiting, with death on the sixth day. The case is too briefly recorded to define the illness preceding labour, but surely it does not follow that it was puerperal fever. It is well known that in the course of certain fevers pyæmia occurs, and the case reported by Dr. KIDD appears to be one of septic poisoning in the course of, and perhaps caused by, a febrile condition already present. This is a very different thing from puerperal fever setting in before labour. While considering this point, it should always be borne in mind that, whereas a surgical operation is not performed in the presence of fevers, labour not unfrequently sets in in the course of one of these diseases, and that a febrile state alone is sufficient to give rise to fetid lochia, a condition generally believed to play a very important part in the production of the fevers of childbed. Then follows MCCLINTOCK'S description of the "epidemic" of puerperal fever in Dublin in the years 1854–55. This clearly shows an outbreak of puerperal fever, virulent at the commencement, milder towards the close. But such outbreaks do not prove the epidemic character of the disease. Similar outbreaks of pyæmia and septicæmia were by no means unknown in the surgical wards of our hospitals at no very distant period, and no one would for a moment entertain the suggestion that they were epidemics. But it may be said that such outbreaks of pyæmia did not occur in the private practice of the surgeon, while they did in that of the obstetrician; and this is true. Puerperal fever, however, dogged the steps of individual practitioners and nurses, but did not attack indiscriminately all or "large numbers" of women confined in a certain locality. This difference in the private practice of the surgeon and of the obstetrician is easily explained by the difference in the parts injured, and the ease with which they can be cleansed in surgical cases. Outbreaks of pyæmia in hospitals have been traced to causes which are remediable, and not to epidemic influences, although pyæmia and septicæmia are in some degree subject to such influences, and are more prevalent at certain seasons and when other diseases are rife, as was shown by the Committee appointed by the Pathological Society to report on Pyæmia. These facts point to the attendants as the carriers of a poison, and not to a poison generally disseminated through the air.

No one doubts that septicæmia and puerperal fever are transmissible diseases, and the researches of PASTEUR have shown how outbreaks of these diseases are virulent at the beginning and milder later on. In the diseases the virus of which he has isolated and cultivated (chicken cholera, charbon, and hydrophobia), he has found that successive generations of the virus possess feebler infective properties, until finally it entirely loses its character as a virus. The same appears to hold good in the transmission of certain poisons through the human body, and amongst them that of puerperal fever. In face of all the facts about this malady which have as yet become known, it is not possible to regard it as a disease at any time epidemic, and all the evidence tends to show it to be a disease transmissible, and that the agents in its transmission are the attendants on the sick. By acting on this assumption, the results obtained have been far superior to those obtained on the older—epidemic—view of the disease.

No apology is needed for returning to the subject on which we commented last week now that the full text of

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Dr. KOCH'S address is before us. The predominant interest of the subject, and the necessity that Dr. KOCH'S views should not be misinterpreted, are sufficient reasons for again referring to it. And in the first place be it remarked that, although the interesting observation remains that the bacilli of cholera are less tenacious of life, and are apparently even destroyed, by the bacteria of putrefaction, it would be going too far to take seriously the inference which we somewhat satirically drew from this fact last week. Certainly no sane sanitarian would dream of encouraging putrefaction to get rid of cholera; but what is of importance to know, and what Dr. KOCH himself deduces, is that none of the usual measures taken to arrest putrefaction will destroy the morbific virus of cholera. He thinks that such measures are carried to an extravagant degree (although it might be asked if this were possible in many places we could name), and are yet of no avail in stamping out the disease. We should hardly have raised this point again were it not for the fear lest the real import of this apparent incompatibility of the putrefactive and the pathogenic micro-organism should be misapprehended. The portion of the address of which we publish an abstract to-day deals with many important problems. Some of the strongest criticism—e.g., that by Dr. CAMERON at Belfast—levelled against the conclusion of Dr. KOCH that his microbe is the cause of cholera, has been based on the failure of his attempts to communicate the disease to the lower animals. He fully admits the failure, but he points out that those animals never have cholera spontaneously; and he explains much of their immunity by the fact that the bacilli are destroyed in the stomach and never reach the intestine. Moreover, he urges that the bacillus is a parasite, and most parasites have their special hosts—an argument which may, however, prove too much. The fact that the comma bacillus—which, by the way, seems to have relatively slight tenacity of life—is destroyed by the gastric secretion, suggests that in the human subject much stress must be laid upon digestive derangement in favouring the passage of the bacillus into the bowel; and the well-known fact of the danger of consuming indigestible matters in cholera times is invoked to support this doctrine. In fact, there are few points even in the very wide etiology of cholera which Dr. KOCH does not fail to gather up and to explain on his bacillus doctrine. We may instance especially the evidence of infection by contaminated water, and the equally accepted fact of infection of those who wash the foul linen coming from cholera patients. Here we have facts well established and admitted, which harmonise very well with the view taken by Dr. KOCH, especially as he has found the bacillus in the linen and in befouled water.

He passes in his address from the conditions of individual infection to those which influence the course and progress of epidemics, and he does not hesitate to deal freely with the large questions that have so long and so often been debated by epidemiologists. He is convinced that the bacillus is the cause of cholera, and straightway he proceeds in the clear and comprehensive manner of which he is master to depict the home of the fateful parasite in the Ganges delta, whence it is conveyed, not by the air or in a dried state in merchandise, but by the human body, so that the dangers of the spread of epidemics increase in proportion as facilities for travel and intercourse are multiplied. Nor is there anything new in this conclusion; but hitherto we have had to endure views of an opposing character on this very point. Dr. KOCH may be an enthusiast, and the eminent men he has gained over to his views may also be under a delusion; but, seriously, we confess that more hope of eradication of this scourge is raised by following his leadership, and acting in good faith in the direction that he points, than by accepting any of the theories and speculations of which the world has had so many. For is now hardly a question of theory, but a very plain practical fact, and one upon which it is possible to act in attempting to check the ravages of cholera on the shores of the Ganges and to limit its diffusion abroad.

At the time of writing we learn that the report of MM. STRAUSS and ROUX has been laid before the Paris Academy. It contains statements based on their observations last year in Egypt, and recently at Toulon, which are far more confirmatory of Dr. KOCH'S view than has been generally supposed. Thus they have observed the presence of the comma bacillus in most cases examined, and believe that this organism plays an important part in the disease. Although they hesitate to regard its relation to cholera as a causal one, they nevertheless arrive at the same conclusion as Dr. KOCH, in the belief that if this be so the action of the bacillus must be ascribed to a power possessed by it of producing a poisonous substance—the choleraic virus. At the same time they announce the detection of the comma bacillus in other diseases, but no mention is made of the results of cultures in such cases—a point in diagnosis on which Dr. KOCH lays much stress.

THE term Pharmacology is one by no means easy of definition. To it is no longer assigned the old significance which it bore as a mere synonym of Materia Medica. It is the science of the action of remedies, and deals with the modifications produced in healthy conditions by the operation of substances capable of producing modification. It constitutes the chief basis for the application of remedies in disease, and is an important connecting link between materia medica on the one hand and the art of medicine on the other. The term Therapeutics is familiar enough to the practical physician, and has for its object the treatment of disease. Authors are not agreed as to the limits to be assigned to the subject, for in its most extended sense it embraces all known methods of cure. Of late the combined subjects of Pharmacology and Therapeutics have assumed such importance in our educational course as almost to oust the old-fashioned Materia Medica. That the change is beneficial cannot for a moment be doubted. Materia Medica was always an unpopular subject both with students and teachers, and it is difficult to see what benefit could accrue from learning by rote the botanical names and characters of a number of drugs which were seldom seen, and rarely or never prescribed. A knowledge of Pharmacology or the physiological action of drugs, on the other hand, not only strengthens the intellectual faculties, but goes far to lay the foundation of a good practical knowledge of the treatment of disease. The change which has taken place in the teaching of the so-called Materia Medica is well illustrated by a comparison of the examination papers of to-day and of five years ago. The old-fashioned

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examiner in Materia Medica required the student to "give a list of the leaves in the Pharmacopœia," or asked him to enumerate the roots named in that publication, "with their differential characters." Such knowledge was "crammed up" slowly and laboriously, and was of not the slightest value when attained. The questions now asked, at all events at all the better-class examinations, are of an entirely different stamp. Here, for example, is one taken at random from the calendar of the University of Edinburgh:—"Give an account of the physiological action of atropia both on man and the lower animals. Mention some of the alkaloids to which it is most closely allied, and some to which it is antagonistic. What substances applied typically dilate the pupil, and what contract it?" Questions such as these not only test the student's reading, but ensure the possession of a certain amount of knowledge, which cannot fail to be of the greatest value to him in his future career.

If further proofs were needed of the enormous strides made of late in this department of science, they might be found in the institution by the British Medical Association of a new section of Pharmacology and Therapeutics. It seems to be generally admitted that this section was the event of the meeting at Belfast. It was at one time thought that Pharmacology would never be popular with the great bulk of the profession, but that such is not the case is shown by the fact that this special section was crowded during the whole meeting, even when other departments languished and were poorly attended. It must be admitted that the promoters of the section of Pharmacology took a somewhat liberal view of the subjects included within its scope. Thus we find a debate on the British Pharmacopœia and the Patent Medicines Stamp Act culminating in the passing of several very practical resolutions; a discussion on antipyretics and the therapeutic uses of the oleates; a series of demonstrations on the action of various remedies on the frog's heart, and of instruments used in tapping the chest; and other features of equal interest. This may have been carrying matters rather far, but it must be admitted that if it were a fault, it was a fault on the right side. We do not see that the question of the repeal of the Patent Medicines Stamp Act could have been discussed equally well in any other section, and the absolute necessity for bringing the matter prominently before the profession cannot for one moment be doubted.

At the meetings of the British Pharmaceutical Conference matters relating to pharmacology and therapeutics are often discussed incidentally, although necessarily the bulk of the work is devoted to pharmacy. The presidential address is always looked forward to with considerable interest; and that delivered by Mr. JOHN WILLIAMS at Hastings on Tuesday last was evidently listened to with especial pleasure. During the last two years we have had occasion more than once to comment favourably on the orations published by Professor ATTFIELD in his presidential capacity. The year-book issued by the Conference contains an authentic record of the progress of pharmacy during the preceding twelve months, and is of considerable use to original workers.

The part taken by THE LANCET in the promotion of the science of Pharmacology will not be forgotten. From time to time special articles on the subject appear in our pages, a course which has doubtless stimulated the British Medical Association to take the step above referred to; and there is hardly an original paper, either on the physiological action of drugs or their practical application to the treatment of disease, which has not received attention at our hands. Pharmacology has undoubtedly a brilliant future before it, and great credit is due to those who have devoted their time and energies to promoting and popularising the subject.

WHEN the three Goddesses met on the summit of Mount Ida, the envy, hatred, malice, and all uncharitableness with which each regarded the other two, as possible possessors of the apple about to be awarded by the too happy shepherd, were no doubt veiled under the usual compliments about personal appearance of which the sex is so great a mistress. But had these ladies had an idea of the prophetical significance of the scene which they were unconsciously enacting, especially of the apple, and of the ten thousand miseries which it would bring upon the inhabitants of the world in the end of the nineteenth century, charity forbids us to doubt that they would have resorted to the quickest and most certain means for its destruction. Whether they would have thrown it at the head of PARIS or down the slope of Mount Ida, or whether they would have divided it into three segments and then and there solemnly masticated it, or given a quarter or the whole to PARIS, we have not time now to speculate. But ZEUS or HERMES would have won our eternal gratitude had he whispered in the ear of any one of the three that the apple was an ovarian tumour, and that the three Goddesses were the prophetical types of the general surgeon, abdominal surgeon, and obstetrician respectively. The original subject has been often painted, but we recommend the antitype to the Royal Academy, and do not doubt that they will find willing sitters for each of the three characters.

We need not further allude to the constant discussion and wrangling on the subject which is heard at our Societies and is to be read in our periodicals, except to remark that the substance of the apple is unmistakably golden, and that the chink of fees seems to us to have repeatedly and effectually drowned the feeble voice of the patient, whose interests have surely *some* claim on our attention. Since ovariotomy became a thoroughly established procedure, it has been practised under various conditions at different hospitals. At some the obstetric physician under whose care the case probably comes in the first instance retains it; but the general tendency has been for the surgeons to take the operation away from the obstetric physician, and either for the surgeon to operate on each case he gets, or for a surgeon to be appointed to perform all ovariotomies for a term of years. Another plan (if plan it can be called) is for all the surgeons and the obstetric physician to operate whenever they can. In discussing the question, a glance at the history of the operation will show that it owes its advances to surgeons—that is, to those who have made a special study of abdominal surgery; and that they find life too brief, and a day of twenty-four hours too short, for the study and practice of their subject. The claim of perfecting the operation rests, then, with the abdominal surgeons, and it is plain that its pursuit involves a vast expenditure of time and study.

In calculating the relative success of various operators, we

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are met by the first of the Hippocratic aphorisms, "Experience is fallacious," which might be extended to the statistics of abdominal surgery until, at least, such time as the whole truth on this head shall be authoritatively published by the special and other hospitals, including the relative results of those who adopt or reject antiseptic measures. In a matter so serious as abdominal surgery, it is surely not too much to ask that operators shall combine in a search after the truth, with a little less apprehension on the score of their individual advancement. Still, laying this question aside, it seems abundantly proved meanwhile that large experience conduces in a marked manner to success, and that percentages derived from small numbers need not be considered. A man who has operated once must either have a success or a mortality of 100 per cent.; while a man who has operated once less often may say that he has never lost a patient after the operation. We should therefore lay down the principle that it is for the advantage of the patient that operations should be to some extent centralised. In the metropolis we imagine that this is what actually happens—in private at least,—and that patients require to be assured as to the number of operations successfully performed by the proposed operator before entrusting themselves to his hands. In the provinces the circumstances are different, and need not here be discussed.

But perhaps the most burning question is that of the allotment of abdominal surgery at the general hospitals, and we have already referred to its various solutions. At the commencement, we feel bound to repeat what we stated above, that the question has, on the whole, been fought in a thoroughly selfish spirit on both sides, and that the solution most generally adopted has usually been arrived at by the very simple process of outvoting, which is not difficult, seeing that there are perhaps four or more surgical votes to one obstetrical vote, taking the average composition of the staffs of the London hospitals, the physicians practically remaining neutral. Of all possible states, the worst is probably that arrived at by a process not so much of solution as of dissolution or disintegration on the great principle of "grab"—"that those should take who have the power, and those should keep who can," surgeons and obstetricians agreeing (or disagreeing) to scramble for cases.

What, then, it may be asked, are the principles which should guide us to a conclusion when the subject is debated? First, that general hospitals should be or become capable of undertaking and teaching any department of practice without resort to special hospitals. Secondly, that to attain satisfactory results concentration of material is absolutely necessary. This means that at each medical school some one person should be appointed to perform ovariotomies for a term of years. The question whether the ovariotomist should be one of the surgeons or the obstetric physician, although practically the NEBUCHADNEZZAR'S furnace of the whole controversy to the parties concerned, seems to us a matter of far less importance. There are attached to some hospitals obstetric physicians who are also thoroughly skilful and competent surgeons, while at other hospitals the same cannot be said. The subject can conveniently be approached from either side. To the obstetric physician pelvic anatomy and the growth of pelvic tumours are (or should be) more familiar than to the surgeon; to the surgeon the treatment of wounds is naturally more familiar than to the obstetric physician; both have advantages and both have disadvantages, but neither is competent to deal with abdominal surgery until such time as he shall have studied abdominal surgery. We confess that against the entrance of any person not specially skilled and experienced we should feel disposed to keep our own peritoneal cavity and those of our friends peremptorily closed. We do not believe that success is to be reached in any other way than that which we have indicated, and the opportunity of undertaking an occasional case will do the operator more further good than to enable him to answer in the affirmative the question of a possible patient or her adviser: "Have you ever done the operation?" The question should be discussed on far higher grounds.

With regard to the detail—how the question is to be decided (if raised) at any medical school—we should suggest that it would be better and fairer not to settle the matter in full conclave, on account of the necessary disparity of votes, but to refer it to an impartial and disinterested subcommittee, who should hear both sides and decide accordingly; and we would conclude with the opinion that these little domestic matters are best settled at home.

IN an article on *Primary Education in Scotland*, in *The Times* of the 6th inst., a very remarkable fact is stated: that "not only has no sound of the cry of overpressure been heard from across the Tweed, but, as a fact, nothing has been done outside the sewing schedule to provide against the practice and the ill effects of overpressure." Considering the outcry which has been raised in England on this subject, it appears important to ascertain in what respects the school system of the two countries differs in its working, and if such difference may account for this remarkable fact. The results obtained as the outcome of the system negative the supposition of a difference in the amount of work exacted from the children. "Standard by standard, Scotland scores above England without a single exception; and in the summary of results, Scotland passed 92·59 per cent. in reading (England 89·14), 90·28 per cent. in writing (England 82·03), and 85·99 per cent. in arithmetic (England 77·51), making a general percentage of 89·6, against 82·9 in England." Not only in the three "R's" did Scotland take the lead, but in the specific subjects. "In England under 10 per cent. of the separate departments examined under the new code took up these subjects, and the number of children examined in them was 2¼ per cent. of all the children in average attendance in all the schools inspected during that period. But in Scotland 55 per cent. of all the several departments presented scholars for examination in specific subjects, and the number of children so presented was 14 per cent. of all in average attendance." These statistical facts appear to show clearly that the difference in the results upon health has not been gained at the expense of the knowledge to be acquired through the medium of the school. There is a point to which we have not yet adverted which may not improbably have a marked influence upon the question of overpressure, and that is the difference in the ages of the scholars in the two divisions of the kingdom. In England 9·74 per cent. of the number on the books were under five years of age, while in Scotland the

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proportion was only 2·2 per cent.; or, calculating the proportion on the numbers living between the ages of two and five years, twenty are at school in England and only four in Scotland. This difference seems to call for a careful inquiry into the ages of the children who are alleged to suffer from over-pressure. If it should prove to be among the younger children, it is obvious that some change is required in the amount of teaching, or the mode in which instruction is imparted at the earlier ages. Another very important point for inquiry is into the amount of confinement in the schoolrooms (seldom sufficiently ventilated) to which these younger ones are subjected. It is in them that the evils of crowding and of a long continuance of breathing a vitiated atmosphere may be expected to be most fully and most quickly developed. A careful compilation of accurate numerical facts, a comparison of those only which are strictly comparable, and a separation of the data relating to large towns, small towns, and rural districts, are all requisite to ensure accurate deductions on this important question. We trust the subject may be taken up by some competent person who has access to the documents necessary for such an inquiry, and whose object is to arrive at the truth, without any regard to upholding existing systems or substituting for them impracticable crotchets.

THE sense of almost absolute hopelessness which one feels as regards the cause of medical reform is not mitigated by the account of the discussion of the subject at the late meeting of the British Medical Association. The principal speakers were Dr. WATERS, Dr. CAMERON, M.P., Dr. JACOB, Dr. B. O'CONNOR, Dr. GRIMSHAW, Professor STOKES, and Mr. HART. Dr. WATERS, in the absence of any recent triumphs of the Association in the arena of medical reform, recounted the victories implied in the Act of 1858. It is time to stop all boasting of this kind in the sense of shame and disappointment at the present impotence of either the profession or the Association to procure legislation having for its object the amendment of that very imperfect piece of Parliamentary work. This Act put the interests of medical education into the hands of a body from which the representatives of the profession itself are excluded, and in which the representatives of medical corporations which have their pecuniary interests in low examinations are powerful, if not predominant. We admit cheerfully the untiring and self-denying labours of Dr. WATERS, and see with regret the manifestation of a disposition to disparage and supplant him. But he and his colleagues are not without blame. He and the Reform Committee are a little too self-complacent in regard to past achievements, and have shown too great a readiness to concede everything, and take anything that is called a Medical Bill, however mutilated or eviscerated. At the meeting at Belfast last week, it was practically admitted that the Reform Committee have been unfaithful to the fundamental principle of medical reform—a one-portal examination—in which the representatives of all the medical authorities should be represented. It was also stated that the Committee in the recent session came to the conclusion that it was for the *Government* to consider the amendments of Sir LYON PLAYFAIR, which amendments the Committee determined not to oppose. When did the Association so lose its sense of power? When did it discover that it was no part of its duty to oppose even the Government yielding to the pressure of Sir LYON PLAYFAIR on a fundamental matter? There have been times when the Association had opinions of its own, and when it had the courage of its opinions; when it dared to say, or to join others in saying, that it would be no party to a mutilated Bill. In 1870 it refused a Bill without the principle of direct representation as we ourselves did; and now we find it conceded on all hands. But if anyone had said in 1870 that Dr. WATERS and his colleagues would live to accept a Bill from the Government without the principle of a one-portal or conjoint board, he would have been judged to speak in ignorance of men and of the great principles involved. But this is what things have come to. The Reform Committee—not with its recent ominous infusion of new blood, but under its old constitution—came to the humbling conclusion that "it was for the Government" to consider amendments fatal to the fundamental views of the Committee and the profession, and "the Committee did not oppose them"! Never was there a more humiliating surrender on the part of men once powerfully representing a great Association. We cannot call it a mere surrender; we must characterise their conduct as in the highest degree unfaithful to their own record and to the commission which they had received from the Association. We think Dr. WATERS will agree with us that he had no authority from the Association to accept a Bill without the principle of a conjoint board, and that when he and his colleagues agreed to do so, or to connive at the Government doing so, they were acting on their individual judgments and betraying a vital principle they were appointed to support—a principle asserted by the Medical Council and by the Royal Commission, and accepted in every Government Bill for the amendment of the very imperfect Act of 1858.

We leave these gentlemen to their own reflections, and wish them joy of their new colleagues in the Committee, one of whom, Dr. B. O'CONNOR, with a modesty that cannot be too much admired, contrives to imply that if "fifty or sixty" amendments had been accepted the Bill might now have been law. Dr. JACOB really has many of the instincts of a medical reformer; but from some cause or other he is "sore let and hindered." We do not do him the injustice to believe that he would approve the amendments which bristled on the notice paper, and which, as a reasonable Irishman, he must see were meant to produce the miscarriage of the Bill. But for some reason or other, whenever a medical bill is on the eve of success, Dr. JACOB curiously finds many points of sympathy with its enemies, and when the hare is in sore need of friends he comes in in full cry with the hounds. Dr. JACOB wants reform, but it must "not necessarily disturb existing licensing institutions." It is impossible to get medical reform without disturbing existing licensing institutions, and a reformer who is so connected with institutions as to make this condition had better leave reform work to others.

It is far better to admit the utter hopelessness of the cause of medical reform, and to leave students to be fleeced and worried and tempted by rival diploma "shops"—to use Sir DOMINIC CORRIGAN'S expression,—than to expect reform from such quarters. It is far better to see that, in the present state of Parliamentary procedure and parties, medical

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institutions in England are entirely at the mercy of Scotland and Ireland, and to hope for better times. At least, we shall be no parties to reforms so delusive and so unfaithful to the profession and to the public, and we do not doubt that we express the feelings of the profession and even of the Association.

Annotations.

"Ne quid nimis."

DR. KLEIN ON THE CHOLERA BACILLUS.

THE following passage in his papers on Micro-organisms and Disease, now appearing in the *Practitioner*, indicates the opinion which Dr. Klein at present holds respecting the comma bacillus; and it will be interesting to observe whether the extended personal research he is about to undertake in India will serve to alter the somewhat sceptical attitude he here maintains respecting Koch's discovery. Dr. Klein says:—"In the reports from India by Dr. Koch, as the head of the German Commission sent to investigate the recent outbreak of cholera in Egypt, we notice that, like the French Commission, they failed to communicate the disease to animals; that the German Commission failed to discover any specific organism in the blood of patients suffering from cholera; that the intestines contained in their cavity and walls numerous peculiar 'comma-shaped' bacilli, which Koch considers to have a special relation to the disease. Considering the state of the intestine in this disease, the presence of the bacilli, however peculiar, in its walls is in itself not convincing proof of their specific nature. Considering, also, that animals are as yet found insusceptible to cholera, artificial cultivations of the bacilli, successfully accomplished by Koch, cannot be tested. From the artificial cultivations of these comma-shaped bacilli Koch learned that it is necessary that the nourishing medium should have an alkaline reaction, and that the bacilli are easily killed by drying. Koch found these comma-shaped bacilli in linen soiled by the cholera dejecta, also in the water of a tank that had produced cholera in several people who had partaken of it. As soon as the bacilli disappeared in this water cholera cases ceased. My friend Mr. A. Lingard has placed at my disposal sections through the human intestine from cases of dysentery; there are seen in the superficial parts of the necrosed mucous membrane large numbers of putrefactive bacilli. In some cases, however, in the depth of the tissue there are found, amongst the extravasated blood-corpuscles, numbers of very fine, long, straight, or, more commonly, curved bacilli and bacillus filaments; some are distinctly made up of a chain of long bacilli. They stain well and conspicuously in methyl blue."

THE REPEAL OF THE PATENT MEDICINES STAMP ACT.

THE question of the repeal of this obnoxious tax continues to excite considerable attention both in and out of Parliament. In *The Times* of the 7th inst. there appears a remarkably able letter, signed "A Member of the Royal College of Physicians," in which the facts of the case are set forth very clearly. The matter is one of such far-reaching importance, that its ventilation in the public press is not only expedient, but necessary. "Is it conceivable," says the writer in question, "that the Act of 1812 was ever contemplated to lay an embargo upon some nine-tenths of all pharmaceutical preparations? Could any rational man suppose that it was to range side by side a 'convulsion oil' and sulphate of cinchonidine or quinine wine? Anyone at all conversant with the history of medicine and therapeutics, or the science which presides over the rational study of the physiological action of drugs, must be aware that in 1812 empiricism was the queen-mother of the healing art, and made her fiat supreme; while therapeutics as a science was yet to be born, pharmacy was of the rudest description, and was restricted within the narrowest domain. Such considerations, one would have thought, might have tempered the zeal of Somerset House with a spice of common sense." Appended to the Act is a schedule, in which are included some five or six hundred quack salves and catch-penny panaceas, most of which have fortunately long since passed into the realms of oblivion; but intermingled with quack "cooling opening pills" and bogus "pectoral lozenges," there appear the words "foreign medicines of all kinds, except drugs." To the uninitiated this clause may appear harmless enough, but its full force will be realised when it is considered that many of our most valued preparations are manufactured abroad, and can only there be made, as it is essential that they should be concocted from foreign plants, and while these are yet fresh. Referring to the responsibility incurred by any Government which permits the unrestricted sale of deadly poisons under the guise of "patent medicines," it is pointed out that no measure short of the total repeal of the Act will prove of the slightest avail. Dr. Balthazar Foster, in a letter to *The Times* of Wednesday last, speaks of it as a law not only indefensible as a matter of commercial policy, but decidedly injurious to the public health. Passed originally as a means of raising revenue for the war against Napoleon, it has survived till the present day, in direct contravention of our policy of free trade, till now, under its most recent interpretation, it threatens to cripple commercial enterprise and obstruct scientific inquiry. Its baleful effects in giving a *quasi*-Government sanction to many worthless preparations, and thus bolstering up a nefarious traffic, cannot be too strongly condemned, more especially as the poor and the ignorant are the chief sufferers." It is a source of satisfaction that the subject has been so warmly taken up not only by the "Member of the Royal College of Physicians," but by the London and provincial press generally, many of the leading journals devoting long articles to the subject, and all, without exception, advocating the adoption of prompt and energetic measures. In *The Times* it is pointed out that, if a medicine be good, it is assuredly unjust to raise its price by a tax; while, if it be deleterious, or if it does not possess the properties which its makers claim for it, it is wrong that it should bear a Government label which may mislead the buyer. "In its origin, doubtless the Act was partly intended to stop the traffic in cheap unlicensed drugs which once could be hawked in the streets, but it has long outgrown its uses in this respect." The attention of the House of Commons, as our readers are aware, was drawn to the subject by a series of pertinent questions by Mr. T. P. O'Connor, who asked the Chancellor of the Exchequer if his attention had been called to recent articles in THE LANCET advocating the repeal of the Act; if he had any information to confirm the statement that the Act, instead of discouraging, stimulated largely the sale of quack medicines; and whether he was aware that the large number of deaths that occurred annually in children was on good authority attributed to the administration of poisons in the shape of secret medicines. Mr. Childers, in reply, practically admitted the truth of the statements implied in the questions, and undertook to obtain from the Board of Inland Revenue a report on the subject, which he promised to study carefully. He added that he could hold out no hope of repealing a tax which brought in £160,000 a year. This answer must, of course, be considered as being merely tentative, and we are convinced that when the Chancellor of the Exchequer is fully informed of the circumstances of the case, he will at once see that the repeal of the Act is

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imperatively demanded. No Government can afford to maintain a tax which doubles and trebles our infant mortality. It is perhaps not generally known that soothing syrups and other noxious preparations containing opium are responsible for over 40 per cent. of all deaths from poisoning in England, whilst in no other European country does the death-rate from this cause exceed 1 per cent. We are glad to find that notice has already been given by the member for Galway of his intention to introduce, at the earliest possible moment, a Bill for the repeal of the Act. Its retention would be not only a disgrace but a national misfortune.

PREVENTION OF HYDROPHOBIA.

FRENCH science may indeed claim a new title to the gratitude of humanity. Whilst granting this, we do not wish to rush to the hasty conclusion that hydrophobia is to be banished from our midst; only, if we can believe our eyes and ears, it seems that we are within measurable distance of this glad state. What has Pasteur done? He has—if our information be accurate, and we have no reason to doubt it—done something to twenty-three dogs, thereby rendering them, at any rate for a time, incapable of suffering from rabies. Side by side with the free animals he has placed others which may be regarded as servile to the yoke of hydrophobia. Of the latter series, six were bitten by mad dogs, three of them becoming mad; eight were subjected to intravenous inoculation, all becoming mad; and five to inoculation by trepanning, all likewise becoming mad. On this showing, sixteen out of nineteen dogs died when a dose of the virus of rabies was sewn in them; whereas, of twenty-three protected dogs, none succumbed, although the virus was brought in the most effectual manner into the tissues of each animal. It is a well-known fact that many more persons are bitten by rabid animals than suffer from hydrophobia. What the exact proportion may be is not satisfactorily known, but in dogs it would appear that about half the number bitten become rabid. There are two explanations of the escape. The first is expressed by saying that no virus gets into the tissues of the body. The second suggestion, though possible, is less plain. It is to the effect that some organisms are unsuitable for the development of the rabid poison. There is analogy for this contention. Some individuals are believed to be insusceptible to the poison of scarlet fever, and this statement also applies to other acute specific diseases. The questioner of nature may ask how these facts are to be explained? And although we are on very unsafe ground, still science does afford some clue to a possible explanation. If we remember rightly, Sir James Paget has asserted his belief that a severe attack of typhoid fever may do away with the protection afforded by a previous attack of small-pox. Typhoid fever so modifies the constitution that the protoplasmic organism once again becomes favourable to the growth and development of the germs of small-pox. Inoculation with the attenuated virus of hydrophobia gives a dog immunity from the disease, just as similar treatment preserves a sheep from charbon; in other words, the physical basis of the canine organism is so altered that it no longer affords nourishment for the evolution of the poison of rabies. We cannot help giving expression to another idea in this connexion. A modification of the constitution may be effected by other means than inoculation with thinned virus. Is it not possible that some of those bitten by mad dogs do not become hydrophobic because they belong to a particular diathesis, the material basis of which is not favourable to the development of the germs of rabies? Supposing, for the moment, that individuals of the gouty type were insusceptible of hydrophobia: we might easily understand how external circumstances would be able to modify the physical basis of the organism; how, in short, the soil might be transformed so as no longer to afford nourishment for a particular plant. But these are pure speculations, and not the kind of wares which the practical physician would care to deal in. The announcement that the Commission charged by the French Government to investigate the assertions of M. Pasteur has fully confirmed the discoveries of the great chemist is at present the object which commands our attention. The Committee proposes hereafter to make further experiments as to the duration of the immunity afforded after preventive inoculation; and, further, it proposes to investigate the point whether inoculation with attenuated virus will save an animal already bitten by a mad dog. A word of scientific caution before we finish. It is imperative on Englishmen to institute an experimental inquiry on hydrophobia, not only for the sake of the honour of their country, but also for the sake of truth and science. No fact of importance can be too firmly established, and no truth can be too highly burnished.

PIGMENTATION OF BRAIN.

ALTERATIONS of colour are amongst the most striking changes which the pathologist encounters. It has now for some time been held that all pigmentations, whether physiological or otherwise, own the same physical origin—viz., hæmoglobin. Although the end and the beginning of the materials concerned in the process of pigmentation may thus be said to be known, there nevertheless remains for investigation the whole field of intermediate changes. M. Baillarger has recently published several cases of slate-coloured alteration of the brain, and has endeavoured to determine the relationship of this lesion with the sacral eschars so often observed in the paralysed insane. The discolouration, more or less marked, was found to be accurately limited to the grey matter of the cerebral cortex. The most frequent sites of the change were the base and posterior parts of the cerebrum, though it was also seen on the upper surface of the cerebral hemispheres, and was always well marked about the Sylvian fissures. The arachnoid and pia mater sometimes showed no other alteration than that usually met with in cases of general paralysis, but more often a greyish purulent infiltration was detected. The slate-coloured change was not discovered in cases of paralytic dementia only, though it was more commonly seen in this disease than any other. The cerebro-spinal lesions which may come on after sacral sloughing belong to three classes. These sacral diseases may set up the slate-coloured pigmentation with purulent meningitis, or either of the alterations alone. The author asserts that the *coloration ardoisée* of a part of the cerebral convolutions is evidence of sacral sores in the absence of cranial lesions and purulent otitis.

THE PHYSICAL TRAINING OF GIRLS.

MR. NOBLE SMITH'S lecture, delivered a fortnight ago at the Health Exhibition, on "Postures in School," touched a vital point in our social management. The lecturer dealt with some of the errors of attitude and exercise which prevail in the recognised training of girls at school, and which have been found to interfere most seriously with their physical development. After adverting to the slowness of ossification in the long bones and vertebræ, in condemnation of the practice of forced walking or sitting up, so commonly adopted with infants of either sex, he proceeded to make the general statement that freedom, not restraint, of posture must rule the carriage of growing girls, especially at school. With boys there is no need for such a rule. Designed for active life, the liberty of their joints and muscles is allowed them. For girls, on the contrary, though action enters largely into healthy womanhood, antique pre-physiological

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decorum has provided many needless restrictions. In class hours they must sit erect with unsupported backs, and afterwards endure the monotony of piano practice in the same constrained position. The play-hour brings no sufficient change, but is passed in sedentary quiet or in regimental marching. All this implies too little variation of movement to secure the benefit of exercise, and a too conventional dread of ease to allow that task-work should generally become a prompt or willing service. Mr. Noble Smith very fairly demands a change in this stilted arrangement. He asks that suitable backs should be attached to all school seats, that desks should be so contrived as to height and slope that they may be leant upon and become a means of relieving spinal tension without producing a chest-contracting stoop, that the light for equally good reasons should fall from left to right, and particularly that the period of piano practice should be strictly moderated. In regard to muscular recreation for girls, we have long maintained that almost unlimited variety as to method may safely be conceded to them, and this opinion is plainly expressed in the lecture under discussion. Lawn tennis, gymnastics, swimming (an art too little favoured by men as well as women), and cricket even, all come in for a share of commendation. Let us add but one caution to this part of an admirable paper—namely, that while there is little need of restriction as to the kind of athletic play, there is real occasion for its limitation as to time and degree. The healthy growth of both sexes depends upon the same conditions supplied to each in its own measure.

DECUSSATION OF NERVES.

PERHAPS in the majority of individuals the pyramidal tracts decussate at their well-known site in such a manner that the bulk of the fibres of one side passes over to the opposite lateral column of the spinal cord, whilst the small remainder continues downwards in the anterior column. This arrangement is, however, subject to considerable variation, and nothing can be positively asserted until a systematic investigation has been made, which is practically impossible in man. Nevertheless, the knowledge which is expressed in the preceding sentences may be regarded as legitimate inferences from a study of diseases of the brain. From careful clinical observation, it seems not at all improbable that further complexity ought to be introduced into the anatomy of the nerve-paths in the brain. Secondary degenerations of cerebral origin are sometimes exclusively confined to the opposite lateral column of the cord; sometimes to the opposite lateral column and the internal part of the anterior column of the same side as the cerebral lesion. Pitrès has also collected ten cases of unilateral cerebral lesion, in which the secondary degeneration occupied both lateral columns of the spinal cord. The cerebral disease varied in its nature, extent, and site; the secondary sclerosis traversed the peduncles, pons, and anterior pyramid, and then abruptly became bilateral below the decussation of the pyramids. The secondary changes were sometimes exactly symmetrical, sometimes more marked on the same side. The columns of Türck were generally spared, or presented but slight damage, whilst the other structures of the cord were normal. M. Pitrès has sought to explain the coexistence of symmetrical medullary lesions with unilateral disease of the brain. His explanation is founded on the individual variations of the decussation of the pyramids as described by Türck and Fleming. There may be simply a crossed pyramidal tract, or there may be a direct as well as a crossed pyramidal tract, and each may bear almost any numerical relation one to the other. Further, the pyramidal tracts of the two sides of the brain may or may not proceed after the same plan; the decussation may be complete for one tract and incomplete for the other. In certain subjects it seems possible that the fibres of one pyramidal tract in the bulb may split into two portions, one of which may proceed down the opposite lateral column, whilst the other descends in the lateral column of the same side. The disturbance of balance and progression appears to be more persistent and more grave when the secondary sclerosis is bilateral than when it is unilateral. Partial paraplegia, exaggeration of the knee-jerk, and contracture of the lower limbs may exist, however, where the sclerosis is unilateral.

METROPOLITAN ASYLUMS AND THE HOUSING OF THE POOR.

THE Royal Commissioners on the Housing of the Poor have apparently found reason to appreciate the difficulty pointed out by Mr. George Sims some months ago as to where the very poor shall live while the slums are being demolished, and the dwellings intended to replace them are as yet unbuilt. Mr. Torrens's proposal, that the prisons and lunatic asylums of the metropolis should be removed into the country and their present acreage devoted to the use of the Commissioners, is a plan worthy of consideration. The question of expense is one with which the Commissioners are probably more conversant than anyone else. It is here, if anywhere, that objection is likely to be found. The advantage to the poor which would arise from such a plan is obvious. Building would then proceed unchecked by the difficulty we have referred to, and the transplanted population would gain in health by breathing the air of neighbourhoods which always were more pure than those from which they came. These latter could then be cleared, purified, and built on at leisure. The inmates of the removed institutions would profit in an equal or greater degree by the change from town to country; they would be comparatively out of range of prevalent epidemics, while their safe keeping would be the more assured by their detachment from the Alsatias of crime and poverty which surrounded them in the city. In so far the proposal is a good one, but various considerations of practical convenience must be taken into account when it is discussed, and the question we anticipate will have to be decided on other grounds besides those of philanthropy or sanitary advantage.

HINTS AS TO SUNSTROKE.

A DAILY temperature of from 80° to 90° in the shade, such as we have somewhat uneasily enjoyed during the last three weeks, has not failed to leave its mark for evil as well as good on living objects exposed to it. Fortunately, vegetation gains more than it loses by a continuance of dry and warm weather. It is not so with all of the human population. Already, by ones and twos, the year's total of deaths from sunstroke is mounting up, and preventive measures, little needed in an ordinary summer, have become imperative under the present tropical conditions. A month ago we referred to the risks incurred by children and certain older persons whose heads were often carelessly exposed to the sun's glare without any adequate covering. The need of care which then existed has since much increased. Field-workers and holiday-makers have multiplied tenfold, and with one and all the weather, and how to meet it, is the first consideration. The causes of sunstroke are several. Thus, while we trace the continuity of cause and effect best after direct exposure to the solar rays, we cannot ignore the fact that mere excessive summer heat, intensified and aided by confinement in small or imperfectly ventilated spaces, is equally effectual to the same end. Various circumstances predispose to insolation. Prominent among these is the common and generally senseless habit of using

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stimulants to quench thirst. The loss of the body by heat is chiefly water. The rational object of drinking in summer is therefore simply to make good this loss with as little stimulation of tissue as may be. Such stimulation tends to raise temperature by needlessly provoking chemical change, and is therefore manifestly prejudicial. He who would enjoy fresh air and sunshine without fear of injury should dress, eat, and drink as lightly as possible. Summer clothing should be, and usually is, light at least in texture. The head and back of the neck, in particular, require to be suitably covered. Many conveniences exist for this purpose. The tropical custom of wearing a damp handkerchief within the hat is occasionally useful. There should be no tight clothing, such as belts or stays, to impede the respiratory movements. All such impediment, by slowing the circulation, provides a condition favourable to heat-stroke. For the same reason excessive exercise or work is dangerous, through the exhaustion which follows it. Alterations in dress devised on these lines have wisely been adopted for the employés on the Metropolitan Railway. It would be well if some similar deviations in uniform were introduced, as far as practicable, by other companies, and in the Government services. Among other preventive measures, cold bathing in moderation must not be forgotten; for prevention, indeed, it is even more valuable than in the event of actual sunstroke, for which it forms a chief therapeutic agent. It is requisite, however, that before immersion the body should not be overheated by prolonged exertion or other cause.

INTEMPERATE MONEY-MAKING BY TEMPERANCE DRINKS.

A VERY sensible letter appeared in the *Echo* of Aug. 11th, in which the writer complained of the extortionate charge which is almost universally demanded for the sale of temperance drinks. No doubt it is fair that demand should stimulate and remunerate supply, but there is a limit to cost beyond which all relation between it and value of material is lost. It must have struck many a one before now that lemonade and ginger-beer at fourpence or sixpence per glass implies a profit to the seller which is simply dishonest in its excess. Probably the cost of manufacture does not amount to one-fifth of this. There does not yet exist any legal restrictions on the sale of such beverages, and, if possible, it were better to meet the evil of overcharge by common agreement on a scale of reasonable prices without recourse to any system of licence. As a mere necessity of public health, it is to be hoped that a branch of industry which has hitherto enjoyed the countenance of all classes because of the justice and reason of its procedure, shall not be suffered to incur damage from the indiscretion of those who live by it.

DETECTION OF BRUCINE AND STRYCHNINE.

THE following tests for these substances are proposed by Dr. O. Lindt (*Pharmaceutical Journal*). For brucine a convenient test is selenic acid containing nitric acid (five drops of selenic acid, of sp. gr. 1·4, and one to two drops of nitric acid, of sp. gr. 1·2). If the fatty oil is first removed from sections of Strychnos nux vomica and S. ignatii by petroleum ether and this reagent used, the laminated cell-walls quickly take on a bright red colour, which gradually turns to orange and yellow, while the cell cavity and the granular substance contained in it remain uncoloured, indicating the absence of brucine. Nitric acid alone does not answer, the colouration of the alkaloid being marked by the formation of xantho-proteic acid. For the detection of strychnine Lindt discards the potassium bichromate reaction, because the violet colour is developed only in immediate contact with the crystal; and the solution of strychnine in sulphuric acid escapes so rapidly from the preparation that no conclusion can be drawn from a subsequent straining as to the original position of the alkaloid in the nux vomica seed. But it is readily shown by a solution of ceroxide sulphate in sulphuric acid, if the fatty oil, grape sugar and brucine have first been removed by maceration in petroleum ether and absolute alcohol. The reagent imparts a violet-blue colour to all the thickening layers of the cell-walls. But the colour quickly disappears, while the deposits of albumen assume a bluish opalescent tint, which finally turns to a reddish-violet. The interior of the cell becomes of an intense red colour. The reagent retains its activity for a considerable time. The microscope is, of course, necessary to follow all the details of these micro-chemical tests.

THE REMUNERATION OF A MEDICAL OFFICER OF HEALTH.

WE are sorry to see that an attempt is being made by some members of the rural sanitary authority of the Chesterfield Union to reduce the salary of Dr. Angus Mackintosh, their medical officer of health, and, so far as we can learn, the only plea which can be alleged for this step is that Dr. Mackintosh has so successfully devoted himself to his official duties, that it is just possible the work of supervising the health of the increasing population in this important sanitary district may in the future not be attended with quite so much labour as heretofore. Whether their contention be a correct one or not, we can hardly imagine circumstances more calculated to repress the energy and zeal which are so much needed in order to secure sanitary improvements, and we hope, both for their own sakes and in the interests of fair play, that the sanitary authority will not adhere to the decision at which they have arrived. The Local Government Board have so far objected to the reduction, and this to a large extent, on the grounds that Dr. Mackintosh has served his district well. It is to be hoped that this objection will be maintained, for if it is, the single vote by which a majority in favour of the reduction has been secured will probably disappear, and a majority holding opposite views may be obtained. The remuneration in this district is by no means high, and the services which have been rendered in it leave nothing to be desired.

A TOO HASTY DIAGNOSIS.

ON August 7th, at the Hants Assizes, before the Lord Chief Justice, an action was tried of the greatest importance to the medical profession. It appears that the plaintiff, Mr. Yarndley, whilst on yeomanry duty in June last became saddle-sore, a circumstance by no means uncommon to persons not in the habit of riding much. In order to protect the abraded skin he applied a handkerchief to the part. On his return home, his wife, not being satisfied in her mind as to the origin of the blood-stains, took the kerchief to a local practitioner (Dr. Pike), who pronounced in favour of the husband's misconduct. Nor did he retract his expressed opinion after he had personally examined the plaintiff at the invitation of the latter. Horrified at the charge made against him, Mr. Yarndley sought the advice of several doctors in the neighbourhood, who unanimously declared that the diagnosis made by Dr. Pike was incorrect, and, with true professional courtesy, advised him to withdraw it. For some reason or other Dr. Pike failed to do this; hence the action brought by the plaintiff to clear his character from the aspersions cast upon it. Apart from the fact that no manner of stain upon clothing could in itself be taken as proof of venereal disease, the circumstances were strongly suggestive of what was no doubt the real explanation, for the wound on the

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thigh exactly corresponded with the blood-marks on the trousers. We do not for one moment suppose that the defendant acted from vindictive motives, nor without a *bonâ fide* belief in the accuracy of his diagnosis; but for all that, if the evidence before us can be relied upon, he showed a lamentable want of forethought and discretion, both in the first instance and afterwards, when his position was shown to be untenable. He ought to have carefully weighed every available fact, and acted with the greatest caution before venturing to give an opinion which would, in all likelihood, destroy the happiness of a home and leave the hapless husband under the stigma of immorality. It was to be regretted that the case was allowed to proceed to trial, but we are glad to state that the plaintiff allowed a juror to be withdrawn.

THE LIVERPOOL LUNACY CASE.

ON the 4th inst., in the Nisi Prius Court, before Mr. Justice Cave, the case of Good *v.* Whittle and others, which excited considerable interest, came on for hearing. The plaintiff, Mary Good, a Liverpool lady, brought an action for libel and conspiracy against Dr. Ewing Whittle and his son, Dr. Glynn Whittle, of Liverpool, and Drs. Richard Hutchinson and George William Mould, of Manchester. The libel complained of was the medical certificate of the defendants certifying that the plaintiff was of unsound mind, and on the authority of which she was locked up in a lunatic asylum at Cheadle; and the second ground of action was alleged conspiracy on the part of the doctors. The first three defendants were charged with having improperly given certificates of insanity, in consequence of which the plaintiff was confined in a lunatic asylum at Cheadle; and Dr. Mould, who was the keeper of the asylum, was charged with having received the plaintiff into the asylum on certificates which it must have been within his knowledge were insufficient. At the conclusion of the hearing, which was of great length, and in the course of which fourteen medical men were examined—four for the plaintiff and ten for the defence,—the jury, after two hours' consultation, returned a verdict for the defendants on all the questions submitted.

A STRANGE CASE OF MANSLAUGHTER.

A YOUNG woman, aged seventeen, has been charged with wilful murder and convicted of manslaughter, for killing a child, by tying a scarf round its neck to stop its crying while she was wheeling it before her in a perambulator—and at the time reading a book—so tightly that it died. We cannot but regard this as a case of more than common concern. It seems to us to point to a matter of the highest moment. Beyond question this young woman was so engrossed with her book that her intelligent will was suspended. The work she was reading was doubtless a novel of some exciting kind, and she was so affected by it that she could not either tolerate the interruption caused by the crying of the poor little child, or exercise a rational judgment as to what she did or had done to it. Unhappily, the mischievous effects of sensation literature are only too apparent throughout the population. A few days ago a boy hanged himself while trying to *realise* the description of an execution which he had been reading. It matters little whether the books read be good or bad in their aim; it is the fact of taking the mind out of its natural relation with the world of fact and placing it in the midst of a fictitious world that does the harm. Not only are the results of this distraction of the consciousness occasionally disastrous in regard to the occurrences of life—as in the instance to which our attention is now especially directed,—but serious injury is done to untrained minds by throwing them into a state which approximates to hypnotism. To read a novel, living and feeling in the scene it pictures to the mind, and at the same time to attend to the actual surroundings, without a very great strain, is impossible. Even practised readers know how, being engrossed with a subject of thought, they forget the scene around them. An untrained brain may do more than forget it; may become disordered in the endeavour to do two things at once. It is desirable to lay stress on cases like this. We are not prepared to say that this young woman ought to have been more severely punished, because, unless the evil nature of her crime were made plain, no deterrent effect would be produced by a heavy sentence. The offence was reading when engaged on duty. The manslaughter was an outcome of this fault. We do not suppose the convict had the slightest animosity to the child, and it is not necessary to suppose that she was of a particularly brutal or cruel disposition. It may be quite true that she does not remember what occurred. Her consciousness was busy with the book; what she did to the child was done with a half consciousness that busied itself only with results. The lesson to be learnt is one of public and domestic prudence. Servants and children should never be allowed to read while engaged in any sort of work. Divided attention involves mental distraction, and "derangement" may at any moment supervene.

INSTRUCTIONS AGAINST CHOLERA.

EVERY sanitary authority ought now to issue plain directions to householders, giving practical formulæ for disinfecting solutions, &c. Several circulars and pamphlets to this effect have reached us, all of which are very good. But some of them are vague, and do not give particulars. Among the best are—Precautions against Cholera, by Dr. J. Spottiswoode Cameron, medical officer of health for Huddersfield, printed by J. Broadbent and Co., of that town; Plain Instructions to Heads of Families and others, issued by the National Health Society, 44, Berners-street, to be had from Allman and Son, 67, New Oxford-street, at rates which only cover the cost of printing. Every parish or sanitary authority, we repeat, should feel responsible for sending such instructions to each householder, and for supplying gratuitously or on low terms solutions of the disinfectants recommended.

MICROBE AND MACROBE.

M. SEDILLOT, of the Académie de France, having discovered, or fancied he discovered, in 1878, a very minute organism of correspondingly short life, designated it a microbe. Exception was taken to the term on philological grounds; so he consulted M. Littré, and on Feb. 13th of that year, he received from the illustrious physician, Hellenist, and lexicographer the following reply: "Microbe and microbie are quite good words. To designate the animalcules I would give the preference to microbe: first, because it is shorter; next, because it reserves microbie, a feminine substantive, for the designation of the state of microbe." In another letter, dated May 13th of the same year, M. Littré adds: "It is quite true that *microbi* and *macrobi* signify in Greek short life and long life; but, as you justly observe, the question is not one of Greek, properly so called, but of the use our scientific language makes of Greek roots. Now the Greek language has *βίος* (life), of which the root may very well figure under the *be* or *bie*, with the sense of living, in *acrobie*, *anacrobie*, *microbe*. My feeling is not to reply to criticism, and let the word defend itself, which it will doubtless do." M. Sedillot, however, had afterwards to be told that, nearly a quarter of a century before him, Filippo Pacini, of Florence, had published in the *Gazzetta Medica Italiana* a demonstration of the minute organism in question, which (with all deference to M. Littré) he called by the still more exact name of "microbio," and had connected it with cholera as the proximate cause of that malady—the

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"microbio colerigeno" (*vide* THE LANCET, August 2nd, 1884, p. 203). Macrobe, on the other hand, was in literary use and acceptation centuries before it received any pathological meaning—having been employed by Pomponius Mela, the Roman geographer, to designate a long-lived race of Ethiopians. What reader of Rabelais, moreover, has forgotten the title of Macrobio applied by the satirist to the aged chief of the inhabitants of one of the numerous islands on which Pantagruel and Panurge landed?

THE ISOLATION OF INFECTIOUS DISEASES AT BRISTOL.

A CIRCUMSTANCE is attracting attention at Bristol which indicates some error in the sanitary arrangements of the city. A child alleged to be suffering from fever has been refused admission into the hospital for infectious diseases belonging to the sanitary authority because that building is being reserved for cholera cases; in other words, a case needing isolation is not received merely because some other case also needing it may perhaps occur. This is by no means the first time that this anomaly has existed in Bristol, for we have more than once noticed that whilst scarlet fever was spreading fatally in the city, the hospital has been kept empty, professedly in case small-pox should be imported. If it be a fact that Bristol is so backward as to have made provision for one disease only, surely the disease which is actually present should not be allowed to spread for the sake of another which may never appear at all. The true remedy for Bristol will be that the city should provide ward pavilions for at least two current infectious diseases occurring in both sexes, and that it should also maintain an isolation building for any special emergency. Bristol has hitherto done but little towards preventing the spread of its current infectious diseases by isolation, and the reason doubtless is that it has not provided itself with adequate means for carrying out this important sanitary measure.

EXPENDITURE IN ABERDEEN INFIRMARY.

THE managers of this infirmary have unanimously adopted the report of a committee which has been examining the expenditure with a view to its reduction. The principal recommendations of the committee have reference to making a reasonable charge for domestic and private servants, reminding patients who can pay of the duty of contributing something to the hospital, and suggesting strict supervision of internal administration. One remark surprises us, that "there are undoubted prodigality and waste, chiefly in what is supplied to out-patients." We believe the London experience to be that very little is spent, much less wasted, on out-patients. A table is given of the respective cost for certain articles in Aberdeen and Dundee, there being about forty more patients daily in the Aberdeen Infirmary. The cost for wine, spirits, and porter in Aberdeen was, for 1883, £283; in Dundee, £62.

SALT AS A PREVENTIVE OF CHOLERA.

A RESPECTED correspondent, styling himself "Vigilans," has sent us a lengthy communication on this subject, which was fully discussed in the Indian papers about twenty years ago. Some valuable evidence as to the physiological value of salt was adduced by Mr. F. C. Brown, of Anjarikandy, in Malabar. This gentleman asserted that while cholera was devastating the surrounding districts not one fatal case occurred amongst the labourers on his estate. This freedom from the scourge was attributed by him solely to the fact that his men were allowed salt without stint; and so far as could be ascertained, no other circumstance was present to participate in the result.

THE FLY PLAGUE.

THE long spell of hot weather we have experienced has not been without its disadvantages, and among these must be mentioned the annoyance caused by flies to both man and beast. Horses have more especially suffered, and their sufferings have been rendered all the more general and acute from the stupid and useless mutilation to which they are subjected in being "docked." This consists in the very painful operation of chopping off more or less of their tail, cutting through the coccygeal bones, muscles, nerves, and bloodvessels, and for ever after depriving the horse of one of its beauties and most useful defences against insects, to whose attacks it is very much exposed. This fashionable mutilation, the result of a depraved taste, has now become so common, that, whereas a few years ago very few horses had to undergo it, there is scarcely one to be found which has not had one-half or two-thirds of its tail lopped off by the horse-dealer, roadside farrier, or veterinary surgeon. Consequently, the agony endured from the operation is trifling in comparison with that which horses experience from the flies, against which they have no protection when subjected to this unreasonable and damaging curtailment. Various expedients have been resorted to, with the view of driving away these troublesome insects, and some of them are worth a trial, as they are likely to be successful. Paraffin, petroleum, or a strong solution of carbolic acid or carbolised oil, may be applied to the hairs of the forelock, mane, and tail, or bits of sponge or woollen cloth saturated with these and attached to the bridle, collar, and crupper strap may be used. A solution of Macdougall's sheep dip answers well when sponged over the skin, as does also Jey's disinfecting fluid. People who ride or drive, or who commiserate their horses when in fly-haunted stables, might advantageously resort to something of this kind, should the creatures suffer from the folly of fashion in being deprived of their tails.

BITE OF A RAT.

IN medicine there are very few pathognomonic symptoms. This statement is equivalent to saying that many diseases present pretty much the same symptoms. Hence the proverbial difficulty of diagnosis. Whether some phenomena observed by M. Millot-Carpantier were really or apparently those of rabies must remain doubtful. A patient's hand was bitten by a rat; the resulting wound completely healed at the end of fifteen days, but was followed by a painful swelling of the forearm, attended with fever, which also passed away; in another fifteen days a purpuric eruption appeared, which also in its turn was succeeded by certain strange nervous symptoms resembling those of hydrophobia. The neurosis lasted for a month, after which the patient remained in good health.

REDWATER.

THIS disease of cattle has been studied by Dr. Berry and Mr. Hutcheon, and is regarded as an infectious disease, which spreads through the medium of the food or drink contaminated by the droppings of the infected animals. The period of incubation is said to be fourteen days. The urine in a well-marked case is of a port-wine colour, and becomes almost solid with heat. No red blood-discs are seen in the urine when the microscope is employed. The condition of the urine (hæmatinuria) generally lasts four or five days, and is very fatal. The spleen becomes greatly enlarged, softened, and diffluent. A bacillus has been detected in the blood of the spleen, which has been named bacillus hæmatinuriæ. The microbe was demonstrated by drying in the air a thin film of blood on a cover-slip. A drop of glacial acetic acid is allowed to remain on the film for a few seconds. After this the cover-

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slip is washed in distilled water, then dried again over the flame of a spirit lamp; next floated for four minutes on a few drops of warmed "gentian-violet" or "amaranth"; washing in rectified spirit, drying, and mounting in Canada balsam complete the essential part of the process for demonstrating the bacillus, which is shorter and thicker than bacillus anthracis. No bacilli were found in the urine.

THE LATE PROFESSOR FRANCESCO CORTESE.

THE fellow-townsmen of this distinguished head of the Army Medical Department of Italy, whose death in Rome last October was the subject of a notice in THE LANCET, have just raised to his honour, in Treviso, Province of Venetia, a memorial tablet, placed in the façade of the house in which he was born. The inscription, a translation of which we subjoin, is from the pen of Senator Tommaso Vallauri, the most proficient of contemporary Italian latinists: "In this house was born, on the 12th of February, 1802, Francesco Cortese, who, as Professor of Anatomy in the University of Padua, shed lustre on the chair by his lectures and his writings; as army-surgeon, in the War of Independence he deserved nobly of his country; and having risen to high honour, he obtained the supreme rank of head of the medical staff in the Italian army. He died in Rome, to universal regret, on the 24th of October, 1883. To perpetuate the memory of their illustrious fellow-citizen the Town Council of Treviso placed this stone."

BOOKS FOR HOSPITAL PATIENTS.

An appeal has been made on behalf of the patients in the City of London Hospital, Victoria-park, for books or periodicals of a wholesome and interesting kind. Reading is the form of mental diversion to which educated people most naturally turn, and if this is the case in health when so many other amusements are possible, it is doubly so during sickness and convalescence when quiet is as needful as change is tantalising. Parcels must be prepaid. Donors of books will readily understand that the small charge on carriage, which is as nothing to each of them, may during the construction of a small library amount to a deduction neither handsome nor charitable from the already taxed resources of a hospital. Is it hardly necessary to add that no hospital or infirmary is so overstocked with literature at the disposal of patients, but that the want expressed by the City of London Hospital is felt in it also.

WOOLSORTERS' DISEASE.

We are glad to learn that on the 8th inst. a conference was held at the Bradford Town Hall between the employers and the employed of those engaged in the worsted trade, and the sub-committee of the Bradford Sanitary Committee, to draw up a code of regulations for the prevention of woolsorters' disease. The proposed regulations, after some modifications, were unanimously adopted; and a very good feeling of reciprocity was displayed between the masters and the men on the subject, the former expressing their readiness to adopt any measures to prevent infection amongst their employés.

CHOLERA AND RAGS.

A NEW order has been issued by the Local Government Board prohibiting, until the 15th of September next, the importation, or delivery for exportation, of any rags from France, unless the rags have previously been proved to the sanitary authority not to have come directly or indirectly from any infected place. All rags contravening the order may be destroyed on the advice of the medical officer of the port.

A LARYNGEAL NEUROSIS.

A FORM of laryngeal neurosis, which is probably not widely known, has been treated of some months ago by Dr. McBride, and still more recently by Dr. Russell in the *Birmingham Medical Review*. Charcot has recorded the notes of four cases, and he regards the affection as a laryngeal vertigo analogous to Menière's disease, the afferent path being the superior laryngeal nerve. The main features of the attack is a sudden falling on the ground, immediately preceded by a short dry cough, and sometimes by spasmodic breathing; unconsciousness has been more frequently observed than not. Subjectively, the patient is almost always annoyed by a tickling or burning sensation in the larynx. Some local hyperæmia, or a "granular" condition of the throat, is nearly always present, and marked benefit has been derived from local medication and the internal administration of bromide.

THE HEALTH OF IDIOTS.

DR. SHUTTLEWORTH'S paper on "The Health and Physical Development of Idiots as compared with Mentally Sound Children of the same Age" is full of significance, and will be perused with much interest. We cannot, however, withhold the expression of a wish that the author had occupied himself more practically with the question how far the health and physical development of idiots throw light on the causation of their mental disability. It is not so important to them whether idiots die earlier or live longer than some children of their age, as it is to ascertain by the study of vital statistics and by the investigation of physical facts, whether preventable disease contributes to the production of idiocy. The value of Dr. Shuttleworth's paper is great, but it would have been still greater if it had dealt more directly with the subject of physical causation.

THE CHOLERA.

AT the time of going to press, we are glad to be able to state that we have not received a report of the occurrence of a single case of Asiatic cholera in any of the London hospitals, or in any part of England, Scotland, or Ireland.

ON the 8th inst., Mr. Durham performed an amputation at the left hip-joint, in the theatre of Guy's Hospital, on account of extensive epitheliomas of the thigh and buttock. The operation lasted about twenty minutes, during which time the common iliac artery was compressed by Mr. Rich Davy, and very little blood was lost. The man, however, never rallied, and died twenty-four hours after. The rectum was carefully examined; there was no abrasion of its mucous membrane, nor blood in the bowel; only a small spot of arborescent capillary injection was seen in the submucous coat at a point about ten inches from the anus. In the above operation the use of the rectal lever was exemplified.

MESSRS. WEISS AND SON have just made for the Hon. James White, M.L.C., a magnificent surgical instrument case for the Prince Alfred Hospital, Sydney. It is made of the choicest mahogany and plate glass, is all of the very best workmanship, and will form a handsome feature in any operating theatre.

THE Indian medical journals announce the death of T. K. Rogers, Indian Medical Service, which took place in Madras on June 12th, from typhoid fever. The deceased had entered the service in 1877, and was Professor of Chemistry in the Madras Medical College and Chemical Analyst to the Government of Madras.

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IN response to an appeal by the vestry of St. James's, Westminster, that the Government should introduce legislation conferring on local authorities a general power of control over the erection and maintenance of overhead wires, a letter has been received from the Local Government Board, stating that it would be impossibla to deal with the subject by legislation this session, and the Government cannot now say what Bills they will introduce next session, but there would probably be an advantage if a Select Committee were appointed to inquire into the subject, and the Board will consider whether steps should be taken early next year with this view.

ON the 8th inst., in the House of Commons, Sir Charles Dilke stated that the Local Government Board are not at the present time in possession of precise information as to the cost now being incurred in deodorising the sewage of London. Permanganate of potash has not been used to any considerable extent, only between three and four tons having been delivered, at a cost of about £130 per ton. Between July 10th and August 1st, perchloride of lime, to the extent of, on an average, about thirty tons per day, has been mixed with the sewage discharged at Crossness and Barking, the price of chloride of lime being about £9 per ton.

THE Sanitary Institute of Great Britain are making an effort to bring together the official reports and papers of the late Dr. Farr, and intend publishing them by subscription if a sufficient number of subscribers should come forward to justify the expense. Mr. Noel Humphreys, F.S.S., of the Registrar-General's Department, has been entrusted with the selection and editorship.

THE death of M. Bouisson has been recently announced. He was born in 1813, and finished his medical studies in 1836. He was appointed Professor of Physiology in Strasburg in 1837; of External Pathology in Montpellier in 1840; and of Clinical Surgery in 1851. In 1859 he was elected to the Chair of Operative Medicine, which he held until his death.

BY the death of Sir Erasmus Wilson, the Royal College of Surgeons, as residuary legatee, will, says *The Times*, receive a sum of something like £180,000, whilst the funds of the Royal Medical Benevolent College, the Medical Benevolent Fund, and the Sea-bathing Infirmary, Margate, will benefit to the extent of £5000 each.

THE gentlemen with whom Drs. Klein and Heneage Gibbes will co-operate in their researches into cholera are Dr. D. D. Cunningham, Professor of Physiology at the Calcutta Medical College, and Surgeon-General J. M. Caningham, Sanitary Commissioner with the Government of India.

TO avoid inconvenience and delay which might be experienced by Poor-law medical officers, we are asked to state that Dr. Rogers, President of the Poor-law Medical Officers' Association, has removed from Soho-square to 31, Montague-place, W.C.

WE remind our readers that the Bradshawe Lecture will be delivered by Dr. G. H. Philipson, of Newcastle-on-Tyne, on Monday, the 18th inst., at 4 o'clock, at the Royal College of Physicians.

THE Canadian medical journals announce the death of Dr. J. E. Landry, for more than a quarter of a century Professor of Surgery in Laval University, Quebec.

DEPUTY SURGEON-GENERAL TRIMNELL, late of the Madras Army, fell dead on the beach at Jersey on the morning of the 9th inst., as he was about to enter the sea to bathe. He had only recently arrived in the island to attend the funeral of a relative.

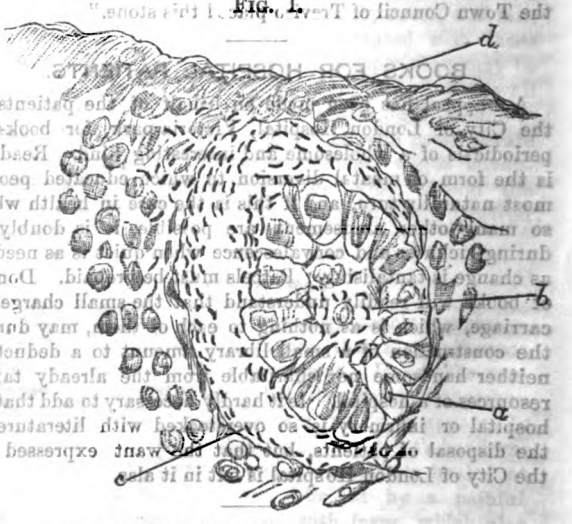
THE meeting of the Canadian Medical Association will be held this year at Montreal on the 25th, 26th, and 27th inst.

DR. KOCH ON THE CHOLERA.[1]

(Continued from p. 250.)

THE conference upon Cholera at the Imperial Board of Health in Berlin, on the close of Dr. Koch's address, which we reproduce in abstract below, adjourned till July 29th, when it was occupied with several questions arising out of the discovery of Dr. Koch, upon which he made further observations. We hope later to give an outline of this meeting, which is reported verbatim in a supplementary issue of the *Berliner Klinische Wochenschrift*, Aug. 11th. Before giving the continuation of Dr. Koch's address we may draw attention to the subjoined figures, selected from a series of illustrations which have been published in the Berlin journals. They illustrate points in the morphology and growth of the bacilli detailed last week. Fig. 1 is a

FIG. 1.



preparation from the intestine of a cholera patient, showing a Lieberkühn's gland, (*a*) in transverse section; within the gland (*b*), and between its epithelium and basement membrane (*c*), are seen numerous comma bacilli. At *d* is the surface of the mucous membrane denuded of epithelium. Fig. 2 is a cover-glass preparation from the margin of a drop

FIG. 2.



of meat infusion with pure cultivation of common bacilli. At *a* are seen long condensed filaments developed from the

[1] For the full text of Dr. Koch's address, see Berliner Klinische Wochenschrift, Aug. 4th and 11th, and Deutsche Medicinische Wochenschrift, Aug. 7th, 1884.

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bacilli. Both figures are from preparations magnified 600 diameters. Dr. Koch's address continues as follows:—

Being thus convinced as to the distinctive characters of the common bacillus, the next thing was to determine the relation in which it stands to the cholera process, and whether it ever occurred in non-choleraic cases. In the ten examinations made in Egypt this point was only tested microscopically, no cultivations having then been made. In India the intestines were examined in forty-two cases, both microscopically and by cultivations, and in not one was the bacillus absent; in very acute cases it was found almost unmixed. Choleraic dejecta from thirty-two cases yielded similar results, but in only two out of many observations on vomited matter were bacilli found. It was probable that in these two cases the vomit contained fæcal matter. Bacilli were also found in specimens from eight cases sent by Drs. Kartulis and Schiess-Bey from Alexandria, and in two cases examined at Toulon in conjunction with Drs. Strauss and Ronx, and in the choleraic dejecta of two other cases. One of these Toulon cases was that of a sailor attacked with cholera when convalescing from malarial fever; he died four hours after the seizure, and the autopsy was made half an hour after death, it being always an object to make such an examination as soon as possible. In this, as in other acute cases, the intestines contained almost a pure growth of the comma bacillus. The other Toulon case was similar; but in neither was the microbe found by Strauss in Egypt detected in the blood. Thus the comma bacillus has now been found in nearly one hundred cases of cholera, occurring in a constant relation to the cholera process, being most abundant in the lower end of the ileum, where the changes are most intense, and being most pure in the acute uncomplicated cases. On these grounds the comma bacillus may be considered as specific to cholera. Many observations were made in other diseases, and in subjects who had recently passed through attacks of cholera, without finding these bacilli in the dejecta or in the bowels. These observations included cases of dysentery, typhoid fever, bilious typhoid, and infantile diarrhœa; the secretions of the mouth, which are so rich in bacterial life; the intestines in arsenical poisoning; but, although bacteria of all kinds were met with, the comma bacillus was conspicuous by its absence. Similar negative results followed examination of the drain-water of Calcutta, and the impure tank-water in the villages on the banks of the Hooghly. Once only in the water flooding the region of the salt-water lake east of Calcutta was a bacterium found at first sight resembling the cholera bacillus, but on further scrutiny it proved to be thicker, and not to have the power of liquefying gelatin. In his own experience and that of other bacteriologists a similar form to the comma bacillus was unknown. Three different views as to its relation to the cholera process are tenable. (1) That the disease favours the growth of these bacilli by affording them a suitable soil. If so, it would mean that the bacillus in question is most widely diffused, since it has been found in such different regions as Egypt, India, and France; whereas the contrary is the case, for the bacilli do not occur in other diseases, nor in the healthy, nor apart from human beings in localities most favourable to bacterial life. They only appear with the cholera. (2) It might be said that cholera produces conditions leading to a change in form and properties of the numerous intestinal bacteria—a pure hypothesis; the only instance of such a conversion refers to a change of physiological and pathogenic action, and not of form. Anthrax bacilli under certain conditions lose their pathogenic power, but undergo no change in shape; and that is an instance of a loss of pathogenic properties, whilst there is no analogy to support the view of the harmless intestinal bacteria becoming the deadly cholera bacilli. The more bacterial morphology is studied, the more certain is it that bacteria are constant in their form; moreover, the comma bacillus retains its special characters unchanged through many generations of culture. (3) Lastly, there is the view that the cholera process and the comma bacilli are intimately related, and there is no other conceivable relation but that the bacilli precede the disease and excite it. "For my own part," said Dr. Koch, "the matter is proved that the comma bacilli are the cause of cholera."

If this be so, experimental confirmation of the fact might be expected; and, were authors to be trusted, there should be no difficulty in this, since it has been stated that cholera occurs in cattle, dogs, fowls, elephants, cats, and other animals. But there is no evidence of such animals being spontaneously attacked with the disease during cholera prevalence; and direct experiments have either proved negative, or, if positive, have been inconclusive or been contradicted by others. The experiments of Thiersch on white mice, to which so much importance has been attached, have been repeated by Koch with recent and with decomposing choleraic material, the mice remaining unaffected. Experiments were also made upon monkeys, cats, fowls, dogs, and various other animals, but nothing like a cholera process was observed; and a similar result followed experiments with the comma bacillus in all stages of its development. Animals were fed with large quantities of the comma bacillus, with the result that the bacilli were found to be destroyed in the stomach, none appearing in the intestinal canal. It is not so with other bacteria—e.g., a red micrococcus found in Calcutta. Dr. Barclay fed mice with this micrococcus, and obtained cultures of it from the intestinal contents. The bacillus was injected directly into the small intestine and into the large bowel of monkeys, but without result; nor was any better success obtained by such measures employed after irritants had been introduced into the intestine. The only experiment which at first seemed to promise results was when pure cultures were injected into the blood of the rabbit or into the abdominal cavity of the mouse. The rabbits became very ill after the injection, but recovered; the mice died in from twenty-four to forty-eight hours, and the comma bacillus was found in the blood. It would seem as if, unlike other experiments on infective disease, very large quantities of the virus had to be employed; but to assure himself of the capability of infecting animals with cholera, Koch made special inquiry as to whether animals in India ever had the disease. He learnt that in the densely-populated province of Bengal, where many kinds of domestic animals are to be found under conditions favourable for infection, cholera was unknown among them. They appear to enjoy an immunity, and are incapable of being experimentally infected—a fact which is not fatal to the view that the comma bacillus is pathogenic; for, apart from experimentation, no other explanation of its connexion with cholera is possible than the causal one. Leprosy is not communicable to animals, and yet the lepra-bacillus must now be regarded as the cause of the disease. It is probably the same with typhoid fever, which is not communicable to animals. It is enough to ascertain the constant occurrence of a special kind of bacterium in a disease, and its absence in other diseases, its occurrence corresponding with the pathological lesions and the course of the disease. And there are some animal diseases not transmissible to man—e.g., rinderpest and pleuro-pneumonia. Parasites have their special hosts; many kinds of animals have their own tapeworm, which cannot develop in any other. Again, there is a whole group of diseases, especially the exanthemata, conceivably dependent on micro-parasites; but no one has ever yet shown that a disease can produce a specific organism. In cholera we have instances amounting to actual experimental infection of man—e.g., the infection of those who are engaged in washing linen soiled by choleraic dejecta. Such linen contains the bacilli often in a pure form, and if infection occur through this medium, it must be by means of the comma bacilli, the only micro-organism present. The hands may be soiled and the bacilli introduced into the mouth by direct contact or through the food, or drops of the washing water may come in contact with the lips, and thus in some way the human being is fed with a small quantity of a pure culture of comma bacilli. Another instance was found by Koch in the case of a tank of which the water was used for drinking and other purposes by many people among whom cholera was raging. He found the comma bacilli in this tank, and learned that the linen of the patients was washed in it. Around the tank were some thirty or forty huts, inhabited by 200 or 300 people; of these seventeen died, the number taken ill not being ascertained. The tank also received the refuse from the dwellings. The Hindoos bathe in the tank, wash their utensils in it, and deposit excreta on its shore; and if a hut has a latrine, its outflow is into the tank. Now, it was found that after a time the bacilli became less abundant in this water, and coincidentally the cholera declined; whereas, had the epidemic been the cause of their presence, and not the result, the number of bacilli should have increased in it. The whole etiology of cholera suggests the view taken as regards the comma bacilli. They multiply rapidly, soon reach their term, and are supplanted by other bacteria. So in the intestine they multiply, set up irritation and diarrhœa, and all the typical symptoms of

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the choleraic seizure. Under normal conditions—in animals at least—the bacilli are destroyed in the stomach, and this harmonises with the important part played by predisposition, and the liability of those to be attacked who are suffering from gastric or intestinal catarrh, or who have overladen the stomach with undigested food, conditions which would facilitate the passage of the bacilli unchanged into the intestine. But the bacillus is limited to the intestine; it is not found in the mesenteric glands or in the blood. How, then, can it destroy life? Probably from the production of a poisonous substance, such as is produced by bacteria in putrefaction. In a gelatin culture of the comma bacilli with which blood-corpuscles were mingled, the corpuscles became destroyed as the colony grew, and it is probable that the bacilli exert a like destructive influence on other cells. That some poison is produced gets confirmation from the experiments of Dr. Richards of Goalundo, who fed pigs with choleraic material, death ensuing from convulsions in from fifteen minutes to two and a half hours. This must have been due to "intoxication," and not, as Dr. Richards states, to choleraic infection, for another pig, fed on the intestinal contents of one of those so killed, remained healthy. If it had been choleraic virus, it should have been transmissible. These experiments prove that in cholera the dejecta contain certain substances poisonous to swine, whereas dogs, mice, and other animals are unaffected by it. Assuming that the bacilli produce a specific poison, the phenomena of cholera may be thus explained. The poison acts locally in destroying the mucous membrane, and, being absorbed, it acts generally, and especially paralyses the circulatory organs. All the symptomatology of cholera, usually considered as due to the loss of water and thickening of the blood, is explicable on this view. Death may occur in this stage of cholera-poisoning when but few local changes are found, and the intestinal contents exhibit a pure culture of bacilli. If this stage be passed through, there occur necrotic changes—hæmorrhages and putrefaction—with symptoms due to the absorption of putrefactive products, usually described as cholera-typhoid. And there is abundant evidence of the cholera virus occurring in the dejecta, and rarely in the vomit. For the further dissemination of the disease it is necessary that the dejecta should be retained in the moist state, for drying destroys their potency; and this fact is borne out by the spread of the disease through the water-supply, or more directly by soiled hands, or even conveyance through insects, or blow-flies to food. Drains may be infected, and through them the water-supply. As the virus cannot be retained in the dry state, aerial infection seems impossible; nor has cholera ever been conveyed by merchandise or by letters, even if these are not disinfected and fumigated. Cholera can only be spread by human intercourse—a fact sometimes wanting in proof because it is overlooked, for the mildest case may be as infective as the most severe. The diagnosis of such mild cases by the detection of the comma bacillus becomes thus of much importance.

That the virus can be reproduced and multiplied outside the body is apparent, since the bacillus can be cultivated artificially, and its growth is not affected by comparatively low temperatures. Probably it does not grow in streams and rivers, where, owing to the current, a sufficient concentration of nutrient substance does not occur; but in stagnant water and at the mouths of drains &c.; vegetable and animal refuse may accumulate and afford the necessary nutriment. Thus is explained the propagation of cholera by the subsoil water, and the increase of epidemics with the sinking of its level, which lessens the flow and diminishes the amount of surface water. Admitting the dependence of cholera upon this micro-organism, it is impossible to conceive the disease having an autochthonous origin in any particular place; for a bacillus must obey the laws of vegetable life, and have an antecedent; and since the comma bacillus does not belong to the widely diffused micro-organisms, it must have a limited habitat. Therefore the occurrence of cholera on the delta of the Nile does not depend on its resemblance to the delta of the Ganges; but the disease must have been imported there as it is into Europe. It was once thought that an outbreak in Poland had a local origin until it was discovered to have been introduced from Russia. Again, about ten years ago, there was a sudden outbreak at Hamar (Syria), thought to be an instance of local origin, but erroneously, as shown by a statement of Lortet, who told Koch, when at Lyons, that the epidemic had been introduced into Hamar, where he was at the time, by Turkish soldiers from Djeddah. Indubitable instances of local epidemics arising outside India are not known, and everything confirms the view gained by experience that the cholera is due to a specific organism having its home in India. It used to be thought that the disease had started from Ceylon, Madras, or Bombay, but there is now general concurrence in regarding Bengal, the delta of the Ganges, as the original source. This is the only region where the disease never varies from year to year, for although some other regions, as Bombay, are never free from it, yet it is highly probable that this is due to its continued re-introduction. The upper region of the Ganges delta is thickly populated; the lower district, Sondarban, covering an area of 7500 English square miles, is uninhabited, and here the Ganges and Bramahpootra break up into a network of watercourses. The district abounds in luxuriant vegetation and in animal life, and is the seat of inundations and the home of pernicious fevers. Here it is probable, where the vast amount of decomposing vegetable and animal life affords a suitable soil, that the cholera bacillus flourishes. All great epidemics begin with an increase of cholera in South Bengal. The inhabitants of Lower Bengal dwell in huts raised on mounds to protect them against inundation, the excavations thus formed making the so-called "tanks," which are very numerous in the district of Calcutta and its vicinity. Since 1870, when new drainage works and water-supply were introduced, the mortality from cholera in Calcutta has become much reduced; but the retention of many of these tanks and the nature of the native dwellings still account for the spread of the disease. A remarkable instance of the disappearance of cholera under improved water-supply is afforded by Fort William, which used to have many cases annually. Other Indian towns show the same good result of improved water-supply—e.g., Madras, Bombay, and Pondichery, where some years ago the formation of artesian wells banished cholera; and although cases reappeared there last spring, Dr. Farnell of Madras ascertained that the cases were limited to the part of the town not yet supplied with these wells. Although contamination of drinking water may be the chief mode of spread, this is not the only way, and each place has its own conditions, which have to be dealt with. The diffusion of cholera in India depends on human intercourse, especially on pilgrimages, which are carried on to an inconceivable extent—e.g., hundreds of thousands flock yearly to Hurdivar and Pari, remain there many weeks herded together, bathing in the tanks that supply them also with drinking-water. Over the borders of India the cholera is carried into Persia, and in the old caravan days thence to the south of Europe; but the route now is by the Red Sea and Suez Canal. Every year the danger to Europe by this route increases, for Bombay, which is seldom free from cholera, is but eleven days distant from Egypt, sixteen from Italy, and eighteen or twenty from France. It is also clear that the greatest danger lies in ships carrying large numbers of people, as troops, pilgrims, coolies, and emigrants, and not the merchant vessels with small crews, for in the former the outbreak of an epidemic would be likely to last till Europe was reached. In the reports of the Sanitary Commissioner of India, 1881, it is stated that out of 222 coolie ships, carrying from 300 to 600, which had left India for American colonies in ten years, thirty-three had cholera on board, and in sixteen the epidemic lasted more than sixteen days. Why outbreaks of cholera outside India die out is probably due to different factors. One is that an attack of cholera confers immunity at least during the period of one epidemic, and whole districts may enjoy a similar immunity for a time; cholera having been in the place one year, passes it by in the next. Another is that the bacilli do not pass into the "resting state." And a third is the check given to their development by temperatures below 17° C.

In conclusion, Dr. Koch adverted to the subject of treatment, and reminded those who say that such discoveries do not enable us to cure the disease better than formerly, that a rational treatment of most diseases, and especially of infectious diseases, cannot be adopted until their cause and nature are known. But even yet the discovery of the cholera bacillus is important, as furnishing an aid in diagnosis which would facilitate the detection of the first case occurring in a district, and the adoption of measures to prevent its spread. Knowing also the nature and properties of the bacillus, and especially the readiness with which it is killed by drying, the right direction of prophylaxis is assured and the lavish expenditure of disinfectants checked, so that there will not be a repetition of what happened in the last epidemic, when millions of gallons were poured into the gutters and sewers

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without the slightest need. Even therapeutically the knowledge of the comma bacillus may be of value. Diagnosis will be possible in mild cases and in the early stages of the disease, when treatment is of most avail.

THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

THE Congress at Copenhagen, which was formally opened on the 10th inst. at the Industrial Exhibition, was preceded on the evening of the 9th by a reception and conversazione in the Tivoli Hall, which was attended by about 1200 members. There were present at the opening the King and Queen of Denmark, the King and Queen of Greece, and the whole of the Royal Family, the Corps Diplomatique, the President of the Rigsdag, the representatives of science and of the University, and the members of the Congress. The Danish professor, Dr. Panum, delivered an address welcoming the foreign representatives to Copenhagen, to which Sir James Paget, Professor Virchow, and Dr. Pasteur replied. Professor Panum was elected president; and Professor Axel Key (Stockholm), Dr. Dahl (Christiania), and Dr. Hjelt (Helsingfors) were nominated Scandinavian vice-presidents. Sir James Paget, Sir William Gull, Sir William MacCormac, Dr. Henry Acland, Sir James Risdon Bennett, Professor Lister, Sir Spencer Wells, Dr. Erichsen, Dr. Watson, and Dr. Marshall representing England, were made honorary presidents.

On the 12th inst. Dr. Billings of Washington laid before the Congress the following invitation, bearing several signatures:—"On behalf of the medical profession of the United States, we, the undersigned members of a committee appointed for that purpose by the American Medical Association, have the honour to offer to the International Medical Congress an invitation to hold its next meeting in the city of Washington in September, 1887." A paper was read by Professor Crudeli, of Rome, on the Cause of Malaria, and the means of making the countries where it prevails more healthy.

The Congress includes 350 Danes, 100 Swedes, 100 Norwegians, and 800 representatives of other nations, figures which show that the attendance of foreign medical men is larger than was the case at the London Congress.

STRAY NOTES ON THE CONGRESS.

(By an Occasional Correspondent.)

Leaving my home in the Midlands by the four o'clock train last Thursday afternoon, I drove straight from Euston to Ludgate-circus, where a German clerk at Cook's counter noted my projected route, and told me my tickets would be ready if I returned after I had dined. This I did, all the more pleasantly in that good luck had begun to smile on me in a chance meeting with a capital travelling companion, Professor Berry Haycraft, also on the way to the Danish capital. Dinner over, tickets paid for, and luggage registered, we left Ludgate-hill station for Queenboro' punctually at 8.25. In due time, on board one of the fine steamers on this route, I, as a wretched sailor, fondly looked on the smooth water, without a ripple in the lovely moonlight night. So bright was the moon that the electric light at the masthead was let out as soon as the engines were set going. The vessel was crowded, but doctors were conspicuously few. No time was lost at Flushing, and on we sped at a very fair pace for a continental train. No Great Western or London and North Western runs beyond the Channel. A long and very hot dusty day through a flat country, with a forward and seemingly good harvest, brought us at 9 P.M. on Friday to Hamburg. Oh! what a scrimmage for our luggage! what banging about of the boxes and swearing of porters! It came to an end at last, and, after a short carriage-drive through the beautiful city, we found ourselves comfortably seated in the train for Altona and Kiel. At one of the changes Sir James Paget's ever kindly smile, word, and hand greeted us, and it was then no longer doubtful that, even if our countrymen at the Congress were not unanimous, old England was sure to walk to the fore. At Kiel were three beautiful and most comfortably-appointed Danish steamers ready to convey the Congress members to Korsör. The sea trip, about six hours, was delightful; the water as still as a mill-pond; and after a comfortable supper in the saloon we all enjoyed sleep in spacious and well appointed cabins. From Korsör, two and a half hours' rail brought us to the capital, in a few minutes over thirty-eight hours from London. I was much struck with the fertility and good farming of Denmark, and the generally prosperous look of the people. As through Holland and North Germany the day before, windmills were plentiful, reminding one of old England in the coaching days, and of France when the diligences of the Messagéries Impériale and of Lafitte and Caillard traversed the country. The cottages hereabout are mostly thatched, and the pigs and sheep well bred and fed. The corn is for the most part cut and carrying is forward. At the Copenhagen station was Sir Spencer Wells, genial as ever, moving off with his children and a load of luggage. On our right was a room with a notice on the door, "Medical Congress Bureau." Within it were colleagues, senior and junior, busy receiving us strangers with the most cordial affability and the most enviable polyglot facility. What capital English scholars these Danes are, alike in accent and idiom! Just before leaving home I had received a card of invitation to Kongensgarde 68. I had only just entered the reception bureau when my host made himself known, addressed me in excellent English, called forward his man-servant, who also speaks English, and on we drove to the most cheery and comfortable of homes. With all deference to Roman and Norman conquests, to Dutch William and the Huguenots, who certainly have been useful blood-crosses, I say that English and Danes are more alike than any other two nations. At any rate I felt so as my host showed me into my dressing and bath rooms. Oh! for that dip, after the hot, dusty journey! And a word, too, for the huge Turkish towels. Who does not remember the French washhand-basins with good big saucers, and the towels like pocket-handkerchiefs? They certainly do not do *these* things better in France.

As two o'clock was the time appointed for taking out tickets, &c., at the University, I devoted an hour, after a good breakfast, to visiting the Thorwaldsen Museum, which is a repository for the works of art bequeathed by Thorwaldsen to his native town, and is also his mausoleum, as it contains his tomb in the centre of a vast courtyard, round which are the galleries and rooms containing his works. Never did I see such a monument to the genius and energy and long-life devotedness of one man. At the appointed hour everything was ready at the University. With a lively remembrance of the great London Congress in 1881, I did not see how the great MacCormac could have a successor; but really, I think, Sir William has a most worthy one in Professor Lange, the secretary-general of this Congress. He has quite an army of willing and able juniors to assist him; but amongst these is a senior who deserves special mention, because not a member of our profession. He was working hard and most usefully in the reception-room. Capt. Richard Carstensen, of the Danish engineers, would, I think, astonish any linguist by his beautiful English. Everybody was at ease—not a hitch; tickets, programmes, maps, all in hand; and after a stroll and dinner, to which invitations were most hospitably plentiful, we made our way to the Tivoli Gardens' beautiful pleasure grounds, whose central hall was specially reserved for Friday evening as a reception- and lounging room for the members of the Congress. A cool breeze, sweet music, iced drinks, cunningly concocted light punch, and a Babel of tongues greeted one. I was glad to see Professor Esmarch looking very well and vigorous; and presently my fears that only English veterans would look in were disappointed, for I caught sight of two worthy representatives of young English medicine in Drs. Mahomed and Lambard Owen. After such a day and forty-four hours on the road, I was ready for bed.

The Sunday was not to be all rest, for that was the day appointed for opening the Congress. Still, time was allowed for attendance at the English church, or rather the service of the church, in a large room on the right of the yard in the Stormgade 21. Thanks to the efforts of H.R.H. the Prince of Wales, money enough has been collected to build an English church here, and it is hoped that the foundation-stone may be laid next spring by H.R.H. the Princess of Wales, who, if possible, is almost more popular here than she is in England. Lady Paget, Miss Paget, and one of her brothers, as also Sir Henry Acland, attended the service,

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which was performed by the Rev. C. A. Moore, M.A., chaplain to H.B.M.'s Legation, the sermon being preached by the Right Rev. P. D. Titcomb, D.D., Bishop-Superintendent for the English chaplaincies in Northern and Southern Europe.

The word having been passed that visitors at the opening ceremony were to be in full dress, we had scarcely time to don our war paint, and be at the Palais de l'Industrie in the Vesterbrogade at 1 o'clock. The hall is beautifully proportioned and decorated, and upwards of 1200 visitors had assembled, when the Royal Family drove up in eight carriages. The scarlet liveries and the outriders made a fine pageant in the glaring sun; and the President, Professor Panum, might well feel proud when he opened the Congress from the tribune, addressing the Kings and Queens of Denmark and Greece, who were seated in gilded armchairs serene and stately before him. After the President, Sir James Paget spoke, as President of the preceding Congress; and I do no injustice to his compeers when I say he held his own as the first orator in the medical profession. Virchow followed; and then Pasteur, who received an ovation without parallel. His son is one of the secretaries at the French Embassy here; and when also I mention that President Panum addressed the assembly in French, that lively bird *le coq Gaulois* may be excused if he crowed rather loud for a day or two. The speeches over, a short interval was allowed before commencing any business (Sunday, remember). The Royal Family graciously utilised the time by chatting with the inner circle of visitors. The King of Denmark very pointedly picked out Virchow for several minutes' conversation, then chatted very jovially with Sir William Mac Cormac, passing on to Volkmann with rather more stateliness. His Majesty seemed to have bethought himself that the hilarious *bonhommie* of a prince of good fellows might almost be too contagious on such a grand occasion. Pasteur certainly seemed to have the monopoly of the conversation and charms of the Queen of Greece; but for an intimate *tête-à-tête*, which seemed as if it were to have no ending, commend me to the chat of the Queen of Denmark and Sir James Paget. Her Majesty seemed as if she would not part with the distinguished baronet. The clock hand moves round even at Copenhagen, and as I have to dine with the President of the Congress at six o'clock, I must reserve for another post a few more stray notes, leaving you to determine if they are likely to interest your readers.

Copenhagen, August 10th, 1884.

THE CHOLERA EPIDEMIC.

AT Toulon the cholera epidemic shows further signs of subsidence, for not only has the number of deaths been reduced to from one to two or three a day, but the fresh attacks which occur are of a much less severe character than they were. Much the same may be said as regards Marseilles, although there the mortality remains higher than at Toulon, and the disease still exhibits a tendency to recur in outbursts. Extension also continues to take place to neighbouring localities to which the inhabitants of infected places have fled, some of the more striking outbreaks having occurred at Cigean, in the Herault, and in villages in the Basses Alpes. The previous extensions to Arles and to Aix have, however, not been maintained to any serious extent, and this circumstance tends to show that the poison is less virulent than it has been, and gives hope of a general abatement of the disease in the South of France. Perhaps the most important event of the past week has been the obvious spread of the epidemic into Northern Italy, several fresh places in the provinces of Turin, Parma, and of Genoa being now admittedly infected, and this notwithstanding the quarantine measures which have been so stringently enforced. So far, however, there has been no tendency to any rapid diffusion of the infection, and in view of the sanitary precautions which are being taken, it is more than probable that no real epidemic will be experienced in Italy this autumn. Except as regards infantile diarrhœa, which is still prevalent, the sanitary condition of Paris remains satisfactory. The returns for the week ending the 9th inst. show no case of cholera, and the druggists in some quarters testify to an unusual absence of bowel complaints, owing to the general abstinence from unripe or indigestible fruits. Paris is, nevertheless, undergoing a process of depletion; the departures of visitors being 24,873, against 21,544 arrivals. Liverpool has again had to adopt stringent measures of inspection, isolation, and disinfection, owing to the arrival of a vessel which had taken on board some soiled linen at Marseilles, and which had in consequence suffered from cholera. No active cases of the disease have been imported, but patients suffering from debility and other symptoms following on the secondary fever have had to be placed under careful surveillance and treatment. The measures which have been adopted by Dr. Stopford Taylor and the Sanitary Committee of the Port Authority have amply sufficed to deal with the emergency. Elsewhere occasional rumours of cholera have occurred in this country, but none of them have been of a character to cause anxiety as regards extension, and it cannot be too widely understood that a fatal attack of choleraic diarrhœa at this hot season of the year may be, and often is, accompanied by symptoms which it is difficult to distinguish from those of true cholera; but still the disease has not the power of diffusion which attaches to the imported Asiatic affection.

THE REPORT OF THE FRENCH COMMISSION.

At the meeting of the Paris Academy of Medicine on Aug. 5th, M. Strauss presented on behalf of M. Roux and himself a report upon their investigations on the cholera at Toulon, researches which were practically a continuation of those carried on by them in Egypt in conjunction with the late M. Thuillier and M. Nocard. They assert that they invariably found the same lesions as those observed in Egypt, where search was made for a special microbe in the intestine by means of methyl-blue staining of sections of specimens preserved in alcohol. Various kinds of micro-organisms were found in the mucous membrane, ducts of the tubular glands, the villi, and in places in the submucous tissue, the majority being bacilli of varied shape and size. At Toulon MM. Strauss and Roux again sought for a specific organism like that found by Koch, and their observations confirmed what they had met with in Egypt. Micro-organisms were found in many cases, especially those where the disease was prolonged, but in the most rapid cases these organisms are much less numerous, and in the very acute cases it was impossible to detect them, even by the method adopted by Koch, whose statements on the point are referred to. The French observers go on to state that the characteristic choleraic stools are found to contain many kinds of micro-organisms, and in many cases but few that are comma-shaped. The intestinal contents obtained post mortem exhibit the same variety in bacteria, without any predominance of comma bacilli. In one extremely rapid case examined in the presence of Dr. Koch, the small intestine was coated with a layer of mucus which contained a pure culture of comma bacilli. These facts lead MM. Strauss and Roux to assign an important part in cholera to the comma-shaped organism; yet there are cases where the variety of intestinal organisms is so great that no special form preponderates. In such cases Koch resorts to cultivation to detect the comma bacillus, and the report goes on to describe the method of culture, the development of the bacillus, and the conditions of its existence. The reporters believe that until cholera can be transmitted by the administration of a pure culture of this organism, its specific character will be incapable of proof. Koch relies largely on the observation that the comma bacillus is not found in the healthy intestine or in any disease but cholera, so that if it could once be found apart from cholera, doubt would be thrown on its specific character. Dr. Maddore (of Tendres) photographed a comma-shaped microbe met with in a reservoir; M. Malassez showed the commission some comma-shaped bacilli in dysenteric stools, and M. Strauss has detected similar organisms in leucorrhœal discharge, and in the uterine secretion of a case of epithelioma of the cervix. The Commissioners further point out that if the comma bacillus be the cause of cholera, its limitation to the intestine and, in the more acute cases, its non-invasion of the mucous membrane, must necessitate the notion that it is capable of secreting a soluble ferment or poison, the absorption of which produces the symptoms of cholera. Attempts must therefore be made to extract from pure cultures of the bacillus a soluble poison having this action upon animals. It would also be of interest to ascertain whether in well-marked cases of cholera nostras the comma microbe is

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present. The particulate bodies resembling organisms first detected in the blood by the Commission in Egypt have again been met with in the Toulon cases, and are believed to be due to a special change in hæmoglobin.

FOREIGN QUARANTINE REGULATIONS.

NOTIFICATIONS to the following effect have been given in the *London Gazette* of August 8th and 12th:—

A service of medical superintendence has been organised at several of the French railway stations to oblige travellers who may be found to be ill to break their journey.

All ships arriving at St. Petersburg from suspected ports are to be subjected to twenty-four hours' quarantine, even though they be provided with a clean bill of health.

At Algiers ten days' quarantine is imposed on all vessels arriving from Marseilles and Toulon, and five days' quarantine on vessels from other infected ports.

Eleven days' quarantine is imposed at Athens on vessels arriving from the Italian peninsula, and five days' observation on arrivals from French Atlantic ports.

Arrivals from Tunis at Austrian ports are subjected to a quarantine of observation of ten days if there has been no sickness during the voyage, and of twenty days if sickness has occurred.

At Madrid arrivals from Italian ports are placed on the same footing as those from French ports, and must consequently perform quarantine at a lazaret port of seven, ten, or fifteen days, according to circumstances.

THE HEALTH EXHIBITION.

THE SANITARY AND INSANITARY HOUSES.

THE whole object of an exhibition is to teach by the eye, which as a gateway of knowledge is allowed by all to be more effectual than the ear. The idea, therefore, of placing side by side two houses, of the ordinary type, one shewing the common sanitary defects, and the other showing how these common defects may be best avoided, and asking the British public to "look on this picture and on that," was, to say the least, a happy one. The idea has been well carried out by Messrs. Rogers Field, Ernest Turner, Corfield, and Douglas Galton; and the Executive Council of the Health Exhibition are to be congratulated on the completion of this important addition to their great show. The work has been some time on hand, as there arose sundry difficulties before an exhibit so full of detail could be completed. Now, however, that the work is done, all will agree that it has been worth waiting for, and it is to be hoped that in the ten weeks or so which will elapse before the close of the Exhibition it will be seen by a large number of the class of artisans upon whom we rely for the construction of our dwellings.

Visitors are conducted first through the insanitary house, where the lesson conveyed is "How not to do it." The dustbin is too big and inaccessible; there is a pipe drain under the basement cemented only at the top. The sinks and closets are without light and air; the apparatus used is of the common bad type; the soil pipes are unventilated; the pan-closets have no safes; bell-traps and D-traps abound; the drinking water is being contaminated by air charged with the products of the decomposition of excrement; the lavatory basin is a duct for sewer gas, as is also the waste-pipe and overflow-pipe of the bath. The water cistern is poked away under the roof, the damp is rising on the walls, the papers are arsenical, and the ventilation is very defective. This "shocking example" is not overdone. The defects shown come daily under the eye of medical men, and as we walked through this dwelling, visions of sore-throat, headache, malaise, typhoid, diarrhœa, and puerperal fever filled the mind.

Having made the circuit of the unhealthy house from basement to top storey, the visitor passes along a passage into the sanitary house, and he is at once confronted with properly ventilated gas-pipes, tube ventilators for the admission of fresh air, and at the top a light and airy cistern-room, in which the cisterns (for there are two, one for drinking water and the other for flushing water, &c.) are easily got at and cleaned. The cork flooring to the bath-room, the window latches, the deep bead at the bottom of some of the windows so that air may find its way into the house between the sashes, are all details sure to strike anyone with an eye for wholesomeness.

The waterclosets are against outside walls, the closets are properly fixed, the overflow pipes open into the air, there are separate waste-preventing cisterns for the waterclosets, and the soil-pipes are ventilated; all this has been accomplished easily, and in spite of the fact that the two houses are of almost identical area and pattern. Then, again, we find a bath of excellent pattern, incandescent electric light, clean and beautiful sinks, parquet floors, ventilating stoves, an impermeable iron-pipe beneath the house, the waste-pipes ending over gulleys, and a proper disconnecting chamber to cut off the house from the street sewer. The front area is lined with white tiles, and the dustbin is replaced by a galvanised iron box. Finally, the visitor emerges through the front area much impressed by the contrast.

There were certainly many plumbers and artisans inspecting these houses on Tuesday, and we can only hope that every plumber in Great Britain may find an opportunity of so doing.

INTERNATIONAL HEALTH EXHIBITION LIBRARY.

The library which has lately been opened in connexion with the Exhibition numbers upwards of 8000 volumes, and contains valuable collections of census and cholera reports, reports of English and foreign sanitary commissions, of medical officers of health, and of vital statistics; also Transactions of Societies and journals relating to health; in the latter may be mentioned a complete series of volumes of THE LANCET from the commencement to the current year (1823-1883), 121 volumes. The medical works on health are very complete, and such subjects as food, dress, dwelling-houses, ambulances, &c., are numerously represented. The collection of English and foreign guide-books, and medical and popular treatises relating to health resorts at home and abroad, are numerous. The Italian Government deserve special mention for their complete and valuable set of sanitary and educational reports. The Executive Council may be congratulated in having formed, under the direction of a sub-committee, such a valuable library, which, we trust, may be increased by the forthcoming Exhibitions. Mr. Carl A. Fhimm, the librarian, is to be complimented on having arranged, classified, and catalogued the library in a remarkably short space of time. The catalogue, which is published, is printed in double columns, and consists of 138 octavo pages.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria in the Kingsclere Rural District, by Dr. BLAXALL.[1]—This outbreak, which affected five different localities in the Kingsclere rural district, exhibited in its early history the difficulty so often met with as to what constitutes the origin of this disease. "Mumps" had for some time past been very prevalent, but some of the school children who had been affected had also suffered from symptoms indicative of diphtheritic paralysis, such as regurgitation of fluids on drinking, altered voice, and impaired vision; throat affections in different forms had been prevalent, and amongst these a certain number had been scarlatinal in character. Following on this sequence of cases, diphtheria as such was first recognised at Ashford Hill in July, 1883, when a child was affected who was in attendance at a school in Ashford. But inquiry at the school disclosed the fact that there had previously been a number of absentees from school owing to "mumps and sore-throat"; and after their first attack others followed which evidently derived their infection from the same source, fifteen of the seventeen primary attacks being attendants at

[1] To be purchased of Knight and Co., 90, Fleet-street; Shaw and Sons, Fetter-lane; Hadden, Best, and Co., West Harding-street; and P. S. King and Son, King-street, Westminster.

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the Ashford school. Other localised attacks took place at Headley Common and at East Woodhay, the attacks at the latter place being preceded by a number of cases of sore-throat in the school and neighbourhood. The true nature of these attacks may be gathered from the facts that in some of them the parents had noted that their children's throats were white inside, that in others the voice and vision were affected, and that the death certificate in one instance includes the obscure term "croup." In all, five different localities were effected, the number of cases was forty-seven, the different families attacked numbered twenty-four, and eleven deaths took place. As regards the origin of the affection, geological circumstances go for nothing. The localities in question lie mainly on the London clay and the Lower Bagshot beds, some infected dwellings standing at high elevations, others on the slopes of the hills, others again on a level with neighbouring streams. The ordinary village nuisances were by no means absent, but nothing could be pointed out capable of being regarded as a clear cause of diphtheria. Food supplies could with some confidence be excluded as a cause, and it was found impossible to detect any community of condition or circumstance peculiar to the homes or the home life of those who were affected which was not equally applicable to those who escaped. As regards Ashford Hill, either a child or one of the teachers who was temporarily absent owing to certain throat symptoms appears to have been the exciting cause of the disease which diffused itself among the school children; but how these first attacks originated is not made out. The subsequent spread of the disease was facilitated by intercommunication, especially amongst members of the same family, by attendance in the harvest fields, or at places of public amusement. The inquiry appears to have been worked out by Dr. Blaxall with a care that leaves nothing to be desired, and yet, as in so many other cases, no fresh light is thrown on the origin of the disease. The principal difficulty, here as elsewhere, seems to lie in the fact that early cases of throat affection which are not of such a nature as to excite suspicion are capable of diffusing themselves somewhat widely, until at last obvious diphtheria is being spread, and then the remedy comes too late. It will only be by a much more intelligent appreciation on the part of the public of the fact that apparently simple cases of sore-throat may lead to fatal outbreaks of disease that the remedy against diffusion can be hoped for. In the absence of strict measures of isolation for these cases, the major disease is often produced, and then no means of isolation are available for the comparatively large number of persons who have sickened.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Billericay (*Rural*).—This rural district had a death-rate of 21·0 per 1000 in 1883, and the excess beyond that which should obtain in such a district was to a notable degree due to zymotic disease. Thus diphtheria was somewhat widely diffused through the district, causing seventeen deaths; and this probably indicates a very large amount of throat affection, for, as Dr. Carter suggests, it is hardly probable that more than one case in fifteen terminated fatally. Dr. Carter is inclined to think that faulty sanitary conditions do not produce diphtheria any more than they lead to small-pox; but that, on the contrary, the disease is always due to infection, the poison invariably breeding true. There is much experience which is opposed to this view, and there are few districts so well administered that it becomes possible to exclude faulty sanitary circumstances as a cause. Once produced, we fully concur with Dr. Carter that diphtheria is intensely infectious by means of personal communication, and that at times certain geological and sanitary conditions favour its retention in a stage in which it is potent for harm.

Helmsley (*Rural*).—Scarlet fever, which caused forty-five deaths in this district, was the only infectious disease which became diffused in 1883, diphtheria and enteric fever being remarkable by their entire absence. Apparently no means of isolation have been provided by the sanitary authority. A remarkable outbreak of diarrhœa occurred at Hawnby, where it mainly attacked school children, and the details were communicated to Dr. Ballard in connexion with his general inquiry into the causes of that disease. Although the district is one where sanitary improvements are still needed, yet according to Dr. Bruce Low much has been done, and the death-rate for the year was only 14·6 per 1000 living, notwithstanding the epidemic of scarlet fever. On the whole he believes that at a minimum expenditure there has been a fair return of health to the district, and whilst he admits that there is ground for satisfaction, yet he impresses on his authority the need for further action and the danger of falling into a false sense of security.

Glanford Brigg (*Rural*).—This district has an estimated population of 29,041; the death-rate during 1883 was 19 per 1000, and the birth-rate 36 per 1000. The infantile death-rate is high, amounting as it does to 21·5 per 100 registered births in the villages where ironworks are carried out. In the rest of the district the rate is only 11, which is about the usual rate in normal agricultural villages. Scarlet fever was somewhat prevalent, causing 23 deaths and necessitating the closure of schools. Typhoid fever occurred in ten different localities, and notably at South Ferriby, where it was apparently caused by the use of contaminated drinking-water. Measures have now been taken to remedy this serious defect. An exceptional mortality is reported by Mr. Moxon as having occurred from puerperal fever, no fewer than twenty women having died shortly after childbirth. After a time some of the medical practitioners altogether abstained from midwifery practice, and then the disease ceased. During the three months preceding the issue of the report no fresh case had occurred. The account of sanitary work carried out shows that the conditions under which the people are living are steadily undergoing improvement.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 9th inst. 5132 births and 3670 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which had been 24·9 and 23·3 per 1000 in the two preceding weeks, further declined last week to 21·9. During the first six weeks of the current quarter the death-rate in these towns averaged 22·6 per 1000, against 19·6 and 20·2 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 14·8 in Bristol, 15·7 in Brighton, and 16·7 in Bradford. The rates in the other towns ranged upwards to 27·3 in Halifax, 27·5 in Leicester, 29·0 in Preston, and 30·2 in Bolton. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which in the two preceding weeks had been 1246 and 1035, further declined last week to 911; these included 585 from diarrhœa, 92 from measles, 75 from whooping-cough, 70 from scarlet fever, 45 from "fever" (principally enteric), 22 from diphtheria, and 22 from small-pox. These diseases caused the lowest death-rates in Huddersfield and Plymouth, and the highest in Liverpool, Bolton, and Salford. The highest death-rates from diarrhœa were recorded in Portsmouth, Bolton, Leicester, and Salford; from measles in Wolverhampton and Halifax; from whooping-cough in Halifax; and from scarlet fever in Cardiff, Sheffield, and Wolverhampton. The 22 deaths from diphtheria in the twenty-eight towns included 18 in London. Small-pox caused 16 deaths in London (exclusive of 3 metropolitan cases registered outside Registration London), 2 in Liverpool, 2 in Sunderland, 1 in Hull, and 1 in Cardiff. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had declined in the four preceding weeks from 1368 to 892, further fell to 810 on Saturday last; the cases admitted, however, which had fallen in the seven previous weeks from 354 to 66, rose to 110 last week. The Highgate Small-pox Hospital contained 45 patients on Saturday last, 6 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 159 and 198 in the two preceding weeks, declined last week to 187, and slightly exceeded the corrected average. The causes of 83, or 2·3 per cent., of the 3670 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Nottingham, and in five other smaller towns. The largest proportions of uncertified deaths were recorded in Sunderland, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which in the two preceding weeks had been 23·3 and 20·6 per 1000, was 20·7 in the week ending the 9th inst.; it was 1·2 below the mean rate during the same week in the

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twenty-eight large English towns. The rates last week in the Scotch towns last week ranged from 11·6 and 15·7 in Perth and Greenock, to 23·2 in Paisley and 24·3 in Glasgow. The 500 deaths in the eight towns included 51 which were referred to diarrhœal diseases, 31 to whooping-cough, 14 to scarlet fever, 7 to diphtheria, 6 to measles, 5 to "fever," and not one to small-pox; in all, 114 deaths resulted from these principal zymotic diseases, against 85 and 95 in the two preceding weeks. These 114 deaths were equal to an annual rate of 4·7 per 1000, which was 0·7 below the average rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœal diseases, which in the three previous weeks had declined from 57 to 40, rose again last week to 51, but very slightly exceeded the number in the corresponding week of last year; they included 23 in Glasgow, 13 in Dundee, and 6 in Paisley. The death-rate from diarrhœa in the Scotch towns last week did not exceed 2·1 per 1000, whereas it averaged 3·5 in the large English towns. The 31 deaths from whooping-cough showed a further increase upon those returned in recent weeks, and included 20 in Glasgow and 4 in Edinburgh. Of the 14 fatal cases of scarlet fever, 13 occurred in Glasgow, where 3 of the 7 deaths from diphtheria were also recorded. The 6 fatal cases of measles showed a decline of 10 from the high number in the previous weeks, while those of "fever" showed a slight increase upon recent weekly numbers. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns, which had been 89 and 66 in the two previous weeks, were last week 65, and exceeded by 11 the number returned in the corresponding week of last year. The causes of 72, or 14·4 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 19·3 and 23·0 per 1000 in the two preceding weeks, declined to 22·4 in the week ending the 9th inst. During the first six weeks of the current quarter the death-rate in the city averaged 21·7 per 1000, the rate during the same period being equal to 23·3 in London and 17·2 in Edinburgh. The 151 deaths last week in Dublin were within four of the number in the previous week, and included 23 which were referred to the principal zymotic diseases, against 16 and 22 in the two preceding weeks; of these, 8 resulted from diarrhœal diseases, 6 from scarlet fever, 6 from "fever" (typhus, enteric, or simple), 3 from whooping-cough, and not one either from small-pox, measles, or diphtheria. These 23 deaths were equal to an annual rate of 3·4 per 1000, the rate from the same diseases being 4·9 in London and 2·1 in Edinburgh. The fatal cases of diarrhœa showed a decline of 3 from the number in the previous week; the 6 deaths referred to scarlet fever showed a slight increase upon recent weekly numbers. The 6 fatal cases of "fever" corresponded with the number in the preceding week. Three inquest cases and 2 deaths from violence were registered in the city during last week; and 57 deaths occurred in public institutions. The deaths of infants showed a considerable decline, while those of elderly persons exceeded the numbers in recent weeks. The causes of 21, or nearly 14 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ADMIRALTY.—Fleet Surgeon Donald MacIver, M.D., has been placed on the retired list.

The following appointments have been made:—Staff-Surgeon W. H. Stewart, to the *Clyde*; Staff-Surgeon A. G. Delmege, to the *St. Vincent*; Staff-Surgeon H. T. Cox, to the *Canada*; Staff-Surgeon H. E. F. Cross, to the *Cambridge*; Surgeon Jeremiah Sugrue, M.D., to the *Watchful*; Surgeon A. G. P. Gibbs, to Haslar Hospital; Surgeon D. S. Gunn, to the *Canada*.

ARTILLERY VOLUNTEERS.—3rd Lancashire: Surgeon Matthew J. Rae, M.D., resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the corps on his retirement.

ENGINEER VOLUNTEERS.—2nd Tower Hamlets (East London): William Bull, Gent., to be Acting Surgeon.

RIFLE VOLUNTEERS.—1st Hertfordshire: Surgeon George Etin, M.D., resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the corps on his retirement.—1st Shropshire: Surgeon Thomas Greville Thursfield, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement. Acting-Surgeon William Thursfield, M.D., to be Surgeon.

Correspondence.

"Audi alteram partem."

THE LONDON UNIVERSITY PRELIMINARY SCIENTIFIC EXAMINATION.

To the Editor of THE LANCET.

SIR,—In the interest of many deserving students, whose honest labour is being cruelly wasted, and whose prospects in life are being seriously injured, I ask you to publish the accompanying papers in physics recently set at the Preliminary Scientific Examination of the University of London.

INTERMEDIATE SCIENCE AND PRELIMINARY SCIENTIFIC (M.B.) PASS EXAMINATIONS, 1884.

Experimental Physics.

Examiners: Professor G. Carey Foster, B.A., F.R.S.; and Professor A. W. Reinold, M.A., F.R.S.

Tuesday, July 22nd. Morning—10 to 1.

1. A railway train of 300 tons is running at 45 miles an hour: find its energy of motion in foot-tons. Also, if the engine while getting up the speed of the train does work on it at an average rate of 100 horse power, show how long it will take to get up the speed of 45 miles an hour. [Take $g=32$ (feet, seconds); 1 horse power = 33,000 foot-pounds per minute.]

2. A cage weighing 240 pounds is lowered with uniform acceleration down the vertical shaft of a coalpit, the velocity changing from 100 to 200 feet per second while the cage descends 600 feet. Determine the force exerted by the cage on the rope by which it is lowered.

3. How can the amount of work done against external pressure during change of volume be expressed numerically? One gram of air is heated under constant pressure from 0° to 10°C.: determine the work, either in *ergs* or in *centimetre-grams*, due to the expansion. [Coefficient of expansion of air $=\frac{1}{273}$. Volume of 1 gram of air at 0°, under pressure of 1 million dynes per square centimetre = 783·8 cubic centimetres. Or, 1 cubic centimetre air at 0° under pressure of 76 c.m. mercury = 0·001293 gram; 1 cubic centimetre mercury at 0° = 13·596 grams; $g=981$ (centim., seconds).]

4. Explain why the rise of temperature due to compression and the fall of temperature due to rarefaction in a sound-wave both tend to raise the velocity of propagation of the wave.

5. How does the pitch of the note sounded by an open organ-pipe depend on the length of the pipe and the velocity of sound in air? Show how the note is affected by changes of temperature.

6. Describe some method by which the expansion of water has been studied. If δ be the expansion of water between 4° and 0°C. and Δ its expansion between 4° and t°, show what is the density of water at t° referred to water at 0°. 7. How does the boiling point of a liquid depend on the pressure to which it is exposed? Describe Regnault's method, founded on the variation of boiling-point referred to, of determining the maximum pressure of vapours at various temperatures. 8. Two air-thermoscopes, one with a clear glass bulb, the other with a bulb covered with gold-leaf, are placed (a) one after another at the principal focus of a convex lens presented to the sun; (b) at equal distances in front of a common fire. In both cases the thermoscopes are found to be unequally heated. How do they differ, and why?

Afternoon—3 to 6.

1. Describe the principle of measurement employed in the torsion-balance. A magnet suspended by a fine vertical wire hangs in the magnetic meridian when the wire is untwisted. If on turning the upper end of the wire half round the magnet is deflected through 30° from the meridian, show how much the upper end of the wire must be turned in order to deflect the magnet 45° or 60° respectively.

2. If a metal ball, hung by a dry silk thread, be made to touch the inside of an electrified metal jar and then carried to an electroscope, the electroscope is not affected; but if the electroscope is connected with the inside of the jar by a wire, it receives a charge. Account for the difference between the two results.

3. *A*, *B*, and *C* are three Leyden jars, equal in all respects. *A* is charged, made to share its charge with *B*, and afterwards to share the remainder with *C*, both *B* and *C* being previously without charge. The three jars are now separately discharged. Compare the quantity of heat resulting from each discharge with what would have been produced by the discharge of *A* before any sharing of its charge.

4. Ten galvanic cells, each of internal resistance 2 and electro-motive force 1·8, are connected (*a*) in a single series; (*b*) in two series of five each, the like ends of the two series being joined together. If the terminals are in each case connected by a wire of resistance 10, show what is the strength of the current in the wire in each case, and compare the rates of consumption of zinc.

5. Two wires whose electrical resistances are as 3 to 5 are connected (*a*) in series, or end to end; (*b*) abreast, or "in multiple arc"; and a current of the same total strength is sent through each combination. Compare the quantities of heat produced per second in each wire in the two cases.

6. When a thermo-electric pile is introduced into the circuit of a

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battery, the strength of the current is reduced rather more than by the introduction of a simple wire of the same resistance as the pile. Account for this effect.

7. A gold fish globe of six inches' radius is filled with water. Determine the apparent position of a point inside the globe, 4 inches from its surface, when seen by an eye outside looking along a radius of the globe.

8. Trace the changes in the position and size of the virtual image formed by a concave lens when the object moves from an infinite distance up to the lens. Explain how the image is formed by the concave eye-piece of an opera-glass.

Besides being extraordinarily difficult and pedantically framed, they deal with departments of natural philosophy far removed from the requirements of future medical men. They might be fit for an advanced class of civil, mechanical, or electrical engineers, devoting all their time and energies to mathematical physics; for young men still under age, who have to get up zoology, botany, and chemistry simultaneously, they are simply disgraceful. It is, therefore, not surprising that, as Dr. Bristowe, himself a distinguished student of the University, has shown, of a hundred who begin this career only ten succeed in completing it. It is also unfortunately obvious that where such recondite and uncommon questions are asked, there must be, even with the greatest care, an advantage given unintentionally to pupils attending the classes of examiners who are themselves teachers.

I am, Sir, yours, &c.,

WILLIAM H. STONE,
August 4th, 1884. Censor, Royal College of Physicians.

HEALING OF WOUNDS IN THE SOUDAN.

To the Editor of THE LANCET.

SIR,—I have had under my care at the Egyptian Military Hospital, Suakin, for fifty-seven days, three men whose right hands were amputated by order of Osman Digma forty-five days before they came under my charge. During these forty-five days they were kept prisoners in chains at Osman's camp at Tamanieb, their wounds being quite unattended to, they themselves having torn a piece off their scanty cloth to wrap round the stumps. When freed, they made their way direct to Suakin and appeared at the hospital for treatment.

As may be imagined, the dressing was in a rather filthy state, but I was surprised to find that active and healthy granulation was going on, with small discharge and no pain, the bones being quite covered by granulations, the stumps large, and healthy ulcers with small healing edges, which after a few days' dressing in hospital grew over the granulations with great vigour. At present the stumps are perfectly rounded, and with a very slight scar where the last of the dermis covered the granulations.

It may interest some of your readers to know how Osman performs his amputations. The right hand of the unfortunate "friendly" was grasped by one man, whilst another tied round the forearm a rope so tightly as to stop the circulation. This rope was dragged upon in one direction, the hand in the opposite. A third operator with one of the ordinary Soudanese curved knives made a circular incision round the wrist over the radio-carpal joint, and so between dragging and cutting the hand was separated from the arm. The method of preventing hæmorrhage was as follows. Before the cord on the arm was loosed, a pot of tallow was placed over a charcoal fire, the men operated on squatting in the usual Eastern fashion till the tallow boiled, then one by one their stumps were thrust into the boiling tallow and kept there till danger of hæmorrhage was supposed to be over. Afterwards they were kept in irons till the day before they appeared in Suakin.

I cite other two cases which have come under my care here.

1. An Abyssinian boy, sixteen years of age, who was in General Baker's battle of Teb, was retreating with the other Abyssinians engaged there, when he was struck by a spear over the superior border of and close to the right scapula, the spear penetrating in a downward direction, and the point making its exit below the clavicle at the junction of the middle and outer third. After receiving the wound the boy assisted in killing the man who struck him, and ran seven miles—i.e., to the harbour of Tokar; he was then shipped to Suakin. The spear measured four inches wide at its tip to 2in. at its base, and from 1in. to ¾in. thick in its central rib. No important blood-vessels were injured, no nerve cords were much hurt, and not a bad symptom appeared in the wound, which was quite healed in six weeks. For two or three weeks afterwards he had slight pain in the course of the musculo-spiral nerve, which quite disappeared.

2. An Abyssinian was shot at the battle of Tamar, the ball passing through the upper part of his thigh close behind the femur, then through the scrotum without injuring the testicles or cords. He was walking about in hospital in the three weeks.

I believe all these cases are examples of the rapid and certain healing of wounds so often seen here in natives of the Soudan and Abyssinia. Many other cases have come under my notice. In no cases have I seen suppuration, except in those where no precautions have been taken to keep the wounds clean, and the Listerian antiseptic system is not carried out by me. Abstinence from alcoholic liquors and simple feeding might be said to explain the sure healing of the wounds of the Soudanese, but not of the Abyssinians, who drink whenever opportunity occurs, and eat as much butchers' meat as they can afford, and on special occasions without cooking it. The dressings used in all the cases cited were simply carbolic water, lint, and gutta-percha tissue; over that a compress of cotton cloth and a bandage.

I am, Sir, yours truly,

ALEX. GALBRAITH, M.B.,
Suakin, July 26th, 1884. Surgeon-Major, E.A.

THE ANCOATS MURDER CASE.

To the Editor of THE LANCET.

SIR,—Since the issue of last week's LANCET, in which you make some comments in a leading article on what has been called the Ancoats murder, my attention has been directed to certain facts connected with the case. It appears that the accused man, Donnelly, was, eighteen months ago, a patient of mine at the Hospital for Epilepsy and Paralysis, suffering from a severe form of epilepsy, accompanied with serious attacks of temporary mental derangement. At that time the patient stated that under the influence of his complaint he had frequently committed assaults and other crimes, for which he had been arrested, and even wrongly punished by imprisonment. While in the hospital, on several occasions he performed acts of violence obviously under insane impulses, and of which he was afterwards totally unconscious. He was finally discharged unrelieved, and considered as incurable. Although it was obvious at the time that this individual should have been placed under some kind of restraint, the law does not recognise the necessity of interfering with the liberty of the subject under such circumstances. Accordingly, after years of minor misdemeanours against society, it is only after murder and homicidal assault have been perpetrated—a sister having been killed and a mother mutilated—that the actor in all these offences has received the official attention which his case has so long merited. Furthermore, this unfortunate wretch, having at last been arraigned before a jury of his countrymen, has been compelled to undergo the mental torture not only of being tried for the most awful crime of which a man can be accused, but of being pronounced guilty of wilful murder, and actually sentenced to death as a malefactor of the most brutal and unnatural type. That this legal judgment has since been partially remitted will be little consolation to the accused or his family, after all the agonies of mind they must have endured.

I quite agree with your editorial remarks that the essential facts connected with an important criminal inquiry should be elicited at the trial, and not after the accused has been condemned to death as a murderer, and my object in addressing this letter to you is to express the opinion that in this case the disastrous uncertainty might have been entirely avoided had the matter been properly investigated at that time. There seems, in short, to have been an oversight on the part of the defence in failing to ascertain the ordinary circumstances in behalf of the prisoner. He had been a patient of Dr. Dreschfeld of Manchester, who doubtless could have testified to his condition. He was under my own observation for some months. I possess full notes of his case, and could have strongly advocated his irresponsibility. Although the authorities were duly informed that the accused had been in infirmary at least two public hospitals, no efforts were made to utilise this evidence in his favour, and no medical man was called upon to prove his mental condition. These, in short, who could have placed the whole matter in such a light as would have convinced any jury

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of the innocence of the prisoner were in no way consulted. All that was thought necessary in this respect was to demand the attendance of a nurse as a witness, who was called upon to answer questions of opinion which might have severely taxed the acumen of the most talented psychologist. Even this was the result of chance, and due to the matron of one hospital, who, accidentally seeing the case in the newspapers, voluntarily communicated with the police, informing them of our experience of Donnelly's habits.

Without going further into this case than pointing out the absence of obtainable medical advice, does it not appear that, owing to its omission, the defence was very imperfectly conducted, and that there was great negligence in failing to elicit what would have been of vital importance to the accused? No one acquainted with the mental condition of the prisoner, and reading the public reports of his trial, could have the slightest doubt of his irresponsibility in the crime he committed, and had the sentence of the law been carried into effect, it would have been little else than an official murder. Had this been properly represented to the jury at the trial, there can be no question that their verdict would have been different. It is scarcely justice that in this momentous problem of trying a man for his life important considerations should be withheld, and that, as a result, a man should be denounced as a murderer, condemned to death, and only saved from execution by a tardy and precarious after-investigation. As it is, the public have a right to be informed whether this individual is for the future to be considered and treated as a lunatic, and consequently as an innocent man, or whether he is to undergo penal servitude for life as a malefactor.

I am, Sir, yours faithfully,

Queen Anne-street, Aug. 12th, 1884. A. HUGHES BENNETT.

LIVERPOOL.

(From our own Correspondent.)

THE HOLIDAY SEASON.

This annual holiday, so grateful to all who dwell in large cities, has already been enjoyed by a large number of citizens, including both practitioners and patients. Liverpool possesses admirable facilities for a pleasant holiday trip. Within a short railway journey are the English lake and Welsh mountain districts. Seven hours' pleasant journey by rail brings visitors to Glasgow or Edinburgh, whence all that is attractive in Scotland may be easily reached. Those who prefer the sea have an *embarrass de richesse* in the many sea trips which are offered daily to the Welsh and Irish coasts, the Isle of Man, and the west coasts of Cumberland and Scotland. A very enjoyable trip is from Liverpool to Leith round the north of Scotland, calling at Oban, Stornoway, Stromness, and other points of attraction, occupying five days. Every care is taken to secure the comfort of the passengers, who thus have the opportunity of seeing the most picturesque parts of Scotland under most favourable auspices.

KEEPING OUT THE CHOLERA.

Considering the constant communication which is maintained between Liverpool and the different French seaports, it is gratifying to state that no case of cholera (other than ordinary cases of English cholera) has yet been reported. Every precaution is being taken to prevent infection being imported, and, under the direction of the medical officer of health, the disinfection of waterclosets in crowded streets and courts is being diligently carried out. The *Tarapaca*, a Liverpool ship, was placed in quarantine, having called at Marseilles, and lost one of her hands from what was evidently a case of cholera. It was reported in the local papers that proceedings had been taken against the sanitary authorities by the owners of the vessel, but this has been contradicted by the latter, who were only too willing to afford every assistance.

THE HEAT.

Although the thermometer has not attained here the height recorded in London, it has been higher than has been known for some years, considerably exceeding 80° in the shade. For some days past there have been appearances indicating a coming storm, and, at the present time, it is much cooler.

THE RECENT CASE OF GOOD *v.* WHITTLE.

Actions against medical men have a tendency, like some diseases, to appear from time to time in an epidemic form, and the recent cases in which Mrs. Weldon was the plaintiff, the Bower and Keates case, and others, would show that the present year is witnessing a recurrence of this epidemic. The case of Good *v.* Whittle, which came to a close last Saturday, has happily ended, so far, in favour of the defendants, who will, however, it is feared, be subject to heavy costs. The verdict has been received with much satisfaction in professional circles, it being evident that they acted throughout in perfect good faith.

IRELAND.

(From our own Correspondent.)

QUEEN'S COLLEGES COMMISSION.

THE members of this Commission held a brief meeting on the 7th inst. Dr. Banks, Regius Professor of Medicine in the University of Dublin, was examined, and stated that his opinion of the standard of education both in Arts and Medicine in the Queen's Colleges was very high. He considered that the period of study for the profession of medicine was too short in this country, and believed that competitive examinations had done a great deal of harm. He objected to men without sufficient education entering the profession, and thought it a great pity that poor men should do so. The Commissioners on Monday last resumed that part of their inquiry relating to the medical schools in connexion with the Queen's Colleges, when Dr. Cruise and Messrs. W. J. Stoker and McArdle were examined.

MERCER'S HOSPITAL, DUBLIN.

Steps are being taken to have this institution—one of the oldest in Dublin, its existence dating back 150 years—enlarged by an addition fronting King-street. The projected building will comprise a new surgery, theatre, and pharmacy, with apartments for the house-surgeon, matron, and resident pupils; and it is also intended to provide a new waiting-room for extern patients. It is probable that a pay-ward will be established, as exists in most hospitals, and which it is expected will add to the funds of the institution. At present there is a debt due amounting to some £1800, which impedes the usefulness of the hospital, and it is to be hoped that the charitable will remove this debt and contribute liberally towards the expense of erecting the projected addition for a very deserving institution.

MIDDLETON WATER-SUPPLY AND SEWERAGE.

In consequence, as alleged, of the insanitary condition of this town, and the impure and insufficient supply of water, 108 cases of fever were treated in the hospital during the past ten months, with a mortality of 37. Dr. Foley, the medical officer, has drawn attention to the subject, and the Local Government Board have requested the guardians to take immediate steps to remedy the defects complained of.

PRECAUTIONS AGAINST CHOLERA.

Arrangements have now been completed for the berthing of infected vessels arriving in Dublin. Two large buoys have been placed at the North Wall Basin, where such vessels will be moored until removal from quarantine. The hospital ship has also been thoroughly fitted up for the reception of patients.

A BELFAST HOSPITAL SATURDAY.

A meeting of the special committee appointed to promote this movement was held recently at the Belfast Royal Hospital. The collection has been arranged to take place at upwards of one hundred stations on the last Saturday of this month, and it is to be hoped that the undertaking will be generously supported.

EXCISION OF THE LOWER JAW.

A few days ago Mr. Lambert H. Ormsby, of the Meath Hospital, Dublin, removed part of the lower jaw of a woman aged twenty-seven for a secondary return of ossifying sarcoma. A free incision was made, splitting the cheek from the commissure of the lip to the lobe of the ear, which laid bare the tumour, which was removed quite close to the temporo-

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maxillary articulation. Considerable hæmorrhage followed from an unusual number of vessels, which were tied with chromocised gut. The case has since progressed favourably. Mr. Ormsby also operated on a woman aged thirty, who had undergone Symes' amputation of the foot six years previously; and although the parts rapidly healed, she had suffered the most excruciating pain in one defined spot at the end of the stump. An exploratory incision was made over the spot indicated, and a small piece of silver suture that had become embedded in the soft parts close to the bone was removed, and which had no doubt given rise to the pain for the past six years.

An election for a medical officer to Dundalk Workhouse took place last Monday, when Dr. Kearney was appointed at a salary of £100 per annum, with a fee of one guinea for each consultation as sanitary officer.

Dublin, Aug. 12th.

PARIS.

(From our own Correspondent.)

THE CHOLERA.

CHOLERA is still lurking in and about the neighbourhood of Toulon and Marseilles, but the admissions and deaths are steadily decreasing. The debate at the Academy of Medicine on the epidemic is being drawn out, and M. Fauvel, who is following it from his retreat in the country, has written to say that nothing as yet, either in the course of the malady or in the debate at the Academy, has transpired to induce him to alter his opinion as to its nature. From the discussions, however, it may be gathered that there are three opinions on the subject. The first, which is the most commonly entertained, is, that "cholera nostras," or, as it is also termed, sporadic or simple cholera, is an "individual" malady—that is, it strikes only certain individuals; it is non-contagious, and very different from Asiatic or Indian cholera. The second opinion is that both the maladies are one and the same, differing only in degree. The third is that maintained by M. Fauvel, and perhaps a few others, to the effect that the malady reigning at Toulon and Marseilles is neither the one nor the other, but that the present epidemic was brought about by special local conditions, and that it must die out without extending much farther, as it is essentially non-contagious, and consequently untransportable. Dr. Ernest Besnier, well known for his writings on epidemiology, made a very important communication in response to M. Jules Guérin and other orators at the Academy on the subject of cholera, and in expressing his surprise at the slow progress that is being made in the science of epidemiology, availed himself of the opportunity of proposing the creation of a chair of Epidemiology in all the medical faculties of the French Republic.

A NEARER APPROACH.

A propos of epidemiology and public hygiene, Dr. Linville has proposed at the Chamber of Deputies, a *projet de loi* tending to place under the same direction the different offices of public salubrity, which are just now dispersed among the various Ministers of State, subject to the inconvenience of individuals and the delay of public business.

PRIZES FOR WORKS ON TEMPERANCE.

The Temperance Society of Paris offers a prize of 2000 francs for competition this year for works relating to temperance and to spirituous liquors, in reference either to their composition or to their action on the economy. While no special subject is proposed, the Society would draw particular attention to the following subjects:—"Hereditary Alcoholism," "Measures which should be taken concerning Habitual Drunkards." The money will be divided among the successful candidates. The treatises, which may be printed or written, are to be forwarded to the General Secretary of the Society, 6, Rue de Mulhouse, Paris, before January 1st, 1885.

DEATH OF BARON THÉNARD.

Baron Thénard, member of the Academy of Medicine and of the celebrated chemist of the same name, died on the 7th inst. at his residence in the Château of [illegible] from the effects of [illegible] the Section of Rural Economy. The scientific works of Baron Thénard are well known to chemists and agronomists. It was this distinguished chemist who first succeeded in liquefying phosphoretted hydrogen, which renders spontaneously inflammable another gaseous substance similarly composed. It is this substance which forms the basis of the ignis fatuus observed in marshy grounds and cemeteries. Baron Thénard devoted a great deal of his time and attention to the phylloxera, and was member of the commission instituted in France in view of remedying the evil caused to the vineyards in this country.

Dr. Lannelongue has been appointed Professor of Surgical Pathology at the Paris Faculty of Medicine, in the room of Dr. Le Fort, transferred to the Chair of Clinical Surgery.

August 13th.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Lords on Thursday, the 7th inst. the Canal Boats Act Amendment Bill was read a third time and passed. On Friday, the 8th, the Criminal Lunatics Bill was read a third time and passed.

On Tuesday, the Disused Burial-grounds Bill, the object of which is to make it illegal to erect any building upon such grounds except those connected with the church attached thereto, was read a third time and passed. The Chloride, &c. Protection Bill was also read a third time and passed.

Sewage of London.

In the House of Commons on Friday, August 8th, in reply to Mr. Borlase, Sir C. Dilke gave explanations as to the amount and cost of the disinfectants employed in deodorising the sewage of London. About twenty tons of perchlorides of lime, and between three and four tons of permanganate of potash, are used for the purpose, the cost for the latter being about £130, and of the former £9 per ton.

The Army Medical Department.

On Tuesday, Mr. Ross asked the Secretary of State for War whether the prefix "Royal" was to be omitted from the Army Medical Department, notwithstanding the recommendation of Lord Morley's Committee that it should be constituted a Royal corps. The Marquis of Harrington said the recommendation of Lord Morley's Committee referred to in the question was not a very strong one, and might perhaps be regarded rather in the light of a suggestion. Looking at the position of other military departments which had not this distinction, he did not think it desirable to act upon the suggestion of the committee.

Obituary.

SIR ERASMUS WILSON, F.R.C.S.

THE death of Sir Erasmus Wilson, late President of the Royal College of Surgeons, occurred at Westgate-on-Sea on the 7th inst. On the 23rd ult. Sir Erasmus attended at the consecration of St. Saviour's Church, Westgate-on-Sea, of which he had laid the first stone eleven months previously, and three days later he was attacked by inflammation of the bowels which terminated fatally. During the last twelve months he had endured the affliction of almost total blindness.

The son of a naval surgeon, James Erasmus Wilson was born in 1809. He obtained his professional education in London and Aberdeen, and became a Member of the College of Surgeons in 1831. He was appointed Demonstrator of Anatomy at University College. On the retirement, however, from University College Hospital of Mr. Jones Quain, Mr. Wilson severed his connexion with the institution and established the Sydenham College School of Anatomy, an undertaking which did not prove successful. He then commenced practice in Charlotte-street, Bloomsbury square, and there by means of taking pupils, and [illegible] on for some years. His father, after serving [illegible] navy, engaged a large mansion at Dublin, [illegible]

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purpose of carrying on a private lunatic asylum, and it was here that Mr. Wilson became acquainted with the late Mr. Wakley, Coroner for Middlesex. Some time afterwards he was appointed sub-editor of THE LANCET, a position he held for about three years; after relinquishing this post, he was for a considerable time upon the staff of writers. He was appointed consulting surgeon to the Marylebone Infirmary, an appointment which he held during a great part of the time that the late Dr. Boyd was resident surgeon; here he had extraordinary opportunities of witnessing every phase of hospital surgery.

Having chosen skin diseases as his specialty, Mr. Wilson visited the East to make himself acquainted with leprosy. He went for his holidays to Switzerland and the Valais to examine goitre, and roamed over Italy with an eye rather to ringworm and the many cutaneous disorders of an ill-fed peasantry than to the artistic beauties of the country. Among the best known of his works are "The Dissector's Manual," "The Anatomist's Vade Mecum," "The Student's Book of Diseases of the Skin," "A Healthy Skin—a popular treatise on its management," "Report on Leprosy," the article on "Skin" in Cooper's Surgical Dictionary, and some elaborate Anatomical Plates. He also wrote articles and reports for journals of medicine and science, and was for a time correspondent on Surgery to the Academies of Medicine of Paris and Leipsic. It is unquestionable that Mr. Wilson knew more about skin diseases than any man of his time. He cured where others had failed to cure; and his works on Dermatology, though they met with pretty searching criticism at the time of their appearance, have nearly all maintained their position as text-books. The horrible cases of scrofula, anæmia, and blood poisoning which he witnessed among the poor of London—they are happily rarer now than they were half a century ago—enlisted his warm sympathies. But he had to deal with rich patients as well as poor, and over these the masterful stamp of his mind enabled him to exercise despotism in matters of diet. Wilson was not only a consummate dietician, but he knew how to make his patients submit to have their bodies placed under martial law.

The greatest incident of his career, however, and that which brought him into notice with the general public was the inquest at Hounslow upon the body of a soldier who had died after the receipt of a regimental flogging. This inquest was held by the late Mr. Wakley, and engaged the attention of the public for many days. After ten adjournments a verdict was given, owing in a great measure to Mr. Wilson's evidence, to the effect that death was caused by the flogging. This occurrence proved the death-blow to flogging in the army, and the inquest was soon followed by a Parliamentary inquiry, which resulted in that punishment being erased from the regimental code.

Professional honours were lavished on Mr. Wilson abundantly in reward of his labours. He became Fellow of the College of Surgeons in 1843, member of the Council in 1870, and President in 1881. In 1869 he founded, at his own expense, the chair and museum of Dermatology in the College of Surgeons, and was elected the first professor. He also instituted the chair of Pathology in the University of Aberdeen. In our last issue we announced that at a meeting of the Council of the Royal College of Surgeons the honorary gold medal of the College was awarded to Sir Erasmus Wilson in recognition of his great liberality in his contributions to the museum, in the endowment of the pathological curatorship, and in the foundation of the professorship with which his name will always be associated. Since this medal was founded in 1800 it has only been six times presented.

Erasmus Wilson erected a chapel and a new wing to the Sea-bathing Infirmary at Margate; he built the master's house at the Epsom Medical College in 1872; and restored the Church of Swanscombe, Kent, in 1873. For these and other similar acts of bounty Her Majesty conferred the honour of knighthood on Mr. Wilson in 1881; but by that time he had earned national fame of a new sort by bringing the obelisk—generally but inaccurately named Cleopatra's Needle—to England. This obelisk was one of two which had long lain in the sands at Alexandria. The French have one which has stood in the Champs Elysée since 1835. That which now adorns the Thames Embankment was acquired for Great Britain by Sir Ralph Abercromby in 1801; but it was not removed. It was offered to the British Government by Mehemet Ali in 1840, and again by the Khedive in 1877; but still the British Government did not think it worth while to incur the expense of transport. Erasmus Wilson thought this derogatory to the national dignity, and undertook to have the obelisk brought over at his own cost. This amounted to upwards of £10,000; but eventually it was brought to London, and the obelisk was placed in its present site in September, 1878.

Respecting his wealth, it is well known to all his friends that Sir Erasmus did not amass this merely as the result of his professional practice; it was the fortunate investment of his "guineas," which multiplied in various metropolitan companies, amongst which "gas" may be cited as wonderfully lucrative, and it has been stated that he was one of the largest shareholders in metropolitan and suburban gas companies. Railways, also, he dealt largely in, and always to his great benefit.

Sir Erasmus Wilson leaves no issue. He was married in 1841 to Miss Doherty, daughter of Mr. James Doherty, who survives him. A brother, Dr. Morris Wilson, who assisted him in his early practice, also survives him. We regret to say that this gentleman has been for the last twelve years utterly prostrate, suffering from paralysis. In addition to this affliction, which he has borne with Christian patience, Dr. Marris Wilson also suffers from total blindness.

The funeral of Sir Erasmus Wilson took place on Wednesday, when his remains were interred in Swanscombe Churchyard.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen passed the Primary Examination for the Licence on August 7th:—

C. R. Adams, J. V. Albart, G. R. Anderson, J. R. Anderson, J. W. Applegate, E. A. Armstrong, G. C. B. Atkinson, J. C. Baines, G. T. C. Barber, A. M. Barford, W. J. T. Barker, W. B. Barnard, H. N. Baron, H. C. Barr, J. C. Barr, E. Barrett, S. E. Barrett, W. J. Bearblock, J. Beddow, J. H. Blakeney, W. Bowden, W. G. Bower, J. A. Bradbury, F. C. Brodie, H. Browne, R. H. J. Browne, A. J. Bulger, H. M. Burke, A. Carter, A. L. Castel, C. D. Christmas, F. W. Clark, W. B. Cockill, S. J. Cole, H. S. Collier, A. W. Cooke, T. S. Coombe, H. A. W. Coryn, J. J. Coulton, E. Creighton, E. W. Crossley, H. Dane, F. M. Davies, G. C. Davis, J. P. De Buriatte, A. J. De Butts, E. A. G. Downing, H. E. Drake-Brockman, C. H. Eccles, A. D. Edginton, G. A. Etsell, H. H. Ellis, W. N. Evans, F. W. Farr, W. Fisher, W. F. Fisher, J. R. Gallard, T. W. Gibbard, J. H. Gilbertson, J. C. Gilmour, J. Girling, J. Good, L. D. Gover, C. T. Griffiths, B. Hamilton, H. Hamilton, E. B. Harris, P. R. T. Harris, F. S. Hawkins, W. H. Athey, H. H. Heffernan, A. G. Hendley, R. G. Hicks, C. M. Hill, C. U. P. Hogarth, E. B. Holland, A. K. Holt, H. Holyoake, S. P. Hosegood, W. L. Hubbard, A. H. W. Hunt, W. R. Y. Ives, A. W. James, P. D. James, J. H. E. Jarvis, H. H. Joslen, L. E. Jowers, T. W. Kelly, G. D. Kerr, E. E. Kershaw, T. M. King, H. W. Knowles, E. L. Lancaster, W. H. Lane, C. B. T. Langton, E. T. Latham, H. Layne, B. A. Lewis, H. W. Lewis, H. Lloyd, A. Lucas, K. W. I. Mackenzie, H. H. B. Macleod, C. T. B. Maisey, R. E. Mann, H. R. Manser, H. B. Marriott, G. Michelmore, J. Moore, F. B. Morse, W. Mortimer, J. E. Moyes, W. G. Nash, F. Naumann, S. Nicklin, J. Nixon, J. Norton, F. Osborne, A. D. Owen, A. T. Ozzard, F. Pain, F. W. Parker, W. Parker, G. W. F. Paul, W. P. Peake, H. J. Pocock, J. E. L. Pollard, A. F. Poolman, T. M. Porter, E. E. Powell, W. Powell, P. Preebin, E. L. Puddicombe, S. W. Quartley, H. E. Rayner, B. Raines, G. W. Richards, A. Rigden, T. W. Robbins, C. D. H. Rogers, J. C. V. Sapp, W. J. Scott, H. B. Seddon, H. F. Semple, R. W. Senior, R. R. Siemen, F. J. P. Smith, H. Smith, E. A. Snape, H. Stelfox, P. W. Sweatfield, P. C. H. Strickland, W. C. Swayne, F. R. P. Taylor, J. Thomas, T. N. Thomas, W. Thompson, A. Turner, W. Venis, W. H. Vickery, C. S. Vines, C. H. Wade, R. F. Waites, C. H. Walsham, R. V. Walsh, A. H. Ward, W. Watkins, R. E. Wellington, H. F. Wiltchurch, E. R. White, J. H. White, G. R. Williams, J. F. Williams, A. Wilson, J. W. Winterbotham, F. D. Woodhouse, W. Woodward, W. L. Woolcombe, G. C. W. Wright.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 7th inst.:—

Dumbleton, Charles Eardley, L.S.A., Tasmania.
Godfrey, H. J. Clatterdon, L.R.C.P. Edin., Lee-park.
Hooge, William Theodore, Middleton.
Mathews, H. E. Hamerton, L.R.C.P. Edin., Longsight, Manchester.
Reily, Alexander Yates, L.S.A., South Norwood-hill.
Shepherd, Lionel John, L.R.C.P. Edin., Torquay.
Spong, Charles Stuart, L.S.A., Clapham.
Visger, Harman, L.S.A., Clevedon, Somerset.
Waite, Henry, L.R.C.P. Edin., Leeds.

Admitted Members of the College on the 8th inst.:—

Allen, Sydney Glean, L.R.C.P. Edin., Maida-vale.
Evans, Tegid Aneurin, L.R.C.P. Edin., Clapham.
Greenway, John Henry, L.S.A., Belvedere.
Hinds, Frank, L.S.A., Goudhurst, Kent.
Humphreys, Charles Evan, L.S.A., Llanfair, Welshpool.

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Low, Charles William, L.R.C.P.Lond., Plumstead.
Milner, James, L.R.C.P.Edin., Barnsley, Yorks.
Robertson, James Sprent, L.S.A., West Kensington-park.
Tomalin, W. J. Clarkson, L.S.A., Northampton.

The Final Examination for the Membership of the College, which commenced on July 18th, was brought to a close on August 8th. Of the 365 candidates examined, 149 passed to the satisfaction of the Court of Examiners and obtained their diplomas; 75 passed in Surgery, and when qualified in Medicine and Midwifery will be admitted Members; the remaining 141 failed to reach the required standard, and were referred to their further professional studies. Forty-two candidates who had passed in Surgery at previous examinations, having subsequently obtained a Medical degree or licence recognised by the College, were also admitted Members. This is the last examination for the Membership of the College until October. The Museum and Library will be closed as usual during the month of September for the necessary repairs, painting, &c.

UNIVERSITY OF LONDON. — The following candidates have passed the recent Intermediate Examination in Medicine:—

ENTIRE EXAMINATION.

FIRST DIVISION.

Alexander, Sidney Robert, Guy's Hospital.
Bahadurji, Kaikhosro Nasarvanji, University College.
Balgarnie, Wilfred, St. Bartholomew's Hospital.
Biddlecombe, Edward Henry, St. Bartholomew's Hospital.
Bradford, John Rose, B.Sc., University College.
Brook, William Henry Breffit, St. Bartholomew's Hospital.
Brown, Frederick Nathaniel, St. Bartholomew's Hospital.
Burghard, Frédérick François, Guy's Hospital.
Chitty, John Shaw Willes, Charing-cross Hospital.
Clarke, James Jackson, St. Mary's Hospital.
Clarke, William Frederick, Guy's Hospital.
Featherstone, William Barltrop, Queen's and Mason Colleges, Birmingham.
Helme, Thomas Arthur, University of Edinburgh and University College.
Lawrence, Thomas William Pelham, University College.
Lyndon, Arnold, St. Bartholomew's Hospital.
Macevoy, Henry John, B.Sc., St. Thomas's Hospital.
Mariette, Ernest Paul Alphonse, King's College.
Rowell, George, Guy's Hospital.
Smith, John Anderson, St. Bartholomew's Hospital.
Thompson, James Edwin, Owens College.
Tomlinson, William Henry, Owens College.
Tonking, John Herbert, St. Thomas's Hospital.
Toogood, Frederick Sherman, University College.
Trevelyan, Edmond Fauriel, St. Bartholomew's Hospital.
Wheatley, James, King's College.

SECOND DIVISION.

Ashworth, John Wallwork, Owens College.
Barclay, Wilfred Martin, Bristol Medical School.
Bindley, Robert Alfred, Guy's Hospital.
Blackler, Henry John, Guy's Hospital.
Bowman, Henry Claxton, Owens College.
Brazil, Walter Henry, Owens College.
Brown, Herbert Henry, University College.
Burrell, Arthur William, London Hospital.
Castle, Bernard, St. Bartholomew's Hospital.
Davis, Arthur Holdsworth, St. Bartholomew's Hospital.
Dobson, Leonard Charles Talbot, St. Bartholomew's Hospital.
Elliott, William Henry Wilson, Guy's Hospital.
Furnivall, Bryan, St. Bartholomew's Hospital.
Gardner, William Thomas, St. Bartholomew's Hospital.
Gault, Arthur Henry, Owens College.
Gee, Frederick William, University College.
Godfrey, Albert Edward, St. Thomas's Hospital.
Greig, Duncan McBean, University College.
Hamel, Julius, University College.
Hensley, Philip Henry, King's College.
Holder, Sydney Ernest, University College.
Jordan, Walter Ross, Queen's and Mason Colleges, Birmingham.
Kauffmann, Otto Jackson, Owens College.
Lindow, Albert, King's College.
Luff, Arthur Pearson, B.Sc., St. Mary's Hospital.
Lys, Henry Grabham, London Hospital.
Moore, Robert Lee, Queen's College, Belfast.
Nevins, John Ernest, Guy's Hospital and Liverpool School of Medicine.
Pagden, Trayton Charles, St. Bartholomew's Hospital.
Permewan, William, University College.
Pugh, John Williamson, London Hospital.
Rivers, William Halse Rivers, St. Bartholomew's Hospital.
Seville, Charles Frederick, Owens College.
Smith, Hugh, Guy's and London Hospitals.
Solly, Ernest, St. Thomas's Hospital.
Spencer, Walter George, St. Bartholomew's Hospital.
Sunder, Charles Edward, University College.
Swayne, Walter Careless, Bristol Medical School.
Wheaton Samuel Walton, St. Thomas's Hospital.
Wheeler, James Atkin, Guy's Hospital.
Young, Charles Wheeler Forest, St. Bartholomew's Hospital.

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.

Smith, Henry Ernest Hill, King's College.

SECOND DIVISION.

Green, Albert, Guy's Hospital.
Kelson, William Harry, London Hospital.
Oliver, Charles Pye, Charing-cross Hospital.
Risdon, William Newt, Guy's Hospital.
Stewart, Arthur Hastings Lanfear, St. Mary's Hospital.

PHYSIOLOGY ONLY.

FIRST DIVISION.

Eady, George John, King's College.
Taylor, Charles Henry, King's College.
Wynter, Walter Essex, Middlesex Hospital.

SECOND DIVISION.

Ackland, Charles Kingsley, King's College.
Williams, Reginald Munro, St. Thomas's Hospital.

The name Nicholas Charles Ridley (St. Mary's Hospital) was inadvertently omitted from the list published last week of gentlemen who passed the Preliminary Scientific Examination of the University.

UNIVERSITY OF ABERDEEN.—During the past year the following candidates received the degree of M.D.:—

Brand, Alexander Theodore, M.B., C.M., Driffield, Yorkshire.
Brown, William Carnegie, M.B., C.M., Penang.
Davies, Morgan, M.B., C.M., Llangwyryfon, Cardiganshire.
Fehrsen, Frederick John, M.B., C.M., Kingston, Jamaica.
Findlater, Sylvester Williamson, M.B., C.M., Dufftown.
Footner, Edward, M.B., C.M., Brigade Surgeon.
Hodgson, Joseph Willoughby, M.B., C.M., Exmouth, Devon.
Jones, Timothy Siddall, M.B., C.M., Swansea.
Knowles, Edward, M.B., C.M., Birkenhead.
Le Mottée, G. H., M.B., C.M., Army Med. Depart., Chatham.
Low, Charles, M.B., C.M., Arbroath.
Millar, James, M.B., C.M., Arbroath.
Moir, John Hay, M.B., C.M., Burton-on-Trent.
Murray, John, M.B., C.M., Surgeon-Major, Ipswich.
Nicol, Alexander, M.B., C.M., Inverurie.
Phillips, Henry Astley, M.B., C.M., Waterbeach.
Robb, J. Bernhardt Klingner, M.A., M.B., C.M., Montrose.
Tuckey, Charles Lloyd, M.B., C.M., London.
Walker, James Hutchison, M.A., M.B., C.M., North Borneo.
Wilde, Percy Roberts, M.B., C.M., Bath.

The following received the degrees of M.B. and C.M.:—

Adamson, Henry M'Kenzie, Morphie, Montrose.
*Allden, George Henry, Southampton.
Anderson, John Hector, Aberdeen.
Anderson, Joseph, Preston.
Barrett, Albert Henry, Wallingford, Berkshire.
Battiscombe, Christopher George, Blackheath.
Bennet, Francis Alexander, M.A., Cullen.
Bett, James Wilson, Dundee.
*Clark, William Ronaldson, M.A., Edinburgh.
Cook, James Will, Alness.
Cowie, Alexander Mitchell, Mortlach.
Craig, James Forsyth, M.A., Leslie, Insch.
Currie, George Burnett, M.A., Aberdeen.
Dalton, Henry Moger Cyril, Newcastle, New South Wales.
Davidson, Alexander Gordon, M.A., Wartle, Aberdeenshire.
Duffus, George, Cullen.
Duguid, Alexander Gray, Longside, Aberdeenshire.
Elmslie, Walter Angus, Resthawet, Chapel of Garioch.
Faulkner, Charles Albert, Rajahmundry.
Fehrsen, John Andrew, Graaf Reinet, South Africa.
Forster, William Revely, Blyth, Northumberland.
*Gibson, Thomas Best, M.A., Aberdeen.
*Gordon, John, Keith.
Graham, Thomas Bell, Ecclefechan.
Grant, Andrew, Balmoral.
Harrisson, John William, Sandwich, Kent.
Lyall, Charles Robert, Aberdeen.
Macdonald, Stuart, Elgin.
Mackintosh, Frank James, M.A., Deskford, Cullen.
Maclean, Alexander, F.R.C.S. Ed., Thurso, Caithness.
Maclennan, Andrew Anderson, Nairn.
Milne, George, Methlic.
Mitchell, James, Aberdeen.
Munro, James Mitchell, Inverurie.
Murchison, Alexander, Lochearron.
Poonen, Eapen, B.A., India.
Pressile, Robert Dowell, Aberdeen.
Reid, Alexander, Auchindoir.
Reid, Irvine Kempt, Aberdeen.
*Roberts, Alfred Ernest, London.
Robertson, William, M.A., Rathen.
Russell, John, Longhope, Orkney.
Ruxton, William Ledingham, West Riding Asylum, Wakefield.
Savege, James, Montrose.
Simpson, Patrick George, Aberdeen.
Sutherland, William Leith Ireland, Aberdeen.
Thiele, Herman, Bermuda.
Walker, Leslie Fyfe, Aberdeen.
Webb, John Eustace, Windsor.
*Will, James, Ellon.
Windle, John Thomas, Burnley.
Young, James Martin, Boyndlie, Fraserburgh.

* Received their Degrees with Honourable Distinction.

The John Murray Medal and Scholarship were awarded to Arthur Greatorex Smith, and will be presented to him along with his diplomas on his attaining the necessary age.

ROYAL COLLEGE OF SURGEONS IN IRELAND. — The undermentioned gentlemen were admitted Fellows of the College at recent examinations:—

Boyd, H. W. B. A.M.D.
McCarthy, Charles William.

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APOTHECARIES' HALL. — The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 7th:—

Bass, Howarth Dentman, Smith-hill Bank, Hampstead.
Carr, John Walter, Bloomsbury-square.
Joberns, William, Aldridge, Walsall.
Waddington, William Tasbman, Kingsford-road.
Spong, Charles Stuart, Clapham.
Viger, Harman, Brompton-road.

The following gentleman also on the same day passed the Primary Professional Examination:—

Pemberton, John Oliver, London Hospital.

ELECTION OF EXAMINERS. — The following gentlemen have been elected Examiners by the Society of Apothecaries for the ensuing year:—Henry Balleek, F.R.C.S. Esq., Drs. Alfred Carpenter, Henry R. Crocker, Robert Fowles, F. de Havilland Hall, Frederick J. Hensley, Robert J. Lee, W. Withers Moore, George H. Savage, John S. Stocker, John C. Thorowgood, and Francis Warner.

BY a majority of twelve to seven the Banbury Board of Guardians have decided not to enforce the Vaccination Act in the town and district.

AT Wetherby Petty Sessions, on the 7th inst., a lodging-house keeper was fined £1 and costs for having wilfully exposed a domestic servant, whilst suffering from an infectious disease—scarlet fever.

SEVERAL cases of death from lightning-stroke have been reported this week. Lamentable occurrences of this kind are often the result of thoughtless disregard of precautions which have been repeatedly indicated

WORKING LADS' INSTITUTE. — Her Majesty the Queen has, through Sir Henry Ponsonby, given her patronage and a contribution of £50 towards the building fund of the Working Lads' Institute, The Mount, Whitechapel, London, E.

AT the Stratford Petty Sessions, on Wednesday, a costermonger was fined 10s. and costs for throwing offal on the public highway. The defendant pleaded that he was unaware that he was breaking the law in thus disposing of his refuse.

A SUBSCRIPTION has been opened at St. Petersburg in order to raise the money for instituting at the University five bursaries in the name of Charles Darwin, to be employed for the maintenance of five students in the five chief branches of Natural Science.

SUICIDE OF A SURGEON.—At an inquest held at Aylesbury, on the 6th inst., on the body of George David Widdas, M.R.C.S., the jury returned a verdict that deceased destroyed himself by taking chloral hydrate, but that there was not sufficient evidence to show the state of deceased's mind at the time.

BEQUESTS.—The late Mr. W. J. Patterson has bequeathed £1000 to the Royal South Hants Infirmary, £500 to the Southampton Dispensary and Humane Institution, and £150 to the St. Mary's Cottage Hospital. The late Mr. Francis Parnell has left £105 to the Manchester Royal Infirmary.

HERTFORD CORPORATION TOWN WATERWORKS.—The Abyssinian tube-well, for the entire supply of the town of Hertford, has been recently completed, with satisfactory results. The size of the tube-well is seven inches and a quarter, and at the depth of eighty-one feet the chalk springs are so abundant that the yield is over 100 gallons per minute. The motor power for pumping is obtained from a water-wheel worked by the river Lea.

THE JOHN REID PRIZE.—The prize founded by the sister of the late John Reid, surgeon, Glasgow, in memory of her brother, is awarded for the best original research bearing on any of the departments of medical science conducted in one of the hospitals or laboratories of Glasgow. The prize, which is of the annual value of £25, was, at a meeting of the trustees held yesterday, awarded for two years to Mr. H. Lyon Smith, who conducted in the Pathological Laboratory of the Royal Infirmary an investigation into the Changes found in the Circulation through the Kidney in certain Pathological Conditions. As a recognition of the high standing of a paper on the Bacillus of Tubercle, sent in by Mr. Leonard Williams, the trustees awarded him £10. This investigation was conducted in the Western Infirmary.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

CLAREMONT, LOUIS BENNETT, M.R.C.S., has been appointed Medical Officer to the No. 2 District of St. Pancras Union, vice Hall, deceased.

CUPP, ROBERT, M.B.Lond., M.R.C.S., has been appointed Medical Officer of Health for the Rural District of the Scarborough Union.

HAINES, ALFRED HENRY, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Tydd District of the Holbeach Union, vice O'Meara.

HICKS, CHARLES CYRIL, M.D. St. And., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Wokingham District of the Wokingham Union, vice Cresswell.

JACK, CHARLES, M.D., C.M.Glasg., has been appointed Medical Officer of Health to the Horsforth Urban Sanitary District, vice Libbey.

JONES, T. W. CARMALT, M.A.Camb., F.R.C.S.Ed., has been appointed Assistant-Surgeon to the Western Ophthalmic Hospital.

KEYWORTH, JOHN WHITE, M.D.Lond., M.R.C.S., has been appointed Resident Medical Officer to the Wellington Hospital, New Zealand.

KING, ERNEST EDWARD, M.R.C.S., L.S.A.Lond., has been appointed Resident Obstetric Physician to the Middlesex Hospital.

KITCHEN, CHAS. F. HEWICK, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer to the Cheetham District of the Prestwich Union, vice Crean.

KNOX, Dr. D. N., has been appointed Surgeon to the Royal Infirmary, Glasgow, vice Morton, whose term of office expires on Nov. 1st.

NEWMAN, ARTHUR JOSHUA, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Farncombe District of the Guildford Union, vice La Fargue.

POPPLEWELL, THOS. WM., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Blisworth District of the Towcester Union, vice Cresswell.

PRINGLE, J. J., M.R.C.P. (of Bruton-street), has been elected an Assistant-Physician to the Royal Hospital for Diseases of the Chest, City-road, vice Dr. Coxwell, resigned, on going abroad.

RAY, HENRY, M.B., Ch.M.Glasg., L.R.C.P., L.R.C.S.Ed., has been appointed Honorary Medical Officer to the Goulbourn Hospital, New South Wales.

ROBERTSON, ALEXANDER, M.D.Glasg., F.F.P.S.Glasg., has been appointed Physician to the Royal Infirmary, Glasgow, vice Dr. James Maclaren, resigned.

SMART, DAVID, L.R.C.P.Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Workhouse in the Tenteth Park Township.

TRAVIS, W. OWEN, M.S., M.B.Durh., M.R.C.S., has been appointed Demonstrator of Anatomy in the Yorkshire College, Leeds.

WHITSON, Dr., has been appointed Assistant-Surgeon to the Royal Infirmary, Glasgow, vice Dr. Lothian, promoted.

WOOD, WILLIAM, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Cranswick District of the Driffield Union, vice R. Wood, resigned.

Births, Marriages, and Deaths.

BIRTHS.

CLAY.—On the 8th inst., at Windsor-villas, Plymouth, the wife of R. Hogarth Clay, M.D., of a daughter.

COLGATE.—On the 5th inst., at Burlington-place, Eastbourne, the wife of Henry Colgate, M.D., F.R.C.S., of a daughter.

CONNOLLY.—On the 7th inst., at Wickham-road, Brockley, Kent, the wife of Surgeon-Major B. B. Connolly, Army Medical Department, of a son.

GRANGE.—On the 6th inst., at Moffat, N.B., the wife of William D'Oyly Grange, M.D., of a son.

HEYGATE.—On the 4th inst., at Wellingborough, the wife of F. N. Heygate, M.R.C.S. &c., of a son.

VLIELAND.—On the 5th inst., at Sydney Lodge, St. Thomas, Devon, the wife of C. J. Vlieland, M.R.C.S., of a daughter.

YOUNG.—On the 17th ult., at Beqeia, St. Vincent, West Indies, the wife of James Vance Young, M.D., of a son.

MARRIAGES.

JEWEL—TUCKER.—On the 5th inst., at St. Peter's Church, St. Pancras, Henry Jewel, M.D., to Kate, second daughter of Mr. C. Tucker.

PARKER—BICKERTON.—On the 7th inst., at St. Bride's, Liverpool, Rushton Parker, B.S., F.R.C.S., of Rodney-street, Liverpool, to Catherine Elizabeth, daughter of the late Thomas Bickerton, Surgeon, of Liverpool.

DEATHS.

BARRAUT.—On the 17th ult., at St. George's-street, Port Louis, Mauritius, Adolphe Rodrigues Barraut, M.D., aged 49.

CAMPBELL.—On the 8th inst., at Warley, Brentwood, Essex, D. Cochrane Campbell, M.D., M.R.C.P., second son of the late Rear-Admiral Campbell, of Barbreck, Argyleshire.

HARRIS.—On the 7th inst., at Buckingham Lodge, Vansittart-road, Torquay, Surgeon-Major F. W. Harris, late Bombay Army, aged 62.

REID.—On the 13th inst., at Madeira-road, Streatham, Alexander William Watson Reid, Surgeon, Royal Navy.

WATSON.—On the 7th inst., Henry Watson, Surgeon, late of Plumstead, aged 84.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 A.M. by Steward's Instruments.)

THE LANCET OFFICE, August 14th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia tion Value.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Aug. 8	30·04	E.	74	67	121	90	64	..	Hazy
" 9	30·06	E.	78	64	120	88	64	..	Hazy
" 10	30·03	S.E.	67	63	113	84	63	·03	Raining
" 11	29·96	S.E.	76	66	123	94	66	..	Hazy
" 12	29·92	W.	75	68	119	81	65	·06	Cloudy
" 13	30·00	W.	70	65	121	80	62	..	Cloudy
" 14	29·99	N.W.	66	60	114	75	60	..	Bright

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

BOGUS AMERICAN DEGREES.

THE following extract from *The Times*, a telegram from one of its correspondents, should be pondered by all who are concerned in either the purchase or the sale of bogus degrees:—"The defunct Medical University of Philadelphia, re-baptised Hospital College, Cambridge and trouble by selling bogus diplomas, has reappeared. The English Consul at Philadelphia, Mr. Clipperton, states that he is in receipt of letters from various parts of Great Britain asking for information about the standing of the College, and to what extent its diplomas are accepted. The Government has thus done all in its power to kill the illegal traffic in diplomas, by cancelling the charter of the College and closing it. If impostors are still committing fraud upon the public through agencies in England, they should be prosecuted by the British authorities."

THE letter of Dr. Cullingworth arrived too late for insertion in our previous issue.

Dr. Stoker (Northampton).—Yes.

ARREST OF DEVELOPMENT OF THIRD RIB IN A FŒTUS.

To the Editor of THE LANCET.

SIR,—The following case, being one of rather uncommon occurrence, may be of interest to some of your readers.

On August 2nd I attended J. H., aged thirty-four years, in her first confinement. Labour commenced on Aug. 1st, at 9 P.M., and delivery took place at 4 A.M. next day. On the right of the infant I noticed a depression in the left mammary region, which, on careful examination, I found to be caused by the arrest of development of the third left rib three-quarters of an inch from the sternum, the free end of the rib being smooth and rounded off, and drawn in at each inspiration. There is a small nodule on the sternum, in the position of the third costal cartilage. The child, a female, weighs seven pounds, measures nineteen inches and a half, weighs six pounds, and is in all other respects well developed and healthy.—I am, Sir, yours faithfully,

Shipley, Yorks, Aug. 9th, 1884. PARRY CARTER, M.R.C.S.

Mr. B. F. Solymos, C.E.—Undoubtedly, one of the principal aims at in wearing flannel or merino next the skin is obtained when the undervest is lined with linen or cotton.

Mr. D. Wilson (Glasgow).—We know nothing of the nostrum.

OPIUM CULTIVATION IN RAJPUTANA.

In consequence of the extension of irrigated works in the province of Rajputana, in India, and the opening of the Rajputana-Malwa Railway, affording the produce easy access to Bombay, poppy cultivation has been considerably on the increase within the last two or three years.

Mr. Rea Edwards.—The paper is received for insertion, and after use the block will be at the disposal of the author.

PREVENTION OF "HARVEST BUGS."

To the Editor of THE LANCET.

SIR,—Hygienic treatment, as a matter of course, is an important factor in preventing attacks of "harvest bugs"—e.g., the clothes of such children should be destroyed, or be exposed to a temperature of at least 150° F., by steaming them, ironing them over with a sufficiently hot iron, or boiling them.

For external application: Calvert's or Macdougal's carbolic acid soap or ointment, or, as a lotion in the following proportions, will be found beneficial: Crystallised carbolic acid, two drachms; spirits of rosemary, an ounce; rectified spirit, half an ounce; distilled water to make up a lotion of six ounces, with which the parts are to be sponged night and morning. Sulphur may be used in the form of vapour baths or fumigations, or the simple or compound ointment of sulphur of the Pharmacopœia with some lavender water. Mercury may also be employed as simple mercurial ointment, or by fumigations with cinnabar, or in solution of the bichloride, in the proportion of ten or twelve grains to an ounce of water, to which some alcohol has been added. The application of sulphurous acid as recommended by Mr. Starkin, seems beneficial: "A warming-pan containing live coals sprinkled with sulphur should be put between the clothes till the sulphur is consumed. A damp napkin held before the mouth will prevent the fumes from entering the lungs." It seems better, however, to submit the bedding (in which cannot be boiled for some hours) to a temperature between 150° and 200°, in a disinfecting chamber or oven. The quickest way of curing and destroying the parasite is to immerse the patient, leaving the head free, in a gaseous bath of sulphurous acid, made by burning twelve ounces of sulphur to a suitable disgrace. While in the bath the patient should be baked, so that in boiling hot water he is saved from irksome pains, and is made free from risk of reinfection.

Internally, the administration of iodide of potassium in small doses, according to age, &c., seems to render the system unsuitable for any further development of the acarus in animals.

I am, Sir, yours obediently,

Osborn place, W.C., Aug. 9th, 1884. C. S. TAYLOR, M.D.Brux.

To the Editor of THE LANCET.

SIR,—I think if Dr. Fox will use a few quassia chips in the morning bath, and sponge the exposed parts of the person with a weak infusion of the quassia once or twice daily, he will find there is complete protection from almost all the annoying insects found in our fields. Even mosquitos fight shy of a person so protected.

I am, Sir, yours faithfully,

St. Leonard's-on-Sea, Aug. 12th, 1884. JOHN T. FINNEY.

METHOD OF TREATING SPRAINS.

To the Editor of THE LANCET.

SIR,—Allow me to remark that in the new method of treating sprains by Mr. Thos. J. Shearer, as published in your last issue, the efficacy lies probably solely in the compression applied through the day, by the knitted joint, by the rubber roller bandage, and not in any to a peculiar discipient property of the clay itself, which could be omitted without the least inconvenience. Thus modified, the method has been contrived and applied, I think for the first time, by M. Marc Sée, who has described it as a kind of compound treatment, combining rest with rubbing or massage, in the *Revue de Chirurgie* of Jan. 10th, 1884. If Mr. Shearer will try the rubber roller bandage alone, without adjunction of clay, he will have undoubtedly the same good results.

I am, Sir, yours truly,

Rue Marignan, Paris, Aug. 9th, 1884. DAVID DININ.

M. C. de Courcy Morris.—The case is one in which the fee should be divided equally.

Mr. Rankin's letter arrived too late for notice this week.

VACCINATION AND SMALL-POX.

To the Editor of THE LANCET.

SIR,—The following case corroborates the article in your issue of the 2nd inst., headed "Vaccination v. Small-pox." Some years ago, during an epidemic of small-pox in Liverpool, I vaccinated an infant [illegible] old. The vaccination was successful, but when the child was [illegible] weeks old the mother took small-pox, and although she continued to suckle the child, it did not take the disease. I remember that during the same epidemic I vaccinated [illegible] on two occasions, but without success, [illegible] on being in the neighbourhood. The vaccination was successful in both cases.

I am, Sir, yours truly,

Liverpool, Aug. 9th, 1884. JOHN SINCLAIR, M.R.C.S.

Mr. Vincent Pleasant (Liverpool).—This investigation [illegible] January.

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Mr. W. F. Macdonogh.—The works needed for examinations for the posts of inspector of nuisances, surveyor, and medical officer of health necessarily differ materially in some respects. There are, however, certain points which they have in common, and these will be found in (1) Dr. Wilson's Handbook of Hygiene, (2) either Mr. Bailey Denton's or Mr. Baldwin Latham's Sanitary Engineering, and (3) the Annotated Model Bye-laws issued by Messrs. Knight and Co., official publishers to the Local Government Board. The official orders relating to the duties of inspector of nuisances and medical officer of health should also be carefully studied.

Messrs. Burroughs and Wellcome.—Application might be made to the Director-General of the Army Medical Department.

"PRICKLY HEAT."

To the Editor of THE LANCET.

SIR,—In a communication on this subject which appeared in your issue of Aug. 2nd the writer relates a case which occurred in his practice in this country, and suggests a remedy. Thinking that perhaps others may have met with similar cases, and, having seen and treated a large number of cases on board ship in India and other parts of the East, I beg to offer the result of my experience. I have never seen a well-defined case in England; and when it does occur it would be most likely to do so in those who have resided in tropical countries, and have been victims to this disease during their sojourn there. There is no doubt that one attack predisposes to another. The disease is ushered in by a feeling of heat or glow over the body, but principally in the skin of the back, and in a few hours numerous little raised spots appear, which tingle and prick (one cannot call it itching) in a most unendurable manner. No one who has not seen a bad case, or had the sensation to a certain extent in his own person, would believe what torment it gives rise to. I have seen on board ship an Englishman, half maddened with this torture, fall on his knees in his cabin, and in all seriousness pray that he might die. It is almost always worse on the back than anywhere else, and does not often affect the extremities. It attacks elsewhere have been yeast in their strength quite as much as those who have just gone out for the first time, but I have never met with a case in a native. Now, as regards the remedy. The treatment is always more or less unsatisfactory, and everything that can be thought of has been tried in various cases. Clothing has, of course, much to do with it. In England, where the temperature is so various and uncertain, perhaps a very thick woollen jersey may be a good thing; but in India, where one can tell one day almost to a degree what the temperature will be the next, and where rainy and dry seasons alternate with such regularity, I used to find that woollen or flannel next the skin almost invariably aggravated the irritation. I always advised the wearing of an ordinary white calico shirt next the skin, and patients almost always found this more comfortable than anything else. The two remedial measures which I found more efficacious than any others were a bath twice a day in fresh water with ordinary washing soda dissolved in it, in the proportion of about a pound to four gallons; and the same bath without the soda, but with the addition of carbolic soap, with which the body should be thoroughly well washed. Various measures are recommended, and I have tried many of them; but I found these mentioned the best. I generally met with more cases of it in the wet season than in the dry, and more in Calcutta and the Eastern side of India than in Bombay. It is particularly prevalent in the months of September and October, when the hot sun is pouring its rays down upon ground saturated with recent and long-continued rain.

I am, Sir, yours truly,

[redacted] R. K. CRAIGIE, M.R.C.S., L.R.C.P. Lond.

[redacted] Aug. 7th, 1884. Late Surgeon P. & O. S. N. Co.

[redacted] POWER OF ELECTRICITY

To the Editor of THE LANCET.

SIR,—The following instance of the power of electricity to excite muscular action may be worthy of notice.

Two months ago I was in attendance upon a woman in confinement. At the termination of the labour the child was born apparently lifeless, and for fifty-five minutes failed to make a single inspiration, although artificial respiration and other means were used to restore animation. In the meantime I sent to my house for my electric battery, and immediately on applying the induced current to the chest and back I had the satisfaction of seeing muscular contraction take place in the muscles of the back and neck, and very shortly circulation was re-established and breathing became regular. The child lived for two days, and died after a convulsive fit. Under the stimulation of animation [illegible] from asphyxia of the heart's muscle, and that the blood was still possessed of vitality, I hoped that by starting the heart into action and driving onward the blood I might bring back the child to animation. The [illegible] to assume a muscular irritability in the [illegible] to allow of the efficient use of electricity. This case seems to show [illegible] the use of [illegible] never have breathed again had not the battery been used.

I am, Sir, yours truly,

C. H. HUNTABLE, M.D., M.Ch.

[redacted], June 4th, 1884.

"LUNACY NOT INCREASING."

AT length the facts are forcing themselves on the intelligent consciences of the official mind, and even being made apparent to the public. The *Daily News* of Aug. 13th says:—"The Commissioners in Lunacy observe in their recent report that the large annual addition to the number of insane persons under care has produced an impression that insanity itself is much on the increase. An examination of the figures which the report presents, however, shows that the apparent increase is almost entirely due to accumulation of chronic cases of the pauper class; so that, as the Commissioners observe, the community at large does not appear, from the official statistics, to be any more liable than formerly to be attacked by this terrible malady." *Magna est veritas et prævalebit.*

F.R.C.S. and other correspondents.—The circular enclosed would seem to be of the ordinary trading character, and appears offensive on account simply of its being sent by an undertaker.

TREATMENT OF VARICOSE VEINS.

To the Editor of THE LANCET.

SIR,—In a leading article of THE LANCET of May 3rd, 1884, it is stated that the only radical cure for varicose veins known is excision of a portion or the whole of the vein. I have waited to see if anybody at home would correct this statement. There being no such correction in your journal up to May 17th, the last number received here, I feel it incumbent on me to draw your attention to an article in THE LANCET of June 6th, 1874, p. 791, where it is stated that M. Simon of Verviers has used the perchloride of iron with great success. I can confirm this statement; for, ever since, now ten years, I have employed this same with unfailing success in varicose veins of the legs. The solution recommended by M. Simon is nearly the same as the liq. ferri perchlor. B.P. (the milder solution), which I use. The only modification I substitute is absorbent lint for flannel, as used by M. Simon, for compress; nor do I wring the pledgets dry, as recommended by him, but leave them moist; it seems to me to act more readily. I have just succeeded in curing an old gentleman aged seventy years, who has been suffering from varicose veins of the right leg for forty years. For the last few months the pain has been excruciating, the patient getting little or no sleep, and being totally incapacitated for business. He had a large ulcer extending from the external malleolus along the outer edge of the tibia half round the back of the leg, considerably larger than the palm of the hand. I drew pieces of strapping across the ulcer in the ordinary way, then applied pieces of absorbent lymph two or three inches long, slightly rolled, soaked in the solution of perchloride of iron, and applied them as compresses lengthwise on the veins. They were supported *in situ* by a bandage of thin flannel, called "domet," or "dumet," instead of the ordinary flannel, as it adapts itself better to the limb. This is reapplied every day for a week; then every other day. In a fortnight the varices had all disappeared, and the veins could be felt as hard wires under the skin. In six weeks the ulcer was healed, and the patient is now able to take long walks and attend to his business as accountant. I think the same may be applied to varicocele, though strapping would probably be required to retain the compresses *in situ*.

I am, Sir, yours truly,

J. E. H. LEWELLIN, M.R.C.S.

Prahran, Victoria, Australia, June 30th, 1884.

IS DEAFNESS A BARRIER TO PRACTICE?

To the Editor of THE LANCET.

SIR,—I cherish the hope that the kind sympathy of those interested like myself will prompt them to reply to this letter. My case is as follows. I possess a very important high-class practice, am devoted to my profession, and have a young family dependent upon me for their education and start in the world. I have just attained my fiftieth year, but am becoming very deaf, and have now some difficulty in hearing anyone unless the voice is raised. The [illegible] suffering from chronic aural catarrh, which is a progressive disease, and my experience of the last few months has unmistakably revealed its progressive nature. Now, it would be a satisfaction for me to know if, in the experience of any of your readers, deafness, even so bad as to necessitate the use of a trumpet, would entirely debar one from practice. When a man is thoroughly established, and has the confidence and friendship of his patients, would deafness such as I refer to lead to make them lose faith in him, and so gradually forsake him? Of course, I take for granted that a competent assistant would be required in all cases requiring auscultation. Now, Mr. Editor, or any of your readers, could tell me of a case where a man with very considerable deafness has yet continued to hold the confidence of his patients, it would be a comfort to me and an encouragement to hold on and persevere. If, on the other hand, there is to be my retirement, much desirable as I am to my calling, and [illegible] to launch out into another business or profession. I must look the evil in the face, and, for the sake of my children, commence the task as it [illegible]

I am, Sir, yours truly,

July 12th, 1884. CONSTANT SUFFERER.

ERRATUM.—The reference to a book in Mr. Charles Hawkins's letter in our last number should have been "at page 113," and not 193.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Lady John Manners; Dr. D. Dinin, Paris; Mr. C. Macnamara; Mr. D. Newman, Glasgow; Mr. Macdonogh; Mr. J. W. Taylor, Birmingham; Surgeon-Major Galbraith; Mr. Allen; Mr. Lewellin, Prahran; Mr. Carter, Shipley; Mr. Blaney, Bombay; Dr. G. S. Taylor, London; Surgeon-Major Duncan, Benares; Dr. G. de C. Morris, London; Mr. Sinclair, Liverpool; Messrs. Burroughs and Wellcome, London; Mr. C. Foster, Leeds; Mr. Blaesan, Edgware; Messrs. Baker and Co., Philadelphia; Mr. Richardson, Birkenhead; Mr. May, Crayford; Professor Tuson; Mr. Gurner, London; Mr. Booth, London; Mr. Squire, Tavistock; Dr. Thomas, Glasgow; Mr. Nicholas, Great Yarmouth; Mr. Bagshaw, Salford; Mr. Keetley, London; Messrs. Fraser and Co., London; Messrs. Smith and Son, Dublin; Dr. George Hatley, London; Dr. Jay, Slough; Dr. Scally, Stuttgart; Mr. Husband, Leeds; Messrs. Ferris and Co., Bristol; Dr. Beaman; Dr. C. Hewett, London; Mr. Hughes, Holyhead; Messrs. Smith and Sons, Birmingham; Dr. Lawrence, Chepstow; Mrs. Bird, Liverpool; Mr. T. Jones, Manchester; Dr. Harkin; Mr. Tuson; Messrs. Boake and Co.; Dr. Glynn Whittle, Liverpool; Dr. Harkin, Belfast; Dr. C. T. Ewart, Salisbury; Dr. Fitzgerald, Folkestone; Messrs. Mayer and Meltzer, London; Dr. Rogers, London; Mr. Oakley; Mr. Radley, London; Dr. Phillipson, Newcastle-on-Tyne; Mr. G. Meadows, Hastings; Mr. Taylor, Chester; Dr. Thomas, Sheffield; Mr. Nicholson, Hull; Dr. Cullingworth, Manchester; Dr. Strahan, Northampton; Dr. U. Pritchard, London; Dr. Manson, Hong Kong; Dr. Illingworth, Clayton-le-Moors; Mr. Roughton, Liverpool; Mr. Carter, London; Mr. T. C. Eager, Woking; Medicus; Vigilans; A. B. C.; Beta; Constant Reader.

LETTERS, *each with Enclosure*, are also acknowledged from—Mr. Vand, Maidstone; Dr. Mockson, Matlock; Messrs. Richardson and Co., Leicester; Mr. Fletcher Northwich; Dr. Austin, Langharne; Dr. Ash, Kensington; Messrs. Gale and Co., London; Mr. Gray, Bagsby; Messrs. Byway and Co., Manchester; Mr. Kneebone, Redcar; Mr. Dawe, Taunton; Messrs. Burgoyne and Co., London; Messrs. Woolley and Sons, Manchester; Mr. Andrew, Stockport; Mr. Jordan, Birmingham; Mr. Long, Stierborne; Mr. Messer, London; Dr. Mitchell, Brockley; Mrs. Garry, Malvern; Mr. Dyer, Chelmsford; Messrs. Lunleys, London; Mr. Denny-Silverstone; Mr. Kent, Middlesbrough; Mr. Stoane, Manningham; Mr. Walton, Blackpool; Mr. Twyford, Hanley; Mr. Bramwell, Newcastle-on-Tyne; Mr. Gibson, Bromley; Mr. Cantley, Ripley; Mr. Moore, Yeovil; Mr. Dobbinson, Bishop Auckland; Miss Wade; Mr. Saunders, Manchester; Mr. Hogg, London; Mr. Hill, Beeralston; Mr. Fort, Oldham; Messrs. Heywood and Co., Manchester; Dr. Miller, Arbroath; Mr. Jones, London; Mr. Roberts, Alfreton; Mr. Saunders, Great Yarmouth; Mr. Cash, London; Mr. Barnes, Newport; R. L.; Zeta; K. W.; J. W.; Poplar; Nemo, Salford; L.R.C.P., Leeds; Matron, Monkwearmouth; W. C. O., Bath; Surgeon; Phidias; Veritas, Birmingham; M.D., Halstead; A. Q. S., F.S.A.; S. C., Warrington; Gamma, Folkestone; J. B., Ryde; J. B., Manchester; X., Liverpool; M., Bolton; J. B., Walton-on-the-Naze; Medicus Hull; Lady Superintendent, Cambridge; Alpha, Huddersfield; X.Y.; Lady Superintendent, Ascot.

Portsmouth Evening Mail, Liverpool Echo, Calcutta Englishman, Liverpool Weekly Courier, Liverpool Weekly Post, Pioneer, New York Herald, Isle of Man Times, Weekly Dispatch, Invergordon Times, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—4 P.M. Bradshawe Lecture: "Pathological Relations of the Absorbent System."

Tuesday, August 19.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, August 20.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, August 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday August, 22.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, August 23.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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"Bradshawe" Lecture

ON THE

PATHOLOGICAL RELATIONS OF THE ABSORBENT SYSTEM.

Delivered before the Royal College of Physicians of London, August 18th, 1884,

BY G. HARE PHILIPSON, M.A., M.D., D.C.L.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, PROFESSOR OF MEDICINE IN THE UNIVERSITY OF DURHAM, SENIOR PHYSICIAN TO THE NEWCASTLE-UPON-TYNE INFIRMARY, ETC.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—The occasion of the present assembly of this College is for the delivery of the fourth Bradshawe Lecture. By the munificence of the widow of William Wood Bradshawe, of Andover and Reading, a Member of this College, a Master of Arts and a Doctor of Civil Law of the University of Oxford, a sum of money was bequeathed whereby a lecture might be delivered at this College annually, with the object of perpetuating the memory of her husband, it being stipulated that the subject of the lecture should have a bearing upon some question of medicine, and that the lecture should be delivered upon the 18th day of August, the anniversary of his death. The munificence of the benefactress and generous founder is well deserving of an expression of respectful and appreciative commendation, in that, while endeavouring to preserve the name of a loving husband, she was actuated with the laudatory idea of associating such with a formal discourse for the advancement of the profession to which he was devoted and which he adorned. This home-loving, studious, and scholarly man, who diligently cultivated his mind in literature and science, may therefore be fittingly extolled as an example for others to follow. His name will be justly venerated and transmitted in good repute, as well as that of his generous and devoted widow.

In undertaking the important duty that has been entrusted to me, I feel the honour and estimate the responsibility of the position. It shall be my earnest endeavour to justify the choice of our revered President, to whom I beg to offer my grateful acknowledgments for this distinctive mark of his favour.

I have selected the Pathological Relations of the Absorbent System as the title of the lecture. The absorbent system occupies a prominent place in relation to several important pathological processes and conditions, and is at the present time receiving considerable attention from histologists and pathologists. As illustrations of these relationships, it may be mentioned that this system is undoubtedly concerned in many septic conditions, and the late Messenger Bradley classified glanders, malignant pustule, snake-bite, dissection wounds, and erysipelas as forms of septic lymphangitis. Moreover, it is supposed to play an important part in relation to various zymotic diseases, such as plague, typhus and typhoid fevers, and diphtheria. The serous cavities are also now regarded as parts of the lymphatic system, and some cases of inflammation of serous membranes, for instance, of puerperal peritonitis are considered as being due to lymphangitis. Again, the absorbents are concerned in conveying to various parts of the body morbid products, such as those of cancer, syphilis, and tubercle, and thus of disseminating these diseases through the system. Again, they are often involved in connexion with diseases of internal organs. Some structures consist mainly of lymph-follicles and their chief diseases are associated with these follicles. Certain skin diseases, such as erythema, have been attributed to inflammation of lymph rootlets, and changes in the lymphatics seem to constitute an important element in the morbid anatomy of elephantiasis and several other affections. These illustrations will suffice to show the importance of the pathological relations of the absorbent system, and justify the selection of this subject for this commemorative lecture.

As an introduction to the consideration, it will be fitting that a short reference should be made to the anatomy and physiology of the absorbent system; for, without such a statement the pathological changes or the departures from the healthy state to those of disease could not be indicated with the same precision and comparative exactitude as this method will ensure. Having in regard, also, that physiology in its true acceptation is the science which treats of the conditions, phenomena, and laws of the life of the human body in the state of health, while pathology comprises the departures from such, manifested to the observer in disease, this process commends itself as the right and true way for this dissertation to be conducted.

The lymphatic and the lacteal systems together constitute the absorbent system. There is no essential difference between the two systems. The process of absorption has for one of its objects the introduction into the blood of fresh materials from the food and air, and of whatever comes into contact with the external or internal surfaces of the body; and, for another, the gradual taking away of parts of the body itself, when they need to be renewed. In both these offices, absorption from without and absorption from within, the process manifests some variety and a very wide range of action, and in both two sets of vessels are, or may be, concerned—namely, the bloodvessels and the absorbents. The lymphatic system may, therefore, be considered as an appendage of or supplementary to the blood-vascular system; the materials which they take up being, in fact, merely the spare nutrient substances forced into the intertextural spaces—that is, the commencement of the lymphatics—by the continued exudation of fresh fluid from the capillaries.[1] The lymphatics never come quite close to the surface of the dermis, but the blood capillaries are superimposed upon them (Teichmann and Belajeff). The lymphatic system consists of vessels, both trunks and capillaries, and of collections of a peculiar kind of connective tissue, adenoid, the meshes of which are crowded with round colourless cells. When these are situated in the course of the lymphatic vessels and are invested with a capsule, they are termed lymphatic glands; but if there is a mere reticulum enclosing the cells, and so forming a patch in the submucous or subserous tissue, it is described as a lymph follicle. Around all such follicles there is a large plexus of lymph capillaries.[2] The principal vessels of the lymphatic system are, in structure and general appearance, like very small and thin-walled veins, and, like them, are provided with valves. By one extremity they commence by fine microscopic branches, the lymphatic capillaries or lymph capillaries, in the organs and tissues of nearly every part of the body; and by their other extremity they end directly or indirectly in two trunks, which open into the large veins near the heart. Their contents pass only in one direction, from the finer branches to the trunks, and so to the large veins, on entering which they are mingled with the stream of blood, and form part of its constituents. The lymphatic capillaries commence most commonly either in closely-meshed networks or in irregular lacunar spaces, between the various structures of which the different organs are compounded. They are composed of a single layer of flattened cells, nearly equal in length and breadth, with a marked sinuous outline. When passing into the large lymphatic vessels they present a varicose appearance, from an incomplete valvular appearance in their interior. In the extremities the lymphatic vessels are divided into superficial and deep. The superficial anastomose freely with one another, and so do the deep, but there is no communication between the two sets, except in the glands, which may be common to both. To this is due the remarkable circumstance that either set may be separately diseased, and that superficial and deep lymphangitis may be spoken of as distinct affections, although inflammation spreads from one group to the other. The mode of anastomosis is peculiar. A lymphatic vessel will run for a certain distance parallel to two other vessels, and then divide; it may join both of them, or one of the branches will continue onwards, and the other run into an adjacent vessel. In this manner a plexus with large meshes is formed. The rapidity with which inflammation spreads from vessel to vessel is thus easily explained.

In certain parts of the body openings exist by which lymphatic capillaries directly communicate with parts hitherto supposed to be closed cavities. These openings have a roundish outline, never exceed the size of an epithelial cell, and have been termed "stomata." An absorption into the lymphatic system also takes place in the membranes covered

[1] Broadbent: Humphry and Turner's Journal of Anatomy and Physiology, vol. i., 1870, p. 14.

[2] Curnow: THE LANCET, vol. i., 1879, p. 307.

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by epithelium or endothelium, through the interstitial or intercellular cement substance, and not through the cells themselves. This mode of absorption may be said to take place through pseudo-stomata. Stomata have been found in the pleura; and, as they may be presumed to exist in other serous membranes, it would seem as if the serous cavities, hitherto supposed closed, form part of a large lymph sinus, or widening out, so to speak, of the lymph capillary system, with which they directly communicate.

The current of lymph is much aided by the valvular mechanism. All occasional pressure on the exterior of the lymphatic and lacteal vessels propels the lymph towards the heart. Muscular and other external pressure accelerates the flow of the lymph, as it does that of the blood in the veins. The actions of the muscular fibres of the small intestine, and probably the layer of organic muscle present in each interstitial villus, seem to assist in propelling the chyle. For the general propulsion of the lymph and chyle, it is probable that, together with the *vis a tergo* resulting from absorption and from external pressure, some of the force may be derived from the contractility of the vessels. The respiratory movements also favour the current of lymph through the thoracic duct as they do the current of blood in the thoracic veins.[3]

Blood and lymph are the essential juices of the body. They stand in the closest relation to the vital processes which go on in the tissues. By means of the blood the constituent elements of the body are supplied with the nutrient substances and the oxygen which they require. By the blood and the lymph are conveyed away the waste and surplus matters which have ceased to be useful to the tissues. The nutrient substances and the oxygen are derived from without. The former usually enter the body from the alimentary canal, the latter usually through the lungs. But most parts of the body are, under certain conditions, capable of directly assimilating both nutriment and oxygen. The channels of entrance are in such cases the smaller bloodvessels and lymphatics. The matters which have to be removed from the tissues are partly surplus nutriment, partly the products of tissue waste and metabolism. These matters are carried off either to be utilised elsewhere within the system, or to be ejected altogether. Under normal conditions the incomings and outgoings balance each other in amount. The channels by which the normal constituents gain access to the blood and lymph may also serve to admit matters which are noxious, or at least abnormal. These matters may be either wholly extraneous or produced within the body itself in virtue of some morbid or abnormal metabolism. The result of their admission is a more or less enduring pollution of the blood and lymph. In many cases the blood is able to eliminate them harmlessly and speedily, chiefly by means of the kidneys and the liver, but in other cases the pollution is more permanent. The composition of the blood often suffers in consequence, and its renovation may not be effected until some of the tissues or organs have been more or less injured by malnutrition.[4] The lymph is merely the liquid transuded from the bloodvessels, together with certain products of tissue metabolism and certain matters taken up by the lacteals from the outside. To this the lymphatic glands contribute a number of lymphoid elements, in addition to the few cells derived from the blood. The sources of the lymph being thus somewhat various, it may be expected that morbid changes in the composition will not be uncommon. Changes in the blood and disorders of the tissues generally give rise to changes in the lymph, and the various impurities of the blood are all of them apt to pass into the lymphatic system on leaving the bloodvessels.[5]

With this narration of the anatomy and physiology of the absorbent system, we are in a position to enter upon the disquisition of its pathological relations. The anomalies in the distribution of the lymph will first receive attention. Every change in the circulation which determines an increased transudation of liquid from the blood leads by consequence to an increased saturation of the tissues. This increased saturation is generally balanced by an increased discharge through the lymph channels. But this compensating action has its limits. If the transudation from the bloodvessels still increases, there at last comes a time when the saturation of the tissues with liquid can no longer be kept down, and so it rises above the normal degree. The condition in which fluid collects in the substance of the tissues is called œdema; when in the greater cavities of the body, hydrops or dropsy. The liquid transudation in œdema and dropsy has never the same composition as blood-plasma; it is always markedly poorer in albumen. Three varieties of œdema may be distinguished according to their mode of origin; these are the œdema of engorgement, inflammatory œdema, and hydræmic œdema.

The œdema of engorgement, as the name implies, depends upon a disturbance of the circulation. If from any cause the outflow of blood from the veins is hindered, the blood tends to accumulate in the capillaries and venules. If the degree of obstruction exceeds a certain limit, the plasma seeks a lateral exit and escapes from the vessels. The amount of liquid thus escaping is proportionate to the discrepancy existing between the inflow and the outflow. The escaped liquid is always poor in albumen, poorer even than the normal lymph; it contains, however, a certain proportion of red-blood cells, depending on the intensity of the engorgement. The immediate consequence of increased transudation is an increased flow through the lymphatics. Often enough this may be quite sufficient to convey away all the liquid which escapes. If it is insufficient, the liquid collects in the tissues and the result is œdema or dropsy. Obstruction to the outflow through the lymphatics does not usually bring about œdema; direct experiments have demonstrated this. In the first place, the lymphatics of most parts of the body possess ample anastomoses, so that it is not easy for a stagnation of the lymph to occur. Even when the thoracic duct is occluded, collateral channels may be opened up and the circulation restored. Furthermore, when in a limb, for example, the whole of the lymphatic outlets have been closed, if no more than the normal amount of transudation from the bloodvessels goes on; no œdema is produced. The bloodvessels themselves have the power of taking up again the lymph they have produced. If the thoracic duct be completely occluded and no collaterals are opened up, then œdema is the result; it takes the form of ascites. At the same time the larger lymphatics become greatly distended with accumulated lymph. Though lymphatic engorgement alone is inadequate to produce œdema, it may possibly increase an œdema which has already been produced by increased transudation from the bloodvessels. The quantity and the nature of the liquid which escapes from the capillaries and veins depend not only on the intravascular pressure and the resistance of the flow, but also to a great extent on the character and condition of the vessel wall. Alterations in the amount of transudation may thus be referable, not to disturbance of the circulation, but to changes in the vessel wall, and especially in their endothelial lining. The vessel wall may, in fact, be made more permeable for the corpuscles as well as for the liquid constituents of the blood by various causes; one of these is long-standing engorgement, involving incomplete renewal of the blood-supply to the vessel. More serious causes of injury are persistent ischæmia, imperfect oxygenation, chemical changes in the blood, very high or very low temperatures, and traumatic lesions. What the exact injuries are which these bring about we are not as yet able to say, but it may fairly be imagined that they amount to a loosening of the connexions between the endothelial cells of the intima. It is in virtue of such alterations in the vessels that inflammatory and hydræmic œdema are produced.

As regards inflammatory œdema, no doubt can exist that it originates in some vascular change. It occurs as an independent affection, in the form of a more or less local and circumscribed swelling with dropsical effusion; but it may also, as a secondary phenomenon, accompany other processes, like severe inflammation. In the latter case it is often characterised as collateral œdema. Inflammatory œdema is distinguished from the œdema of engorgement by the fact that in the former the exudation is very much richer in albumen and white blood cells. It is also common for coagulation to take place in the dropsical tissues.

Hydræmic or cachectic œdema is very near akin to inflammatory œdema. It was formerly believed that hydræmia, in which the blood is impoverished of its solid constituents, and hydræmic plethora, or over-dilution of the blood with water, might directly give rise to increased transudation from the vessels. It was conceived that the vessel wall acted like other animal membranes, through which liquids poor in albumen filter more readily than liquids rich in albumen. This is incorrect. Cohnheim has shown that the vessel wall is not to be regarded as a dead membrane, but as a living organ. When hydræmia is artificially produced it

[3] Kirkes' Physiology, p. 362.
[4] Zeigler: Macalister's Translation, part ii., p. 1. [5] Ibid., part ii., p. 33.

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is not followed by œdema. Even hydræmic plethora produced by over-filling of the vessels with diluted blood, though it leads to increased transudation, does not do so till the dilution has been carried to an extreme degree. Even then the œdema does not make its appearance at the parts which are the usual seat of hydræmic œdema in man. We must therefore look for another explanation of the œdema of cachexia and of nephritis, in which disease the functions of the kidneys is disturbed. According to Cohnheim they owe their origin to a change in the vessel wall. This change is due to the watery character of the blood, or to some deleterious substance circulating in it. Hydræmic œdema is akin to inflammatory œdema, but it is not identical with it. This appears from the fact already alluded to, that the liquid effused in the former is much poorer in albumen than that in the latter, and that it contains considerably fewer of the corpuscular elements.

As to the diffusion of diseases by the lymphatics. The granulative formations are all distinguished by similar characters. Their development usually stops short at the fibro-blast stage, and having reached it, or even before that, the constructive process gives place to retrogressive changes. Cicatricial development being arrested, the granulation tissue persists for a time unmodified, and often develops to a considerable amount. For this reason Virchow described the formations as granulative growths or granulomata. All of these growths have, furthermore, the clinical character of infectiousness. Hence they have been termed "infective growths" by Klebs and Cohnheim, and "specific inflammations" by Rindfleisch. Their infective character may be recognised by various signs. Thus they are all locally invasive—that is, the granulation tissue spreads centrifugally from a centre into the surrounding structures. At the same time the central or oldest part of the new formation usually dies and disintegrates. In many cases the lymphatic system becomes affected, so that secondary granulative foci are formed in it. From the lymphatics the process at times transferred to the blood, or it may invade the blood-vessels directly. The final result is the spread of the disorder to various organs, or throughout the system.

In most of the granulomatous disorders, we may have not merely a diffusion of the disease throughout the individual organism, but also a transference of it from one individual to another. The affection is inoculable. If one person be inoculated with the inflammatory products derived from another, he acquires a disease whose course is exactly similar to that of the original one, and which yields identical inflammatory products. This latter character of infectiousness is that by which it is most readily recognised. To this group of infective granulomata belong the neoplastic formations found in tuberculosis, syphilis, leprosy, lupus, glanders, and actinomycosis. All these affections are due to the invasion of the body by a virus or poison derived from the outer world or from the body of another individual. This virus may probably be produced by vegetable parasites. In leprosy (Hansen, Neisser), tuberculosis (Koch), and syphilis (Klebs), bacteria have been found, and in actinomycosis a special fungus. These are declared to be the originating causes of the respective diseases. Our ideas as to the nature and character of these affections are as yet mainly based upon their clinical course, but we have also derived something from inoculation experiments. Tuberculosis and syphilis are thus known to be communicable from one person to another; tuberculosis is also communicable from man to the lower animals.[7] Inoculation with sputa containing bacilli of tubercle gives rise to tuberculosis, which is developed more rapidly when the bacilli are abundant. The inoculated bacillus multiplies in the organism, and involves the lymphatic system, liver, spleen, and serous membranes; by its presence it sets up a chronic inflammatory process with the formation of products which become caseated, but subsequently soften, producing gradual destruction of the organ. The bacillus is found in the centre of the tubercles in their earliest stage of formation, and hence is the cause and not the effect of the morbid process. The lymphatic vessels, amœboid cells, and the blood current are the means by which these micro-organisms are transported from one organ to another and diffused throughout the body.[8]

(*To be concluded.*)

[7] Ibid., part i., p. 43. [8] Ibid., part i., p. 188.

[9] Sormani: London Medical Record, 1884, p. 86.

REMARKS ON THE

COMMUNICABILITY OF PHTHISIS.[1]

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[DR. BARRS having reviewed in detail the experiments and observations of Buhl, Klencke, Villemin, Marcet, Wilson Fox, Koch, Watson Cheyne, Spina, Cohnheim, Tappeiner, Schottelius, Aufrecht, Weichselbaum, Poulet, and others, proceeded as follows]:—

According to Koch and Watson Cheyne, then, our definition of tubercle in the future is to be by the presence of the tubercle bacillus; and I am not sure that we, who are not mycologists, are in a position to oppose this change. For some years past there has been a general falling away from old morphological or histological definitions in this matter; caseation is gone as a test; the giant-cell has been found in many admittedly non-tubercular substances, such as the syphilitic gumma; and the old intercellular network has been removed by Cornil and Ranvier. Almost all pathologists are prepared to define tubercle, apart from the bacillus, rather by its distribution and tendencies—its life history in short—than by any peculiar structural element. Thus tubercular processes, as we most commonly meet with them in phthisis, constantly show the bacillus in greater or less quantity, I have no doubt; I have myself found it in all the cases of phthisis (thirty in number) which have come under my observation during the last year, and the number of cases on record in which others have found it now far exceeds five hundred. Of negative observers upon this point, I shall refer to one only, who, if he still adheres to his original position in regard to the bacillus, stands almost alone. I need scarcely say I refer to Spina, of Vienna, who, with great energy and some feeling, took up every point in Koch's paper, and produced arguments and experiments to refute them. He denied the characteristic reactions of the bacillus, and that they were found in tubercular matter only, and adduced many other points which have needed confirmation from the time they were published (1883) to the present. In short, the constant presence of the bacillus in tubercular tissue has been affirmed by all who have taken the trouble to look for it, and in no other substance has it been found.

Time does not permit me to enter into any discussion of the relations of tubercle to phthisis. Were I to propound a view which I held almost up to the time of collecting the materials for this paper, I should, I doubt not, be accounted one of a bygone age. The simple broncho-pneumonic theory, as propounded by Niemeyer, now nearly twenty years ago, and twenty years before that by Addison, had always seemed to me one which could be embraced without doing violence to one's reason or to clinical and pathological facts. Indeed, when tubercle was looked upon as clinically malignant, one saw no other way of explaining the cases of recovery which one was now and again obliged to admit, as well as the large number of cases which used to be designated, and, as it seems to me, rightly so, mechanical phthisis; but the discovery of the bacillus has changed all this. When in every case of phthisis an organism is found which is common to it and all other manifestations of tubercle in the human subject, and also in all animals subject to the disease, spontaneously or artificially produced, one cannot but abandon, though with much regret, the dualistic theory; in fact, I believe the unity of pulmonary phthisis is now almost universally admitted.

As to the positive evidence of contagion in the human subject, there is little forthcoming, and that little is of a very doubtful nature. In this country the only extensive investigation made in this direction was made by the Collective Investigation Committee last year. Prior to this the only cases on record are those previously referred to, published by Dr. Hermann Weber and Villemin. The Collective Investigation Committee, as will be remembered, issued to the members of the British Medical Association, on two occasions inquiries as to the communicability of phthisis. Of the 10,000 or more members, only 1028 replied; of these, 673 had seen no examples, 261 reported cases they

[1] Being the concluding portions of a paper read at the opening of a debate on the Communicability of Phthisis, at the meeting of the Leeds and West Riding Medico-Chirurgical Society, March 7th, 1884.

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believed to support the infective theory, and the remainder were doubtful or negative.

I propose to criticise with some minuteness Dr. Hermann Weber's cases of supposed transmission from husband to wife. I do this because they are the most fully reported cases with which I am acquainted, and because they are not infrequently quoted by the complete believers in communicability as providing almost all that is to be desired in the way of evidence in favour of their views. The cases are nine in number, and are reported in the Transactions of the Clinical Society for 1874, though they seem to have occurred some years previous to that time. The husband is in every instance described as of consumptive family; they all (the husbands) suffered from hæmoptysis between their eighteenth and twenty-first years; and they all survived, save one, a second marriage at least; and one survived a fourth, and another a third. The marriages, too, were not repeated with absolutely indecent haste, consequently the husbands survived for some considerable period in each case the first marriage, in which they are supposed to have transmitted phthisis to their partners. They are all described as healthy, or considered so, at the time of marriage; and they all, save one, died of phthisis, as stated by their medical attendants or as ascertained by post-mortem examination. Amongst the many remarkable points in these cases, the most noteworthy to me is the period of time which elapsed between the supposed infection of the first wife, when of course the husband was regarded as suffering from phthisis, and his death. In Case 1 the period I have calculated from the facts given was at least twenty-five years, in Case 3 nine years, in Case 4 twelve, in Case 6 eight, in Case 7 eight, and in Case 8 ten; in the remaining cases no definite figures are given, but calculating from the number of pregnancies of the wives and other statements it may be roughly stated at from five to nine years. The man in Case 9 married his first wife in 1867, his second in 1868, and was living and well in 1872. To return to Case 1. A man said to be of marked phthisical family, to have had hæmoptysis at twenty-one, and to have infected four successive wives with consumption, lives through twenty-five years to tell the tale. Can this seriously be taken as an example of infection from husband to wife? Suppose him to have been perfectly well, as stated, at twenty-seven, when he married his first wife, who showed symptoms of phthisis after the third pregnancy—that is, four years after marriage at the earliest,—and take this as the commencement of his own disease; after an interval of ten years he marries his second wife, whom he infects; the intervals between the second and third and third and fourth are not given, but say the time allowed to elapse between the death of one wife and the marriage of another was twelve months; this, added to the time which each wife lived, will give us a period of not less than seven years, during which period he must have been exhaling the contagium of phthisis, or, in other words, have been suffering from active lung disease, and then survived the last of his supposed victims for eleven years, when he died and presented the following changes in the lungs: "a cicatrised condition of the former seat of disease, and also the recent affection." I confess I do not see my way to accepting in any sense this case as proof of direct infection from husband to wife; rather it is to me a more than gratifying example of the curability of phthisis, and a proof that a man may cohabit with four individuals dying of consumption, who is himself of consumptive extraction, who has exhibited lung symptoms from his twenty-first to his twenty-fifth year, and lives to the not unripe age of fifty-seven, having expressed some doubts as to the propriety of even a fifth marriage.

This line of criticism, which I deem not unfair, may be applied with the same result to all Dr. Weber's cases. They prove too much, not only of contagion, but of recovery from what we regard as a commonly lethal condition. The cases published in abstract in the Collective Investigation Record scarcely admit of analysis, the statements being in so many cases simply the conclusions of the reporters, and not the facts upon which the conclusions are based. In Dr. Weber's cases, and also in the collective investigation cases, I beg you to notice the entire absence of cases of acute general tuberculosis, of tubercular meningitis, strumous arthritis, and of urino-genitary tuberculosis, all of which diseases are to be accounted manifestations of tubercular affection in the human subject, and cases of which we have a right to expect if the theory be true as applied to man in these so-called examples of infection.

To proceed further with the negative side of the question. I need scarcely refer to the very striking statistics of the Brompton Hospital in regard to the affection of attendants resident in the hospital. During the last twenty-five years not a single case of phthisis fairly traceable to the surroundings could be found amongst more than 250 officials connected with the hospital during that time. The mortality, in fact, amongst residents was lower than in some general hospitals. It has been said that this proves only that under such conditions as exist at Brompton phthisis is not contagious, and that it cannot be taken as in any degree settling the whole question. But, I would ask, do the conditions at Brompton differ in kind or even in degree from the condition under which life will go on amongst us? The element for contagion has been shown to exist in the atmosphere of the building generally, and Dr. Charnley Smith has shown also that the bacillus is continually escaping from the air-passages of phthisical patients.

My own conclusions upon this extremely wide and difficult question are, I need scarcely say, subject to revision. In the main they are as follows:—1. The tubercle bacillus is constantly found in all lesions of a tubercular nature, and in all cases of pulmonary phthisis in the human subject. 2. So far as the communicability of tuberculosis in animals is concerned, this is clearly proved by inoculation experiments. Whether it is so without antecedent traumatism there is very little evidence to show. 3. The great prevalence of phthisis amongst those of certain occupations, and the comparative rarity with which those presenting caseous changes in the lungs die by means of a general infection, tend to show that certain predisposing causes are necessary for the production of phthisis—some more definite condition than a mere obliquity of construction, such as we mean by constitutional tendency. The bacillus is not in this case the real and primary cause of the disease, but by its constant presence may determine a wide distribution of the lesion and a fatal result. 3. Although the discovery and isolation of Koch's bacillus and the inoculation experiments upon animals make the direct infection of individuals with tuberculous matter possible under certain conditions, these conditions are not established by our present mode of life. 4. The clinical evidence of direct infection from man to man is at present of a quite untrustworthy nature. I need scarcely add that the want of proof of direct contagion in no way militates against the view that pulmonary phthisis is an infectious disorder—that is, due to the introduction of an infective particle from without.

SOME

STATISTICS AND OBSERVATIONS REGARDING LITHOTOMY IN THE HYDERABAD CIVIL HOSPITAL, SINDH.

By SURGEON-MAJOR B. C. KEELAN, L.M.D.,

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TABLE I. is a summary taken from the monthly returns of the above hospital of the operations for lithotomy performed by myself from the 1st January, 1883, to the 31st August, 1883, a period of eight months. It gives the number of cases, with the ages, results of the operation, &c. The patients were all in good health, with the exception of the symptoms arising from stone in the bladder. Of the 102 cases operated upon, 81 were Mussulmans and 21 were Hindoos, of whom 98 were males and 4 were females. To avoid taking up too much space, I have been obliged to arrange their ages into quinquennial periods. The table will show that Sindees are infinitely better subjects for operation than Europeans, being so much less liable to inflammation setting in after the operation, owing probably to the simple manner in which they live, and perhaps to the very dry climate of Hyderabad. The operations at the other hospitals in Sindh, though fewer, have reached to pretty nearly about the same favourable results; consequently lithotomy here in Sindh is not looked upon as a formidable procedure, as is the case in Europe, owing to the mortality being comparatively so very low. The table will also show the average number of days spent in hospital, as well as the average duration of the formation of calculi, arranged in quinquennial periods, to correspond with the ages of persons

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operated upon; the weights of the stones are arranged in the same manner for the purpose of condensing information.

It will be seen from the statistics that stone in this country is more prevalent in children from one to ten, and in adults from thirty-one to fifty, years of age than at any other time of life; during this latter period of life also calculi are larger, taking the average; this is remarkable, but is nevertheless the case. My object in publishing these statistics is to point out the superiority of lithotomy as an operation over that of lithotrity, and also to show a cursory outline of the method of operating upon, and of treating calculus in the bladder as carried out in the Civil Hospital of Hyderabad, Sindh, which is considerably the largest hospital for lithotomy in India.

It may be interesting to the profession in England to mention that stone in the bladder is exceedingly common all over Sindh, a district in the Bombay Presidency about as large as England and Wales. Through the middle of this tract of land passes the mighty river Indus, which takes its origin from the melting snow of the far-off Hindoo Khoush Mountains, and courses down through the Punjaub and Sindh, falling into the Indian Ocean south of Karachi. Indeed, I think I may say without fear of contradiction, that calculus in the bladder is much more prevalent in Sindh than in any other part of the world. It appears to be hereditary, and in my opinion it also arises from drinking the muddy water of the river Indus and its tributaries, which the natives of this country invariably do without filtering it, or even allowing to settle to the bottom of their vessels the silt which is suspended in it so abundantly as to render it quite thick and of a brownish colour; however, the addition of a few grains of alum makes it clear and sparkling; but the natives, though many of them are aware of this fact, seldom trouble themselves about it. Again, Sindh is probably one of the most dusty countries in the world, especially lower Sindh, so that the native inhabitants (Sindees) may truly be said to be continually eating and drinking fine particles of earth. I imagine there can be no doubt whatever but that this alluvial matter, all of which is carried down by the Indus, is the fountain head to which the origin of stone in the bladder can be traced in this part of India, and that the silt brought down by the river from its source supplies to the urine the earthy materials from which the calculi are formed in the bladder.

Table II. shows the number of patients operated upon who were able to trace their own disease (calculi) in one or more members of their family, including also their cousin relationship; it also shows the kinds of stones operated upon, as well as the quality of the water used for cooking and for drinking purposes. It will be seen that no less than 90 per cent. of the persons operated upon used for all purposes the muddy river water; nearly 23 per cent. may be said to have been hereditary; and nearly 70 per cent. of the stones operated upon were phosphate of lime. Professor Gamgee states that the sheep in the hill districts of Wales get stone in the bladder from feeding on the short grass, which is covered with dust, and which is peculiar to the sheep hills of that country; and I see no reason whatever to suppose that the prevalence of stone in Sindh may not be attributable to the same source. Professor Gamgee's statement no doubt applies to Sindh and the Sindees.

Table III. gives the number of stones extracted in each of the 102 cases of lithotomy under review, the number of cases previously operated upon, and the interval between the first and second operation, also the weights of the secondary

TABLE I.

Ages in quinquennial periods.	No. of cases operated on.	Result. Cured.	Result. Died.	Average number of days in hospital.	Average duration of illness, in months.	Weight of stones corresponding to the different ages of persons operated on, arranged quinquennially.
1 to 5 years	17	17	—	14	14	3 dr.; 20 gr.; 40 gr.; 6 dr.; 3 dr.; 3 dr.; 1 dr.; 3 dr.; 1 dr. 12 gr.; 1½ dr.; 4½ dr.; 2 dr.; 1½ dr.; 2 dr.; 4 dr. 9 gr.; 3 dr. 20 gr.; 5 dr.
6 to 10 ,,	12	12	—	15	20	1½ dr.; 2 dr.; 1½ dr.; 2 dr.; 2 dr.; 3 dr.; 1½ dr.; 1 dr.; 5 dr.; 6 dr.; 5 dr.; 3 dr.
11 to 15 ,,	4	4	—	15	24	6 dr.; 5½ dr.; 1 oz.; 3 dr. 6 gr.
16 to 20 ,,	3	3	—	21	28	1 oz. 2 dr.; 2 oz.; 1 oz. 6 dr.
21 to 25 ,,	5	5	—	25	30	3 oz. 5 dr.; 1 oz. 2 dr.; 1½ oz.; 1½ oz. ½ dr.; 1½ oz.
26 to 30 ,,	7	7	—	25	30	7 dr. 12 gr.; 7 dr.; 4 dr.; 1 oz. 7 dr.; 3 dr.; 2 oz.; 1 oz. 2 dr.
31 to 35 ,,	12	11	1	25	37	3 oz. 2 dr.; 1½ oz.; 2 oz. 6 dr.; 3 oz. 2 dr.; 1 oz.; 2 dr.; 1 oz. 2 dr.; 4½ dr.; 1 oz. 2 dr.; 1 oz. 5 dr.; 2 oz. 1 dr.; 1½ oz.
36 to 40 ,,	15	15	—	28	37	5 oz.; 1½ oz.; 1 oz.; 1½ oz.; 2 oz.; 3 dr.; 3 oz.; 3 oz.; 3 oz.; 1 oz. 20 gr.; 1½ oz.; 2½ dr.; 3 oz.; 1 oz. 6 dr.; 3 oz.
41 to 45 ,,	5	5	—	28	38	3 oz.; 2 oz.; 1 dr.; 2 oz.; 3 oz.
46 to 50 ,,	12	12	—	30	45	1 oz. 2 dr.; 2 oz. 2 dr.; 1 oz.; 4 oz. 5 dr.; 1 oz.; 2½ oz.; 1½ oz.; 2 oz. 6 dr.; 1½ oz.; 1 oz. 2 dr.; 3 oz.; 3½ oz.
51 to 55 ,,	6	5	1	30	36	4 dr. 6 gr.; 6½ dr.; 2 oz.; 1 oz. 3 dr.; 2½ oz.; 3 dr.
56 to 60 ,,	2	2	—	30	24	4 dr. 20 gr.; 6 dr.
61 to 65 ,,	1	1	—	30	36	1 oz. 3 dr.
66 to 70 ,,	1	1	—	30	48	2½ oz.
Total	102	100	2	—	—	

TABLE II.

Number of cases operated upon.	Hereditary.	Non-hereditary.	Kinds of stones. Lithic acid.	Kinds of stones. Phosphate of lime.	Kinds of stones. Oxalate of lime.	Quality of water used for drinking. Well water.	Quality of water used for drinking. Muddy river water.
102	23	79	20	70	12	8	94

TABLE III.

Number of cases operated on.	Number of stones in each case. One stone.	Two stones.	Three stones.	Four stones.	Number of cases previously operated on.	Interval between the first and second operation.	Weight of secondary stones.
102	88	8	5	1	4	1. Forty months 2. Twenty-seven months 3. Thirty-one months 4. Thirty-three months	2½ oz. 1 oz. 1 dr. 1½ oz. 1 oz.

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stones. All the secondary stones were composed of phosphate of lime.

From observation of several hundred cases of lithotomy, I find that it takes on an average about two years and a half for a stone weighing, say, two ounces to form—that is, of course, counting from the time the symptoms begin to be observed by the patient; a stone of five ounces will take seven or eight years to form. Small stones weighing only two drachms in the bladder of an adult, provided always that they be smooth on the surface, will cause very little inconvenience or suffering, and adults rarely apply for relief when the stones have only reached this stage of development. I have frequently operated on the same patient twice in from four to six years, each time the stone weighing from two to nearly three ounces. The lateral operation is the one invariably performed in the Hyderabad Hospital. The calculus is reached in the usual way; if it be small there is never any difficulty, but if large its successful removal can only be accomplished by long practice. In removing a large stone, it should not be taken out of the bladder with any degree of force, nor should pulling be resorted to, lest the neck of the bladder be contused and lacerated; of all others, this is the chief point to be attended to in lithotomy, for any departure from this, which should be considered a golden rule, would be the cause of immense mortality—a fact which is experienced by young operators, and which I have had experience of myself as a beginner. Before applying the forceps to the stone, the forefinger of the left hand is passed through the wound on to the stone, the size of which is ascertained, then a blunt pointed knife is passed along the finger, and the neck of the bladder incised according to the size of the stone; the wound is also enlarged proportionately; then, having applied the forceps, the stone is pulled in the proper direction, and at the same time rocked a little from side to side and from above downwards; this has to be very gently done. If the stone does not come then, the forceps is given to an assistant to hold, and the index-finger of the left hand is inserted into the wound, which is searched in every direction, and that part of it which is put on the stretch, by the pressure of the stone against it, is cut pretty freely in as many places as the circumstances of the particular case will demand. It matters not whether it be above, below, or to the right or left side; the soft parts must be cut in all directions, if necessary, rather than use force. Then the forceps is again taken from the assistant, and the stone gently pulled and rocked as before; it is on this procedure that the success of the operation for extracting a large-sized stone entirely depends, and the cutting process just described is repeated as often as necessary. Hæmorrhage is exceedingly rare, and is easily restrained. I have only seen three or four instances of severe bleeding amongst hundreds of cases, and these were soon arrested. After the operation the patient is placed on his side, the thighs being brought very close together; a compress of very fine tow (called by us in India "surgeon's tow,") is placed on the wound, and held there tightly by an assistant for half an hour or longer if necessary. This is the very best way I know of compassing the stoppage of hæmorrhage; it is very simple, no styptics being required, for these often do harm by irritating the bladder, and it is a great mistake to suppose that bleeding will take place into the bladder when the wound is pressed externally. Plugging the wound round a catheter should be avoided; it is most objectionable and hurtful to the patient. In the after-treatment no catheter is required to be placed in the wound; it does not answer, as it keeps up irritation of the bladder—the very thing, of all others, to be avoided after the operation. It is better that the urine should pass through the wound unaided, unless it happens to be stopped momentarily by clots of blood, and then it is sufficient merely to pass a straight silver tube, just to clear the passage for the urine to flow, and then withdraw it immediately. It is not very often that clots impede the passage of urine, and only when this occurs should a tube be passed through.

Hyderabad, Sindh.

THEFTS FROM MEDICAL MEN.—A young man was recently charged at Liverpool Police-court with a long series of thefts from the houses of medical men, committed whilst he was ostensibly waiting the return home of the doctor. The property stolen from over twenty members of the profession in Liverpool, Birkenhead, and Manchester, included many surgical instruments, a galvanic battery, and various articles of clothing. The prisoner was committed for trial.

ON FIVE CASES OF

SPORADIC CRETINISM IN SCOTLAND.

BY ROBERT KIRK, M.D., F.F.P.S. GLASG.,
OUT-DOOR PHYSICIAN-ACCOUCHEUR TO THE GLASGOW WESTERN INFIRMARY.

SPORADIC CRETINISM is not only interesting from its rarity, but has acquired an unusually high degree of importance of late from its probable affinity to myxœdema in adults. The following account of five cases I have lately met with, of which two are represented by woodcuts, will therefore be read with interest.

CASE 1.—G. B——, a boy aged twelve years (Fig. 1). I encountered this case accidentally in my daily rounds, and was at once struck with the close resemblance he presented to the only case of myxœdema I had previously seen, that of a female aged fifty-six, and which I showed to the Medico-Chirurgical Society of Glasgow last winter. The boy was enormously swollen, and judging from his height, seemed only three years old, although I was told he had reached the age of twelve. On inquiry, the following particulars were elicited. His parents belong to the village of Ladybank, in Fifeshire, where I afterwards met with Case 2. They are both healthy and well developed, above the average height (the father being six feet high), not related to each other,

FIG. 1.



free from goitre, and of strictly sober habits, the father never having been intoxicated in his life. There is no history on either side of goitre, intermarriage of relatives, intemperance, or tendency to any hereditary disease. The boy is the fifth of six children, all of whom are well except himself. During gestation his mother felt ill, took little food, and vomited much. She had severe pains or cramps in the abdomen almost daily; these often compelled her to get out of bed at night and sit by the fire for hours together. When the infant was born he was large and stout, and, as the mother supposed, an unusually fine child; he was at least half as heavy again as any of her other children at birth. She soon observed, however, that he was very sluggish; he always leant forwards in her arms, and he slept a great deal; he seldom cried, and did not smile like other children; his skin was always cold. He did not grow taller; did not walk till he was five years old, and then with a feeble, tottering step, the slightest obstacle overturning him; he did not get all his teeth till seven, when also he first made some rude attempts at speech. He had become much stouter during the last two years. He is now three feet in height, and weighs 4 st. 1 lb. He measures round the head 20½ in., round the abdomen 29 in., and round the thigh 16 in. His legs and arms are short; he is extremely broad in proportion to his height; buttoned in his coat, which reaches below his knees, he is like a barrel, and is, in fact, a marked example of myxœdema. The face is as broad as it is long, dull, and expressionless; ears thick and doughy; lips thick; hands short, swollen, and clumsy; ab-

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domen very protuberant, communicating a feeling of resistance and solidity on pressure; eyelids puffy; neck short and thick; skin hanging in large folds from the lower jaw. The supra-clavicular swellings, described by Mr. Curling and Dr. Fagge, are well marked on either side; they are soft and inelastic, but do not seem capable of being drawn down over the clavicle; they are not well-defined, but merge gradually into the surrounding swollen integument; the folds of skin hanging from the jaw rest on them, so that the neck presents a deep transverse fissure. The outline of the trachea can be distinctly traced by the fingers, apparently indicating the absence of the thyroid body; but, desirous of having further evidence on this important point I requested Dr. H. C. Cameron, surgeon to the Western Infirmary, to examine the case; he kindly did so, and came to the conclusion that the thyroid body was entirely absent. The nose is small and somewhat flat; depressed at the root, and slightly turned up at the point; the alæ nasi are but little expanded, and the interval between the eyes is not abnormally great. The forehead is somewhat narrow, and the head round; the anterior fontanelle is not yet closed, and the bilateral diameter of the head seems large in proportion to that of the antero-posterior. It appears to be the same with the trunk, the back being very broad and flat; there is a slight anterior curvature of the spine (lordosis) in the lumbar region, and the tibiæ are slightly bent at their lower part. The skin is rather sallow, but has a tolerably healthy appearance, and is not translucent; the cheeks are a little ruddy, but do not show the pink spots of adult myxœdema; the exposed parts of the skin are cold to the touch; the backs of the hands are wrinkled, but in most parts the skin is smooth and soft, and nowhere shows any tendency to furfuraceous desquamation. Dr. Ord has remarked[1] that we do not find in the report of the Sardinian Commission on Cretinism that a general dryness, harshness, and coarseness of skin prevails among cretins as in adult subjects of myxœdema, and it is interesting to remark that my patient conforms to the description of the former, and not the latter. Nevertheless, I observed that if the surface of the skin in some parts, as over the loins and the lower limbs, was gently grazed with the fingers or the palm of the hand, a sharp grating sensation was felt, like that communicated by sandpaper. He never sweats, and the secretion of sebaceous matter seems to be arrested. The hair of the scalp is very scanty and scattered; it is harsh, dry, and brittle, and the skin scurfy, amounting to pityriasis capitis. The eyebrows are rather thin and slightly oblique, eyelashes long, thin on the lower lids, which are red and inflamed. His nails are very thin and brittle. He has all his first set of teeth, although the back ones have partly decayed; the front ones are blackish and very small, leaving a free space between each. The tongue is thick and dry; the hard palate not much arched. The pulse is 76, weak; respiration short and quick (32), often accompanied by a slight snuffle, or rather snort; temperature in the axilla on three occasions, 97°, 97·8°, and 97·6°. He likes the fire in cold weather, but does not quickly feel changes of temperature. He eats and drinks very little; sleeps regularly twelve hours out of the twenty-four, snoring loudly. His urine averages 10 oz. in the twenty-four hours; feebly acid, sp. gr. 1025, free from anything abnormal; I have not yet made any estimation of the daily excretion of urea. All his movements are extremely slow. He walks with a balancing gait, the legs being wide apart, and is still very easily knocked over. His intonation is strongly nasal, his speech confined to single words for the most part, and he frequently omits consonants. His parents have never attempted to teach him the alphabet, and he cannot count ten. He is very quiet and docile, and has no mischievous propensities. His senses seem all good, and he feels a pinch or scratch acutely. He is fond of music, and can even hum a tune. He sometimes laughs heartily, and frequently he relaxes into a smile; when he does so the swollen eyelids close altogether, and I have been struck with the identical expression which he then assumes to the case of adult myxœdema already mentioned.

CASE 2.—A. D——, aged eleven years, also a boy (Fig. 2), was born in the village of Ladybank, above mentioned, the native place of both his parents. The family history is the same as in the preceding case, with the important exception that the mother has a goitre larger than the fist on the right side of the neck, which began to appear, she says, shortly after she was married. Her mother had a small hard swelling the size of a marble on the front of her neck. Of six maternal aunts, two (both unmarried) had large goitres, one of them extending quite across the neck. These are all the instances of bronchocele she knows of amongst her ancestors, and there were none in her husband's family. The child in question is the fifth of nine, and was born when the mother was thirty-three; all her other children are well. During pregnancy there was nothing unusual in her state of health, except that she felt weak and disposed to rest during the latter part of it. She suffered severely in labour, but was delivered without forceps. The child at his birth was short and thick, especially over the belly; she is sure he was much heavier than any of her other children. He had long, dark, curly hair, extending even over his back, but this was all shed before he was a few months old. All the rest of her children were fair, and had light hair, which at first was both scanty and short, but gradually grew. His skin was very dark, and his lips blue, sometimes intensely so; his entire body was cold: these peculiarities have continued ever since. He slept a great deal, and, in short, progressed like Case 1 in every respect. He has never had any ailment, although he has slept in the same bed with cases of measles and whooping-cough. He is now 2 ft. 7 in. in height, and weighs 2 st. 9 lb. He measures round the head 21 in., and round the abdomen 24 in. His legs and arms are short, and not very thick; head massive; trunk voluminous in proportion to his height; neck extremely short, the head being set

FIG. 2.



almost directly on the shoulders. He is of a more pronounced cretinous type of conformation than G. B——, although by no means such a well-marked example of myxœdema; the broad, squat build thus appearing to be dependent on the skeleton, and not on any growth of soft tissue. His head is long, as well as broad; anterior fontanelle not yet closed; forehead high and broad; face broad and flat, though not much swollen; mouth large and wide, and lips thick; nose flattened at the root, markedly elevated at the point; alæ nasi more flattened and curved than in G. B——; wider interval between the eyes; eyebrows more oblique. The trunk is bulky, and the bilateral diameter great in proportion to the antero-posterior, making the back broad and flat; some degree of lordosis of the spine in the lumbar region; tibiæ bent at their lower part. The soft parts of the body are not much swollen; the ribs are very distinctly seen, and even the outline of the abdominal muscles is visible to the eye. The supra-clavicular eminences are but slightly marked; indeed, they can scarcely be said to exist, but his mother expressly states that he often swells considerably in their situation, especially on exertion. I could detect no trace of a thyroid body, but he made the examination difficult by a sturdy resistance. His skin is cold; it is dark, sallow, and dry, and has a leathery appearance; in many parts, as the scalp, it is wrinkled, and can be pinched up into large folds, as in advanced cases of adult myxœdema. The scalp, hair, and nails resemble those of Case 1; there is no furfuraceous shedding of epithelium. There is no translucency of the skin anywhere, and no pink flush on the

[1] Med. Chirurg. Soc. Trans., vol. lxi., p. 70.

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cheeks. He does not sweat. The skin feels like sand-paper when gently rubbed; it is thickest over the back of the neck, the belly, scrotum, and thighs, which are probably the seats of some amount of myxœdema. He has only a few teeth in front, which are small and discrete, as in G B——; the back ones have been lost by decay; he never shed any, and has got none of the permanent set. The tongue is broad and thick, dry, and leathery; the palate narrow and highly arched. His gait is a feeble, waddling totter, with the legs widely apart, as if in momentary expectation of falling. His speech is inferior to that of Case 1, and he is slower in his movements. He is in some respects livelier, however; he frequently laughs, and has a considerable sense of humour; he also resents interference more, and cries lustily. He is not vicious, and behaves very well in church. All his senses are good, and he is said to be fond of music, although he cannot reproduce any musical note. He takes very little food, and sleeps much; his circulation is very feeble; respiration not hurried, as in Case 1 (this, I believe, being due to the myxœdema in the latter); temperature in the axilla, 97 6°. Through the mother of this patient I learned of the existence of the following three cases.

CASE 3.—G. R. H——, a boy, aged ten years and a half, living in the town of Perth. The family history in this case is the same as in Case 1. The boy was the first of four children, all of whom are well except himself. During pregnancy his mother had the best of health, but during the latter part of it she had frequent occasion to see a dwarf (whom, she says, her boy now resembles, and who, indeed, seems to have been a cretin), but she attached no importance to the circumstance. About the eighth month she had a fall, and afterwards she supposed the child was dead, as movement nearly ceased. He was born apparently lifeless, but the doctor succeeded in resuscitating him; he was a feeble infant, and was both short and thin; his legs and arms, besides being thin, were short in proportion to his body. His history from infancy onwards has been much the same as in the former two cases, except that he was not so slow in any respect, that he never swelled, that he did not sleep more than usual, and that he has two lower incisors of the permanent teeth. He can read a few words, but his father remarked that it was vain to send him to school. His height is 2 ft. 11 in.; his weight has not been ascertained, but on lifting him he feels very heavy and solid. He measures round the head 20¾ in., and round the abdomen 23½ in. The occiput projects backwards, making the head look very long; the arms and legs are very short in proportion to the trunk, which is not so broad as in the previous two cases; neck thin, and not very short; abdomen tumid, soft, and yielding. He seems muscular about the limbs; the muscles of the calf, thigh, and arms are very prominent; the pectorals are not in proportion. His face is not too broad in proportion to its length, but the lips are thick, especially the lower, and there is a wider interval between the eyes than in Case 2; nose markedly depressed at the root, and a little upturned at the point; cheeks a little puffy and flaccid. The tongue is moist, and not too large. The two permanent incisors above mentioned have each two marked perpendicular notches, thus presenting three points along their edges. The ears are a little doughy, but not thick; the hands sallow and wrinkled; neck thin; lower part of the larynx pretty close to the sternum. The thyroid could be felt, as I supposed, on the right and over the isthmus, but not on the left; no trace of supra-clavicular swellings; no folds hanging from the jaw. He is somewhat fair and freckled, but sallow compared with his brothers and sisters; hair coarse, dry, and somewhat scanty. The skin feels cool, and there is free desquamation of fine cuticular scales at all parts; this is very visible to the eye, and when his shirt is taken off a fine shower falls, which, his mother says, is of daily occurrence. Nevertheless, the skin is everywhere soft, and communicates no sand-paper feeling to the fingers; veins are visible all over the surface, especially over the abdomen. His nails are brittle; the front edges of the finger-nails curve forwards at a right angle to the posterior part; the nails of the great toe are traversed by several transverse markings. He walks very well, and with a short, decided step. He speaks pretty well, but his intonation is markedly nasal. He can write figures and letters on a slate, and can read a little. All his senses are good. His circulation and respiration are feeble; temperature 98·2°. He is extremely sensitive to cold, and fond of the fire. He never sweats except in hot weather, and he takes very little food. His parents are not aware whether he can recognise colours, of which his vocabulary does not include the names; though he is said to have a retentive memory in some things, and to be very observant.

(To be concluded.)

ALIBERT'S CHELOID (?) FROM INDIA.

BY A. ST. CLAIR BUXTON, F.R.C.S.

MR. J. Y. D——, a gentleman in the prime of life, presented himself to me in January for surgical assistance. He told me he had lived in India for several years, and had always enjoyed good general health. About two years ago some small boils (not Delhi boils, which are probably parasitic) made their appearance in various regions, some on the shin of one leg. In due course they went through the usual stages, and eventually nothing remained except a sense of soreness about the seat of those on the shin. This soreness continued, and although the skin was not acutely inflamed nor broken, an elevation was after a while noticed at one of the tender points; it was pale and flattened, and it increased by spreading in each direction (without rising much), but more in the direction of the axis of the limb than laterally. Another of the points took on the same action, and yet another. These were all situated about the junction of the middle and upper third of the leg on its anterior aspect, the largest being over the internal surface of the tibia, the others over the tibialis anticus. Meanwhile medical aid was had recourse to, and dilute nitrate of mercury ointment was applied, but without much benefit. Then iodine was tried, with the result of lessening the dimensions of the patches to some extent. As little or no inconvenience, beyond occasional irritation, was felt, the treatment became somewhat neglected. About this time Mr. D—— accidentally scraped his shin, by missing his footing, against the sharp iron step of a railway-carriage, and the edge of the metal plate roughly tore away one of the large patches. After the abrasion had healed, it was observed that the cicatrix was thickening and beginning to spread. He then came to England, and it was at this period that I saw him.

Careful examination revealed three islands of elevated tissue, two of which had nearly coalesced, the third being quite separate. They were all more or less of an elongated oval form, raised about the eighth of an inch, or rather more, above the level of the surrounding skin; pale, smooth, and dense, with hair growing sparsely in, though abundantly around, them; and each having a dull bluish tint along the borders. Pressure with the finger produced little or no indentation, but some pain. Two or three groups of suspicious-looking purplish spots, each about the size of a sixpence, were scattered about the leg. These faded somewhat on pressure. A few days later some of them broke down into a state of ulceration, and ran together; these were over the front of the ankle, and on the lowest third of the leg. The others remained passive awhile, and then slowly disappeared. Probably a high-laced boot was answerable for these ulcerations.

The family history of the patient proved no inheritance of syphilis, nor had the disease ever been contracted. The other leg had always remained sound, and the original boils had healed up in the other parts of the body; indeed, all trace of them had vanished. Dust and sand might have contributed something to the perversion of the cell growth now under consideration. Free perspiration would, it is conceivable, cause much foreign material to adhere in a fine state of division to the lower extremities, and this would be rubbed into the surface of the skin by the clothes, and produce considerable irritation in tender spots. My diagnosis was "perverted cell growth in the cutis vera," and for want of a better name I called it "cheloid."

I suggested an absorbent plan of treatment for the elevations, and I healed up the raw surface with lead lotion. The absorbents, however, appeared not to have the slightest effect on the patches, and I then proposed to my patient that we should seek the assistance of Sir Joseph Fayrer, to which he readily assented. Sir Joseph went most carefully into the details of the history of the case, and finally agreed that the tumours were the products of perverted cell-growth in the cutis vera, but would not pledge himself as to their being cheloid. As absorbents had failed, it was deemed desirable

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that an attempt at radical cure should be made at once. Sir Joseph thought it was within the bounds of possibility that a growth of this type might take on a malignant tendency if subjected in a hot climate to continued irritation. The course he advised was steady blistering until complete destruction of all epithelial tissue had taken place both at the seat of trouble and well round it, keeping the sore open and active by the application of savin. This plan of treatment I carried out fully, and produced a couple of large deep ulcers, the two patches which were so near together being treated as one. I kept the sores open for nearly three weeks, and then allowed them gradually to heal, dressing them with carbolised oil (1 in 20). The carbolic acid was well borne, and I had the satisfaction of finding the resulting cicatrix firm and flat. The last dressing was applied on March 5th, and since that date Mr. D—— has had no symptoms of any return of his trouble. Perfect rest in the horizontal position, with the leg well up, was maintained throughout.

Orchard-street, Portman-square, W.

CASE OF SACCULATED ANEURYSM OF THE DESCENDING THORACIC AORTA OPENING INTO THE LEFT BRONCHUS.

By C. D'A. COLLINGS, M.A., M.B. OXON.

THE following case is interesting from the rarity of similar aneurysms in women, and from the difficulty of arriving at a correct diagnosis before the bursting of the sac into the air-passages.

Maria C——, aged forty-eight, a Frenchwoman, of intemperate habits, but without any distinct syphilitic history, was admitted into the hospital on April 26th, suffering from dyspnœa. She carried on her trade as a hawker until two or three days previously, when, the difficulty of breathing having increased, she took to her bed.

On admission her temperature was 103·5°, pulse 120, and respiration 55; lips and nails livid; respiration somewhat wheezing; expectoration tolerably copious and frothy, with only a very slight rusty tinge. Examination of the chest revealed dulness all over the left side, both in front and behind; heart's apex not displaced. Measurement of left side of chest at level of fifth cartilage, 16¼ in.; of right side, 16 in. Bronchial breathing was heard in the left infra-clavicular and over the left scapular regions; over the rest of the left side the respiratory murmur was greatly diminished, but somewhat bronchial in character, expiration being more audible than inspiration; there was slight bronchophony in the left scapular region. The heart sounds were normal; no murmur was heard either in front of the chest or behind. Radial pulses and pupils equal.

The elevation of temperature continued for about fifteen days, when it gradually subsided to normal; the duskiness disappeared; the respiration was reduced to about 20, and the pulse to 80. The physical signs remained unaltered, but the heart's apex beat was displaced somewhat outwards and upwards, being felt about half an inch external to and in the nipple line. The patient was feeling much easier, and was allowed to get up a little each day; she still complained of some pain referred to the lower angle of the left scapula and down the left arm. Some blood-stained serum was drawn from the pleural cavity by a hypodermic syringe; but a day or two later no fluid could be drawn off by the aspirator. On the morning of May 27th the patient got up to have her bed made, and on getting into bed again was seized with a fit of coughing, bringing up about two pints of bright-red blood, which poured from the mouth and nose. When seen five minutes later she was found to be quite dead.

Necropsy.—On opening the thorax, the right lung was found to be quite healthy, but enlarged, encroaching over to the left side. The left lung was found collapsed and utterly airless, the pleural cavity containing about half a pint of fluid. The heart was normal; there was no valvular disease or hypertrophy. The whole of the arch of the aorta was found to be atheromatous, only small patches remaining of normal appearance. On the anterior part of the descending aorta, as it lay behind the left bronchus, was found a saccular aneurysm, about the size of a horse chesnut, lined with laminated fibrin, the opening into the aorta being about the size of a threepenny-piece. There was an opening from it into the bronchus about the size of a quill; the sac and part of the bronchus extending to the trachea were filled with clot; the distal part of the bronchus contained no clot, but only blood-stained mucus. There was very little induration of the tissues around the sac. Liver and other organs normal.

Guernsey.

TWO CASES OF RUPTURE OF THE HEART.

By A. WITHERS GREEN, M.R.C.S., L.R.C.P.

CASE 1.—E. T. H——, aged seventy-seven, a heavy man, went to bed as usual one night in October, 1881. On the servant bringing him in his breakfast next morning, he found him dead in his bed. The deceased was known to be somewhat eccentric; he was said to be subject to fits of some kind, and to have had rheumatism in 1878. He was a revising barrister. A post-mortem examination showed the brain and lungs to be healthy. The heart was dilated and flabby, the aortic valves containing some chalky deposit. The right coronary artery was thickened, and felt like a cord from outside. On stripping it up from the aorta, a recent but ante-mortem clot, an inch long, was reached, and beyond it a much older, tough, adherent clot; further on still was an extravasation of blood through the posterior wall of the right ventricle. There was blood between the muscle of the heart and the visceral layer of the pericardium, and a pint of blood, half of which was clotted, in the pericardial sac. It would seem that the atheroma in the right coronary artery had led to almost complete plugging of the artery, but it was the fresh clot completely occluding the artery which probably caused the rupture.

CASE 2.—W. J. H. W——, aged sixty-six, a well-made man, on May 7th was sitting listening to a debate, as was his wont, in which he never took any part. Suddenly he fell off his seat, was laid flat on the ground by those nearest him, gave a few deep inspirations, and expired. The deceased was a retired engraver, and was believed to have lived a steady life. Three days before his death he complained of pain at his left side, but would see no doctor. At the time of his death he was drinking gin, instead of his usual beverage of malt liquor. On post-mortem examination, the left pupil was found to be dilated, and the muscles of the left side of the face appeared as in facial paralysis. The vessels at the base of the brain were very atheromatous. The heart weighed twenty ounces. The left ventricle, forming the greater part, was much hypertrophied and rather dilated towards the apex. At the apex, on the septal side, was an irregular laceration of the muscular substance running through into the right ventricle, and also outwards into the sub-pericardial fat; both this and the edges of the laceration were infiltrated with blood. The pericardial sac contained about a pint of clotted blood. The valves on both sides were healthy, though the aortic and mitral valves were slightly thickened with atheromatous deposit. The first inch of the aorta was also moderately atheromatous, and the coronary arteries were excessively calcareous, both of them being narrowed in their main trunk. The branch running down the anterior aspect, corresponding to the septum and to the laceration, had its coats changed at more than one spot by altered blood-colouring matter of old date. The muscular tissue, notwithstanding the disease of the vessels and the laceration, appeared to be very good; its colour was of a natural deep-red, and it displayed no unnatural softness or fatty change. The cause of death being ascertained, no further investigation was considered necessary as regards other organs.

MEDICAL MISSION WORK IN KASHMIR.—At the hospital at Srinagar 5402 new patients were registered during 1883 and a total of 12978 visits paid. The number of in-patients was 391, the average stay of each of these being twelve days. In the Leper Asylum thirty-two patients were treated, seven being operated upon. The financial condition of the institution is satisfactory, and the year closed with a considerable balance in hand. Dr. Neve, in his report, states that such diseases as phthisis, pneumonia, pleurisy, rickets, scrofula, and aneurysm, are in Kashmir very rare, almost unknown, notwithstanding cold, poverty, insufficient food and clothing, overcrowding, and syphilis.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Malhauntem estalia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

GUY'S HOSPITAL.

CASES OF FRACTURE OF THE BASE OF THE SKULL.

(Under the care of Mr. BRYANT.)

THE following series of cases of fracture of the base of the skull illustrates some of the more important complications attending this lesion:—

CASE 1. *Fracture of Base of Skull; Hæmorrhage from Left Ear; Right Facial Paralysis; Recovery.* (From notes by Mr. Hilbers.)—John C——, aged sixty-three, a warrant officer, was admitted on Nov. 2nd, 1882. He had been knocked down by a horse and cart, and was brought to the hospital insensible. Soon after admission he became sensible, but seemed dazed and was very sick. There was no superficial wound of the scalp, but there was copious hæmorrhage from the left ear. On the following day he was sensible, but complained of pain in the head and stiffness about the right arm. He was still giddy, and had been sick several times. There was paralysis of the right side of the face. The pupils were equal and acted well to light. Temperature 98·2°; pulse 80. Ordered an ice-bag to the head, and to have five grains of calomel at night. On the 7th he complained of throbbing pain in the head and pain at the back of the eye. On the 11th he slept and ate well, and the paralysis had almost entirely disappeared. On Dec. 5th he was discharged well, but was advised to keep quiet for five or six weeks.

CASE 2. *Fracture of the Anterior Fossa; Subconjunctival and Nasal Hæmorrhage; Separation of Lower Epiphysis of Radius; Death; Necropsy.* (From notes by Mr. F. Knagga.)—James H——, aged twelve, was admitted on February 24th, 1883. He was sliding down the balustrade of a warehouse, when he fell from the third floor. On admission, at 2 P.M., he was quite insensible; pupils dilated and unequal, the left being the larger; no bleeding from the ears, but some from the nose and mouth (he fell upon his face); respiration irregular, but not of the Cheyne-Stokes character. The left eyelid was much swollen, and the lower lid was of a bluish-black tint. There was a slight puffy swelling of the anterior half of the left temporal fossa. There was, in addition, the typical displacement of a Colles' fracture of the lower end of the radius; crepitus not felt. The right knee was slightly flexed and passed over the front of the left leg. There was very little enlargement of the knee-joint, but fluid could be felt on both sides of the patella. At 4 P.M. the right pupil contracted and dilated in a rhythmical manner without reference to light. At 5 P.M. both pupils contracted and dilated alternately; both eyes turned to the right, and then a twitching of the whole eyeball occurred, and the whole eye was markedly directed outwards, but occasionally there was a return movement of the eyes to their proper position. On the left side the subconjunctival hæmorrhage was very distinct. The eyelids were difficult to open on account of swelling. Respiration 28; snoring as in normal sleep. Well-marked anchylosis of right knee. At 11 P.M. the skin was bathed in perspiration; loud rhonchi could be heard all over the chest; no spasms or twitching.—Feb. 25th: Restless; respiration stertorous and regular. At 1 P.M. the respiration was rapid and irregular; limbs perfectly flaccid.—26th: The patient died at 12.5 P.M. The temperature rose more or less regularly from 96·6° on Feb. 24th to 105·4° on the 26th, the time of his death.

Necropsy.—There was a contusion about the left orbit, and a fracture of the left orbital plate of the frontal bone. No injury to the brain was observed. There was a fracture of the styloid process of the vena, and separation of the lower epiphysis of the radius backwards. The organs were healthy, with the exception of a slight hæmorrhagic effusion below the capsule and under the surface of the liver. There was no hæmorrhage into the left orbit. The fracture extended obliquely backwards and inwards on the orbital plate of the frontal bone to the cavernous sinus, rupturing the ethmoidal vessels, as the ethmoidal bone was seen to be implicated in the sinus. No inflammation in the membranes existed.

CASE 3. *Fractured Base; Crushed Mastoid Process; Escape of Cerebro-spinal Fluid for eight days from Ear; Fractured Lower Jaw; Recovery.* (From notes by Mr. Ironson.)—Walter Edward C——, aged six, was knocked down by a light van, the wheel of which went over his head. On admission, on April 20th, 1883, the child was found to have a large wound on the left side of the head, and the head and face were much bruised and abraded. There was a sero-sanguineous discharge from the ear. No paralysis existed, and the patient was quite conscious. There was a great depression on the left mastoid process, where the bone had been crushed, and also a considerable contusion about the left angle of the jaw. The right side of the neck and face was much swollen, and the right eyelids were completely closed up. On the 24th the discharge from the ear still continued, but the swelling of the face had subsided. The right eyelid was open and the pupils dilated, acting, however, equally, though sluggishly. On the 27th the child was much brighter, and the wound was healing up. A small pocket of pus was opened by incision at the apex of the mastoid process. On the 28th the flow of cerebro-spinal fluid ceased. On May 3rd the patient's face was much swollen on the left side, about the lower jaw. The dresser thought he heard crepitus near the symphysis. On the 8th there was considerable fluctuation observed near the fracture. Next day the swelling over the lower jaw was incised, and some white pus escaped. On the 21st there was some purulent discharge from the left ear, but the wounds were doing well. On June 16th the patient was discharged.

CASE 4. *Fractured Base of Skull; Scalp Wound; Facial Paralysis on Left, and subsequently on Right, Side; Mastoid Abscess; Incision; Prolonged Incoherence; Recovery.* (From notes by Mr. Humphreys.)—Mary Ann K——, aged twenty-four, was admitted on Dec. 5th, 1882. She was a drunken and bad character. On the evening of the 3rd she fell into a cellar, and was picked up and left to lie upon the floor all night. Next morning she was found to have bled a good deal, and to have been sick. On the evening of the 5th, as she had not recovered consciousness, she was taken to the hospital. On admission she was found to be collapsed and pulseless. Brandy was injected, which revived her, but did not restore consciousness. She had a scalp-wound to the left of the occipital protuberance of a punched-out appearance. There was slight left facial paralysis. She had a bruise on the chin and several bruises on her body. Her right pupil was larger than the left. She had perfect movement of her extremities. She was sick on admission, but not afterwards. Ordered iced milk, and five grains of calomel at once. On the following morning she was still unconscious, and fluid was escaping from the ear. Her face turned to the right, and resumed that position if moved. On Dec. 7th the paralysis of the face was more marked, but next day she became half conscious. On the 11th a great deal of pus and fluid escaped from the left ear. On the 12th she became very noisy. Two days later a slight fluctuating swelling appeared anterior to the ear. Above and below the mastoid process were two other swellings, and a third behind the ear, and discharging through it. On the 20th the patient was able to talk well. Two days later a great deal of bad smelling discharge escaped from the left ear. On the 27th there was less discharge from the ear, and the swelling in front of it had subsided. On Jan. 2nd the skin had become red over and around the ear; and on the 5th some necrosed bone could be felt in the abscess behind the ear. There was a slight rash on the face and forehead. On the 9th there was still some paralysis of the right side of the face. It was stated that the woman had been rather "silly" for the last few days, continually giggling and making disconnected remarks when spoken to. On the 13th, however, she seemed more collected. There seemed to be complete paralysis of the right side. On the 16th the patient had more control of the right half of the face. Some blood-stained discharge came from the abscess behind the ear. On the 22nd the patient was rather cyanotic. She complained of hunger and seemed more sensible. On Feb. 17th the woman went out, still half foolish, the wound behind the ear continuing to discharge. The occipital wound was healed, and in general health she was improved.

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SOOREE CHARITABLE DISPENSARY.

FRACTURE OF SKULL; EXTENSIVE EXTRAVASATION OF BLOOD ON DURA MATER, PRODUCING COMPRESSION OF BRAIN; TREPHINING; PARTIAL RELIEF OF SYMPTOMS; DEATH.

(Under the care of Dr. G. C. ROY.)

DURING a drunken affray in a liquor shop, the patient was knocked down by a blow on the head from a heavy stick. He fell down insensible, but recovered consciousness after a while and was able to speak, but soon relapsed into a state of insensibility, in which condition he was taken to the dispensary next morning, and placed in bed.

When seen, the man was unconscious and very restless, tossing about in the bed, and he made no response to questions put to him. His pupils were normal; the breathing was at times natural, with a tendency to stridor. Pulse 72, small. There was no paralysis, but the limbs were rather rigidly flexed. The scalp at the junction of the sagitto-coronal suture was contused and puffy, and a depression was felt in the skull just outside this line and to the left. A crucial incision was made over the part, and the trephine applied over the depressed segment. A linear line of fracture traversed this space, but the depression was limited to the outer table, and was caused by the condensation of the bone from the force of the blow. A probe was gently passed between the bone and dura mater to scoop out any blood that might have been effused on its surface, but only a few small pieces of clot could be thus removed. The wound was dressed with cotton soaked in weak carbolic acid.

Next day there was a return of consciousness. The patient opened his eyes when spoken to loudly. He also put out his tongue, and pointed to his head as the seat of pain. He was, however, very dull and stupid, and could not speak. The progress was impeded next day by an attack of erysipelas, which travelled from head to face and neck, and after three days left him in a very exhausted condition.

For the next three days the patient's condition was hopeful. The wound was granulating, and he could answer questions by signs, though still unable to speak. He took a fair quantity of rice and milk. The rigidity of the limbs disappeared, but the pulse went up to 116, and a tendency to pneumonia of the left lung was manifested. On the ninth day after operation he was decidedly worse, the consolidation of the lung had progressed, and he died quietly at night.

Necropsy.—The extensive fracture passed across the squamous portion of the left temporal bone, and bifurcated at the external angle of the orbit, enclosing a bit of loose spiculum. Another line of fracture radiated upwards from the centre of the first, and terminated at the seat of operation. A thick layer of coagulated blood rested on the dura mater just opposite the temple—dimension 5 × 3 × 1 inch. At the lower part it was an inch thick and adherent, but gradually thinned on the top. Another patch of coagulated blood was found on the right side, opposite the parietal eminence. The dura mater and brain were healthy. The left lung was in the first stage of hepatisation. Other organs were healthy. The wound was healthy-looking.

Medical Societies.

ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Medical Section held on May 16th,

Mr. JOHN B. STORY exhibited a patient suffering from Atrophy of both Optic Nerves, and Paralysis of the Olfactory Nerves and of the Sensory Division of the Right Fifth Nerve. The patient was an unmarried woman, aged thirty-two, who had enjoyed good health till the winter of 1882-83, when she began to suffer from a violent pain in her head. The pain later on became so violent as to confine her to bed, where she remained for some months in the spring and summer of last year. After a time she became completely unconscious, and when her consciousness returned (about July, 1883) she found her senses of sight and smell totally lost, and sensation absent from the right side of her face and the little finger and ulnar side of the ring finger of her right hand. She noticed at the same time a defect in the sense of taste in the anterior portion of the tongue at the right side. The examination of the patient completely established the truth of her statements, with the exception of the paralysis of the fingers, which did not then appear to exist. Corneal and conjunctival sensibility was completely absent, and the palpebral and lacrymal reflexes connected with it, while the cornea itself was perfectly healthy, and the tension of the right globe rather above that of the other eye. He considered the case to be one of cerebral tumour, but could not assign any definite locality to the supposed new growth. The atrophy of the nerves was undoubtedly produced by optic neuritis. He commented on the various theories explanatory of the connexion between papillitis and brain disease, and upon the current views as to the production of neuro-paralytic keratitis. The secretion of saliva from the right parotid gland was, so far as careful testing with vinegar could ascertain, completely abolished, that from the left gland being perfectly normal.—The CHAIRMAN (Dr. H. Kennedy) would connect the symptoms with a tumour at the base of the brain, implicating particular nerves or parts. There seemed to be less vomiting than usual in the case related.—Dr. C. J. NIXON considered that if Mr. Story was perfectly satisfied there was a lesion of both nerves of smell, and at the same time a lesion affecting some of the fingers of the hand and the forearm, it would be perfectly possible to account for all the phenomena that existed on the idea of an isolated tumour. It was remarkable to find that, with the implication of the sensory division of the fifth nerve, there was complete loss of the sense of taste on the corresponding anterior portion of the tongue. This was directly in opposition to a case recorded by Althaus, in which he excluded the fifth nerve as administering to the sense of taste on the antero-lateral region of the tongue.—Mr. STORY, in reply, said he had tried iodide of potassium for some weeks without alteration in the symptoms. In answer to Dr. Nixon, he pointed out that they were all familiar with the fact that loss of sense of smell followed paralysis of the sensory portion of the fifth nerve. In this case a probe might be put up the right nostril without the slightest effect; but if the left were touched in the same way, the patient shrank with pain. Assafœtida, valerian, oil of cloves, or ammonia, had no effect on the right side, whereas on the left the sensation was produced consequent on inhaling strong smelling salts.

Dr. C. J. NIXON read a paper on Reflex Paralysis, in which he summarised the different views which had been held in favour of and against the theory of this form of paralysis. He first examined the class of cases of paralysis which are usually cited as caused by reflex influence—viz, amaurosis from affections of the fifth nerve, and paralysis of the orbital nerves from a like cause. Having shown that these cases may be explained without reflex mechanism, he next examined the evidence as to the existence or non-existence of reflex paraplegia. Examining the views of Brown-Séquard, Gull, Leyden, and others, and the experimental observations on the subject, he directed attention to the absence of any true conception of the mode in which paralysis by reflex action is brought about, except we understand it to be produced by inhibitory influence; so that reflex paralysis, if it have any meaning, must be inhibitory paralysis. This name had at least the advantage of suggesting the way in which the phenomena of disease are produced. Dr. Nixon thought, however, that there was no necessity to admit the existence of an inhibitory paralysis, as, taking for instance the cases recorded as reflex paraplegia, they could arise in different ways—as an ascending neuritis, which sets up myelitis from extension of inflammation along the veins to the spinal cord, or from a lumbar-sacral neuritis, which descends along the sciatic nerves.—Dr. MCSWINEY called attention to the so-named reflex paralysis following wounds, of which Weir Mitchell had given many examples, including paralysis affecting the upper extremities, right or left, where a wound had been received in the lower extremities, right or left.—Dr. BENNETT considered Dr. Nixon's paper open to the objection characterised by lawyers as "pleading double." In his hospital experience Dr. Nixon had never seen a case of reflex paralysis, while he quoted instances of inhibitory nerve influence, which he held to be another name for reflex paraplegia. It was difficult, therefore, to follow his argument.—Dr. WALTER G. SMITH, looking at Dr. Nixon's conclusions as a whole, said his views must to a great extent be felt to be in accord with those of modern teaching, supported by the pathology of nervous diseases; so that very few, if any, physicians or surgeons would now accept Brown-Séquard's teaching in his interesting lectures on Paralysis of the Lower Extremities. Caution

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must be observed in dogmatising too strictly as to what could or could not happen in the domain of the nervous system. Dr. Nixon did not sufficiently allow for the extremely important effects of local sensory irritations, which include both the skin and internal skin or mucous membrane—in other words, stimulation of a limited area of the sensory nerves. The curious thing was that, no matter what part of the skin was stimulated, similar effects followed. It was known that death occurred during the early stage of inhalation of anæsthetics. Again, tickle the inside of the thighs and in a bright light the pupils would be seen to dilate. It was difficult to say what channel that influence travelled up, yet it was the influence of reflex action. Indeed, it was well known that the vomiting centre could be approached by many channels. Modern teaching had undoubtedly narrowed the field of reflex diseases, and while they should be thankful to those inquirers who had cleared away so much obscurity, it was too soon to urge anything positive as to the phenomena being a reflex arrest of function, without speculating that the mechanism by which it was produced might not arise in the body.—The CHAIRMAN called Dr. Nixon's attention to a clinical aspect of this question. He had himself put on record a host of cases of children, from five to seven months old, who had suddenly lost power of one arm, and in these the scarification of a gum or an active purge produced a cure at once. Thus the reflex paralysis was in these cases due to irritation of the mouth or the accumulations in the intestines.—Dr. NIXON replied that he had used the term "inhibition" first, as a step in getting rid of the theory of Brown-Séquard that the paralysis was due to reflex spasm of the bloodvessels of the spinal cord; if not to that, it was due to something else, a number of things, and he took inhibition as one to which it might be due; and he had said there was no necessity for introducing this explanation of the theory of disease at all, inasmuch as it had been established that the paraplegia assumed to be reflex was due to causes which had been ascertained, as an ascending neuritis or a descending neuritis, or a neuritis established by the travelling up of inflammation along the veins. The received explanation of the results of the operations he had cited was that they were due to what was understood as the phenomenon of inhibition. If they were not satisfied that the cases of paraplegia recorded had most distinct and positive pathological lesions to explain them, then the theory of paralysis by inhibition was the one that would satisfy the scientific requirement best. But in the absence of necessity there was no use introducing a new term into medical pathology. With regard to Dr. Walter Smith's observations as to the effect of stimulation, Brown-Séquard had mentioned that peripheral stimulus might act in three different ways—it might influence secretion, or the condition of the bloodvessels or of the muscles. In his paper before the section, he had confined his observations to the condition of the muscles that might be said to be influenced by peripheral irritation. He did not discuss the condition of the bloodvessels such as would be brought about from irritation of an extensive surface of the skin following a blister, &c. Dr. Smith seemed to have dealt with spasms as being connected with paralysis. There was not the slightest doubt that peripheral irritations of various kinds—worms in the intestines and teething—produced convulsive phenomena; but it was quite a different thing with irritation transmitted to the cord. Irritation was supposed to pass to the motor area, and yet the usual result was not attained. Although he had seen a great many cases of paralysis, he had never seen one that he could connect with any of those cases of local irritation such as teething, or that got well on suddenly lancing the gum, and he did not see why paralysis should be cured by such a simple procedure. The object of his paper was to show that such a thing was a physiological impossibility.

On the motion of Dr. Grimshaw, the remaining papers on the agenda were, for want of time to be read, referred to the Publication Committee.

CAMBRIDGE MEDICAL SOCIETY.

AT the meeting on July 4th, Professor Humphry, M.D., F.R.S., in the chair,

Mr. BALDING (Royston) exhibited a specimen of Sarcoma of the Left Tonsil, taken from a female aged fifty-three, who first came under observation on Aug. 7th, 1883, in consequence of sudden and profuse hæmorrhage from the mouth, which appeared to be arterial. At this time there was sore-throat of a month's duration, with some ill-defined indurated swelling in the left submaxillary region, great fetor of breath, and complete fixity of the lower jaw, which rendered any examination of the mouth or throat impossible. This alarming hæmorrhage soon subsided, and only recurred once, to a less amount, ten days later. On Nov. 8th the swelling in the neck had slowly increased, without having become either very painful or tender, and some deep-seated fluctuation now appeared to indicate the existence of pus. This was easily reached and evacuated, and it was estimated that an ounce was let out on the first day. This gave some slight relief, and at the end of a week the abscess had completely healed. Ten days later a second abscess was detected and opened, and this healed rather quicker than the first. These abscesses were just on a level with the upper margin of the thyroid cartilage, the second posterior to the first. There was no subsequent suppuration. During the time of formation of these abscesses there was considerable swelling of the tongue, especially in the left half, so that for a few days it could be scarcely kept within the mouth, but after the second abscess was opened the swelling subsided, and was almost immediately followed by further swelling of the tongue, this time principally affecting the right side, so that it was protruded from the mouth and firmly grasped by the teeth. The swelling subsequently subsided so as to allow the tongue to be returned within the mouth. The patient died on Jan. 12th; the swelling in the neck had for a fortnight previous to death encroached on the trachea and caused some difficulty in breathing. During the whole course of the case the patient was able to take fluid nutriment with but little difficulty. The necropsy showed a firm growth involving the left tonsil; it extended into the submaxillary region, infiltrating the glands and surrounding structures. The epiglottis was also partially destroyed. Microscopically, the growth proved to be a round-celled sarcoma.

Mr. MANBY (East Rudham) related a case of Morphia Poisoning unsuccessfully treated by Hypodermic Injection of Atropia. At 11.30 one evening he was hastily summoned to a lady who was known to be suffering from internal cancer, with considerable intra-peritoneal effusion &c. He found her lying on her back, with livid face, dropped lower jaw, closed eyes, and apparently dead. Shortly after, respiration commenced, in Cheyne Stokes' manner, with palatal stertor. The skin was moist; pulse 108, soft, and rising with the breathing to 120 or more; pupils contracted to pins' points, and insensible to light; conjunctivæ insensate to the touch. The most violent irritants applied to the trunk had no effect in exciting reflex action. On inquiry, he was informed that the patient had that evening returned from London. The previous evening she had an ineffective hypodermic injection of morphia, in consequence of which the nurse, obeying instructions given her to increase the dose if necessary, without any clearly defined limit, had about 10 P.M. injected a larger quantity, corresponding to at least a grain and a half. It was clear also, from the account given, that the needle had not been inserted on the previous occasion. The symptoms supervened very soon after the injection. Mr. Manby made use of all the ordinary means to arouse her, but without success. He then, at 11.45 P.M., injected beneath the skin of the arm five minims of the liquor atropiæ, without effect on the pupils or respiration. At 12 P.M. he injected another ten minims, which had a slight stimulating effect on the pulse, so at 12.15 he added ten minims more. Then, after using a powerful magneto-electric current to the præcordium, another injection of five minims was repeated. No improvement followed, and the patient died about 1.30 A.M., three and a half hours after the morphia injection. The amount of liquor atropiæ injected was thirty minims, or a quarter of a grain of atropine.

Dr. RANSOM related five cases of Croup. He said the term "croup" was used to indicate a group of symptoms. All the cases were children under six years of age. Three died and two recovered. The trachea was opened in one of the fatal cases. The symptoms in all the cases were very much alike. There was at first little or no constitutional disturbance, and in two cases at the beginning no rise of temperature. The fever in no case exceeded 101° F. the tonsils were swollen, and there were patches of exudation on them and on the aorta, but very little appearance of inflammation. All the fatal cases died from asphyxia; in one,

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after tracheotomy had been performed, the disease spread below the tube. The two recoveries were brothers. The treatment was various. The two latter took from one to two minims of a strong solution of perchloride of iron every hour. In no case was any contagiousness exhibited. If these cases were diphtheria, how were the exceedingly mild constitutional symptoms to be explained? Perhaps by supposing that although the disease were in truth diphtheria, yet the amount of poisoning was small or the number and reproductive activity of the micrococcus limited; hence also its non-contagiousness; but the local disease was, in young children, for anatomical reasons, sufficient to cause asphyxia.

Reviews and Notices of Books.

Die Tuberculose der Knochen und Gelenke. Bearbeitet von FR. KŒNIG. Mit 18 Holzschnitten. Berlin: August Hirschwald. 1884.—This excellent account of the tubercular diseases of the bones and joints is founded on the results of personal observation of the author; it is dedicated to the distinguished Volkmann. We may perhaps best indicate the scope and character of this work by describing some of the contents of the chapter on the treatment of tuberculous affections of the parts under consideration. The author says in the beginning of the section in question, that since the white swelling of joints is regarded as an example of tuberculosis, it is obvious that the treatment of this localisation of the disease must be conducted on the same general principles as guide us in considering the treatment of any other tuberculous disease. Amongst other objects, one of our chief aims must be to destroy the infective agents, the bacilli and their spores, by means of specific remedies. Up to the present these specific agencies have not been discovered. Whilst admitting that the preparations of arsenic, iodine, and mercury, with cod-liver oil, saline baths, and the sea coast, are beneficial in many cases of tuberculosis of any part of the body, Dr. Kœnig does not place much reliance on them, for he thinks many cases go on just as well without their employment. He has not had any experience of Davos and the mountain cures in surgical cases. Contrary to his earlier teaching, Kœnig does not now look with favour on the injection into the diseased tissues of solutions of carbolic acid and similar agents. The author is an advocate of the operative interference in almost all cases of tubercular bone and joint disease. In cases where the diagnosis of a local affection of any part of the articulation is probable, the removal of the diseased centre is recommended by simple gouging or scraping away, under proper precautions of strict cleanliness. Where the extent of the disease necessitates it, resection of a greater or less amount of the diseased structures is regarded as the proper line of treatment. The bloodless method of operation is highly spoken of, and the employment of iodoform dressings is strongly recommended. Free incisions are praised in suitable cases. The results of timely resection in the author's hands have been very satisfactory. Separate chapters are devoted to the consideration of tubercular disease in each of the principal points of the body—viz., hip, knee, ankle, tarsus, shoulder, and elbow. With regard to the results of excision of the hip-joint, the author says but little here, promising to say more at the Surgical Congress, but he is evidently inclined to look favourably on the operation.

Specificity and Evolution in Disease. By W. J. COLLINS, M.D., B.S., &c. London: H. K. Lewis. 1884.—This paper, which was read before the Abernethian Society of St. Bartholomew's Hospital, is well worthy of perusal. It is an attempt—and not altogether an unsuccessful one—to apply the evolution theory to the explanation of the relations between specific diseases, and to advance facts in support of the doctrine that there is no sufficient ground for the hard-and-fast lines of demarcation between these diseases and simple inflammatory affections that are generally adhered to. We cannot but think that Dr. Collins in some places pushes his views too far; as, for example, where he implies that tubercle has been robbed of its specific nature by the pneumonic doctrines of Niemeyer, or that gonorrhœa can arise *de novo*. Indeed, from the standpoint he assumes, it would almost appear as if to be an evolutionist one must also be a heterogenist; but we hold that this does not necessarily follow. The hypothesis that most of the varied forms of disease now known to us have sprung from some ancestral type, and that modifications in their nature have largely depended upon the conditions around them, is not improbable, and harmonises with the biological doctrines which are making so much progress in respect to the causes of disease. It is a different matter, however, to admit that the specific distinctions which have led clinical observers to separate diseases from one another, and which pathological inquiry confirms, have no essential basis at the present time. To do him justice, however, Dr. Collins admits there is a relative specificity, but not an absolute one; and if only he would follow biologists in observing more caution in receiving evidence upon the *de novo* origin of morbid germs, we see nothing in his able argument from which we need seriously differ. He has done good service in directing attention to the subject, which is capable of very wide application.

Sleep-walking and Hypnotism. By D. HACK TUKE, M.D. London: J. & A. Churchill. 1884.—This brief essay is given in memoriam of William Samuel Tuke, the author's lamented son. Six years ago Dr. Tuke and his son prepared and printed a series of questions on the subject of sleep-walking, which were then widely circulated; but from two or three causes nothing much came of the attempt to enlarge our knowledge in that direction. Dr. Tuke now again takes up the subject, and has written a readable, entertaining, and instructive account of sleep-walking. The circular of inquiry has been reproduced at the end of this account. A case of spontaneous and one of induced sleep-walking are next described. The section following is concerned with the mental condition in hypnotism or artificial somambulism. To form an idea of the cerebro-mental condition of the hypnotised is not a difficult matter for the speculative mind, but whether such an idea would stand the test of ordinary objections is more than doubtful. Taking Hughlings Jackson's standpoint of mental phenomena regarded as matters of increasing complexity and diminishing stability or organisation, it is not difficult to conceive of the suspension or continuance of various acts of the mind under the influence of several forces, inhibitory or otherwise. But whether such views are merely different modes of stating the same problem, or truly, though but partially, explanatory in their character, is more than we can say. It would land us into a hopelessly long discussion if we attempted to unravel the knots of the skein which we have produced by saying what little we have. We can, however, confidently recommend Dr. Tuke's little work to the attention of all interested in psychological matters.

Western African Hygiene; or, Hints on the Preservation of Health and the Treatment of Tropical Diseases, more especially on the West Coast of Africa. By CHARLES SCOVELL GRANT, M.D. Pp. 51. London: Stanford. 1884.—This is the second edition of a work intended for the use of non-professional persons who are called upon to reside on the West Coast of Africa. Its object is not to supersede skilled medical advice and assistance when these can be obtained, but to give such instructions as may prove useful in preventing disease, and in treating it when such assistance cannot be procured, or until it is available. The book

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has the great merit of being written in plain intelligible language, and the instructions for the prevention of disease and for its treatment, both during the active stage and the period of convalescence, appear to be judicious.

A Medical Guide to the Principal Health Resorts of Northern England. With new chapters on Whitby, Scarborough, Redcar, Saltburn, Harrogate, &c. By RICHARD ELLIS. Pp. 175. London: Scott. 1884.—This is a new edition of a guide-book published last year. It gives an account of the more important health resorts in the North of England, classified into seaside, inland, and mountainous or upland health resorts. It cannot fail to prove useful in helping persons to select a place where they may spend their holiday pleasantly in England, with the advantages of sea-bathing or of mountain air, as may be most desirable. It contains a good deal of historical information regarding the various places described, the objects of interest in their neighbourhood, and the season of the year best suited for their enjoyment; but it is more of a popular than a professional guide, and would advantageously bear pruning in some of its flowery descriptions.

Health Studies. By H. SINCLAIR PATERSON, M.D. Pp. 209. London: Hodder and Stoughton. 1884.—Although no information is given on the subject, we are disposed to think that this volume consists of lectures addressed to some society composed of young men, upon various subjects connected with health. It is well written, contains much information and sensible advice, and the tone throughout is good. It is a work which should prove useful to the class for whom it was apparently written.

La Santé du Peuple. Par L. EVRARD. Pp. 229. Bruxelles: A. B. Lebegue.—This is a work to which the Royal Academy of Science &c. of Belgium awarded a prize of two thousand francs. It treats of the general rules for preserving health; nursing the sick, and the aid to be given in cases of sudden illness, and of accidents and injuries; the measures to be adopted in epidemics; the subject of small-pox and vaccination; and the organisation of a public health service. It appears well calculated to spread sound information among the educated classes of Belgium on the subjects of public health and the first assistance in sudden illness and accidents.

The Laws of Health: Physiology, Hygiene, Stimulants, Narcotics. For Educational Institutions and General Readers. Copiously illustrated. By JOSEPH C. HUTCHISON, M.D. Pp. 223. New York: Clark and Maynard. 1884.—The object of this work is to supply a useful and intelligible text-book for grammar schools, and those of a higher grade, on the subjects of physiology and hygiene. We regret that we are unable to congratulate the author on having effected the important object he had in view. The book does not appear to us to be one which would be generally understood by the class of boys who attend grammar schools, and some of the illustrations would be very likely to mislead.

The New York Medico-Legal Journal. June, 1884.—This volume contains several papers of great interest. That by Dr. H. Maudsley on the Moral Sense and Will in Criminals is written in the author's best style. Dr. C. H. Hughes gives a contribution on "Moral" Insanity. The article of greatest value, looked at from a practical standpoint, is by Dr. G. Johnson on Poisoning by Canned Foods. The writer relates cases of poisoning from the ingestion of tinned tomatoes, and conclusively proves that the deleterious agent is a mineral poison, either verdigris derived from copper kettles used in preserving fruit and vegetables, or chloride of zinc employed to solder on the caps of the tins. Dr. J. M. Carnochan has a brochure on Cerebral Localisation in relation to Insanity. Notes of Transactions of Societies, reviews of current literature, and other miscellaneous matter, complete an unusually good number of this excellent journal.

"REARING OF HAND-FED INFANTS."

To the Editor of THE LANCET.

SIR,—I read with much interest the abstract of Mr. Owen's lecture on the above subject at the Health Exhibition in last week's LANCET, but I was disappointed at his laudation of diluted cow's milk with a little sugar and a pinch of salt as a satisfactory substitute for the natural maternal aliment. My own experience at least does not confirm his, and I have known many infants who would have succumbed to deranged stomach and bowels, and virtually have died of starvation, had they been kept to the diet recommended by him.

Since the publication in THE LANCET of March 16th, 1878 (p. 390), of Dr. Frankland's method of preparing artificial human milk, I have always resorted to this for all delicate infants deprived from any cause of natural nourishment. Dr. Frankland states that he "saved the life and thoroughly nourished one of his own children for the year during which he consumed it." He states that "human milk is sweeter, but contains less casein and salts than cow's milk; the butter is about equal in quantity." The casein is in excess by about one-third in cow's milk; this it is which causes the digestive troubles of the little one, great cakes of hard curd being often rejected by the stomach, or, if passed on to the bowels, setting up irritation, diarrhœa, or enteritis. If you simply dilute the milk with an equal volume of water, you may reduce the casein to a quantity sufficient, but you rob it of half its proper amount of butter and saline matter, both of which are most important for the infant's growth and nourishment. What is requisite to be done? Simply to remove one-third of the casein, and add the required amount of sugar; no "pinch of salt" will be required if the milk is not diluted, as the cow's milk contains sufficient saline matter. The preparation of this artificial milk is accomplished in about ten minutes, and it will be gladly undertaken by even "the lazy nurse," for the sake of the better health and rest acquired by the baby thus nourished. To prepare it, allow half a pint of new milk to stand for about twelve hours; remove the cream and add it to one pint of new milk, as fresh as possible. Into the half pint of skim-milk put a piece of rennet about an inch square, to be obtained of the butcher. Set the vessel in warm water till the milk is fully curdled, which requires from five to fifteen minutes, the rennet being removed as soon as curdling commences, and put into an egg-cup for future use, as it can be employed daily for a month or two. Break up the curd thoroughly and separate the whole of the whey, which should be rapidly heated to boiling, when a little more casein separates and may be removed by straining; 165 grains (about two teaspoonfuls) of powdered sugar to be dissolved in this hot whey and the sweetened fluid added to the pint of new milk (and cream). It is then ready for use. With Dr. Frankland I can affirm that I have saved the lives of sundry children that would assuredly have died without this artificial milk. The little extra trouble is thought nothing of by mother or nurse who has once tried it. The above quantity is generally sufficient for a new-born infant for the twenty-four hours, and, except in the hottest weather, will keep sweet for a similar period. My apology for thus troubling you must be my desire that it should be better known and tried by practitioners before recommending the endless variety of biscuits and infants' food, as it is, indeed, almost a *fac simile* of the natural nourishment.

I am, Sir, yours truly,

Spondon, Derby, Aug. 18th, 1884. B. WALKER.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At a meeting of this Association held on the 14th inst., Dr. Hime, who presided, made a few observations on woolsorters' disease—a subject which has lately been productive of a good deal of interest and anxiety amongst medical men and others. Dr. J. M. Fox afterwards made some remarks on a recent outbreak of fever at Bowdon, and, referring to the conviction for libel of the newspaper editor who published the medical officer's report, urged the necessity of an amendment of the law of libel as applying to such "discharges of an inconvenient public duty." A brief discussion followed.

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THE LANCET.

LONDON: SATURDAY, AUGUST 23, 1884.

WHILE cheerfully recognising the extreme interest of Dr. KOCH'S investigations into the nature and cause of cholera, of which we have been gratified to give our readers an early and full account, it is quite obvious that they do not at present supply the material for much guidance in the treatment of this much-dreaded disease. It is fair at least to hope that we shall not have many cholera cases to treat. To be forewarned is to be forearmed, and certainly our sanitary authorities have had warning enough. The disease is not one which overpowers us all at once. It has to be introduced from an infected place more or less directly, and to spread slowly from one individual to another and from one house or place to another. We may fairly trust to our medical officers of health giving a good account of any suspicious case, and we may rely on medical practitioners everywhere cheerfully co-operating with them in their efforts for isolating cases and restricting the spread of a disease which appears, despite Dr. KOCH'S somewhat discouraging conclusions as to the value of disinfectants, to be so much more preventable than curable. When the College of Physicians ventures to assure the public that, "with reasonable precautions," those who wait on the sick are not more liable to the disease than others, it certainly elevates the question of such precautions into the first rank of importance.

We the less dwell on this part of the subject, as it may be assumed that every sanitary authority, by public instruction, will place before its constituents the best ascertained facts as to the means of disinfection. Where excreta and infected garments cannot be destroyed by fire, which is certainly the most satisfactory way of dealing with them, we should recommend that the excreta be received into a vessel containing fluid consisting of one part of carbolic acid to nineteen of water, or of a solution of sulphate of iron (green vitriol) of the strength of one ounce to a pint of water. The excreta must be kept in these solutions three or four hours. Stained and infected linen should be soaked in such a solution of carbolic acid and hot water for twenty-four hours and then boiled.

Our object just now, however, is not so much with questions of disinfection as with strictly medical questions of treatment. There is one point on which Dr. KOCH is in practical agreement with medical practitioners—that is, the wisdom of rectifying all ordinary gastric and intestinal disorders during the prevalence of cholera. Nothing is more striking in his conclusions than the bactericidal function of the human stomach when in health and when reasonably treated by its owner. He never found the comma bacillus in the vomited matters, except where he had reason to suspect that they contained accidentally some fæcal contaminations. The stomach which is affected with gastric catarrh, whether from drinking or over-eating, chill, or other cause, is likely to supply an amount of mucus-protection to the cholera bacillus which will secure its transmission unkilled into the intestine, especially the ilgum, there to do its deadly work. It is an old point of medical observation that drunkards and other disorderly livers fall an easy prey in times of cholera. They will do well to mend their ways in time—to live "soberly and righteously,"—and, if any indigestion or dyspepsia survive such a change in their habits, to apply without delay to their medical advisers. It is a vulgar impression in cholera times that nips of brandy have a preventive effect. Nothing can be more incorrect. Such a practice would be well calculated to produce that gastric catarrh which, as KOCH and all practitioners of experience agree, is most apt to give the cholera poison its best chance of operating on the intestine.

There is nothing in KOCH'S researches contradicting the general opinion of the profession that by far the best thing in cholera epidemics is to take measures to bring cases of diarrhœa under early treatment, and to employ such remedies as are of a corrective and astringent character. The College of Physicians has done good service in recommending that in any place visited with cholera house-to-house visitation should be instituted. In this way, not only are cases of diarrhœa prevented from drifting, but opportunity is gained for seeing the homes in which they occur. The nature of the remedies to be used for diarrhœa will vary somewhat according to the nature of the case and the judgment of the practitioner. In some cases of gastro-intestinal catarrh, with little evacuation, such medicaments as bismuth and soda will be enough to correct the disorder, but where copious fluid evacuations from the intestine have begun they should be regarded as in themselves serious, and first objects of treatment. No doubt there are cases of cholera, especially in the East, fatal without these, or in which the evacuations are disproportionate to the shock and collapse. But this is not the rule in this country, and indeed is exceptional. In the great majority of cases where the evacuations can be early controlled the constitution of the blood is preserved and the disease may be cured. Where there is not much vomiting, the chalk mixture with a few minims of tincture of opium will often suffice. In later epidemics, undoubtedly, the dilute sulphuric acid mixture has been rather preferred, especially where there is much sickness. More effective than either in many cases, and more easily retained in cases of sickness, is a small pill of solid opium and acetate of lead in the proportion of half a grain, to two, three, or even four grains of acetate of lead. The house-to-house visitor, who of course would be a qualified practitioner, should carry such pills with him. The diet should be of a light and unirritating character; the patient should lie in bed, and have a large linseed-meal poultice applied to his abdomen; cold water should be freely allowed in quantities short of those which might excite vomiting; where that is not borne, ice is of great use.

When the stage of diarrhœa is passed, much more complicated changes and lesions have to be realised, and a wise treatment becomes increasingly difficult. It is not the least valuable part of KOCH'S investigations to have given more precise pathological definition to these changes, and to have shown us that, besides deadly collapse, with lividity, suppression of urine, pyrexia, &c., we have in a large majority of cases remarkably "severe intestinal lesions" to deal with—dark reddish-brown colour of the mucous membrane, with superficial

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hæmorrhages, or the mucous membrane necrosed or covered with diphtheritic patches; the contents of the intestine being sanguinolent, ichorous, and putrescent. Our readers would do well to refer to THE LANCET of the 9th inst., p. 249. It would be folly to dogmatise on the treatment of such conditions any more than on those of typhoid fever. Immense good is done by realising the complications of the case and the possibility of doing harm by expecting immediate and instantaneous changes from vaunted or specific remedies. Opium here is out of place. Stimulants, too, can only be used with great caution. Food must be of an unirritating character. Mr. MACNAMARA recommends warm enemata of beef-tea with brandy every third hour in cases where the purging has abated. Food given by the mouth may be iced, and the powers of life must be husbanded by warmth and rest.

The difficulty in the treatment of the advanced stages of cholera will have two lessons for all sensible people:—First, that what is difficult for doctors must be much more so for those who are unlearned in disease; and, secondly, that their whole efforts should be directed to giving the profession every assistance in promoting the early treatment of cases, and diffusing general intelligence as to the laws which regulate the spread of the disease.

IN accordance with the recommendation of the Committee presided over by Lord MORLEY, the system of examination of army medical officers previously to promotion has been reintroduced into the service. We always held that the abolition of these examinations was a mistake, and therefore think this a step in the right direction. But we regret that we cannot speak in terms of unqualified praise of the regulations upon the subject just issued with the *Army Circular* of August 1st. They are divided into two sections. 1. Rules for the examination of surgeons previous to attaining the rank of surgeon-major, which may be taken at any time between their fifth and tenth year of service. The examination is to embrace (1) surgery, operative and practical; (2) medicine and pathology; (3) hygiene; and (4) duties of executive officers during peace and war, at home and abroad and at sea. There are certain exemptions from the examination which it is unnecessary to detail. But there are two very serious objections to the rules as laid down. First, it is not stated whether the examination is to be optional or compulsory; nor is any penalty attached to the refusal or neglect to undergo it. If there is any practical difficulty in applying the new rules to officers appointed under the warrants of the last ten years, it ought at least to be made clear in what manner they are to operate in the case of those now entering the service. Nor is it stated when these rules are to come into force. It surely cannot be intended to subject officers to such an examination without giving them due time to prepare for it. But the second objection appears to us a much more serious one. It is enacted that "a certificate will be required from a recognised teacher of surgery in any medical school at home or abroad in which operative surgery is taught, showing that the medical officer has gone satisfactorily through a complete course of operative surgery during the period within which the examination must be taken, and that he is a competent operator." But nothing is said of the manner in which such certificate is to be obtained. Is every officer to have a certain amount of leave, over and above that usually granted, to enable him to attend such "recognised teacher of surgery"? Is the expense of this "complete course of operative surgery" to be defrayed by him or by the War Office? And in what manner are the necessary subjects for operations to be obtained? We confess that in the absence of any explanation on these points this new rule appears calculated to inflict a serious injustice upon the junior medical officers; and we trust, in the interests of the service, that it may be either abolished or very materially modified. Unless something is done in this direction, it will probably have the effect of preventing many of the surgeons from undergoing the examination. 2. The second section of the regulations contains "rules for the examination of surgeons-major of twenty or more years' service; the examination will be optional." But the option is so far modified that until the surgeon-major has passed the examination he will not be eligible for promotion to brigade surgeon and the administrative ranks. We consider this a very fair condition, as the subjects of examination are all such as a medical officer ought to know well if he is to discharge efficiently the duties of the higher grades. They relate chiefly to the organisation and administration of hospitals and to the duties of the medical staff corps, the relations of the medical and other departments of the army to each other, field service with troops, sanitary duties in peace and war, epidemiology, and the protection of sick and wounded against pyæmia, septicæmia, and all other forms of blood-poisoning, and their treatment when they occur. The examinations are to be partly written and partly *viva voce*, conducted by an examining board, who will record the questions and answers, and forward them with all the written documents to the Director-General, without expressing any opinion as to the result. We believe that this examination for the higher grades, if properly carried out, will tend to exclude incompetent officers from positions of serious responsibility, and will operate beneficially in the interests alike of the department and the service generally. But we trust the authorities may be induced to reconsider the rules laid down as to the examination of the surgeons, and to modify them in such a manner as will remove all ground for a complaint of injustice on their part.

IT is generally admitted that the British Pharmacopœia is an eminently unsatisfactory work. It has been unhesitatingly condemned by the highest medical authorities in the country. We have over and over again urged the necessity for placing it on a more satisfactory footing. At the recent meeting of the British Medical Association at Belfast it was criticised in unmeasured terms, and a resolution was passed urging the Council "to consider with as little delay as possible what steps should be taken to ensure that the proposed new edition be brought into more complete accord with the present state of medical knowledge." A committee was appointed to further this end, and to organise means for establishing a supplemental or semi-official list of remedies the properties of which might not have been sufficiently investigated to warrant admission to the Pharmacopœia itself. This list, added to or modified from year to year, would, it was thought, form the basis of changes to be con-

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sidered by the sub-committee of the Medical Committee at their periodical revision of the official publication. The scheme has excited some discussion, and several well-known authorities have published their views on the subject. Dr. FARQUHARSON, speaking of the present Pharmacopœia, expresses a hope that something may be done to bring this antiquated volume into harmony with modern usage. By this, he explains, he means not the revision rendered necessary by self-progress and the introduction of those new drugs which have established their claim to popular favour, but a "drastic and thorough overhauling of every page," and the "summary ejection of useless and superfluous articles." "Nothing in connection with materia medica," he says, "has surprised me more than the way in which many so-called remedies, which no one ever dreams of using, and which probably could not be found in case of need, are permitted to cling with the conservative tenacity of barnacles around our modern text-books." Dr. LAUDER BRUNTON endorses Dr. FARQUHARSON'S statements, and pleads for the introduction of more preparations, which shall be not only useful as remedies, but agreeable to the palate. At present, the medical man who writes a prescription is undoubtedly at a great disadvantage with one who dispenses his own medicines. The latter can remedy anything objectionable either in appearance or taste, whilst the former is almost entirely limited to the official preparations, many of which are abominably nasty. At the British Pharmaceutical Conference, held at Hastings last week, the President spoke of the necessity, long experienced, of a better Pharmacopœia, and claimed for pharmacists the right to participate in the production of this important work. He argued that they, as a body, knew more about the practical niceties involved in the preparation of medicines than anyone else, and reminded his hearers that in most countries the pharmacist was the only recognised dispenser of medicines, the practice of pharmacy being jealously restricted to those who made it a special study. This is a view of the subject deserving of careful consideration, although it is of course a mere matter of detail. What we want is a better Pharmacopœia, and if the Medical Council is unable or unwilling to accomplish the task in reasonable time, they must not be surprised if we look elsewhere for assistance.

IN conjunction with M. CHARCOT, M. PARINAUD has been engaged in studying the ocular disorders associated with disseminated sclerosis. (*Le Progrès Medical*, Aug. 9th.) The most common are muscular affections—a paralysis or paresis of the associated movements of the two eyes,—so that there is a difficulty in lateral motion and convergence. Thus, if the patient looks to the right or left without moving the head, the corneal margin does not reach the canthus, and the pupils tend to return to the middle line, owing to fatigue of the muscles. Nystagmus interferes with this observation, and, as both eyes are affected, there is no appreciable strabismus. Paralysis of convergence is readily determined. Diplopia is a frequent symptom, especially at the onset of rapid cases, disappearing after a month or two, either in reality or apparently, but it is less marked than in monocular paralysis. Nystagmus, the most important symptom, is due to the paralysis of associated movements, being excited by attempts at fixation, and more pronounced when the eyes are turned to the right or left. The nystagmus is not apparently related with the degree of paralysis; it is more likely dependent on an incomplete paralysis arising from a lesion of the centres governing associated movements. The vague faccial expression so characteristic of this disease is accounted for by this derangement in ocular movements, for the physiognomy depends largely on the remarkable synergy that enables the eyes to travel together in all directions, their axes being constantly changed for accommodation to various distances. Ordinary paralyses of peripheral origin are rare; but M. CHARCOT has seen cases of ptosis. As to the iris, slight inequality of the pupils is not infrequent in the early stages, especially when the eye is at rest. Later, myosis is marked; but in either state the reflex contractions to light and accommodation are preserved—a point of importance in the diagnosis from tabes, of which the Argyll-Robertson pupil is one of the earliest and most characteristic signs. These pupillary reflexes may even be exaggerated in disseminated sclerosis, so that the pupils contract extremely, even if already myotic. It is held that this suffices to dismiss the idea of tabes from such a case, and to suggest disseminated sclerosis. The myosis of tabes with early abolition of light-reflex, and sometimes even of contraction for accommodation, is a kind of paralytic myosis; that of sclerosis with preservation or exaggeration of the same reflexes may be regarded as a spastic myosis. The analogy of these ocular reflexes with the tendon-reflexes in these two affections is therefore striking. As regards the optic nerve, M. PARINAUD points out that amblyopia occurs in this disease under three forms. In many cases it arises slowly; visual acuteness is about the same in both eyes, and the field is normal. There is a certain amount of dyschromatopsia for red and green, often an early and well-marked symptom. In many cases there are no papillary changes, but when advanced the papilla may be pale, especially in its temporal half. In the second form amblyopia develops rapidly, and leads to absolute but transient blindness. This may pass away to such a degree that the patient can read fine type; but the colour-blindness persists, the visual field is contracted, and the optic discs remain notably white. M. CHARCOT has never seen a case of persistent blindness, although the atrophy of the optic nerve may be quite obvious; and this affords a contrast to tabetic atrophy. In the third form the amblyopia and nerve change is unilateral; but this is rare, and is probably due to sclerosis of the nerve itself, the bilateral variety being referable to central lesion.

WE have had frequent occasion of late to animadvert on the unsatisfactory state of the law relative to private lunatic asylums, and we have observed with satisfaction in the signs recently forthcoming that the forbearance of the public in this particular is reaching its limit. But whilst fully alive to the importance of not relaxing our efforts in this direction, we cannot shut our eyes to the fact that in a far different quarter—that, namely, of the public asylums—a state of things is arising serious enough to justify grave uneasiness, and even alarm. The tendency of late years has been for these institutions to be ever growing larger and expanding their borders, until they are assuming proportions altogether unwieldly; and we see cases in which from 1500 to 2000

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insane individuals, *supposed to be patients*, are congregated under what is practically one roof, and under the care and control of one medical man.

Now if institutions of this magnitude are intended solely for the *care* of the insane, we have nothing to say against them; but, on the other hand, considered as *curative* establishments, their constitution is a delusion and a snare. To say that a certain number of recovered individuals are turned out annually from these institutions is beside the mark. Thanks to the *vis medicatrix naturæ*, cases will often recover when but a minimum of care and attention is bestowed on them. It does not admit of either question or dispute that from the large amount of administrative work necessarily devolving on the medical head of one of these huge establishments his medical functions are practically in abeyance. It is certainly little to the credit of the English lunacy system that the enormous mass of material that annually passes under the eyes of the medical staff of the asylums is almost wholly unutilised.

In saying this we give the explanation of the comparative stagnation of the special department of medicine under consideration, for whilst other branches of the art are advancing by leaps and bounds, psychological medicine, if not altogether stationary, manifests at best but a lame and halting progress. Let us not be misunderstood: we consider that the English county asylums are admirable institutions for the *care* of the insane, and in this regard reflect credit on their management; but as *curative* establishments they are by no means to be looked upon with equal favour. In truth, the great thing needed is the separation of the cure department from the care department of the insane; for whilst for the latter object large institutions are not harmful, and may be necessary, the establishment of small lunatic hospitals is in many ways imperative for the former. Such institutions officered by able and earnest medical men would doubtless before long yield abundant fruit. The only possible objection to this view—the economic one—has not, we think, any weight. Granted that these small curative establishments might be more expensive than the average county asylums, the extra expense incurred might be, and would be, fully compensated, and perhaps more than compensated, by the saving effected on the chronic cases in the asylums reserved for their care. Such a division of labour would, we entertain no doubt, have far-reaching beneficial effects, and be highly conducive to the welfare of the patients; and in the long run we make no question but that many an individual might be thereby rescued from being a burden on the rates for a period bounded only by the term of his natural life.

AMONGST the Acts of Parliament to which the Royal assent was given on the 14th inst. were the following:—The Cholera Hospitals (Ireland) Act; the Canal Boats Act; the Criminal Lunatics Act; the Disused Burial-grounds Act; the Cholera &c. Protection (Ireland) Act; the Public Health (Ireland) Amendment Act; the Public Health Officers Act; and the Brighton Improvement Act.

ON the 16th inst., a patient, while in a delirious condition, escaped from the temporary hospital for small-pox cases at Crewe. After five hours' search he was discovered hidden in some corn. He was naked at the time of his escape, and died on the 20th from the effects of disease and exposure.

Annotations.

"Ne quid nimis."

THE MEDICAL COUNCIL.

THE Medical Council is summoned to meet on the 6th of October, chiefly to elect a President, Sir Henry Acland's term of office having expired. It is possible, too, that by that time the English Colleges may have prepared a scheme, or may reproduce the old one, for a conjoint examination, and may ask the Council to sanction it. We shall revert to this subject before the meeting of the Council.

OPENING OF THE FIFTH INTERNATIONAL CONGRESS OF HYGIENE.

ON the 14th inst. the fifth international gathering of sanitary reformers was opened at the Binnenhof or First Chamber of the States General of Holland. Our correspondent will send us from the Hague some details of the proceedings, but we have already received the summary of the various reports which are presented as the basis of discussion. Thus, for instance, Dr. Corradi of Pavia will seek to demonstrate that we may admit the possible contagion of phthisis, but that transmission by clothes, rags, &c., is not yet proved. Cohabitation is the most likely, if not the only, means of contagion. Dr. Vallin of Paris has a report on the spread of tuberculosis by infected meat and milk, which he considers may occur unless the cause of infection is destroyed by exposure to great heat in cooking. Dr. Napias, as usual, appears as the champion of the working classes, claiming better legal protection for them against unwholesome industries and unhealthy dwellings. A great number of papers will be read by Dutch medical authorities on Over-pressure in Education, the Influence of Life Insurances on Infant Mortality, the Effect on Climate produced by the Destruction of Forests, and other topics. As yet no mention is made of Cholera, but it will be found almost impossible to exclude this "burning question" from the debates, and naturally the drainage of towns, notably Paris, will receive a large share of attention. The Congress will close its proceedings on Wednesday, the 27th inst. For Sunday next the Rhine Railway Company has placed a special train at the disposal of the members of the Congress, to take them to Rotterdam, Feyenoard, Dordrecht, and Moerdijk. There are entertainments for every evening, and the town of the Hague gives a reception to the members of the Congress at the Palace of the Arts and Sciences. Altogether, the Dutch will not fail to prove themselves worthy of their high reputation for hospitality.

REGISTRATION OF LODGINGS.

NEVER was this precaution more necessary than now. In consequence of the cholera scare and the clumsy and erroneous quarantine precautions taken by our neighbours generally, the watering-places and "health resorts" on this side of the "silver streak" are crowded, and it may be assumed that hygienic conditions are often seriously neglected. It would have been far wiser, in a precautionary sense, if the great bulk of English people had stayed at home this year, instead of exposing themselves and their families to the exceptional perils of towns and villages in which the one eager desire is to make hay while the sun shines, regardless of the most obvious dangers and careless of results, provided only that they can contrive to take the largest possible advantage of unusual if not unprecedented opportunity. Medical officers of health would do well to look into this matter at once, and, as some have had the courage and honesty to do, institute a system of special certificates, even

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without the sanction of authority. Those who recommend sickly persons and families to hasten to these overcrowded places ought to share the responsibility of the advice they give with the local medical officers, by taking the trouble to ask the advice of these local men as to the particular hotel or house to which they send the persons who have consulted them.

ALCOHOLIC PARALYSIS.

THE current number of *Brain* contains an interesting account by Dr. Dreschfeld of Alcoholic Paralysis. He distinguishes two forms of the affection, the one being marked by ataxic symptoms, chiefly occurring in males, and subsiding on discontinuance of the alcohol. He thinks that the history of such cases of alcoholic ataxia, together with the absence of many of the ordinary symptoms of true dorsal tabes, suffice to determine their etiology. Moreover, tabetic symptoms—especially the absence of tendon reflex and the lancinating pains—are sometimes seen in the more typical cases of alcoholic paraplegia. This latter type is, he says, more frequent in females who have been addicted to alcoholic excess. The symptoms begin more or less acutely, and consist of sensory disorders, as hyperæsthesia of the lower limbs, sometimes with hyperalgesia, and often with lancinating pains and spinal tenderness. Anæsthesia or retarded sensibility and analgesia may follow. There is more or less motor paralysis, mostly of the lower but sometimes attacking the upper extremities, with diminished superficial reflexes and absence of tendon-reflex. Redness of the feet, hands, and other parts indicates vaso-motor disorder. Cerebral symptoms—as insomnia, restlessness, more or less delirium, and hebetude—may arise in the course of the disease, and are often the cause of death. As to prognosis, some cases which are early cared for recover; others recover for a time and then relapse; in others the course is steadily downward, death ensuing from cerebral symptoms, from exhaustion, or some intercurrent affection. Dr. Dreschfeld gives details of a well-marked case, which was readily diagnosed. It proved fatal, and at the post-mortem examination pulmonary and renal tuberculosis was found, but no lesions in the spinal cord. The peripheral nerves (the sciatics, musculo-spiral, and anterior crural were examined) showed degenerative changes, breaking up of the myeline, and in many places of the axis cylinder also. The condition is, then, one of peripheral multiple progressive neuritis, and can be distinguished mainly by its less acute course, and limitation of paralysis to the extensors, as well as by the more marked hyperæsthesia from the non-alcoholic progressive multiple neuritis described by Leyden, Strümpell, Pierson, and others. Its resemblance to lead paralysis was pointed out by Lancereaux, and Dr. Dreschfeld concludes by mentioning two cases of visceral neuralgia attributed to alcoholism which have some analogy to lead colic.

FEEDING OF INFANTS.

As a good working rule, it cannot be denied that infants under the age of seven months should take nothing but milk. Further, it must also be owned that some infants thrive though a departure be made in the direction of farinaceous additions to their diet; but the proportion of those who are able to bear deviations from the natural food must be very small. So that he who maintained that such farinaceous additions were innocuous would be under the necessity of proving his assertion. It appears to us that the matter lies in a small compass, and may best be explained by analogy. Some individuals can get through more work than others, their reserve force being greater. So it is with an infant's digestion. Human milk is that which nature has found to be best for infants generally; and if that cannot be obtained, other fluids artificially prepared must be substituted for it, closely resembling human milk. No starchy additions can be made without taxing the reserve forces of infantile digestion. Generally the tax cannot be met, and the insolvency of digestion is shown in the production of rickets. It must follow, therefore, that even those infants who do thrive when amylaceous articles are given, do so at an expense and loss which may not be evident, but which is nevertheless real. Dr. Keating has come to the following conclusions from some observations made on the salivary digestion of starch by infants:—The saliva of some infants possesses the property of converting starch into glucose. The age of the infant cannot be taken as an indication of this property of its saliva. When such a condition is found to exist, a small quantity of well-prepared farinaceous food is valuable as an element in the diet. (This proposition we should be disposed to take exception to.) An examination of the stools of children so fed would be a guide as to the quantity of starchy food to be used, and when farinaceous food is employed, slow feeding is probably preferable to the use of the bottle.

SHOP EMANCIPATION.

THE conviction that shop labour no less than factory labour needs regulation is happily gaining ground. An able article by Lady Manners in the *National Review* takes up the principal points on which the present system of shop service errs. The practically unrestricted duration of daily work is usually regarded as comprehending the essence of the evil which it is sought to remedy. Roughly it does so, but associated faults are numerous, and from their nature cannot but aggravate greatly the bad effects of mere fatigue. The work of shop assistants may not, as a rule, be so severe in its muscular strain as that of factory *employées*, but it implies mental effort of quite equal and often greater tension and diversity. Again, the conditions under which work is done are usually anything but satisfactory. Under the best management ventilation is apt to be faulty in many such establishments. A space originally insufficient to contain the air-supply of twenty or thirty daily inhabitants, and ten times as many regular frequenters, cannot with any ordinary provision for renewal of its atmosphere be expected to feed the combustion of so many pairs of lungs, reinforced, it may be, by a brilliant array of gas jets burning in full flame. The heat of such rooms is in itself at once a test of their impurity and an independent cause of mischief. As regards meal-times, it is well known that the dinner "hour" is commonly a fable. In some houses the term "meal-time" has hardly any meaning during a busy season. Arrangements for other necessary calls of nature are sometimes so awkwardly designed that decent attention to these is not possible. The unclean overcrowding of young men or women in their dormitories is an old evil. So is the want of seats in shops, where these might well be allowed were master tradesmen willing to be as frank as they are facile towards their customers. It is not necessary to tell medical men that early disease and death are frequent under these conditions. Each of them has seen the vested capital of the shop attendant—health—again and again merged into the growing revenues of his employer. The remedy which is asked for this state of things is that a term equal to the average period of factory work, fifty-six hours per week, meals having been allowed for, should be assigned to shop labour. This is not too much to ask. In the case of women it is, we think, too little. Employers and customers, particularly poor customers, it is hoped, will endeavour to put an end to the metropolitan habit of shopping late, and the public is appealed to in support of the whole project of reform. We strongly recommend the public to listen to that appeal, and we hope that

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all that social agreement can do may be accomplished by that means. At the same time, the question of shop labour in all its bearings appears to us much too large for settlement in this way. State legislation, which we deprecate wherever it can be done without, is here necessary. It has been successfully applied to the regulation of factories, and there is no reason why it should not be used with equal success to correct the very faulty righteousness of counter traffic.

THE PATENT MEDICINES STAMP ACT.

THE *Saturday Review*, in an able editorial on this subject, points out that there are few things more to be regretted in connexion with the Session just closed than the failure of the Government to put the Patent Medicines Stamp Act on a more satisfactory footing. "There is of course a small loss of revenue to be apprehended, but there are a hundred less harmful ways in which a similar sum might be raised. Mr. Childers stated in the House of Commons that the stamp at present brings in £160,000, and that he could hold out no hope of a repeal of the tax. This, if correctly reported, was curious language to use, the more so as he went on to say that he had applied to the Board of Inland Revenue for information on the subject, which he promised to study. The object of studying with care the operation of a tax which he holds out no hope of repealing is not very clear." We should concur in the justice of these strictures if we were satisfied that the utterances of the Chancellor of the Exchequer had been accurately reproduced. We have reason, however, to believe that Mr. Childers, if not incorrectly reported, was at all events reported less fully than he might have been. It appears that after he had replied to Mr. T. P. O'Connor, he was asked by Mr. Warton if the Government next session, or next session but one, intended to carry out the promise they made on March 26th, to bring in a bill dealing with patent medicines. Mr. Childers said he had taken no part in the discussion on the subject, but thought he might give the promise asked for. We are glad to find that the necessity for active interference is recognised by the Government, and we look forward with confidence to the repeal of the Act. The subject has been warmly discussed by all classes of society, and there is a general consensus of opinion that a question which concerns so vitally the health of the people cannot be dealt with too promptly.

ERYSIPELAS AFTER VACCINATION.

AMONG the accidents of surgery is erysipelas—an accident in many cases avoidable and avoided by surgical forethought, but one arising from so many different and often exceptional circumstances that it does not seem possible that the strongest concentration of human skill will ever banish it from the list of diseases. Nay, its very standing as a disease has reference rather to the degree than to the type of change which it indicates. Through the term erythema we can trace a generic development from the blush of emotion or the rosiness which borders a healthy wound to the tense and even suppurative hardness which we usually name and treat as erysipelas. This variation of type depends upon variety in causation, and the force and kind of the resulting change reflect the character of its stimulus. It will readily be admitted by all medical authorities that that two chief groups of such causes exist—that in which mechanical irritation is the prevailing feature, and that in which aceptic forces are at work. In aid of these there often comes the habit of body of the person attacked. The under-fed or improperly fed, the overworked, the relaxed and flabby types—in short, any in whom health means less than vigour—possess this constitutional proneness. There is abundant and daily evidence that dangerous degrees of erysipelas may proceed from almost any surface injury, as well as from deeper faults of vital action. The pin-scratch has no immunity which the amputated stump has not. In either case, dirt, friction, bad ventilation, and other equally common conditions may introduce this unwelcome complication. Much has been made of erysipelas after vaccination, and a feeling has been created by prejudiced and half-informed people against that measure on the ground of this occasional sequel, which is not its consequence. No candid mind can fail to see that there are numerous circumstances in the lot of children, especially of poor children, which help to determine inflammation at the seat of a pustule or of any irritable sore. The child may be unhealthy; the home may be unwholesome; the parents or the child may be uncleanly; the arm may have been rubbed by one of the shields so commonly in use, or clothed in some poisonous aniline-dyed sleeve such as the small draper can always find for a poor customer fond of colour. In these and many similar ways fault creeps in, but careful and thorough vaccination cannot, and does not, furnish a sufficient cause for fatal erysipelas. Much of the misconception on this point has arisen from a confusion of cause and effect, of *post hoc* with *propter hoc*, which unbiased reflection alone can remove. In this question, as in every other, judgment, not prejudice, must inform public opinion in order that neglect may receive its proper name and punishment, and vaccination may not be saddled with discredit which does not belong to it.

"KILLED BY LIGHTNING."

THE lamented death of the Earl of Lauderdale from the effects of lightning has served to emphasise the danger to life that lurks in one of the grandest and most entrancing manifestations of nature—a thunderstorm. In the majority of instances no amount of forethought or care can save the victim from the impetuous and capricious influence; and yet we think that not a few fatalities might be avoided if people only possessed the most rudimentary knowledge of electrical science, and the presence of mind to act upon such knowledge. But, in truth, there is much that seems mysterious in the lightning flash and its attendant phenomena. The brilliant presence and the wondrous sequel inspire the imagination more than the judgment. Poets and sages have clothed the zigzag writing in the air with attributes that are many of them only links in the chain of conditions of which itself is one, and have erred in assigning to the comparatively harmless thunder the dire effects of the momentary passage of the electric fluid. In one of his "Hebrew Melodies," Lord Byron has written: "As fall the oaks at once, and blasted by the *thunderstroke*." The subject of electro-dynamics is very abstruse, and yet it requires no great acuteness of intellect to enable one to grasp the main facts relating to the correlation and mutability of forces. It may not, however, be easy to demonstrate to the unscientific mind how an electric current displaces the atmosphere and causes those marvellous successions and intervals of sound which in the aggregate are known as thunder; how it is rendered visible as a flash of light, or is transmuted into electrolytic action, decomposing the most stable chemical compounds; or, lastly, how it is converted into an outburst of mechanical violence of uncontrollable and almost immeasurable power. The familiar exhibitions of the workings of Nature's laboratories may be utilised for instruction and guidance. Had George Henry Mitchell, killed by lightning on Saturday week last whilst seeking shelter under a tree, been aware of the danger he was incurring by placing his body in close proximity to an imperfect conductor, he would have preferred a good drenching in the open meadow to the treacherous protection

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he sought from the storm. In this man's case the face was blackened, the hair on the face and head singed, and the left tympanum ruptured; his hat was torn, the laces of his boots charred, and in the instep of each boot a large rent was made. Results very similar to those last mentioned may be seen in the museum of St. Mary's Hospital, here in that instance the patient recovered. In Lord Lauderdale's case, a deep wound was inflicted on the forehead, scorched lines indicated the path taken by the electric current, whilst his lordship's watch and chain were fused. It is a well-known fact that the course of the superficial vessels and nerves is occasionally mapped out with tolerable accuracy. The blackening is partly due to simple burning, partly to reduction of the oxyhæmoglobin of the blood. It was formerly supposed that the blood of animals killed by lightning remained quite fluid, but such is not the fact; the coagulation, nevertheless, is imperfect.

ALLEGED CURE FOR HYDROPHOBIA.

As far back as 1865, Dr. Buisson, a respected correspondent reminds us, wrote in the *Salut Publique* of Lyons an article claiming to have discovered a remedy for hydrophobia. The Doctor is said to have himself been inoculated with the virus of rabies by means of the saliva from a patient suffering from the disease; the saliva impregnating a handkerchief having come in contact with a slight abrasion on his left index finger. Nine days after the accidental inoculation Dr. Buisson began to suffer from symptoms referable to hydrophobia. When this stage had been reached, vapour baths at a temperature of 52° C. were had recourse to, not with the intention of cure, but it is said with a desire to produce suffocation. According to the account given, strange to say, the whole of the symptoms disappeared and never recurred. Dr. Buisson declared that after his recovery he attended eighty individuals who had been bitten by mad dogs, and never lost a single case. When an individual has been bitten by a mad dog, he must for several successive days take a vapour bath. This procedure is spoken of as the preventive remedy. When the disease has declared itself, one vapour bath alone is required, the temperature being rapidly raised to 37° C., and then more slowly to 63°. The patient must be strictly confined to his chamber until the cure is complete.

THE "SLUMS" OF NEW YORK.

On a recent occasion we alluded to the new law affecting the drainage and salubrity of the tenements occupied by the New York poor. Unfortunately these regulations, though excellent and productive of beneficial results so far as new buildings and respectable lodgers are concerned, cannot prevent the fearful overcrowding, squalor, poverty, and dirt that have for long existed, especially on the Manhattan Island. A lengthy report, accompanied with a sensational illustration, was recently published by the *New York Herald*, describing the condition of the New York poor as equal to what may be seen in the worst quarters of London. In Manhattan Island the number of poor tenements has increased from 14,494 in 1869 to 21,163 in 1881. The immense size of the houses renders their ventilation extremely difficult, and the *Herald* report describes "the intensity of the pollution of air in these buildings as inconceivable." Nothing can surpass the "impurities found in such a place as Gotham-court, which for thirty years was filled with cases of contagious disease, and where a census taken by Dr. Elisha Harris in 1859 showed 250 sick out of a population of 500, including typhus fever on every floor, and numerous cases of typhoid fever, measles, scarlet fever, small-pox, and diphtheria." The new and model tenements are also reported to be almost as offensive as the worst rookeries, in consequence of the neglect on the part of the tenants and lack of supervision by the landlords. In New York, as in London, the Italian, Irish, and Poles are the most difficult to train to ideas of order and cleanliness. Altogether, the main facts and difficulties seem to be much the same on both sides of the Atlantic. The Americans, however, have a good law, and we trust they will succeed in securing its rigorous application.

RELAPSING FEVER.

Dr. Vandyke Carter has published a *brochure* comprising observations on relapsing, or, as he terms it, "spirillum fever," made in Bombay subsequent to the appearance of his work on the subject in 1882. He describes examples of sporadic cases, and of others occurring in the form of restricted epidemics, all the cases presenting the usual features of the disease; and his former conviction was also confirmed as to the symptomatology being more diverse than is often supposed. The mortality, so far as could be ascertained with certainty, of these cases was 6·6 per cent. Nothing new was learnt as to treatment, the high pyrexia being quite uncontrolled by sodium salicylate and resorcin. He lays stress upon the importance of arriving at an early diagnosis, and the great value of the detection of the spirillum in the blood, a test which he recommends should be adopted in all "outbreaks of epidemic or endemic fever of doubtful character occurring in the districts and jails of this country." He believes this to be the pathognomonic sign, and its presence to be sufficient to establish diagnosis in a doubtful case, whether the relapsing character of the fever be present or not. Failures to detect the spirillum, on the other hand, do not positively negative a diagnosis, since the microscopic investigation requires naturally special care and attention. The importance of some definite means of distinction from other types of fever which prevail in India is self-evident, and Dr. Carter does well to insist on the application of all means to this end. Dr. Carter adds some interesting data concerning the gradual decline of the epidemic which began in Bombay in 1877, and mentions that the persistence of the disease cannot be attributed to a continuance of distress and famine. It would seem rather that it had become naturalised or endemic, and evidence of contagion was strong in many cases. Speaking of the general course of epidemics, he compares their character to that of a conflagration, "which begins, extends, and becomes extinct proportionately to the amount, state, and location of inflammable material encountered during its existence"—a far apter comparison, he thinks, than the ordinary conception of a "wave" or atmospheric current.

"BURYING CHOLERA PATIENTS ALIVE."

It is not so much undue haste as inexcusable carelessness that must be blamed for the premature burying of persons who are not really dead. Such heedlessness as alone can lead to the commission of this crime is not a shade less black than manslaughter. We speak strongly because this is a matter in regard to which measures ought to be at once taken to render the horrible act impossible and to dismiss all fear from the public mind. If it be a fact, as would seem to be indisputable, that during the last few weeks there have been cases—we will not attempt to say how many or how few—of burying alive, a scandal and a horror, wholly unpardonable in the last quarter of the nineteenth century, have to be faced, and the sooner the full truth is known and rules of safety established the better. Let it be once for all decided that measures shall be taken to ascertain the fact of death before burial. Why not revert to the old practice, and *always* open a vein in the arm after death, or pass a current of elec-

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tricity through the body before the coffin is finally screwed down? It may be held that these unpleasant resorts are unnecessary. We do not think they are. In any case enough is known of the *possibilities* of "suspended animation" to render it unsafe to bury until the evidences of an actual extinction of life are unmistakable; and, as it is impossible to wait until decomposition sets in in all cases of death from infectious disease, it would be prudent to adopt what must certainly be the least of evils.

DISINFECTION AND DEODORISATION.

WE have received certain papers from Messrs. Fearenside and Baynes as to a patent automatic disinfecting and deodorising apparatus, which can be used in connexion with waterclosets, urinals, water-carts, &c., and which is so designed that any given quantity of a disinfecting fluid can be mingled with the water and be automatically delivered whenever either of the appliances referred to comes into use. Mechanically the arrangement is ingenious, and wherever the regular mingling of a fluid disinfectant with any water becomes necessary it will be useful. But our doubt as to the value of this and allied appliances is twofold. If a waterCloset, for example, be foul, its filth will certainly not be "disinfected" by means of such an arrangement. Disinfection must be regarded as meaning the destruction of matter capable of conveying infection, and in the present state of our knowledge as to what constitutes the poison of the infectious fevers we cannot speak of disinfection apart from the destruction of all the organic matter in which the infection may lie hidden, and it is certain that no occasional flushing with water containing a certain quantity of any of the ordinary so-called "disinfectants" attains this end. Then, again, if a watercloset does really stand in need of such occasional chemical flushings, it may be taken for granted that the apparatus is in fault, being one permitting the retention of contents or being otherwise favourable to foulness. The remedy is to get rid of the faulty contrivance, not to attempt to deal with it by disinfecting fluids. In so far as the apparatus facilitates deodorisation it may have important uses, especially in connexion with urinals and street watering, but even then we should prefer to see the removal of the conditions which lead to offensiveness, rather than the attempt, however successful, to deal with them by an ingenious method of deodorisation.

SAFETY FEVER AMBULANCE.

HAVING been for some time past impressed with the idea that ambulances as at present constructed must be a source of danger to the public, Dr. Gayton, medical superintendent of the North-Western District Hospital, Haverstock-hill, has recently had a carriage so altered as to do away with, or at least modify, such danger. To those acquainted with the ambulance carriage at present in use, it must be apparent that the open windows and louvre-shutters readily permit a free egress to infectious matter from patients; and should a susceptible person be near such a source of infection—when, for instance, the carriage stops at the gates of a hospital till admitted,—such a person runs a decided risk of "catching the fever." In his ambulance, Dr. Gayton has replaced the louvre-shutters and a portion of each window by a double layer of perforated metal, between which wool, lint, or other suitable material, impregnated with some recognised antiseptic, can be placed. One of the layers of metal is so arranged as to permit of the old wool or lint being readily removed. With this arrangement it becomes necessary to have some special means for ventilation, and in the new ambulance used is made of Tobin's shaft, modified as follows: The shaft is horn- or trumpet-shaped, with the small end placed vertically within the ambulance; in this end is fitted a plug consisting of a double layer of the perforated metal, with antiseptic material interposed. The larger end of the shaft opens externally just below the driver's seat, with the opening so placed that when the ambulance is in motion the air blows directly into it. Two shafts are provided for each ambulance, placed one on either side of the driver's legs.

THE BRADSHAWE LECTURE.

NOTWITHSTANDING the unfavourable effect of the temperature and other peculiarities of August in London, and we may even admit of some peculiarities in Dr. Philipson's elocution, it must be acknowledged that Sir W. Jenner could not have made a fitter selection for the Bradshawe Lecture than Dr. Philipson, and that the lecturer could not well have chosen a subject more congenial to the character of Bradshawe or to the designs of his widow in founding the lecture, than the Pathological Relations of the Absorbent System. This great system of vessels and glands, with all their hidden and quiet operations, are apt to be forgotten but for such expositions as Dr. Philipson's, and those of Dr. Curnow in his capacity of Gulstonian lecturer in 1879. Practitioners who consider that there are probably a thousand lymphatic glands in the body, that the lymphatic vessels are the main agents in the transmission of the gravest forms of disease, and that the fluid discharged from the thoracic duct of man in twenty-four hours is estimated at six or seven pounds, can scarcely fail to realise more fully the importance of this system and its pathological conditions, which will be found well described in this Bradshawe Lecture.

SANITARY CONDITION OF CALCUTTA.

THE memorial to the Lieutenant-Governor of Bengal from the European residents in Calcutta has already led to important action bearing on the sanitary condition of the city. In a letter addressed to the chairman of the municipal corporation, the secretary to the Government informs him that the Lieutenant-Governor, after a careful inquiry into the statements of the memorialists and a review of the action which has been taken by the commissioners in connexion with the required sanitary improvements, is of opinion that it is fully established "that the past and present action of the commissioners for the sanitation of Calcutta is inadequate." And he is of opinion that it is no less clear that the outbreak of disease in March and April might have been mitigated had proper measures been adopted to improve the condition of the unhealthy portions of the city. "While the mortality from cholera was less than 5 per mille per annum in the Park-street Section, it was 46 per mille in Jorabagan, 36 per mille in Burrabazaar, 31 per mille in Coomertolly, and 25 per mille in Jorosanko and Colootollah." After pointing out how the commissioners had neglected to adopt the advice given them by their officers on the subject of the removal of undoubted sources of disease, he adds, "Nothing can be more certain than that, had the commissioners taken more vigorous and determined action to carry out the Lieutenant-Governor's recommendations upon this point, the virulence of the late outbreak would have been greatly mitigated." Recognising, however, that one of the great difficulties in the way of sanitary reform has been the want of a clear understanding of what has been required, the Lieutenant-Governor has decided to appoint a committee, consisting of the chairman and two members of the corporation, two medical officers, an engineer officer, and a non-official European gentleman to be nominated by the Government, whose duty shall be "to draw up (1), for each section of the town, a complete scheme for the reclamation of bustees, the filling up of tanks, the provision of water-supply, surface

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drainage, and the like; and (2), for the whole town, such a scheme of structural improvements in the way of opening up new streets and straightening or enlarging existing streets, as may come within the limits of the probable financial resources of the corporation." It is to be hoped the corporation will join cordially in this work, but if not it seems pretty certain that the Lieutenant-Governor will take steps to carry out the requisite sanitary measures independently of them. The composition of the committee appears to be very satisfactory; it is not too large to work well and quickly, and its recommendations are likely to be such as may be insisted upon by the Government and carried out efficiently with the support of the leading members of the European population. The action of the Lieutenant-Governor must commend itself to all who take an interest in the physical well-being of the citizens of Calcutta.

TABES DORSALIS.

THE subject of locomotor ataxy is one which has perhaps engaged more attention from clinical observers than almost any other affection of the nervous system. The remarkable variations in and concomitant appearance of symptoms that occur in tabes seem to afford endless scope for inquiry. One of the most recent contributions to the subject is that of Dr. O. Berger, in a paper read before a Schleswig scientific society. Basing his conclusions upon the clinical features of the disease, and thereby following in the wake of Charcot, Leyden, Buzzard, and so many others, he affirms that tabes dorsalis may issue fatally without having presented any ataxic symptoms in its course; and he thinks it probable that such exceptional cases depend on the limitation of the anatomical lesion to particular tracts of the posterior columns. In the majority of cases the existence of lightning pains forms a valuable aid in diagnosis, which is further strengthened by the presence of Westphal's symptoms and the Argyle-Robertson pupil. In many cases the early occurrence of gastric crises, ocular paralysis, uncertainty of gait, &c., confirms the diagnosis. The initial neuralgia may present the character of a severe migraine. Lastly, he believes that much significance is to be placed on vesical derangement without obvious local disease.

TROPICAL HEAT IN ENGLAND.

WE have been experiencing exceptionally high temperatures both in the sun and in the shade. It is not surprising that sudden deaths have occurred, or that strong men have been overpowered. In this country, with its proverbially variable climate, the native organism is so developed as to possess a considerable faculty of adaptation to the changes we are accustomed to encounter—that is to say, to which we are habituated as individuals and as a race. The typical English "body" is furnished with a heat-producing and regulating apparatus, which is far better able to meet the demands made upon it by extremes of atmospheric temperature than is the similar apparatus of an average Indian or a Laplander. This is abundantly proved by the fact that the able-bodied Briton can live in the tropics or in the immediate vicinity of the North Pole if he be not wantonly deprived of his lime-juice. It must, however, be remembered that the majority of the population are not able-bodied; and it must needs happen that, when, relatively, excessive heat visits us, a large proportion of the population are severely tried. The tolerance of inordinate heat requires a faculty, first, of quickly "damping down" the fires within, and, second, of as quickly opening up the evaporators, radiators, and disseminators. In plain words, we must diminish the oxidising process, and at the same time—which is difficult—so determine the blood to the surface and establish a discharge of heat by evaporation as to preserve the mean of health (about 98·6–8) in spite of the sudden rise of external temperature. The diverse experiences of any dozen persons taking a Turkish bath for the first time in their lives, or much out of their habit, would suffice to show how difficult it is to avoid internal congestions, even under conditions the most radiative, in a highly heated atmosphere. We as a nation can bear sudden heat better than almost any other people, but it taxes us heavily, and many individuals must succumb. Possibly by the time this reaches the reader it may be "winter" with us again; but if the heat *should* persist or return, care should be taken to minimise the strain cast on the multitude by such obvious changes of rule in public and private workshops as shall give the weary labourer—especially if he be exposed out of doors—a period of rest during the heat of the day, such as he would enjoy if he were in form, as well as in fact, a dweller in the tropics.

ISOLATION ARRANGEMENTS AT CANTERBURY.

THE Canterbury corporation have once more, by a majority of one, decided not to provide themselves with means for isolating infectious diseases. The scheme had at last come down to the purchase of a hospital tent; but even this tentative measure has been set aside. If the decision arrived at meant that the corporation intended to commence the erection of some permanent building, however small, it would be one to be commended, for tents are not adapted to the colder months of our climate, and in point of site, sanitary arrangements, means of cooking and administration, they need much the same requirements as a brick pavilion. But we fear Canterbury is waiting for its horse to be stolen before it goes to the expense of purchasing a key. The individual members of the corporation probably act very differently as regards their own private interests, and take care to insure their premises against fire, annually paying the necessary premiums without so much as a grumble, rather than wait for a fire. The principle involved is the same, and many an authority, under the influence of a prevailing epidemic against which it has not provided itself, has had to pay far more than the accumulated annual rates which would have been necessary to provide a hospital. The action of individuals and that of collective bodies, however, often differ materially.

NORTH-WEST LONDON HOSPITAL.

IT will be remembered that after the resignation of the entire medical and surgical staff of the North-West London Hospital, the committee appointed delegates to confer with three representative members of the profession, for the purpose of framing new rules for the conduct of the hospital. We learn that rules have been agreed upon which we trust will be found to satisfy the just requirements of the profession and the public. The rule enabling three members of a committee to form a quorum, to which strong objection was taken, has been so altered that a quorum can only be formed when there are at least three members present in addition to the lady founders of the hospital.

SHIP SURGEONS.

ATTENTION is again drawn to the question of surgeons on the Transatlantic passenger steamers. The immediate occasion is the alleged death of a lady from heart disease after several days of severe sea-sickness, during the whole time of which, it is stated, neither the ship surgeon nor the stewardess visited her. The publication of this case, which is to come before the courts of law, has elicited many complaints as to the qualifications and services of ship surgeons, and correspondents have taken the trouble to publish the ages of the surgeons in the Transatlantic lines. We can make no comment whatever on the case mentioned also

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until the actual facts have been elicited by the lawyers; but we must support a body of men who discharge difficult duties for the most part well, and often under great drawbacks. The appointments are such that it is impossible to expect middle-aged and experienced practitioners to hold them; but the companies can readily command the services of surgeons for longer periods by offering more liberal remuneration, and especially by giving them proper authority over all the sanitary conditions in the ship. It must not be forgotten, too, that the subjects of sea-sickness, for which, after all, medical skill can do so little, are very likely to cast upon surgeons blame which should rest upon themselves, the arrangements of the ship, or upon the sea itself.

THE HOSPITAL SATURDAY FUND.

AN admirable circular has been addressed by Mr. Morley the president, and Mr. H. N. Hamilton Hoare, the treasurer, of the above fund, to employers of labour, foremen, and others, setting forth the ease with which, by a small effort, the working men of London might add enormously to the resources of the London hospitals and dispensaries. We quote one paragraph, which is very reasonable, and is much in the line of our constant pleadings on this subject:—"There are in London at least 1,000,000 of working people who could afford a halfpenny per week each towards the support of hospitals and dispensaries. In this way a sum of more than one hundred thousand pounds annually might be contributed to these institutions by those who derive the greatest benefit from their existence." Let us hope that the effect of this appeal will be to elicit the sympathy of the working classes, and thus relieve the great responsibilities of those who administer hospitals and dispensaries.

THE WESTMINSTER UNION.

AT the meeting of the Board of Guardians of the Westminster Union, held at the board-room on the 15th inst., a copy of a letter which had been sent to Mr. J. D. Bliss, the master of the Poland-street workhouse, by the Local Government Board, was read. In this letter the Central Board, after reviewing all the facts connected with the official inquiry, the election of a new board, their suspension of Mr. Bliss, &c., conclude as follows:—"The Board cannot hold that the facts which were elicited at the inquiry, apart from any circumstances which have occurred since, do not justify the conclusion at which the guardians have arrived; and as the Board under the circumstances are not prepared to remove your suspension, they must request that you will at once place your resignation in the hands of the guardians." In accordance with this decision Mr. J. D. Bliss tendered the resignation of his office.

SANITARY INSPECTION OF PORTS.

DR. DE CHAUMONT, F.R.S., is engaged on behalf of the Local Government Board in inspecting the sanitary arrangements of many of our ports, in connexion with the state of preparedness to cope with cholera, should it be imported. At Faversham he found that in the absence of any infectious hospital a large barge would be held in readiness for the purposes of isolation. His inquiries both there and elsewhere included all relating to the inspection and disinfection of ships, the burial of bodies, and the landing of patients. He is reported as being favourable to cremation, could this system for the disposal of the dead be carried out in this country.

DRS. H. J. BIGELOW and R. M. HODGES have withdrawn their resignations from the staff of the Massachusetts General Hospital.

THE *Warsaw Courier* is reported to have published a letter from a subscriber, in which the writer offers himself as a subject to be experimented upon in reference to cholera. "I am unmarried," says he; "I have no ties of any kind, and no plans for the future. I therefore wish to be of use to humanity by undergoing any experiments which have not yet been tried upon human beings. I seek no reward, but should require to be paid my travelling expenses to wherever I might have to go to be experimented upon, and those of my return journey to Warsaw, should I be spared to perform it. I may add that I am twenty-four years of age, and in good health." The writer says that communications in answer to this may be sent to "Z. A. K., care of K. Tsibulski, china and glass dealer, Theatre-place, Warsaw."

AT a recent meeting of the Hampstead vestry, a deputation, representing a recently held public meeting of ratepayers, presented a memorial to the vestry, asking that body to move for an injunction to restrain the Metropolitan Asylums Board from continuing to use their North-Western or Hampstead Hospital for the reception of small-pox cases. The memorial was referred to the Sanitary Committee for consideration and report, and the vestry clerk was instructed to forward a copy of the same to the Metropolitan Asylums Board.

IN their report on the composition and quality of daily samples of the water supplied to London for the month ending July 31st, Messrs. Crookes, Odling, and Tidy state that, altogether, the quality of the water, as indicated by its state of aeration, and by its freedom from turbidity and excess of colour and organic matter, continued excellent.

THE members of the Queen's Colleges (Ireland) Commission have now closed their inquiry so far as regards the taking of evidence, and will examine no further witnesses.

DR. GEO. H. B. MACLEOD, Regius Professor of Surgery, University of Glasgow, has been elected Foreign Correspondent to the Academy of Medicine at Paris.

MR. J. HARRISON, M.R.C.S., has been elected Coroner for East Essex.

THE BIOLOGICAL LABORATORY AT THE HEALTH EXHIBITION.

No. II.

BACTERIA ASSOCIATED WITH DISEASE IN MAN.

MICROCOCCUS OF PNEUMONIA.

THIS organism is found abundantly in the fluid expressed from the lung in cases of acute lobar pneumonia. It is a round or oval micrococcus (Fig. 5, A), which is surrounded

FIG. 5.



A, Fluid from the lung. B, Cultivation in gelatinised meat infusion. Objective $\frac{1}{12}$ in. The micrococci have lost their hyaline envelope. C, Test-tube cultivation.

by a hyaline envelope. It may be cultivated in gelatinised meat infusion, but the envelope disappears from the micro-

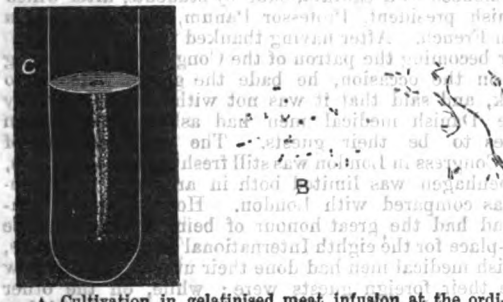
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coccus under these conditions. (Fig. 5, B.) In test-tube cultivations (Fig. 5, C) it forms a characteristic figure, the so-called "nail cultivation." This consists of a large cushion-like expansion, at the point of which the needle enters the cultivating medium, and a rather slender growth along the needle track. The growth is of an opaque white colour. When a few minims of the cultivation are mixed with boiled distilled water and injected into the lungs or pleural cavity of a mouse, the characteristic appearances of acute lobar pneumonia are produced. After such an inoculation the organism is found to have regained the hyaline investment. If the cultivation is mixed with boiled distilled water, and a spray of this liquid is directed into a cage containing mice, a certain proportion of them are affected with acute lobar pneumonia. Injection and inhalation experiments with rabbits are not attended with any such results.

Bacillus of Typhoid Fever.

This bacillus is constantly present in sections of the ulcerated portions of the wall of the intestine of patients dying in the acute stage of the disease. It is also present in the mesenteric glands, and frequently in the liver, spleen, and kidneys, forming plugs in the small capillaries. It is short (Fig. 6, B), measuring about one-third the diameter of a human red blood-corpuscle. The breadth is one-third the length. When cultivated in gelatinised meat infusions, the appearance of the bacillus is somewhat altered. (Fig. 6, A.) It is larger, and tends to grow out into long filaments, in which

Fig. 6.



A, Cultivation in gelatinised meat infusion at the ordinary temperature. B, Cultivation in solidified blood-serum at the body temperature. Objective $\frac{1}{12}$ in. C, Test-tube cultivation.

by careful staining the individual bacilli may be distinguished. When cultivated in solidified blood serum at the temperature of the body (Fig. 6, B), the shorter form, similar to that observed in sections of the intestinal wall, is reproduced. The constant presence of this organism in the intestinal ulcers has led to the view that typhoid fever is the result of its agency. This has not hitherto been confirmed by the experiment of reproducing the disease by inoculation in other animals, as no other animal has been found which is subject to this disease. In this respect cultivations of the bacillus correspond with typhoid material direct from the body, as this, too, is inert when introduced into other animals.

Micrococcus of Acute Osteomyelitis.

This organism is constantly found in the pus of the abscesses in connexion with the bone, when they are opened. It is a small round micrococcus, which frequently occurs in pairs (Fig. 7, A). It may be cultivated in the usual manner, and causes the gelatine in which it grows to become liquid.

Fig. 7.



A, Micrococci from cultivation in gelatine. Objective $\frac{1}{12}$ in. C, Test-tube cultivation.

(Fig. 7, C.) The micrococci sink to the bottom of the liquid as a moderately compact orange-yellow precipitate. They also grow readily on potatoes,[1] forming orange-yellow colonies. When inoculated or introduced subcutaneously into a healthy rabbit, no pathogenic effect is produced. If, however, the bones have previously been injured, the injection of a quantity of the cultivation into the veins is followed by appearances resembling very closely those of acute osteomyelitis in man.

The Bacillus of Tubercle.

This bacillus is found in all tubercular affections (acute tuberculosis, phthisis, scrofulous diseases of joints, bones, glands, &c.), as well as in the sputa of phthisical patients, and in tuberculosis of the lower animals. It is a slender rod-shaped organism, measuring 2 to 4, rarely 8, μ in length. It often occurs in groups, and is frequently curved. In some cases it bears spores. In sections of tubercles the bacilli are found chiefly in the spreading region among the epithelioid and giant cells. They disappear as the part becomes cheesy. It may be cultivated at the body temperature on the surface by blood serum which has been sterilised and coagulated by heat. It forms irregular dry white scales and patches, which grow slowly. (Fig. 8, C.) Small portions of such

Fig. 8.



A, Bacilli from a tubercle. B, Portion of sputum of phthisical patient. Objective $\frac{1}{12}$ in. C, Cultivation in solidified blood-serum.

cultivations introduced into the subcutaneous tissues, the cavities of the body, or the blood of rabbits and guinea-pigs, cause the death of the animal from acute tuberculosis. This result may also be obtained by causing the animal to inhale a spray of phthisical material or cultivations, or by causing it to swallow the bacilli with its food.

THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

Never has more splendid hospitality been offered to any body of men than that tendered by the city of Copenhagen and the whole Danish nation to the International Medical Congress, which concluded its labours on Saturday last. Never has the medical profession received a more heartfelt and noble recognition of the services which it renders, and tries to render, to humanity at large. Those who visited the Congress were one and all made to feel the warmth of their reception from the moment of landing on Danish soil. The formalities of the Custom-house at Korsor were dispensed with, and members of the Congress were at once bowed to their carriages, and on the arrival of the train at Copenhagen the members of the Reception Committee were at hand to give every assistance possible to the strangers. It has been stated that at the London Congress the choice of Copenhagen was made because it was felt that a city so inferior in size would certainly not attempt to outdo the hospitality of London. We cannot for a moment think that any vulgar notions of rivalry have actuated the Danes, but

[1] A potato cultivation is prepared as follows:—An old potato is taken and well scrubbed with a nail brush, care being taken not to injure the epidermis. It is then soaked for half an hour in corrosive sublimate solution (1-1000). It is then steamed for half an hour. While still hot it is cut in two with a hot knife, and the halves laid out in a dish protected from dust. When the potato is cool it may be inoculated with an organism, by means of the platinum needle, in the usual way.

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we must in all fairness admit that no city in the world could have shown more lavish hospitality and more courtecus consideration for its guests than has the fair city of Copenhagen. We English are apt to think that domestic hospitality is the peculiar characteristic of our race, but we now know that this peculiar characteristic must assuredly have been inherited from our Danish ancestors. In Copenhagen, during the week of the Congress, the flow of private hospitality was continuous and splendid. Large dinner parties were given night after night to the more distinguished guests, and houses, servants, carriages, and horses were unreservedly placed at the disposal of the chiefs of medical science.

Of public hospitality there was an equal abundance. The municipality provided luncheon every day for the members, and in addition to this there were three splendid entertainments. On Wednesday there was an excursion to Elsinore, some 1500 persons travelling to that pleasant town by water, where, on their arrival, a luncheon was served in the Castle of Kronborg, which, strangely enough, has been taken by Shakespeare for the scene of the greatest of his plays. The building is romantic enough to give point to any passage even in such a play as *Hamlet*, but why the poet selected this particular castle as the scene of his metaphysical tragedy will ever remain a puzzle for human ingenuity to solve. From Elsinore the party returned to Copenhagen by special trains, many of the guests stopping to see the Castle of Fredericksborg, which was originally built by Inigo Jones for Christian IV. Inigo Jones's building was gutted by fire in 1859, but has since been restored with dazzling splendour by the munificence of a private citizen. On Thursday the municipality gave a splendid dinner to 1200 guests in a wooden building specially erected on the quay at Copenhagen. This dinner was most successful. Notwithstanding the number, it was well served, and the glee-singing by the students and the musical performances by the band will not readily be forgotten by those who were present. The room was necessarily too large for effective speaking, but those who were within earshot could not but enjoy the simple and effective oratory of the Governor of Copenhagen, of M. de Bille, of Pasteur, Virchow, and Paget. After dinner the whole company embarked on four steamboats, and made a triumphal progress to the Tivoli Gardens. The whole of the shipping was gaily festooned; the boat-clubs rowed past the steamers and tossed their oars in honour of the guests; coloured lights were displayed, bands played, and the quays were packed with a dense crowd of spectators, cheering and waving hats and handkerchiefs. At the Tivoli Gardens were some 25,000 persons in addition to the members of Congress, and here ample amusement was afforded in the shape of music, illuminations, fireworks, and a variety of theatrical and other performances. The night was mild and lovely, and it was past midnight before the company finally separated. On Friday, the last day of the Congress, the most splendid of all the entertainments was given by the King at the Christiansborg Palace. The guests assembled at 8.30, and soon the vast and noble rooms were crowded almost to excess. At 9.30 the Royal party arrived, including the King and Queen, the King and Queen of Greece, the Crown Prince and Crown Princess, Prince Waldemar, Princes William and John of Glucksbourg (brothers of the King), and the ladies and gentlemen of the Court. The leading members of the Congress were presented to their Majesties by the ambassadors from their respective countries; and among those who received this honour through the mediation of the Hon. Mr. Vivian, the British ambassador, were Sir James Paget, Sir W. Gull, Sir S. Wells, Sir Risdon Bennett, Sir W. Mac Cormac, Sir H. Acland, Professors Priestley, Ogston, Marshall, Macewen, Chiene, Stokes, Watson, Poore, Knowsley Thornton, and others. This ceremony concluded, their Majesties walked through the crowded rooms to the supper-room, a noble hall, where a truly regal repast was provided, during which the King's musicians discoursed most excellent music. The supper ended, the King proposed, in a few kindly, dignified words, the health of his guests, and expressed the honour which he and his subjects had felt in receiving the Congress. Sir William Gull, at the request of Professor Panum, the President, thanked their Majesties on behalf of the Congress, and said that never had the profession of medicine been more honoured or so royally entertained. Sir Wm. Gull's speech was short, courteous, and judicious, and was received with every mark of satisfaction by his medical colleagues. No Englishman who was present at this Royal *fête*, and who experienced the kindly courtesy of the King and Queen of Denmark and the Danish Royal Family, could fail to see whence was derived the beauty, dignity, and kindliness which have given to the Princess of Wales her undying popularity, and have made her at once respected and beloved by the whole English people. The British members of the Congress cannot but feel grateful to the Hon. Mr. Vivian for the hospitality and courtesy which were shown by his Excellency to all subjects of the British Crown who visited the brilliant Congress of Copenhagen.

(*From our own Correspondent.*)

The eighth International Medical Congress was opened on Sunday, August 10th, in Copenhagen, by a festival which was attended by more than 1500 people. Until a few days before the opening of the Congress only about 500 foreign medical men had registered their names, but on Friday, Saturday, and Sunday an equal number arrived. As all the hotels had been taken long ago by those who had applied to the Reception Committee for rooms, all the new comers were either received as guests in Danish families or went to private boarding-houses. On Monday night, the number of members of the Congress present amounted to more than 1700, of which about 500 were Danish. The festival, which was honoured by the presence of the King of Denmark, who is the patron of the Congress, and by the Royal Family, amongst whom were seen the King and Queen of Greece, was commenced by a cantata, sung by students, after which the Danish president, Professor Panum, rose and made a speech in French. After having thanked the King of Denmark for becoming the patron of the Congress and for being present on the occasion, he bade the guests welcome to Denmark, and said that it was not without some anxiety that the Danish medical men had asked their foreign colleagues to be their guests. The great success of the last Congress in London was still fresh in their memories, and Copenhagen was limited both in area and accommodation, as compared with London. However, as Copenhagen had had the great honour of being selected as the meeting-place for the eighth International Medical Congress, the Danish medical men had done their utmost to show how welcome their foreign guests were; while, on the other hand, they reckoned very much upon their guests' forbearance. Professor Panum then thanked the Committee for the last Congress in London, for those never-to-be-forgotten days, and he was happy to be able to personally thank Sir James Paget and Sir Wm. Mac Cormac, who were then present. He then said that national prejudices ought to have no place at an International Congress such as this; the different languages, instead of being as flags to point out the speaker's nationality, should be as sails which enabled men of different nations to approach each other. The famous Tower of Babel differed from modern science, because the latter came from heaven and demanded sacrifice and humility on the part of those who worked in its service; while vanity, selfishness, and jealousy between nations would only produce a weak building, which would soon go to pieces. Sir James Paget then rose, amid loud cheers, and spoke in honour of the Danish Royal Family, to which England especially was much indebted, because it had given England the Princess of Wales, who was a model to her sex as wife, mother, and Princess. Sir James Paget's speech, the language of which was elegant and the style perfect, was received with loud applause. Virchow then spoke about the development of medical science, in which Scandinavians had lately taken so great a part. He, too, laid stress upon the international character of the Congress. Science was only one and the same everywhere. M. Pasteur, who was received with loud cheers, expressed his thanks for the hearty welcome which the foreigners had received. Like the former speakers, he laid stress upon the neutrality of science, which, however, in no way prevented every great scientific man from being a great patriot and from adding to his country's honour. After the general secretary, Lange, had made a report of the preparations for the Congress, and M. Panum had given the history of the International Medical Congresses, the following vice-presidents were elected:—For England: Sir J. Paget, Sir W. Gull, Sir William Mac Cormac, Sir Henry Acland, Sir Risdon Bennet, Sir S. Wells, Profs. Erichsen, Watson, and Marshall. For America: Billings and Austin Flint. For Scandinavia: A. Key, Dahl, and Hjelt. For France:

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Pasteur, Verneuil, Chauveau, Ollier, Jaccond, Hardy, Ranvier, Cornil, Trélat, Lépine, and Bouchard For Germany: Virchow, Kölliker, His, Frerichs, Volkmann, Esmarch, Hensen, Flemming, Henoch, Münk, Liebreich, Liebermeister, and Gurlt. For Austria: Schnitzler. For Holland: Tilanus, Rosenstein, and Engelmann. For Russia: Reyer and Rauchfuss. For Italy: Crudeli and Bottini. For Belgium: Crocq. For Switzerland: Lombard, Prévost, Meyer, and Kollmann. As secretaries were elected—Kronecker, Petit, Owen, Poore. In the evening the President gave a dinner to about 300 members of the Congress. After dinner Sir James Paget spoke for Denmark, Virchow for Copenhagen, Pasteur for the Danish hospitality, and Crocq for Professor Panum.

On Monday, the 11th, the different sections were formed. It was decided that the list of the Danish presidents should stand, with the exception of the section of Laryngology, whose Danish president, Dr. Wilhelm Meyer, was a president also for the Otological section; in his stead Dr. Morell Mackenzie was elected president

The most prominent paper read on Monday was that of Professor Pasteur on Pathogenic and Vaccinia Microbes, which altogether seems to have been the one to which most interest was attached during the Congress. Pasteur's speech was principally a report of the work done in his laboratory during the last four years. His own and his pupils' labour has been entirely devoted to the question of hydrophobia inoculation, and his experiments have been both numerous and thorough. As the results of some of these have already been published, only a brief summary of the first part of the speech can be given. He first called attention to the fact that the characteristic changes of the tissues in animals which had died from hydrophobia are often limited to the medulla oblongata, in which organ the poison producing the disease is found most concentrated and pure. Secondly, to the fact that inoculation of the poison obtained from the medulla oblongata is not always followed by positive results, unless the poison is introduced into the subarachnoid cavity by means of a trocar, after trepanning the skull has been performed. These two facts have been of vast importance in solving the great difficulty in obtaining the poison sufficiently concentrated for experimental purposes, experience having shown that two dogs, both bitten by the same rabid dog, may take the disease in quite different degrees and after longer or shorter periods of incubation. Liability to error may, however, be obviated by pursuing the following method:—Take the medulla oblongata from a dog which has died of rabies, crush and put it into sterilised bouillon, taking all necessary precautions. By introducing two drops of this preparation into the subarachnoid cavity of rabbits by means of a Pravaz syringe, the same results will always be produced; the rabbits will all develop hydrophobia within twelve to fifteen days, neither more nor less. It is, however, necessary to take the poison from dogs whilst the disease is at its maximum, otherwise the period of incubation will be very different. By transferring the poison, originally taken from a dog from one rabbit to another, from a second to a third, and so on, Pasteur has come to the result that after the tenth inoculation the incubation period is reduced to from eight to nine days. After this point the incubation period is of exactly the same length until the fifteenth inoculation, which during the last few days he has succeeded in reaching. Guinea-pigs reached the incubation period proper to them after a shorter series of inoculations, but neither in these animals nor in rabbits or dogs is it possible to weaken the poison by inoculation. Pasteur has, however, succeeded in finding animals in which it is possible. The latter part of the speech was as follows:—"Jenner first propounded the idea that the poison which he called 'grease,' but which we now more accurately call horse-pox, must, before it can be given to man without danger, be weakened in its poisonous effect, if I may use the term, by being transferred to the cow. After this the idea of weakening the hydrophobia poison by introducing it into certain animals seemed worthy of a trial. Many experiments were made, but in the greater number of animals experimented upon the poison only increased in virulence, as, for instance, in rabbits and guinea-pigs; happily monkeys proved an exception. On the 16th December, 1883, a monkey was inoculated by trepanning from the medulla oblongata of a dog, whose rabid state had been confirmed by the fact that it had bitten a child who afterwards died of hydrophobia. The monkey became mad eleven days after. From this one the poison was given to a second monkey, which also became mad in the course of eleven days. A third monkey was only attacked after twenty-three days. From the medulla oblongata of each monkey two rabbits were inoculated. The rabbits inoculated from the first monkey were seized after thirteen and sixteen days, those from the second monkey after fourteen and twenty days, those from the third after twenty-six and thirty, those from the fourth after twenty-eight, from the fifth after twenty-seven, and from the sixth after thirty days. It cannot be doubted after this that by transferring the poison from monkey to monkey and from several monkeys to rabbits, it at last became weakened. In the same way it is weakened in dogs. A dog which was inoculated from the fifth monkey had an incubation period of fifty-eight days, although the inoculation was done by trepanning. Other experiments of the same nature led to like results. Thus, we are now in possession of a method by which the contagious power of hydrophobia is weakened. Inoculations from monkey to monkey produce a poison which, when given to rabbits, has an incubation period which gradually increases in length. If, on the other hand, the poison is given to a succession of rabbits it becomes subject to the law already mentioned, by which it increases in violence when transferred from one rabbit to another. From the application of these facts we obtain a means of inoculating dogs against hydrophobia. As a starting-point is taken a rabbit poisoned from a monkey, which has been inoculated by poison that has gone through so many individuals that it is not able to cause death through hypodermic or intravenous injection. Having now applied this method for protecting dogs against hydrophobia, and having collected a large number of dogs which had been made impervious to infection, I determined, as I had a higher aim in view, and remembering the opposition which Jenner had encountered, to place the results, which, in my opinion, are the ground-plan of the protection of dogs against hydrophobia, before a competent commission. The Minister of Education, M. Tallières, to whom I spoke on the subject, was willing to support me, and he appointed MM. Béclard, P. Best, Bouley, Tisserand, Villemin, and Vulpian to examine the facts which I had already laid before the Academy of Sciences at its meeting of the 19th of May last. The Commission, having chosen M. Bouley as president and M. Villemin as secretary, at once set to work, and I have the pleasure to announce that it has within the last few days sent its first report to the Minister. The Hydrophobia Commission has up to the present experimented on thirty-eight dogs, of which nineteen were from me, and declared to be impervious to contagion, whilst nineteen were unvaccinated. Those dogs which have not died under treatment are still under observation, and will be for some time to come. As far as the condition of those dogs which have been experimented upon is concerned, of the nineteen unvaccinated, three out of six of those bitten have become mad, five out of seven of those inoculated in the popliteal vein have become mad, and all of the five which were inoculated by trepanning have become mad, whilst not one case of hydrophobia has declared itself amongst the nineteen vaccinated dogs. One vaccinated dog died on July 13th from hæmorrhagic diarrhœa, which had shown itself in the first days of July. In order to see whether hydrophobia had had any part in its death, three rabbits and one guinea-pig were at once inoculated by trepanning from its medulla. These four animals are still in perfect health, which is a certain proof that the dog did not die of hydrophobia, but of an ordinary disease. The next report from the Commissioners will treat of the history of twenty dogs, the inoculation of which they will superintend themselves."

Pasteur's speech was received with enthusiastic applause from the numerous audience who had followed with great interest the reading of the paper.

I must defer the conclusion of this report until next week.

STRAY NOTES ON THE CONGRESS.

(By an Occasional Correspondent.)

The President's dinner at the Hôtel d'Angleterre, on the first Sunday evening of the Congress opening, was a very brilliant affair. The guests must have numbered at least two hundred and fifty, and the *menu* of viands, wines, and music could not be excelled for exquisite selection. In form the *menu* is a masterpiece of elegant humoristic art. The guests were soon made acquainted with a Danish peculiarity not very favourable to the digestion of an excel-

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lent dinner. Our Scandinavian friends begin the toast list soon after the repast has well begun, and the President rose to do honour to the King of Denmark just when the guests were discussing the relative merits of roast beef à l'Italienne and poulets sautés à la Marengo. When presently Sir James Paget was called upon to propose "Prosperity to Denmark," he playfully referred to the custom of toasting and cheering during dinner, and suggested that, with all deference to the hosts, this was one of those customs almost "more honoured in the breach than in the observance." By common consent Sir James's speech was perfect in matter, form, and delivery, and it rose to eloquence and pathos as he concluded by asking permission to convert the toast into a prayer, "May God preserve Denmark," a sentiment which was responded to with unbounded enthusiasm, all the more telling in that a very large proportion of the guests were Prince Bismarck's countrymen. The dinner over, the sight was a brilliant one, as the crowd of guests descended into the spacious courtyard of the hôtel, covered with glass, lighted by electricity, and decorated with exotic plants. Over Chartreuse and coffee the question was soon mooted amongst various groups of talkers, Where shall the next Congress be?

At the opening ceremony in the morning a fertile theme with speakers had been the superiority of science over distinctions of creed, rank, and nationality. But once more abstractions did not stand the test of serious practical difficulty. When Berlin was mooted for 1887, it soon became seriously questioned whether the international character of the Congress could be maintained in the absence of the representatives of one of the leading European nations. The Parisian crowd once shouted "à Berlin," but were the academicians likely to echo the cry? The mere doubt was almost fatal to the project, and the distinguished American representatives, Dr. Austin Flint and Dr. Billings, saw and made the best of their opportunity. So it has come to be decreed that the next cosmopolitan gathering of doctors is to be on the other side of the "herring pond."

On Monday the sections gathered for work, and as I entered the surgical one, allowing for different sizes of rooms, the attendance at Copenhagen seemed decidedly more numerous than it was when Mr. Erichsen first took the chair at Burlington House three years ago. Professor Panum presided at first, and after referring to the recent and deeply regretted death of Professor Holmer, who had taken a most active part in organising the Congress, Sir Henry Acland, as one who had known him personally, was called upon to express the condolence of his colleagues. This he did in a brief but most apt speech. As he delivered it, I was forcibly struck with the resemblance of Sir Henry as he now is with Professor Sharpey as he looked about twenty-five years ago. The Oxford professor is not quite so massive in build as the veteran physiologist, but the resemblance is most striking. Professor George Buchanan of Glasgow was independently much struck with it, and observed to a mutual friend that he thought it was Sharpey come to life again when he saw Sir Henry at the presidential dinner the previous evening.

Professor Panum now vacated the chair in favour of Professor Volkmann, and the section was in eager expectation for Sir Joseph Lister's promised address on the Listerian Antiseptic Treatment in its present form. But as the baronet was not present, Professor Esmarch made a short speech on Malignant Diseases of the Rectum, which was illustrated by schematic diagrams. The *pièce de résistance*, and a very rich and substantial one it proved, was Mr. Thomas Bryant's communication on Lumbar Colotomy as a Curative and Remedial Operation in Syphilitic, Simple, and Cancerous Ulceration of the Rectum and Colon, with an improved method of performing the operation. A very full and well-arranged abstract of Mr. Bryant's paper was in the hands of members, who were thus enabled to follow him through the analysis of his eighty-two cases of colotomy, an unrivalled experience for any one surgeon. Forty per cent. of the whole number of eighty-two cases operated upon died within the month. Of the forty-nine successful cases, sixteen died within six months, eight lived from six to twelve months, twelve from one to five and a half years, five were alive from one and a half to fourteen years after operation, while eight had left the hospital convalescent. The manner of the delivery of the address was worthy of the matter, and, all in all, British surgery could not have had a better representative. Professor Verneuil followed on Inguinal Colotomy, and Professor Trélat on the Lumbar Operation, substantially endorsing Mr. Bryant's teaching and practice. The President then called upon Mr. Sampson Gamgee of Birmingham, who, in compliance with a generally-expressed wish, addressed the section in French. He avowed that, since he had had the personal instruction of Amussat, he had always practised his peration; but his recent observations in Professor Verneuil's clinique, and the experience of his colleagues, Mr. Furneaux Jordan, Mr. Bennett May, and Mr. Jordan Lloyd, in the Queen's Hospital, Birmingham, had convinced him that in well-chosen cases inguinal colotomy was an easy, safe, and efficient operation. The prevailing feeling of the section was a hopeful one as to the possibility of affording great relief in malignant rectal disease by timely and suitable surgical intervention.

If these Congresses are supposed to be holidays, they certainly are very hard-working ones to some of us. What with heat and dust and talk, repose is neither easy nor frequent; and as I am very anxious for a run home through the cliniques of Halle, Berlin, and Vienna, I shall not for the present inflict on THE LANCET readers any more stray notes from the Copenhagen Congress.

HEALTH OF THE ARMY.

No. I.

THE annual report on the health of the army during 1882, which has just been presented to Parliament, shows the strength of the white troops serving at home and abroad to have been 174,557. The admissions into hospital during the year were in the ratio of 1093 per 1000, the deaths 12·06, the discharges by invaliding 19·45, and the constantly non-effective from sickness 54·21 per 1000. With the exception of the invaliding, which shows a slight increase, these ratios were all under those of the preceding year, but the admissions and constantly sick were above the average of the last ten years.

Among the troops serving in the United Kingdom the admissions amounted to 852, the deaths to 6·94, the discharges by invaliding to 24·55, and the mean daily sick to 47·12 per 1000, in a strength of 86,847 non-commissioned officers and men. These are all lower than in the preceding year except the proportion invalided, which shows an increase of 2·36 per 1000, a result probably of the Egyptian campaign. The reduction does not appear to have been confined to any particular class of diseases. The admissions and deaths from enteric fever amounted to 2·0 and ·47 per 1000 of the strength, being more than double the proportion which occurred in 1881. The increase is stated to have been principally due to its occurrence among men recently returned from active service in Egypt. This was especially the case in the Home District and at Aldershot. In Dublin, where 27 cases and 5 deaths occurred, several of the cases "originated in the Royal Barracks, which are reported to have been badly constructed originally, too close to the river Liffey, and to have faulty drainage; various sanitary improvements have since been undertaken." Scarlet fever prevailed in a severe form at the Curragh from May to October, causing 35 admissions and 3 deaths; it was also prevalent at Chatham, where there were 23 cases with 1 death. Erysipelas was the cause of 269 cases, with 4 deaths; the largest number occurred at Aldershot, where the principal medical officer was unable to trace them to any insanitary condition either of the quarters or the neighbourhood. The Dublin and Cork districts furnished the next highest proportion of cases, and 3 out of 4 deaths occurred at the Curragh. Comparing the different military districts with each other, the Dublin district is found to furnish the highest ratio of admission, and the southern district the highest of deaths and constantly sick. This result, as regards the latter, is probably to a great extent due to the number of regiments returning from foreign service which arrive at Portsmouth, bringing with them cases of chronic disease, often in an advanced stage.

The returns by arms of the service show the admissions to have ranged between 573 per 1000 in the Royal Engineers and 956 in the Foot Guards; the deaths between 6·32 in the Household Cavalry, and 9·69 in the regimental depôts; and the mean sick between 29·78 in the Royal Engineers and 51·82 in the Foot Guards. Although the Royal Engineers had the lowest rates of admissions and daily sick, they fur-

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nished the highest ratio of deaths, except the depôts, amounting to 8·16 per 1000, the Foot Guards coming next with a ratio of 8·14 per 1000. We regret to observe the omission from the present report of the table hitherto given of the deaths to the end of the year among invalids discharged to pension from the different arms, as they ought to be added to furnish a fair statement of the death-rate of our troops at home. No reason has been assigned for the omission. The sickness and mortality among the officers serving at home are stated at 311 and 4·64 per 1000. Among the women, the cases, exclusive of parturition, were 439 and the deaths 8·10 per 1000; and among the children the attacks of illness were in the ratio of 490 and the deaths 26·79 per 1000, nearly one-fourth of the cases being measles.

At Gibraltar, in an average force of 4558 men, the ratio of admissions into hospital was 817, of deaths 10·31, of invalids sent home 14·70, and of constantly sick 50·35 per 1000. These results do not differ materially from those of 1881, except as regards the deaths, which have been more than doubled; all the ratios however, except the invalids sent home, are considerably above the average of the last ten years. The excess of deaths was chiefly due to enteric fever, and, though to a less extent, to fatal injuries. In the returns 40 cases of enteric fever appeared, of which 18 proved fatal. The surgeon in charge of the station hospital attributed the prevalence of enteric fever to deficient rainfall, but Surgeon-General Smith states that the troops were well supplied with good water, and believes it to have been mainly due to the fact that, owing to the change of troops in connexion with the Egyptian campaign, the garrison was almost entirely composed of unacclimatised soldiers just arrived from England. "The younger men on first arrival suffered much from fever, which in many instances assumed the enteric form, with the high rate of mortality of that disease."

The strength of the troops in Malta, exclusive of the Royal Malta Fencible Artillery, was 4619. The admissions into hospital were in the ratio of 804, the deaths of 8·88, the invalids sent to England of 36·37, and the mean daily sick of 52·35. With the exception of the invaliding, these results compare very favourably with those of the preceding year, and the admissions and deaths are both under the average of the last ten years. The reduction in the admissions has been chiefly in fevers, and in the deaths in fevers and tubercular diseases. The reduction in the amount of fevers would probably have been still more marked but for the arrival of four regiments from England, three of them at the hottest period of the year, to relieve corps which were ordered to proceed for service in Egypt. The influence of this circumstance upon the sickness and mortality in the command may be estimated by the fact that the *annual* ratio of admissions and deaths in five line regiments which were in the island at the beginning of the year was 645 and 5·87, while in the four regiments which arrived from England during the year it was 1229 and 12·58 per 1000. Enteric fever furnished 78 cases and 13 deaths, being in the ratio of 16·9 and 2·81 per 1000 of the strength, October and November being the months in which it was most prevalent. It is stated that it was impossible "to trace the disease to any definite cause or to any insanitary condition of the barracks themselves."

The admissions and deaths in the Royal Malta Fencible Artillery amounted to 606 and 12·62, and the constantly sick to 22·81 per 1000 in an average strength of 317. The sickness was considerably under, but the deaths double, the average of the ten preceding years; but the numbers are too limited to justify any positive deductions. A new scale of rations was introduced into the corps during the year, and the change is favourably reported upon by the medical officers.

The average force at Cyprus during the year was 595; in September and October it consisted chiefly of the depôts of corps serving in Egypt; before and after these months it was composed of a wing of a line regiment and detachments of Royal Engineers and Departmental Corps. The ratio of admissions into hospital during the year was 1004, of deaths 11·76, and of constantly sick 46·89 per 1000; all in excess of the results for the previous year. The excess of sickness and mortality was probably due to the arrival of troops in the hottest and most unhealthy season of the year, and to the 1st Battalion Royal West Kent Regiment landing in the island from Egypt, after the termination of hostilities, "in a most sickly and debilitated condition." There were 21 cases and 3 deaths returned under the head of enteric fever, but in all except two cases the disease was believed to have been contracted in Egypt.

In the Dominion of Canada, the average strength of the force stationed at Halifax, N.S., was 1892, and consisted of Royal Artillery, Royal Engineers, two line regiments and detachments of the Departmental Corps. The admissions into hospital were 710, the deaths 3·70, the invalids sent home 11·10, and the constantly sick 32·88 per 1000 of strength, all lower than in the preceding year, and the deaths only half the average of the last ten years. No case of enteric fever occurred; the most prevalent diseases were tonsilitis, dyspepsia, and diarrhœa.

At Bermuda, in a force of 1446, the admissions into hospital were 661, the deaths 8·99, the invalids sent home 15·91, and the constantly sick 33·04 per 1000. Except the invaliding, these ratios are very slightly above the average of the last ten years. The excess in the admissions was chiefly due to venereal diseases. Dengue prevailed as an epidemic among the civil population, but affected the troops to a very slight extent. There were 21 cases and 2 deaths from enteric fever; 14 of the cases occurred at Prospect Island, but could not be traced to any local cause.

In the West Indies, the average strength of the white troops was 492 non-commissioned officers and men, among whom the cases amounted to 675, the deaths to 10·16, the invaliding to 10·16, and the mean sick to 37·28 per 1000, results much under the average of the last ten years. The reduction in the admissions and deaths was almost entirely in the class of fevers, which furnished only 45 and 2·03 per 1000 of the strength. There was no case of yellow fever, which prevailed so much at Barbadoes in 1881, and only one case of enteric fever at Newcastle, Jamaica. Among the black troops, averaging 1120, the ratio of admissions was 1029, of deaths 16·96, of invaliding 41·96, and of mean sick 59·47 per 1000—results which, although they differ but little from the average of previous years, contrast very unfavourably with those of the white troops. Tubercular diseases were the principal causes of the mortality, and next to them diseases of the digestive system. Syphilis and gonorrhœa were the most prevalent diseases, and together furnished more than one-fourth of all the cases.

On the West Coast of Africa, the admissions from a force of 580 black troops amounted to 1247, the deaths to 27·58, the invaliding to 1·72, and the mean sick to 60·84 per 1000; the ratio of deaths was slightly above, but the other ratios considerably under, the average. Tubercular diseases were the chief source of the very high rate of mortality, one-half of all the deaths having resulted from them. Gonorrhœa, paroxysmal fevers, and diseases of the digestive system were the principal causes of admission into hospital. The cause of the great mortality from phthisis among the black troops in the West Indies and West Africa is a subject deserving careful investigation.

The average strength of the force employed at the Cape of Good Hope and St. Helena was 3944. The admissions into hospital were in the ratio of 697, the deaths of 19·52, the invaliding to England of 33·72, and the mean sick of 56·83 per 1000. These, except the mean sick, are much below the average of the preceding ten years. The high ratio of mortality was due to enteric fever, for if it were omitted the death-rate for the year would only be 7·60 per 1000. There were 240 cases and 47 deaths returned under this head, all of which occurred in Natal. These numbers give the proportion of 61 cases and 11·92 deaths per 1000 of the whole force in the command; but if calculated on the strength of the troops in Natal alone, averaging 2701, the cases would be 88·8, and the deaths 17·40 per 1000. At the close of 1881 this disease was very prevalent among the troops in Natal, and continued so during the first quarter of 1882, when it abated, and only 8 cases and 4 deaths occurred in the second quarter. The principal medical officer attributed the disease to the impure water supply at the up-country stations in Natal, "where the water-supply was, in all, open to serious objections, but unavoidable in camp life." At Cape Town small-pox was epidemic among the civil population, but only two cases occurred among the soldiers, 1038 in number.

In the Island of Mauritius, the admissions into hospital from the average force of 892 amounted to 2476, the deaths to 13·08, the invaliding to 28·56, and the mean sick to 95·18 per 1000. This very high ratio of admissions, which is considerably above that of 1881, was chiefly the result of the continued prevalence of paroxysmal fevers, which amounted to 14·50 per 1000, though fortunately attended with a com-

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paratively low rate of mortality. The disease seems to be generated at Port Louis, as the senior medical officer states "that there does not appear to have been a single admission from malarial fever at Curepipe unless the patient had suffered from the disease previous to his being sent there." Unfortunately, he does not tell us what proportion of the force is quartered at each of these stations respectively. Surely some steps might be taken, and certainly ought to be taken, to find a more healthy spot in which to quarter the troops, when in their present barracks one-tenth of the force is constantly in hospital, and the cases of fever alone are in the proportion of three attacks to every two men. Any reasonable expenditure should be incurred to save our soldiers from such unnecessary deterioration of health and efficiency. Is there any imperative necessity for keeping the troops quartered at Port Louis?

HOME HEALTH RESORTS.

No. II.

THE picturesque village of Shelfanger, near Diss, in Norfolk, has recently assumed a position of some prominence, owing to the discovery of a valuable spring of natural mineral water. The water is said to be most palatable, and has been analysed by Professor Attfield; the chief ingredients are carbonates of iron and magnesia. A capital residence for the reception of visitors has been fitted up, and the grounds have been made as attractive as possible. Two of the principal features of the place are the artistic drinking-fountain and the covered swimming-bath. An observatory has also been erected on the premises, from which fine views of the surrounding country may be obtained.

Ilkley, which was formerly known as the Mountain Spa, is situate on the southern slope of the beautiful Wharfe valley, with the extensive range of Rumbold Moor in the near distance. The walks in the immediate neighbourhood are plentiful and picturesque, and the scenery within a few miles of the spa is said to be amongst the finest in England. The hydropathic establishments are numerous and well appointed, and that known as "The Spa" has good chalybeate springs. There are several good hotels, and private lodgings can be had. The site is about 700 feet above the level of the sea. The cold waters are derived from rocky streams, which are for the most part at about a temperature of 47° F. Bathing and drinking are both practised at this resort. Scrofula, diseases of deficient vitality, stiff joints and muscular contractions, and gastric irritability, are the chief diseases which have been benefited. Ben Rhydding is situate in this elevated and bracing region of Yorkshire. Malvern, Matlock, and Sudbrook-park, are all celebrated for their cold-water cures.

Clifton has its particular advantages of temperature, air, and locality, which, in the hands of a judicious practitioner, might be made available in many cases where probably no other situation or measure would avail. Fifty years ago the mianamed Hot Wells of Clifton were more spoken of than they are now. The temperature of the springs is about 73° F. Though not insipid, the taste of the waters is hardly so pleasant as those of Malvern or Ilkley. The chemical constituents are few and simple; the whole amount of them in a pint of water is about eight grains, sulphate of soda being one of the principal ingredients. Clifton is built in terraces on the southern declivity of a hill of carboniferous limestone and hard sandstone. The soil rapidly becomes dry, and the air appears to be less humid than on the South Devon and Cornwall coasts, and the fall of rain seems to be less. The winter temperature is about three degrees cooler than at Torquay. The houses in the neighbourhood of the Bristol Hot Wells, near the bottom of the hill, are the most sheltered. There is good ground for exercise, and the surrounding country is attractive

Woodhall ought to be a very important English spa; it is situated between Boston and Lincoln. According to Mr. Cuffe's pamphlet on this spa, a gallon of water contains 1215 grains of chloride of sodium, 105 of chloride of calcium, 86 of chloride of magnesium, rather more than 5 grains of bromide of sodium, and more than 2·5 grains of iodide of sodium. Although this resort has got the name of the "Iodine Spa," it is probable that the iodine plays only a secondary part in its therapeutic action, as is the case with the "Haller Jod-Wasser," or of the "Adelheidsquelle." Braun is therefore inclined to ascribe the good effects of the Woodhall waters to the chlorides and other conditions, rather than to the iodide and bromide.

The Beulah Spa, near Norwood, appears to be once again rising in public estimation; the waters contain 61 parts of sulphate of magnesia and 9 of sulphate of soda, and belong, therefore, to the class of bitter springs, which are mostly prized for their purgative tendencies.

The Purton Spa, near Swindon Junction, ought to prove useful in many cases if methodically used under medical guidance and with a proper régime. It contains 23 grains of the sulphates of soda and magnesia, with 10 grains of sulphate of lime, 3·6 of carbonate of potash, and 4·2 of chloride of sodium, and is impregnated with 6 cubic inches of carbonic acid, in which most English and also most foreign bitter waters are defective. The mild aperient effect is, however, somewhat counteracted by the large proportion of gypsum.

Cheltenham waters may be classed both among the salt and bitter springs. No. 4 Montpellier contains 52 grains of chloride of sodium to the pint. The sulphates consist of 17·2 grains of sulphate of soda and 14·2 of sulphate of magnesia. The constitution of Pitville saline water is similar, though not identical. The principal defects of these waters are the small proportion of carbonate of soda and carbonic acid; but these might be remedied by the addition to every tumbler of a certain quantity of Bilin or Fachingen or Vals water, and the temperature might be regulated according to the individual cases. If this suggestion were carried out, and the local practitioners became thoroughly interested in the methods of administration, there seems to be no reason why Cheltenham and also Leamington should not again become much-frequented and useful watering-places, the more so as in many instances they could be resorted to also in early autumn and even winter, on account of the greater mildness of climate as compared with continental spas. Cheltenham also possesses a fairly strong chalybeate, with ·83 grain of ferrous carbonate, 6 grains of other salts, and an amount of carbonic acid sufficient for use at the well, though not for transmission. The summer temperature of Cheltenham is stated by Dr. Macpherson to be 2° cooler, and the winter temperature 3° warmer, than that of London.

Leamington may also as reasonably be classed with the mixed sulphated waters as with muriated. These cold springs contain no sulphate of magnesia, but only sulphate of soda, ranging from 28 to 40 grains per pint in different springs. The saline spring contains, in addition to 40 grains of sulphate of soda, 40 of common salt, 20 of chloride of calcium, and 3 of chloride of magnesium, with traces of iron, bromide, and iodine, and 2 cubic inches of carbonic acid. The saline chalybeate contains only 32 grains of sulphate of soda, with over 60 of chloride of sodium, 20 of chloride of calcium, and 12 of chloride of magnesium, about 1 grain of iron, and 3 cubic inches of carbonic acid. There are, besides, a sulphuretted saline and several other springs. The advantages of the springs for some cases are obvious, and the defects for others might be remedied by warming and the addition of other mineral waters.

Builth, in North Wales, may before long take a high place as a health resort; the saline waters are the principal ones, though there are also weak sulphur wells. We have been informed that barium chloride exists in appreciable quantities in some of the springs.

PROFESSOR MAX VON PETTENKOFER ON CHOLERA AFLOAT.

IN the scientific supplement to the *Allgemeine Zeitung* of Munich (August 13th, 1884), this well-known authority on bygiene takes up the question of the occurrence of cholera at sea. He restricts his investigation to the outbreak just thirty years ago on board H.M. flagship *Britannia* during the Crimean war, an outbreak on which a report was written by Dr. Milroy, but of which an eye witness has just enabled Professor von Pettenkofer to give a fuller and, in present circumstances, a more interesting account.

The *Britannia* was in the spring of 1852 fitted out as a

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flagship; spent the first year chiefly at Malta; went in August, 1853, to Besika Bay; in October to Constantinople, where she remained the whole winter; and in March, 1854, after the declaration of war, to Varna. With the exception of a short run to Odessa and Sebastopol, she was there the whole summer. In August the cholera broke out, at first among the troops on shore. Till then the ship and the whole fleet were in perfect health. It was thought that the French had brought the cholera with them from the Dobrudscha, whither some regiments had been sent from Varna. Few of these returned, the majority having succumbed in the lower levels of the Danube to cholera, typhus, and malaria.

The cholera among the land troops having ceased, it broke out in the fleet, but in very unequal proportions. There were then lying off Varna fifty-four English, French, and Turkish vessels of the line, with a host of smaller craft. The *Britannia* lay on August 20th in Kavarna Bay, fifteen leagues from Varna. Some hundred yards from her lay two other English three-deckers, the *Trafalgar* and the *Queen*, each, like the *Britannia*, with a crew of 1040 men. The *Britannia* lost 139, the *Trafalgar* 6, and the *Queen* 4 from cholera. On the French and Turkish ships the case was similar. It is remarkable that the French flagship, equally with the English, was most violently attacked. It lost 162, among them three officers. Throughout the malady the French flagship (*Ville de Paris*) remained at anchor in the roads with the rest of the fleet. The *Britannia* put out to sea in hope of bettering herself. How this was disappointed we know. While, then, the cholera on board the *Britannia* when anchored in the roads, and still more when on the high seas, dealt such fearful destruction, a fact quite inexplicable on the contagionist theory manifested itself. Of the (about) sixty officers serving on board, from the septuagenarian admiral to the youngest midshipman, not one was even ill." On their imperative return to Varna, the crew were accommodated in transport ships, while all the officers, of their own free choice remained on board the *Britannia*, "partly," as Professor von Pettenkofer's informant says, "to restore the courage of the men, partly out of convenience; and even then not a soul of them was sick. I slept in an empty cabin on the lowest deck, in spite of the physician's warning," and nothing came of it.

Now for the cause why on board the *Britannia* the cholera was so severe, while on board the *Trafalgar* and the *Queen* it was so very mild. Had the outbreak in the ship been due to the presence of cholera patients, cholera linen, and so forth, this circumstance was common to the other vessels. Dr. Milroy has already tried to explain the excess of the malady in the *Britannia* from another cause, which certainly might have had effect, not on the specific infection, but on the development of the disease in the individual subject. At night, after the numerous cases of diarrhœa and cholera had counselled removal to the high seas, it was necessary to shut the lower portholes. According to him, the men seemed poisoned with the foul air they breathed all night through. A more striking example, in his opinion, of the deadly effects of impure air in the time of an epidemic, and of the infallible means of checking them, could not be conceived. The immunity of the officers, he thinks, on this occasion was doubtless a consequence of the ampler breathing space they had at command. This explanation Professor von Pettenkofer admits to be one which must satisfy the practical physician whenever it is his business to find an opportune cause for an unexpected occurrence. "I, too," he says, "hold foul air as injurious, but not as sufficient to account for such an explosion of cholera. In the case before us we must not forget that it was on account of her heavy sick list that the *Britannia* had already sought the high seas. Then we must bethink ourselves of those cases in which, despite the most liberal ventilation, the cholera could not be got rid of—as witness the well-known epidemic on board the *Windsor Castle*. Finally, it would still have to be investigated whether there were not other ships which, coincidently with the *Britannia*, were heavily visited with cholera, and which had the lower portholes open. My informant has set my mind completely at rest on this point, that the crew of the *Britannia* were not inhaling such foul air as Dr. Milroy's report made me suppose."

Professor von Pettenkofer's eye-witness (a young naval officer on board the *Britannia*, who lived and served throughout the whole visitation) corrects another erroneous assumption. The professor had concluded that the shutting of the lower portholes was caused by stormy weather. It was not so. On the day of the departure from Kavarna Bay a calm came on; instead of the wished for cool breeze, the sun blazed down on the cholera-stricken vessel. In addition to this a ground-swell occurred, causing long, oily-looking waves without wind. As a consequence, the ship swayed so that the hatches of the lowest cannon-deck, where the men slept, had to be shut. And now came the terrible night in which fifty-eight men died—a night without wind, without a pulsation in the sultry air. Storm there was none; would that there had been! The closing of the hatches had no influence in producing the mortality, for, on account of the heat, the men did not sleep in their hammocks, but were allowed to lay themselves down where they pleased, the majority bivouacking in the open air on deck and on planks. The physicians themselves had given the order, and it was precisely in the open air that most of the men died. It may be remarked that the *Ville de Paris*, which remained in the roads, lost as many as the *Britannia*, though her hatches and portholes were wide open.

The bad air theory, from the shutting of these ventilators, thus falls to the ground. Equally futile, as explaining the cholera explosion, is the contagion theory. That a cholera patient with his evacuations or cholera-linen came on board accounts for nothing, for many other ships had the same thing occurring to them, and no evil results followed. But perhaps the infective matter was brought to the *Britannia* in the food or drinking-water used only by the crew. On this point Professor von Pettenkofer's informant is decisive: "Provisions came daily from shore, even during the epidemic, when we were fifteen leagues from Kavarna Bay, but the officers ate the same meat, the same vegetables, the same fruits as the men. The only difference was that the crew drank rum-and-water and the officers wine; while in the drinking-water no distinction was observed." Nor was the ballast from the shore a vehicle for bringing the infective matter on board the *Britannia*, which used neither sea-sand nor rubble, but, as on all English vessels of war, only iron—the so-called pig-iron—in square pieces, wedged together in the lowest ships spaces, and never disturbed.

Nothing remains to account for the outbreak but the previous communication of crews and officers with the shore. Professor von Pettenkofer again quotes his eye-witness:—"The sick, not only on board the *Britannia*, but on all the other vessels of the allied fleet, had, before the cholera visitation, while we lay in Varna, regular communication with the land, and our men—there is no denying it—frequented the same boozing kens and places of lascivious resort, which cropped up in the town like mushrooms." As the *camaraderie* of regiments on land and ships' crews ashore leads to this—that the one will patronise one place of rendezvous, and the others by preference another, so, concludes Professor von Petterkofer, "we may assume that the cholera locality on shore was the seat and the occasion of infection (*Infectionsgelegenheit*), that individual and specially infected resorts were haunted by the men from one ship more than by the men from another, and that many lingered in this or that house oftener or seldom, for a longer time or a shorter." He leaves it an open question whether the infective matter engendered in the locality was inhaled by the men or whether they took it in what they ate or in what they drank. If, he thinks, we consider the facts without prejudice, we shall find no possible proof of the contagion theory, but only that of the localistic theory (*localistische Anschauung*) of cholera diffusion and infection.

In emigrant ships the manifestation of cholera obeys the same laws as in war-vessels, and the question to ask is, where those who fall ill on board have been on land before embarking. "My attention has just been drawn," the Professor says, "to the fact that 11 cases which occurred in the *Westphalia*, between Hamburg and New York, from Aug. 27th to Sept. 10th, 1873, belonged all of them exclusively to two German families, and that quite as severe an epidemic as that on board the *Britannia* was possible, had the majority of the other passengers before their embarkation lived together or been in similar circumstances with the said two families." That this here and there actually occurs is proved by the epidemic outbreaks exceptionally taking place in emigrant ships. That the *Britannia* as a vessel was not a focus of infection may be seen from the 60 gallant officers who remained unaffected on board.

Prof. von Pettenkofer hopes some one of the European maritime powers, during the cholera invasion, will organise a commission to make minute investigations on the occur-

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rence of the disease in ships, and on any etiological momenta antecedent to it, although, he says, a similar proposal made more than ten years ago met with no response.

THE CHOLERA EPIDEMIC.

ALTHOUGH there has been no material extension of the epidemic at Marseilles and Toulon, yet the steady recurrence day by day of some eight to twelve deaths in the former and of some two to six deaths in the latter place is sufficient to cause anxiety, especially in view of the continuance of the almost tropical weather on the Mediterranean coast. With the advent of colder weather a more rapid diminution of the outbreak might reasonably be anticipated. A considerable number of places in the departments of Bouches du Rhone, Var, Basses Alpes, &c., are continually reported as having suffered from cholera deaths, but the facts that no large mortality occurs in any one place and that localities alleged to be infected one day are not heard of again gives reason to hope that some of the attacks are only of the sporadic type, and that the others fail to get that hold upon the places in which they occur which is so characteristic of Asiatic cholera during the period of its diffusion. Some recent rumours as to the extension of the epidemic to the north of France were evidently not justified. In Italy the disease has extended, and deaths are reported from the provinces of Campo Basso, Cuneo, Parma, Massa Carrara, Port Maurice, Cosenza, and Turin. None of the outbreaks are on a wide scale, but the Italian Government has despatched large bodies of troops into the provinces of Campo Basso and Cosenza, for the purpose of again trying the effect of the sanitary cordons which have hitherto so signally failed.

The account which has been published as to the alleged death from Asiatic cholera in Birmingham fully justifies the caution which we gave last week as to the inexpediency of basing alarming rumours on a single attack, which might exhibit symptoms which, though resembling those of true cholera, are also often met with in the severer cases of the sporadic disease. In the temporary absence of Dr. Alfred Hill, whose mature judgment, based on a lengthened experience, would have been opportune had it been available, the Mayor has sought the advice of Mr. Waterson, surgeon to H.M. Prison at Birmingham, and on his authority it is officially announced that the case was simply one of English cholera.

OFFICIAL CHOLERA REPORTS.

In view of the prevalence of cholera on the Continent and of the possible invasion of this country, the Local Government Board have issued a reprint of a number of reports which have at intervals been made to them and to the Privy Council Office, together with the comments which have been made concerning them by their several medical advisers, including Mr. Simon. Dr. Buchanan introduces the set of papers by a preliminary report, in which he sets forth the object of the reissue, it being intended both to exhibit the doctrines concerning cholera in Europe which have been continuously held by the principal medical advisers of the English Government, and further, to indicate the local conditions provocative of cholera in England. For these purposes the publication has considerable value, for the principles which Mr. Simon and his successors have so long and so successfully laboured for are fully set out, and the detailed reports by Mr. Netten Radcliffe, Dr. Buchanan, and the late Drs. Parkes and Seaton, on actual outbreaks, including some of considerable historic importance, cannot fail to be extremely helpful in guiding those who may at any moment have to conduct similar inquiries in their own districts. The publication, which can be procured as an official paper for a few pence, deserves a wide circulation amongst medical officers of health.

QUARANTINE AND INFECTED PORTS.

THE *London Gazette* of the 15th and 19th inst. contains notifications to the following effect:—

All merchant vessels whatsoever arriving at Greek ports, unless furnished with a visa of the Greek consular authorities, will be subjected to a quarantine of five or of eleven days, at the discretion of the sanitary authority.

The Italian coast, from the French border to Civita Vecchia, has been proclaimed under suspicion of cholera. The ports of the Gulf of Genoa have been declared by the Portuguese Government to be infected with cholera.

At Buenos Ayres, eight days' quarantine will be imposed on all vessels arriving from Toulon and Marseilles or any other port in which cholera has shown itself; should a case of the disease have occurred during the voyage, the quarantine will be extended to fifteen days.

Vessels arriving at the Danish West India Islands will be subjected to strict investigation, and a quarantine of fourteen days imposed on those on which a suspicious case of cholera has occurred.

A quarantine of sixty days or more is imposed on arrivals at Ship Island Harbour, Mississippi, from cholera-infected ports.

The term of quarantine for ships arriving at Sicily and Sardinia has been increased to twenty-one days.

THE BRITISH PHARMACEUTICAL CONFERENCE.

THE meeting of this Conference, on the 13th instant, was devoted to the reading and discussion of papers, the programme containing a total of twenty-eight contributions.

The alkaloid value of commercial and of wild belladonna was the subject of a final report by Mr. A. W. Gerrard; that of atropa belladonna the subject of a report by Messrs. W. R. Dunstan and F. Ransom; and Mr. T. J. Hasselby contributed some notes on the growth of belladonna and hyoscyamus; English rhubarb was the subject of two papers by Mr. W. Elborne; and Messrs. W. R. Dunstan and F. W. Short contributed a report of an investigation, aided by the Research Fund of the Conference, on the chemistry, botany, and pharmacy of the strychnos nux-vomica.

The suggestion that preparations of nux-vomica should be standardised was followed by papers on the standardising of pharmaceutical preparations, by Mr. G. F. Schacht and Mr. D. B. Dott. In the course of his paper Mr. Schacht said that suggestions had recently been made for standardising some of our galenicals. He considered these suggestions to be unwise, and mainly because they involve an assumption of knowledge concerning them that is not possessed. He regarded remedies in this connexion as divisible into two classes—first, definite chemical substances and their diluted forms, which lend themselves naturally to standardising, and cannot be too exactly standardised for employment in medicine; and, secondly, remedies of mixed and variable constitution. These cannot, with our present knowledge, be standardised in a way to convey the truth as to their medicinal potency, and therefore must form a class of more or less vague medicinal value. In the progress of the art of medicine from empiricism to science, it is probable much more exact knowledge concerning substances occurring in the latter class will be arrived at, and then such remedies may properly pass into the former class. But the work connected with this progress is chiefly medical work, and pharmacy can only follow and assist; it certainly cannot pretend to lead. Mr. Dott remarked that in order to standardise preparations of a drug it was necessary that the amount of active principle or principles be capable of accurate and reasonably easy determination. This rule excluded a large section of the materia medica, as there is a host of drugs whose active principles are unknown or incapable of exact determination. It is only practicable to standardise preparations of those drugs which readily yield their active principles in a state of comparative purity. An objection to standardising pharmaceutical preparations was that the operation could only be safely performed with an amount of knowledge and experience which would not be always available. A serious error in analysis might lead to greater variations in strength than the pre-standardisers ever dreamt of. Taking all the facts into consideration, no general system of standardising ought to be introduced into the British Pharmacopœia.

After papers had been read by Mr. W. Martindale on the composition of seidlitz powders, and by Mr. T. Greenish on the pharmacy of linseed, Mr. W. Southall reported the result of a microscopical examination which he had made of a specimen of a fungoid plant, the Tasmanian native bread. He came to the conclusion that the plant may be considered a mycelium or the sclerotioid-mycelium of a fungus of which

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the other stages of growth have not yet been discovered. The specimen weighed when fresh 37 lb.

The composition of gray powder, of blue pill, and of blue ointment was treated by Messrs. M. Dechan and T. Maben; sesame oil as a basis for lead plaster was further reported upon by Mr. T. Maben, whose later experiments led him to form a more decided opinion in favour of it than he could have given a year ago; commercial Peruvian balsam was reported upon by Mr. P. MacEwan, who found twelve samples to be pure; Mr. T. S. Dymond compared the two processes of testing the amount of diastase in extract of malt, which is becoming a popular remedy; Mr. J. R. Hill called attention to the possibility of pharmaceutical preparations being contaminated by the copper of the vessels in which they are prepared; Mr. R. Wright recommended the use of hydrochlorate of quinine instead of the sulphate of quinine in the preparation of the tincture; and the presence of iodine in cod-liver oil and other marine products was reported upon by Mr. E. Stanford, who stated that in Anglo-Portuguese oysters the proportion was too small to be of use. Sulphurated lime having come into use as a remedy for boils, Mr. T. Dymond compared the different processes of making it; Mr. D. Hooper contributed elaborate analyses of some old cinchona barks.

The papers disposed of, it was determined to hold the next meeting at Aberdeen. In the election of the officers Dr. J. C. Thresh of Buxton, was associated with Mr. Plowman of London in the honorary secretaryship. Mr. J. B. Stephenson of Edinburgh was elected President and Mr. A. Strachan of Aberdeen local secretary.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Fever and Diphtheria in the Romford Rural District, by Dr. PARSONS.—The rural portion of the Romford Union contains a population of 21,862, and it has suffered from several outbreaks of fever and diphtheria during recent years. In the end of November, 1883, enteric fever appeared at Victoria Cottages, Dagenham,—a row of twenty-nine cottages and a public house lying in an open situation. Here conditions very typical of the district were found to exist. Slop-water goes into cesspools overflowing into an offensive ditch, and cesspit privies prevail. At either end of a row, the soil of which is thus in danger of being befouled, is a well, and a wet boggy site discoloured with black fetid matter having been selected, it was found that paraffin oil poured down here found its way within three days into the well, the water from which on analysis showed a high proportion of nitric acid and albuminoid ammonia; the sample also exhibited microscopic constituents probably derived from household waste. All the cases of enteric fever, eleven in number, occurred in twenty-three houses using this water, the remaining seven escaping. Again, in the winter of 1882-83 a considerable outbreak of enteric fever took place at Great Ilford, fifty-nine persons in thirty-five households being attacked. The medical officer of health aptly describes Ilford as "ripe for the outbreak of a serious epidemic of typhoid fever, should the germs of the disease be introduced, as a corn-stack is ripe for the flames should a lighted match be applied to it." But little is known of the sewers there, except that they are unventilated; cesspool drainage also exists, leading to soakage and overflow into a gravelly soil, with consequent nuisance on the surface. No proper precautions exist to prevent the escape of foul air into houses, either from drains or cesspools; and so-called waterclosets without water also exist. It is possible that at the onset the disease had its origin in an infected milk-supply. The date, however, at which Dr. Parson's inquiry was made prevented the circumstances as to the earlier history of the cases being submitted to an exhaustive examination. But it is clear that, so far as diffusion is concerned, the faulty sanitary conditions we have adverted to, and especially the facilities for the escape of infected sewage exhalations into and about houses, must materially have conduced to increase the outbreak. Enteric fever also prevailed at Barkingside in the autumn of 1881, in a locality where drinking-water is so scarce that it has to be imported by cart, and where the supply for so-called washing purposes is from a sewage-polluted brook. As regards diphtheria, independent groups appeared in and about Chadwell-heath, Dagenham, in the winter of 1883-84, the locality being one where cesspools overflow into nearly stagnant roadside ditches. Other outbreaks, apparently due to importation, or at times associated with cases of scarlet fever and of so-called "croup," occurred in other localities. Of Dagenham, where some of these cases took place, it is stated that most of the houses are old and dilapidated; there is no sewerage; the house-slops run into ditches, cesspools, or pits; sewage nuisances are frequent in the neighbourhood of houses; the privies are ill-made and offensive, and are too near houses; and water is obtained from wells sunk in a porous gravel-bed, and which are suspiciously near to privies, cesspools, and other sources of contamination. Conditions such as these have now existed for a long time in this rural district, and although small works of improvement have been carried out from time to time, no measures of a comprehensive character have been adopted. The authority have, however, now approved of a work of sewerage to include Ilford, Chadwell-heath, and Barkingside. In connexion with the diphtheria it may be noted that much of the district lies to the north of the Thames, where it is bordered by a belt of alluvial marshes about a mile wide; to the north of this is an extensive plain of gravel, resting on London clay;—and still further north the district is hilly, the soil being composed mainly of the London and boulder clays.

Diphtheria and Typhoid at Calne, by Dr. BLAXALL.—So far as diphtheria is concerned, this report gives an account of a somewhat large prevalence of the disease which, in so far as its spread is concerned, had mainly to do with intercommunication between sick and healthy at one of the elementary schools in the place, and also as regards one portion of the outbreak, with infection conveyed through a servant girl. The report does not succeed in unravelling the mystery which so often attaches to first cases of this disease, but it is able to show once again the imperative importance of having at hand some available means for the isolation of the first attacks which come under observation. A want of definite regulations to govern school attendance with a view to guard against children being sent to school in an infective state was also matter of comment, and this subject is one which unquestionably calls for some general attention in the future, especially in connexion with refusal to re-admit children from infected localities and houses, except on a medical certificate of freedom from danger. The outbreak of enteric fever was a localised one, brought about in the main by faulty drainage arrangements, and one of the principal recommendations attached to the report relates to the need for action to remedy the defects both in the sewerage and drainage of the place. Calne was inspected by Dr. Blaxall in 1874, and although improvements have been made since that date, yet much remains to be done as regards the system of cesspit privies, the systematic and frequent removal of refuse, and the special nuisances attaching to pig-keeping in a town where some 300 pigs are daily slaughtered.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 16th inst., 5781 births and 4052 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which in the three preceding weeks had declined from 24·9 to 21·9 per 1000, rose last week to 24·1. During the first seven weeks of the current quarter the death-rate in these towns averaged 22·8 per 1000, against 20·1 and 20·2 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 17·4 in Bristol, 18·5 in Derby, and 18·8 in Huddersfield. In the other towns the rates ranged upwards to 30·6 in Oldham and in Portsmouth, 31·1 in Bolton, and 43·3 in Wolverhampton. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had steadily declined in the four previous weeks from 1257 to 911, rose again last week to 1108; these included 789 from diarrhœa, 103 from measles, 68 from "fever" (principally enteric), 68 from whooping-cough, 49 from scarlet fever, 21 from diphtheria, and 10 from small-

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pox. These diseases caused the lowest death-rates in Huddersfield and Bristol, and the highest in Norwich and Wolverhampton. The highest rates of mortality from diarrhœa were recorded in Leicester, Norwich, and Wolverhampton; from measles in Wolverhampton and Blackburn; from whooping-cough in Sunderland and Derby; and from scarlet fever in Wolverhampton and Sheffield. Of the 21 deaths from diphtheria in the twenty-eight towns, as many as 19 were recorded in London. Small-pox caused 9 deaths in London (exclusive of 3 metropolitan cases registered outside Registration London), and 1 in Sheffield. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which in the five previous weeks had declined from 1368 to 810, further fell to 640 on Saturday last; the cases admitted were 64, against 66 and 110 in the two preceding weeks. The Highgate Small-pox Hospital contained 37 patients on Saturday last, 6 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which in the two previous weeks had been 198 and 187, further declined to 162, and were 14 below the corrected average. The causes of 92, or 2·3 per cent., of the 4052 deaths last week in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Sunderland, Norwich, Derby, and Cardiff. The largest proportions of uncertified deaths were recorded in Blackburn, Oldham, and Hudderfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·6 and 20·7 in the two preceding weeks, was again 20·7 in the week ending the 16th inst.; it was 3·4 below the average rate during the same period in twenty-eight of the largest English towns. The rates in the Scotch towns last week ranged from 13·4 and 13·6 in Paisley and Greenock, to 23·5 in Perth, and 25·9 in Glasgow. The 499 deaths in the eight towns included 51 which resulted from diarrhœal diseases, 29 from whooping-cough, 9 from scarlet fever, 9 from measles, 6 from "fever," 5 from diphtheria, and not one from small-pox; in all, 109 deaths were referred to these principal zymotic diseases, against 85, 95, and 114 in the three preceding weeks. These 109 deaths were equal to an annual rate of 4·5 per 1000, which was 2·1 below the mean rate from the same diseases last week in the twenty-eight English towns. The deaths from diarrhœal diseases, which had been 40 and 51 in the two previous weeks, were again 51 last week, and exceeded by 8 the number in the corresponding week of last year; 27 were returned in Glasgow and 7 in Edinburgh. The rate of mortality from diarrhœa in the Scotch towns did not exceed 2·1 per 1000, while it averaged 4·7 in the large English towns. The 29 fatal cases of whooping-cough were within 2 of the number in the preceding week, and included 20 in Glasgow and 4 in Edinburgh. All the 9 deaths from scarlet fever were recorded in Glasgow, where 6 of the 9 fatal cases of measles were also returned. The deaths from "fever" showed a further increase upon recent weekly numbers, while those from diphtheria showed a decline of 2 from the number in the preceding week. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns were 64, against 66 and 65 in the two previous weeks, and were 8 below the number returned in the corresponding week of last year. The causes of 77, or more than 15 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 23·0 and 22·4 per 1000 in the two preceding weeks, rose to 24·2 in the week ending the 16th inst. During the first seven weeks of the current quarter the death-rate in the city averaged 22·0 per 1000, the rate during the same period being equal to 23·0 in London and 17·0 in Edinburgh. The 163 deaths in Dublin last week exceeded by 12 the number in the previous week, and included 33 which resulted from the principal zymotic diseases, against 16, 22, and 23 in the three preceding weeks; of these, 22 were referred to diarrhœal diseases, 6 to scarlet fever, 4 to "fever" (typhus, enteric, or simple), 1 to whooping-cough, and not one either to small-pox, measles, or diphtheria. These 33 deaths were equal to an annual rate of 4·9 per 1000, the rate from the same diseases being 5·1 in London and 2·7 in Edinburgh. The deaths referred to diarrhœa, which had been 11 and 8 in the two previous weeks, rose to 22 last week. The fatal cases of scarlet fever corresponded with the number in the preceding week, while those of "fever" and diphtheria showed a decline. The deaths of infants considerably exceeded the number in the previous week, while those of elderly persons were below the average of recent weeks. The causes of 30, or more than 18 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

Surgeon-Major E. C. Markey, medical officer in charge of the Cambridge Hospital, Aldershot, is held in readiness for immediate embarkation for Egypt. Brigade-Surgeon E. G. McDowell, C.B., has been ordered to Aldershot to assume charge of the Cambridge Hospital.

ADMIRALTY.—Fleet Surgeon Robert Nelson has been appointed to the *Achilles*.

ARTILLERY VOLUNTEERS.—The Tynemouth: Acting Surgeon William Pope Mears, M.D., from the 1st Northumberland and Sunderland Artillery Volunteer Corps, to be Acting Surgeon.

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Buffs (East Kent Regiment): Surgeon Charles Holttum is granted the honorary rank of Surgeon-Major.

Correspondence.

"Audi alteram partem."

THE DEMONSTRATION OF THE BACILLUS LEPRÆ.

To the Editor of THE LANCET.

SIR,—The discovery of bacillus lepræ, though made some years before that of bacillus tuberculosis, has not been put to the same very practical use in diagnosis that immediately followed the discovery of the latter bacterium. The reason for this lies in the comparative difficulty hitherto attending the demonstration of the parasite of leprosy. To show it, it has been necessary to excise a portion of affected tissue—an operation naturally objected to even by a leper; and afterwards the tedious processes of hardening and section-cutting have to be gone through prior to the final staining, washing, and mounting; and even then, when the preparation, the result of so much labour, is under the microscope, it sometimes, especially to the untrained eye, may require a considerable exercise of faith to recognise in the patches and ill-defined streaks of colour the bacillus. I have shown such specimens to friends, and at times their smiles were more indicative of incredulity than conviction.

By a method I now adopt, the bacillus can be demonstrated as easily, rapidly, and perfectly as can that of tubercle, and the preparations are so clear that on examining them the most thorough sceptic is immediately converted to a belief in the bacillus lepræ. I proceed as follows:—A leper tubercle or infiltrated patch is selected and the whole or part of it included in the jaws of an ordinary thin-bladed pile clamp. The tightening of the clamp has the effect of driving out all the blood from the included tissues, and the tubercle, from being dirty red or purple, becomes like yellow wax. The hold of the clamp is maintained at a degree of tightness sufficient to keep up this state of anæmia, and at the same time the centre of the included mass is pricked with a needle or sharp knife. From the puncture a droplet of perfectly clear fluid exudes, and is to be transferred to one or more cover-glasses, each cover-glass being smeared with rather a thick layer of the leper juice. The cover-glasses are then dried, stained, washed, and mounted in the ordinary way. The Weigert Ehrlich method I have found give good results. Under the microscope slides so prepared show bacilli in prodigious numbers, both free and in dense bundles packing the leper cells. The diagnosis of leprosy from the juice of

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the leper tubercle is in this way made as easy, expeditious, and visible as is that of tubercular phthisis from sputum.

Trusting that this hint may be of service to those interested in leprosy and its bacillus,

I am, Sir, yours truly,

Hong Kong, China, July 9th, 1884. PATRICK MANSON.

THE CASE OF JOSEPH JAMES DONNELLY.

To the Editor of THE LANCET.

SIR,—Dr. Hughes Bennett finishes a very instructive letter in this day's LANCET upon the case of Joseph James Donnelly by asking a question, which I am very glad to be able to answer if you will grant me space in your columns for the purpose.

Dr. Bennett writes:—"The public have a right to be informed whether this individual is for the future to be considered as a lunatic, and consequently as an innocent man, or whether he is to undergo penal servitude for life as a malefactor." Dr. Bennett will, I am sure, be glad to learn that Donnelly was admitted into the epileptic ward of this asylum on Monday, the 4th inst., where, if Dr. Bennett should ever be in this neighbourhood and should have half an hour to spare, he may, if so inclined, renew his acquaintance with his quondam patient, and at the same time afford me the pleasure of showing him the general arrangements of the asylum.

It is very justly pointed out by Dr. Bennett that, Donnelly being what in his letter to you he describes him to be, two things of a nature to be regretted have happened in his case. The first is, that he was permitted to have the opportunity of killing his sister; and the second is, that he was afterwards tried and sentenced as if he had been a responsible malefactor. Now, although no one would, I think, have the hardihood to hazard the assertion that our statutes relating to lunatics are perfect, or that the resources of civilisation have been exhausted with respect to our modes of procedure in the treatment of these unfortunate persons, still we are, happily, not compelled to own that there is absolutely nothing that could be done, in a similar case in the future, to avert the occurrence of similar unfortunate incidents.

With respect to the means for the possible prevention of the recurrence of similar acts of homicidal violence, I would ask your permission to point out that any medical gentleman who possessed information similar to that which Dr. Bennett possessed as to his patient, at the time of discharging him from hospital, would be taking a legal and justifiable course if he were to address a letter to the relieving officer of the parish to which the patient belonged, stating the circumstances, together with his opinion of the patient's mental condition. Upon the receipt of such a letter every relieving officer of a parish is bound by statute (16 and 17 Vict., chap. 97, sect. 68) to make inquiry into the case.

With respect to the second point, the suggestion that I would venture to make is, that if any medical gentleman should ever be in possession of any facts relating to the mental condition of any person committed for trial upon a charge of murder, and should be in any doubt or difficulty as to the right course to take in the matter, he may, if so disposed, address a letter to me stating the facts, and I will, very gladly, charge myself with the duty of taking steps for bringing before the court and the jury such facts as may reach me in this way. The only stipulations I would make are, that the information should reach me sufficiently long before the trial, and that the facts should either be within the personal cognizance of the writer or be capable of proof by witnesses.

With the view of disarming criticism beforehand, will you permit me to add that I do not offer these suggestions as if I thought that they contained the whole duty of man in the matter, but that I offer them only as possible aids to those in doubt.

I am, Sir, your obedient servant,

W. ORANGE.

Broadmoor Criminal Lunatic Asylum, Aug. 16th, 1884.

To the Editor of THE LANCET.

SIR,—As you do me the honour to refer to a letter of mine in your leading article of the 9th inst. on the above case, I trust you will allow me to state, in as few words as possible, why I find myself unable to agree with some of the remarks in that article.

First of all, you seem to doubt the propriety of interfering to prevent the execution of the capital sentence when once it has been pronounced; you "think that matters of this sort should be dealt with finally at the time of trial, or rather before it," and although you allow Donnelly's to be one of the exceptional instances which call for inquiry, you state in general terms that you do not "think it expedient, in the interests of public safety, that there should be this last chance of escape open to criminals." My answer is that cases occur not unfrequently in which, from the poverty of the accused and the peculiarities in our English methods of judicial procedure, the arguments in support of the plea of insanity are imperfectly brought out during the trial. Take, for example, this very case. Donnelly's friends were too poor to provide him with any sort of legal assistance, so that had not a member of the Bar kindly undertaken the defence at the request of the presiding judge, the poor fellow would have been left without anyone to plead his cause. As it was, his counsel entered upon his task under every conceivable disadvantage; no defence had been prepared, no witnesses had been summoned on the prisoner's behalf; and as the prosecution did not happen to produce the one witness, Dr. Dreschfeld, whose evidence was likely to tell in the man's favour, it was impossible to elicit, in cross-examination, the facts which were necessary in order to sustain the plea. It is perfectly evident, therefore, that the trial could not, in the nature of things, be a satisfactory one; and to my mind it would be horrible if a decision, arrived at under such circumstances, should be held to be irreversible.

If it be asked why means were not taken to interfere in the matter before or during the trial, I reply that interference by persons not directly concerned in a case that is *sub judice* is generally supposed not only to be impolitic but absolutely reprehensible. It seems to me that I adopted the only course open to me; I abstained from interference until the trial was over, and until there was imminent danger of a deplorable miscarriage of justice. That the case was one that needed revision is proved by the fact (of which, of course, I was not aware when I wrote to the local papers) that the Government had already sent two medical inspectors to report on the case, and that in consequence of their report the man has been reprieved during Her Majesty's pleasure.

But there is a still more important point in your leading article on which I am compelled to differ from you. You compare the condition of an epileptic maniac with that of a patient rendered irascible and peevish from an attack of gout, or from phthisis in a certain stage, or from the approach of certain changes in the sexual life. In my opinion the two conditions are incomparable. In the case of an epileptic maniac, his acts of violence are done unconsciously, and therefore are uncontrollable; in all the other cases mentioned, acts of a similar nature would always be done consciously, and would simply be the result of uncontrolled temper. Epileptics like Donnelly have no control over their actions during the maniacal paroxysm, and no recollection of them when it is over. They are therefore legally and morally irresponsible, and no effort can be too great to prevent their being systematically treated as criminals.

I remain, Sir, yours very truly,

CHARLES J. CULLINGWORTH, M.D., M.R.C.P.,
Lecturer on Medical Jurisprudence at the Owens
August 13th, 1884. College, Manchester.

P.S.—As my letter happened to be too late for insertion last week, may I be allowed to add a postscript, expressive of the pleasure with which I read Dr. A. Hughes Bennett's letter in THE LANCET of last Saturday? I entirely concur in the sentiment to which he has given such forcible expression. With regard, however, to the mismanagement of the prisoner's defence, the above letter will show that our system of preparing cases for trial is more to be blamed for the extreme unsatisfactoriness of this inquiry, than the very able advocate who kindly undertook the defence at the last moment, without having received any instructions, and who was consequently at an enormous disadvantage throughout the case.

THE CHOLERA IN FRANCE.

To the Editor of THE LANCET.

SIR,—Before leaving for Paris, I send you a line to say that on visiting the hospitals, both of Toulon and this place, I was agreeably surprised to find all the patients either con-

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valescent or in the stage of consecutive fever in which the intra-peritoneal injections were not called for. No admissions in the algide stages of this disease presented themselves whilst I was there. For some time, however, these injections into the peritoneum have been exercising the minds of practitioners here, through quotations from THE LANCET having found their way into the foreign press; and since Dr. B. W. Richardson's first essay in 1854 many authors appear to have written on the subject. The chief difficulty seems to have been the want of directions for the employment of the method. In tapping for dropsy, the volume of ascitic fluid would protect the intestines; but in injecting the peritoneum for other diseases, it would seem necessary, as Dr. Richardson has done, to make a small lancet incision and scratch down to the peritoneum, and then push in a blunt cannula. Such a cannula, blunt at the end, with an eyelet like a catheter at one side, I have left with Dr. Duranty, one of the chief physicians of the cholera hospital established at the Palace of "Pharo," at the entrance of the harbour here; and Dr. Bassano, one of the house-surgeons, and the Doctor himself, have promised to give me careful details of any cases which they may be able to treat by intra-peritoneal injections. All seem anxious to try them, intra-venous injections neither having succeeded in this epidemic, nor being, unless with exceptional apparatus, unattended with risk. The almost sudden influx of fluid by the veins seems to be unfavourable. I also strongly recommended the injection of the subcutaneous cellular tissues with warm water, so as to produce artificial anasarca, for both cases of dropsy and anasarca have been known to recover when attacked by cholera, apparently through the absorption of their effusions. To Dr. B. W. Richardson, it appears, we are indebted for this method, though others may have thought of it independently. Drs. Coney and Purves have recommended vesical injections, but Dr. Richardson, who tried this long ago, did not find the absorption to be satisfactory. Besides, so dangerous is the reabsorption of urine, that the catheter has often to be employed.

The epidemic seems to be passing away. The deaths registered are chiefly of cases admitted long ago in the stage of secondary fever. The admissions seem now to be few.

Dr. Koch has recommended, I hear, the non-watering of the streets, as he believes desiccation kills the "microbia."(?)

All the medical officers, sisters, and attendants, including ladies of rank, the British consulate, chaplains, &c., display the utmost courage and devotion.

I am, Sir, yours truly,

CAMERON MACDOWALL, F.R.C.S. Edin.,
Marseilles, August 1st. Brigade Surgeon, Bombay Army.

P.S.—To show you how extremely difficult it is to introduce any new treatment of disease, I send you a copy of the following telegraphic answer (the original telegram I have had to send to the India Office) to my inquiry—if, since I left Toulon and Marseilles, it has been possible to make any trial of "intra-peritoneal injections" with the apparatus which I left there? The answer was as I expected from what I saw at the hospitals, where no cases in the algide stage were admitted during my stay. It was to this effect: "Not yet. Waiting for favourable case." This I received on Friday from the interne or house-surgeon, Dr. Bassano, I drank Toulon and Marseilles water, and may say that I suffered from diarrhœa before going there. This diarrhœa increased so much at Marseilles that I was obliged to take one-drachm doses of bismuth in mucilage before it yielded on the third day. Like ipecacuanha in acute dysentery, small doses are useless. After burning most of my clothing, I endured a good ten days' quarantine in the north of France before coming to England. In conclusion, I may be permitted to say that this epidemic, which has been monstrously exaggerated in public opinion, is comparatively mild. The statistics of the Pharo Hospital at Marseilles show that considerably more than half the cases recovered. If imported by the transport *Sarthe*, it would appear that the forty days' sea voyage may have attenuated considerably the virus, or else, as I have thought ever since I saw cases in Liverpool, the epidemic coming by sea is less formidable when it arrives than when travelling by land *viâ* Russia &c. To those who blame the sanitary state of Toulon and Marseilles, I would point out the very extraordinary difficulties of draining the places into the tideless Mediterranean. The upper town is built almost entirely on rock, the lower on piles, and water is found at a few feet. Closed cesspools are excavated under the new houses, which are periodically emptied in the night by steam power; for it must be remembered that even in Paris, and according to very generally approved ideas, no sullage from waterclosets is allowed to enter the drains, which carry into the River Seine only kitchen and surface waters. In the lower town such cesspools or "fossées" are impracticable, and receptacles are carried down at night into each street to be taken away and brought back empty. I believe a system of covered surface drains has been spoken of; but then, as in Marseilles, the docks will become foul, as there is no tide, unless the drains be carried far out to sea. There would be no deficiency of water, for clean streams run down the gutters of almost every street. It is turned on periodically.

OUTBREAK OF CHOLERAIC DIARRHŒA AT CLAYTON-LE-MOORS.

To the Editor of THE LANCET.

SIR,—On Saturday, Sunday, and Monday, the 2nd, 3rd, and 4th inst., between 100 and 150 persons of all ages were taken ill in the above township with vomiting and purging, and at the same time almost as many were attacked in the adjoining parish of Rishton. Having treated eighty-five of these cases myself during the past week, it may be interesting to your readers to report concerning the causes and symptoms of the outbreak, the treatment adopted, its infectious or non-infectious nature, and the conclusions at which I have arrived generally.

In all cases except two I traced potted meat from one pork butcher. It was made from beef, pork, and pig's head, and those who had partaken largely were affected most.

The symptoms were the same in all, with varying degrees of intensity. They were vomiting and purging, pains in the stomach, and, in the worst cases, collapse after a few hours. The vomited matters were first those of the contents of the stomach partially digested, but afterwards of a yellowish or bile-stained watery fluid; whilst the dejecta varied from a brownish to a yellow fluid, and in some cases green, with very foul odour. The tongue was moist, and covered with a white or brownish-white fur, but red at the edges and tip. There were feverish symptoms in the mild cases, but reduction of temperature and coldness of the extremities in the worst.

As regards treatment. In the case of all the adults I prescribed six draughts of an effervescing mixture with half a drachm of a 1-in-20 solution of carbolic acid, fifteen minims of the solution of morphia, and twenty minims of the aromatic spirit of ammonia; one to be given every two hours. In the majority of cases this mixture answered well, but in some of the worst it did not stop either the vomiting or the purging, and it seemed to have a tendency to increase the collapse, no doubt from the depressing action of the morphia upon the respiratory and circulatory centres. In the mild cases sleep was induced with one or two doses, but in the worst the morphia was not retained in sufficient quantity in this form to act as a soporific. In some cases morphia in pill of the strength of one-sixth of a grain answered well in checking the vomiting and inducing sleep, but not in others. In addition to medicine I also ordered brandy and soda-water and milk and soda-water to quench the great thirst which all complained of, and a hot linseed and mustard poultice over the whole of the abdomen. When the above-mentioned effervescing mixture failed, I gave five to ten grains of bismuth, half a drachm of solution of carbolic acid, five to eight grains of hydrate of chloral, five to eight minims of tincture of belladonna, half a drachm to a drachm of glycerine, and water to one ounce, every two, three or four hours, with excellent effect. Many rejected and vomited the soda-water and milk, but all could take and retain water, and particularly port wine and water, better than any other fluid. In cases where there was no vomiting, but only diarrhœa and pain, with feverish symptoms and foul tongue, the following mixture cured in a few hours: three drachms of compound spirit of ammonia, half an ounce or six drachms of solution of carbolic acid (1 in 20), a drachm to a drachm and a half of chloral hydrate, a drachm to a drachm and a half of tincture of belladonna, six drachms of syrup of red poppy, to six ounces of water, half an ounce to be taken every second or third hour. With this mixture also I treated most of the young children

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affected; of course in reduced doses, and with bismuth in place of ammonia in cases of severe vomiting. I found that suppositories of belladonna and lead acetate greatly relieved the straining at stool when the diarrhœa was abating. Of the stimulants used, I found port wine to agree the best. I believe that in carbolic acid, bismuth, chloral, and belladonna we have an excellent remedy for cases of this kind. I would never in any case give more than half or three-quarters of a grain of morphia either in pill or solution, and am now determined to give the most decided preference to chloral and belladonna, and to discard morphia altogether in the treatment of those severe cases where there is great depression and a tendency to collapse. If carbolic acid, bismuth, chloral, and belladonna prove more efficacious in relieving the vomiting than morphia—as in the worst cases in my hands they certainly did—I think they should rather be used; moreover, there is not the same danger attending the use of them in a system weakened by large losses of fluid as there is in this disease. Again, chloral, whether or not by transformation or chemical change in the blood, has proved of acknowledged efficacy in relaxing muscular spasm anywhere—as, for instance, in convulsions; and hence, I think, its good effects in vomiting and diarrhœa, by exerting a sedative effect upon the diaphragm and the muscular coat of the intestines, and this without much depression of the vascular system. Not so with morphia, in its temporary or evanescent stimulant, and very much more marked depressant, action upon the vascular and respiratory centres. Many of the alleged symptoms of stimulation by morphia I believe to be due to passive congestion of the cerebrum from depression of the circulation, not stimulation. Any depression of the circulation which may result from chloral in the above mixtures is amply compensated for by the belladonna they contain. In some cases of diarrhœa only, the ordinary sulphuric acid and opium mixture, with carbolic acid, answered well, but not so well as ammonia and opium with the same, the reason being, I think, that ammonia, besides being a powerful stimulant, supports the circulation when weakened by losses, by preventing coagulation, whilst acids favour it and have no stimulant properties. I had opportunities of observing the greater and more rapid improvement with carbolic acid than without it in the above mixtures, and am of opinion that it should form a constant ingredient in all diarrhœa mixtures. Of the eighty-five cases, two died collapsed—one, a young collier of twenty-six years, and the other a debilitated man of fifty-one. In both I injected ether subcutaneously to the amount of a drachm or so, but with little or no effect.

Of the infectious nature of the complaint there is but slight evidence in one case, that of a little boy who was continually in the room where one of the worst cases was being nursed, and followed the nurse when the dejecta were being removed. He was taken ill with symptoms similar to those of the others, but with three or four doses of the bismuth, carbolic acid, chloral and belladonna mixture, he was well in twelve hours. All the cases under treatment recovered. Unfortunately none of the meat or stew was examined, as when the cause had been determined all had either been eaten or otherwise disposed of. It seems unreasonable to believe that in two days meat should so far decompose as to cause such terrible sickness, and I am afraid the actual cause must remain a mystery.

A propos of the subject of diarrhœa and choleraic diarrhœa, with the allied one of cholera itself, it occurs to me to speak of Koch's cholera bacillus. It is, I think, quite within the bounds of probability that the bacilli will yet be found in the intestines of patients who have died of diseases other than cholera which have a debilitating action upon the lining membrane of the bowels; and I am of Dr. Roche's opinion that any amount of the bacilli may be swallowed without any evil consequences arising, provided they are well washed.

Finally, I should like to state that, in my opinion, all cases of the nature of those described in this outbreak which present symptoms of a mild character with no depression of vital power should be treated with morphia and carbolic acid combined with ammonia; but that those which present symptoms of collapse should be treated with chloral and belladonna combined with bismuth and carbolic acid; whilst the treatment with ammonia, chloral, and belladonna with carbolic acid should be reserved for those very mild cases which are characterised by diarrhœa with feverish symptoms and nausea, but no vomiting.—I am, Sir, yours truly,

C. R. ILLINGWORTH, M.D. Ed.

Clayton-le-Moors, Aug. 12th, 1884.

CHOLERA: ITS ETIOLOGY AND TREATMENT.

To the Editor of THE LANCET.

SIR,—The cholera is making sad havoc in France, and may any day break out in this country. There are many young medical men who will be perplexed as to its treatment. In 1848 and 1849 many different modes of treatment were tried; and, notwithstanding all the researches that have been made since, there is no fixed plan of treatment adopted by the profession. Many eminent medical men have placed their valuable lives in danger, and worked hard to find a remedy, but the only means known of preventing the disease and checking it are those adopted by Sir William Hunter and his staff in Egypt—isolation and cleanliness, pure air, good water, and especially early medical attendance and good nursing. We have been taught by sad experience that impure water and filth favour all epidemic, endemic, and contagious diseases, and increase their virulence. During the epidemic of 1849 I was requested to take charge of those suffering from cholera and diarrhœa in the townships of Westhoughton, Over Hulton, and Lostock. These townships were very free from stagnant and filthy water, and although I was kept busy night and day for six weeks I had only two deaths from cholera, whereas in the adjoining township of Hindley the water-supply was very deficient, and a brook which received the sewage from houses on both sides passed through the village. The disease in this village was very virulent, and many deaths took place; isolated cases occurred near this spot. A committee sat here day and night to supply blankets, food, and other necessaries. Five medical men were stationed in the village. Isolated cases of death took place in the immediate neighbourhood of the village; other cases were treated successfully in the more healthy parts of the township, where pure air, good water, and proper attention could be had. I found the most favourable symptom was the return of bile in the motions, and I adopted with success the calomel and opium treatment in doses of two grains to one grain or two grains to half a grain for an adult, together with a saline mixture, properly prepared sago gruel and brandy, toast water, coffee or cocoa, or milk-and-water, in equal parts, boiled and allowed to cool. Hygiene is too much neglected. The food and drink are quite as important, and require as much attention, as the medicine, as is also the immediate removal of all discharges. I believe I was instrumental in saving many lives by advice as to preparing and administering food and drink. I am convinced that good nursing is quite as necessary in cholera as medicine. I have seen patients almost pulseless for hours, the legs and arms cold and blue with violent cramp, who, after many hours' rubbing with warm flannels and the administration of gruel and brandy in small quantities, have recovered; some are now living who were in that state in 1849. "Sed tunc quoque unicum in frictione præsidium est; quæ si calorem in cutem evocavit, potest alicui medicinæ locum facere" (Celsus). It has been stated that many of the deaths which take place at Toulon are from the subsequent fever. No doubt some of those cases are attributable to giving opium without the calomel, thus checking the natural secretions from the liver. The acid treatment recommended by the College of Physicians of Dublin was used in many cases in 1849 by some of my colleagues, but was abandoned, and the treatment I adopted resorted to with greater success. Celsus said, "Si post suppressam choleram febricula manet, alvum duci necessarium est; tum cibis vinoque utendum est." Dr. Koch deserves our best thanks for the exertion he has made to discover the cholera germ; but, after all, the only remedies against its spread are cleanliness and temperance, and the clean and healthy state of a country or district or house is the greatest safeguard, the most economical, and the best remedy against cholera.

I am, Sir, yours truly,

Bolton, July 22nd, 1884. JOHNSON MARTIN.

"PHYSIOLOGY OF THE FEET."

To the Editor of THE LANCET.

SIR,—Mr. Allen's regret for representing an opinion of mine on what *should be* as a statement of that which *is*, has not prevented him from pointing out objections to "letting the heel down gradually from the toe," while the words used in my paper were that the foot should reach the ground

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when nearly flat; just as the caution in the acceptance of a theory which he feels called on to inculcate does not deter him from asserting as a fact that "our distant ancestors walked on all-fours." I took great pains to justify my opinion that, in walking, the toes should first touch the ground. Mr. Allen's letter may pass for a reply to arguments used in mine. As, however, the point involved has an important bearing on the question what proper walking is, it may be added that Professor Michael Foster, as I have since found, holds the same opinion, and that he has paid special attention to the point is shown by his qualifying a statement in the text, that the toe *does* first touch the ground, by a foot-note saying that this is rather as it *should* do. Very recently an intelligent engineer told me that the bare-footed natives with whom he had been engaged in making a railway in Brazil put the front of the foot down first, and hardly touched the ground at all with the heel. These men, he said, were of Portuguese descent, and had exceedingly good feet. Moreover, it is difficult to imagine how Red Indians can walk with their toes turned inwards (whose walking Sir John Burgoyne said should be the model for our soldiers' march) if the heel be directed downwards. So much for Nature. I hear on good authority that high-class teachers of calisthenics in ladies' schools have long taught that in walking the toes should first touch the ground.

I am, Sir, yours truly,

Gloucester, August 18th, 1884. T. S. ELLIS.

*** Here the controversy must close.—ED. L.

"BOGUS AMERICAN DEGREES."

To the Editor of THE LANCET.

SIR,—I notice in your issue of August 16th an extract from *The Times* about the bogus M.D. of the University of Philadelphia. In this district and in the North of England generally, where collieries and ironworks exist, there the impostors of Philadelphia plant themselves, and are a curse to the unfortunate working class, whom they dupe.

I send you the original letter I received from the British consul at Philadelphia. Will you endeavour to bring it under the notice of the medical men in Parliament? Something ought to be done to stop this quackery.

I am, Sir, yours truly,

JOHN C. O'HANLON.

Tudhoe Grange, Spennymoor, Durham, Aug. 16th, 1884.

"British Consulate, Philadelphia, July 26th, 1884.

"SIR,—With reference to your letter of the 25th ult., I have to inform you that the University of Philadelphia is no longer in existence, its charter having been cancelled by the Government of Pennsylvania after a disgraceful existence of many years. Diplomas purporting to issue from such an institution are bogus and a fraud upon the community.

"Your obedient servant,

"ROBERT CHARLES CLIPPERTON,
Her Majesty's Consul.

"John C. O'Hanlan, Esq., M.D.,
Tudhoe Grange, Spennymoor, Durham."

RUPTURE OF THE COVERINGS OF AN INGUINAL HERNIA.

To the Editor of THE LANCET.

SIR,—I read with much interest in your last number the report of the case of rupture of the coverings of an inguinal hernia through the cicatrix of an old operation wound. In a similar case which I brought before the Medical Society last year, and which was reported at length in THE LANCET, the rupture occurred not through the cicatrix of the old operation wound, but through the sound skin, where it joined the cicatrix, and I should imagine this to be the most likely place for such a rupture to occur. I trust that in Mr. Keetley's case the statement made by the man of his treatment before reaching the hospital is not quite correct—viz., that "he walked a quarter of a mile to see a surgeon, who wrapped a piece of lint round the part, and ordered him to go off to a hospital at once; on leaving the surgery he walked back to the place where he left his waggon, and then took a cab to the hospital." Surely, no human being, still less a surgeon, would leave a man under such circumstances to shift for himself.

I am, Sir, yours truly,

Harley-street, Aug. 19th, 1884. BERNARD PITTS.

BIRMINGHAM.

(From our own Correspondent.)

CHOLERA SCARES.

CONSIDERABLE excitement was created in Birmingham on Tuesday by the prominence given by the press to the report that a death had occurred from Asiatic cholera. Careful inquiry, however, leads to the belief that an error has been committed in supposing this to be the case. The patient was a man aged forty-seven, living in a densely populated part of the town; the seizure took place about midnight on the preceding Friday, the man having gone to bed in apparently good health. The next day he was able to be downstairs and about the house, but became worse in the evening from diarrhœa, stomachic pains, and cramp in various parts of the body. He was better again on the Monday, but on a return of the symptoms died from collapse at six o'clock in the evening, after an illness of fifty-six hours. An official examination, under the direction of the medical officer of health, has shown the case to have been one of severe diarrhœa and collapse. The prevalence of diarrhœa in the town at the present time is very great. From the 10th to the 17th inst. 800 cases were treated at the General Hospital, and in one week at the Owens Hospital 490. In this instance the certificate of the medical man in attendance was filled up as "cholera" and "collapse." In the present state of public excitement on the question, it is incumbent upon medical practitioners to promote the confidence of the public, rather than to add to the apprehension which so many people have of this dread scourge. Judicious dealing with certificates of death, and careful comparison of known facts relative to the two diseases, will generally serve to distinguish between the true form of cholera and the more common cases of acute diarrhœa with collapse and cramps which occur in such frequency at this season of the year in all large towns. In the present case much needless alarm has been caused, which it is to be hoped will be assuaged by the prudent and clear letter which the Mayor has written to the public papers on the question.

IRREGULARITY IN DEATH CERTIFICATES.

A case of much public importance was heard at the Birmingham Police-court on the 15th inst., upon a summons taken out by the Superintendent Registrar against a Mr. Williamson, a local medical practitioner, for giving a medical certificate of the cause of death of a child he had not seen or attended during illness. From the evidence it was shown that the child was attended by an unqualified assistant of the defendant's, the latter signing the certificate after the death of the child. Some contradictory evidence was given as to the genuineness of the certificate, but the magistrates considered the case proved, and imposed a mitigated penalty of £5 and costs or twenty-eight days imprisonment. It cannot be too widely known that such offences are punishable in a greater degree than this, for if proceeded against by indictment, a conviction renders the offender liable to two years' imprisonment with hard labour, or seven years' penal servitude. Irregularities of this kind open the door to serious abuses of many kinds, and it is to the interest of the profession, as well as to the security of the public, that they should be protected from frauds of a similar character to this.

IRELAND.

(From our own Correspondent.)

ROYAL COMMISSION ON IRISH PRISONS.

THE Commissioners appointed to inquire into the administration, discipline, and condition of prisons in Ireland, both local and convict, report that they have inspected carefully the convict prisons, the majority of the local prisons, and some bridewells. At these visits an examination was made as regards the general structure of the buildings, the wards, cells, stores, and hospitals; also, the sanitary and culinary arrangements, the provision for the supply of water, and that for exercise and labour. Many of the

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prisons were devised for an obsolete system of discipline, and therefore fall short of the requirements of the present day; only five may be regarded as coming up to the standard of modern construction; while of the remainder, twenty-two have been more or less improved, and eleven are unsatisfactory as regards construction. Before the passing of the General Prisons (Ireland) Act, 1877, the administration of the Irish Convict Prisons was entirely separated from that of the county and borough gaols and bridewells. The former were administered by directors appointed by the Lord-Lieutenant; while, on the other hand, the county and borough gaols and bridewells were under the direct management of local boards of superintendence. The General Prisons (Ireland) Act, 1877, transferred to a General Prisons Board all the county and borough gaols and bridewells, together with all the powers and duties of the local boards of superintendence. The Commissioners report that, from inquiries made, they do not believe that the Irish local prison system is administered with any intentional or systematic harshness towards the inmates. Where an excessive number of punishments appear to have been inflicted, they were cases of refractory prisoners whose mental condition may be described as the borderland between sanity and insanity, and where the application of penal discipline is confessedly difficult. They, however, are not satisfied that the discipline in all the local prisons is as regular and efficient as it ought to be, or that the means exist in them for effectively promoting the reformation of criminals; and are convinced that the fact of there being a large number of local prisons in Ireland, and consequently a small number of persons in most of them, lies at the root of the principal defects of the existing administration. No argument is needed to show that a superfluity of diminutive establishments must be as conducive to waste in expenditure as it is prejudicial to uniformity and economy of administration, and therefore the Commissioners are unanimous in opinion as to the superiority of larger over small prisons, and suggest that the prisons should be consolidated as to ensure, if possible, that the daily average population should in no case be less than one hundred.

THE DUBLIN TRIALS.

Before Baron Dowse, on Tuesday last, at the Court-house, Green-street, Dublin, James Ellis French was arraigned for a felony committed in May, 1883, and a jury was empanelled to try whether the prisoner was in a fit condition to plead guilty or not. Dr. Gordon, surgeon to the Constabulary, Dr. Eames, resident medical superintendent to the Cork District Lunatic Asylum, Dr. Curtis, a well known surgeon of Cork, Mr. Wheeler of Dublin, and others, gave evidence to the effect that Mr. French was not in a mental condition to plead to the indictment and conduct his own defence with due caution. On the other hand, Drs. Banks and Cruise, with Mr. McDonnell, were equally unanimous that he was unimpaired and in the possession of his faculties. There was no result when the electric battery was applied to the lower extremities; he had also a dragging in one of his legs, hesitation in his speech, occasional difficulty of deglutition, alleged loss of memory, &c. From the symptoms it was evident to Baron Dowse that Mr. French was suffering from some kind of paralysis, but from Mr. McDonnell's evidence it would appear that he considered there was nothing the matter with him mentally or physically, and that he would pass him for an insurance company, even if he were the doctor for that company; but his lordship added that he had a suspicion that if he did so, it would be the last man that he would ever pass for that company. In a conflict of medical evidence such as this the jury very naturally disagreed. It is possible that Mr. French may be suffering from locomotor ataxy, accompanied by nervous debility, but the case no doubt is an exceedingly complex and difficult one. The only specialist examined in the case was Dr. Eames of Cork, who was of opinion that the prisoner was not capable of pleading.

From reports of the condition of the Bishop of Limerick, who a few evenings ago ruptured a bloodvessel in his side, we learn that his lordship is making favourable progress towards recovery. He has been visited by his medical attendant, Dr. Vachell, who found his lordship's strength so far improved as to permit him to leave his bed for a short time.

PARIS.

(From our Paris Correspondent.)

FRENCH HEALTH-RESORTS.

I HAVE just returned from a rambling tour of about four weeks in the South of France, and I desire to send you a few general observations on some of the health-resorts I have visited *en route*; but your remarks anent the "health resorts at home," which lately appeared in THE LANCET, are so forcibly true that they have had a deterring effect on my mind, and I had almost given up the idea of troubling you, as what I have to say is simply corroborative of all you stated respecting the relative merits of the home and continental health-resorts.

France is certainly the most favoured country in the world as regards the number and variety of its natural mineral waters, but the conclusion I have come to from what I have personally witnessed is that the therapeutic value of these waters has been greatly exaggerated. Change of climate, change of scene, and change in the mode of living are doubtless important elements in the cure of chronic cases, which are at all curable, that are sent to the different watering-places. Those in France are the more generally resorted to from all parts of the world, as the French have the innate faculty of combining the agreeable with the useful, and they spare no expense or pains to render their health-resorts more attractive than is possible in any part of the United Kingdom. "Variety is charming," and there is no doubt that this is the great secret of the beneficial results obtained by travelling on the Continent or elsewhere away from home. Moreover, those who can afford the time and money will continue their excursions, in spite of all that may be said or written against their doing so, because it is fashionable for people to go away for a change at certain seasons of the year. For my part, excepting the notoriously insanitary condition of the dwellings, I was most favourably impressed with the general aspect of the country, and would willingly concede to it the epithet of "La belle France" given to it by its own inhabitants. After a few short excursions in the Basses Alpes I made my way to Aix-les-Bains, where I met with the most cordial reception among the medical staff, who, I was told, practised there in the most perfect harmony—a compliment that cannot be unreservedly paid to the profession in many other places in or out of France. Aix-les-Bains is certainly one of the most important thermal stations in France, not only on account of the curative properties of its waters, but because of the beauty of the town itself, which is situated at the foot of a range of mountains in Savoy, on the line of intersection between France, Switzerland, and Italy. Its altitude is 768 feet. It forms also the centre of the most pleasant excursions, an account of which is given briefly in a work "Guide aux Villes d'Eaux," lately published by Dr. Macé, one of the principal physicians of the place. The waters, which are thermal, and which are used for drinking and for douching, are partly alkaline and partly sulphurous, with a certain proportion of alum. They are said to be well suited for all cases of rheumatism, gout, and certain diseases of the skin, which, with the two former affections, are comprised under the head of "arthritism," whatever that may be. They are also useful in affections of the throat and bronchial tubes connected with gout and rheumatism, and in the various manifestations of scrofula and syphilis. The bathing establishment is one of the most complete to be seen anywhere, for besides the apparatus for hydrotherapy in all its forms, there are rooms fitted up with spray-producers, inhalers, swimming baths, &c., on a large scale. But the most important feature of the work of the establishment is "massage," which is here carried out to perfection, and renders immense service to those suffering from affections of the joints from whatever cause, paralysis, neuralgia, &c. According to the local physicians, the waters are, however, contra-indicated in phthisis, apoplectic tendencies, and heart affections. From a social point of view, Aix-les-Bains is provided with everything that could be devised to render the sojourn of visitors as pleasant as possible. The atmo-

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sphere here struck me as being suited to patients suffering from lung affections, but I was told it was considered too relaxing in July and August, the height of the season, and this accounts for the place being frequented by English visitors only at the commencement and at the end of the season, which lasts from the beginning of May to the end of September, on their way to or from the south. There are two casinos (one too many, in my opinion), but I am not sure whether these would contribute much to the cure of patients who are induced to keep late hours and frequent heated rooms, and thus lose at night what they have gained in the day in the way of health and strength. This reproach may be applied to all the other watering-places. The cholera scare has proved singularly inimical to the interests of Aix-les-Bains, as it was reported that the disease was raging at Aix, which is in Provence, and this was confounded with Aix-les-Bains, which is in Savoy, where not a single case was known to have occurred. But, as might be expected, all the watering-places in France have suffered more or less from the same cause. Within a few minutes' drive from Aix-les-Bains is Marlioz, which may be considered a branch establishment of the former. The composition of its waters, which are cold, is, like those of Aix-les-Bains, partly alkaline and partly sulphurous, and, in addition, they contain iodide and bromide of potassium, which render them useful in catarrhal affections, scrofula, affections of the vocal organs, and the manifestations of syphilis in all its stages, particularly in the tertiary form of the disease. Like those of Aix-les-Bains, the waters of Marlioz are contra-indicated in the advanced stages of pulmonary phthisis. In my next I shall give an account of my visit to Royat, Mont-Dore, La Bourboule, and Vichy.

THE CHOLERA EPIDEMIC.

There is nothing particular to relate respecting the cholera epidemic which is still hanging about Marseilles and Toulon with varying intensity. It has, however, a tendency to spread to the neighbouring provinces, and has already made its appearance in the departments of the Aude, Ardèche, Vaucluse, and Hérault, where several fatal cases have been reported. It is also extending to the Pyrenées Orientales, where, at Perpignan and in the surrounding villages several deaths have occurred. In short, nearly the whole of the littoral of the Mediterranean is affected by the disease, and even Montpellier, which has hitherto escaped, has been brought under its influence, and according to a despatch just received there were reported on the morning of the 17th inst. six deaths as having occurred in that city. The disease seems to have a tendency to extend northwards. Paris, however, still keeps free and healthy. At Puits-le-Bon, a small village in the department of the Yonne, there have been fourteen cases in all since the outbreak of the epidemic, of which seven died. It is remarked that, on official inquiry, it has been ascertained that none of the persons affected had been in communication with the emigrants from the infected parts. There has been rather an aggravation of the reigning epidemic at Marseilles and Toulon within the last few days, the fugitives returning to these places being the principal victims. In sixteen hours there were two deaths from the disease at Toulon, and fourteen at Marseilles in twenty-four hours. Dr. Fauvel, unwilling to admit that he was in error as to his diagnosis of the present epidemic in the south of France, preferred sending in his resignation as Inspector-General of the Sanitary Service throughout the French territory, which has been accepted, and he has been replaced by Dr. Grousat.

DEATH OF DR. BURQ.

Dr. Burq, who became famous in connexion with metallotherapy, of which he may be considered the founder, and whose theories as to the efficacy of copper as a preventive and cure for cholera obtained a wide circulation, has just died at Bièvres, in the sixty-third year of his age. Whatever may be the opinion of the profession respecting the peculiar ideas of the deceased as to the action of metals on the economy, no one could contest his good faith and disinterestedness.

Paris, Aug. 19th.

THE BRIGHTON SEWERAGE.—A Local Government inquiry was held on the 8th inst. concerning an application by the Town Council for permission to borrow £25,000, for sewerage works. There was very little opposition, the question of high rating only being raised.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentlemen have recently passed the Second Professional Examination of this College:—

Samuel Boake, James H. Bogan, Patrick Bolger, Louis Bagry, J. Casey, Edward A. Cooke, William Cotahan, Thomas Considlan, T. H. Corbet, Edward Corcoran, R. H. Cox, W. B. Dick, E. J. Dore, St. Leger John Edmundson, V. E. Fenton, Thomas M. Frood, M. J. Geary, T. A. Goodchild, John Hall, John W. Haughton, R. Hugo, E. Jacob, S. Long, H. Mathews, P. McDermott, J. B. Moore, J. E. Nally, S. H. Newland, J. O'Brien, J. O'Connor, F. G. Donohoe, D. O'Loughlin, R. D. Pennefather, R. M. Power, P. H. Power, F. J. Reid, M. Riordan, W. Ross, T. S. Sillis, W. T. Steele, E. Stoker, T. H. Strangman, W. J. Taylor, P. Tennaw, John Toppin, D. W. Turpin, Thomas Williams, T. H. Wilson, W. Woodright, C. S. Woodwright, E. Yates.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 14th:—

Hutt, Frank Charles, St. Margarets, Richmond.
Gemmell, John Edward, Queen-street, Waterloo, Liverpool.
Hughes, Samuel, Prince's-road, Liverpool.
Kendall, Henry Wm. Martindale, Renfrew, Bexley-heath.
Priestly, Robert Chambers, Hertford-street, Mayfair.

SIR CHARLES DILKE early in the week paid an official visit of inspection to the small-pox camp and small-pox ships and wharves of the Metropolitan Asylums Board.

THE salary of Mr. C. Gross, F.R.C.S.Eng., the medical superintendent of St. Saviour's Infirmary, Newington, has been increased from £400 to £500 per annum.

THE CANAL BOATS ACT.—It is stated that Sir C. Dilke has decided to appoint Mr. J. Brydone of Edinburgh, and late of Droitwich, to the canal boats inspectorship, under the Act of last session.

FOR the second time within two years Madame Patti, on the 14th inst., gave a grand morning concert in aid of the Swansea Hospital. The receipts amounted to considerably over £1000.

DEATH FROM SWALLOWING GLASS.—A boy recently died at Beckenham from spasm of the glottis, caused by swallowing some glass, a considerable quantity of which was present in a pot of marmalade of which the deceased had partaken.

MULTIPLE BIRTHS.—A woman at Bradpole, Dorset, recently gave birth to three boys; and on the 16th inst. the wife of a labourer at the Carlisle gasworks gave birth to four daughters. The infants in each case are reported to be doing well.

SINGULAR DEATH.—A boy who was recently bathing in the river Medlock, in Manchester, got out of his depth and swallowed some of the water, which was particularly filthy. Though immediately rescued by another lad he expired shortly afterwards, death, it is stated, resulting not from drowning but from poisoning.

ON the 14th inst., whilst Dr. Richardson, of Rhayader, Radnor, was returning home from a professional visit, his horse took fright and ran away, throwing him out of his conveyance and breaking his neck. Deceased, who was sixty-three years of age, had practised in Rhayader for many years.

THE Local Government Board have reversed the decision of the auditor by which nine members of the Milton-next-Sittingbourne Rural Sanitary Authority were surcharged in the sum of £32 odd, being the amount of a certain allowance or abatement, on account of water-supply, they by resolution made to a firm who owned all the cottages in the parish of Murston.

THE STATE OF THE RIVER WEY.—Much excitement has been aroused at Guildford by the fouling of the river Wey and the poisoning of the whole of the fish for miles along its course. The mischief is supposed to have been caused by the refuse from some manufactories on the banks of the river having been allowed to enter the stream. The Guildford Town Council is doubtful how far it can exercise its powers in the matter, but the inhabitants are getting up a petition to the Local Government Board, asking that authority to step in and remedy the existing disgraceful and dangerous state of things.

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Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning at the latest.

ALDRED, JOHN CHARLES, L.R.C.P.I., L.F.P.S.Glasg., has been appointed Medical Officer to the Fourth District of the Ecclesall Bierlow Union, vice McBeath, resigned.

BENTHALL, WINFRED, M.B. Camb., M.R.C.S., has been appointed Honorary Physician to the Derbyshire General Infirmary.

CARTER, THOMAS EDWARD, M.B.Lond., M.R.C.S., has been appointed Medical Officer to the Stamford District and Workhouse of the Stamford Union.

COLLINS, E. TREACHER, M.R.C.S., L.R.C.P.Lond., L.S.A.Lond., has been appointed House-Surgeon to the Royal London Ophthalmic Hospital, Moorfields.

GREAVES, CHAS. AUGUSTUS, M.B.Lond., M.R.C.S., L.S.A.Lond., has been appointed Honorary Physician to the Derbyshire General Infirmary.

GREENSILL, EDW. SAMUEL, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer to the Witley District of the Martley Union.

GREENSILL, JOHN NICHOLAS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Martley District of the Martley Union.

HALL, THOMAS LAMBERT, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Dilwyn District of the Weobley Union.

JAMIESON, CHARLES, M.B., C.M.Glasg., has been appointed Medical Officer to the Fourth District of the Braintree Union.

JONES, EVAN, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Western District of the Llandilofawr Union.

KNOX, DAVID NELSON, M.B., C.M., F.F.P.S.Glasg., has been appointed Surgeon to the Glasgow Royal Infirmary.

PRINGLE, J. J., M.B., M.R.C.P., has been appointed Assistant-Physician to the Royal Hospital for Diseases of the Chest, City-road, vice G. F. Coxwell, B.A., M.B., resigned.

TURNER, JOHN KEMP, M.B., M.Ch.Aberd., has been appointed Medical Officer to the First District, St. Columb, of the Major Union, vice Fulford, resigned.

WITCHELL, EDWIN AUBREY, M.B., C.M.Univ. Ed., has been appointed House-Surgeon to the Stroud General Hospital.

Births, Marriages, and Deaths.

BIRTHS.

ADAM.—On the 19th inst., at Malling-place, West Malling, Kent, the wife of James Adam, M.D., of a son.

GRANGE.—On the 6th inst., at Mansfield House, Moffat, N.B., the wife of W. D'Oyly Grange, M.D., of a son.

HARE.—On the 1st inst., at Woolwich, the wife of Surgeon-Major George Hare, Army Medical Department, of a son.

HOBSON.—On the 15th inst., at Lower Addiscombe-road, Croydon, the wife of John Morrison Hobson, M.D., of a daughter.

LITHGOW.—On the 14th inst., at Stirling House, Farnborough, Hants, the wife of Dr. T. G. Lithgow, L.R.C.P.Lond., of a son.

SCORESBY-JACKSON.—On the 12th inst., at St. Hilda's, Walthamstow, the wife of Thomas Scoresby-Jackson, M.D., prematurely, of a son (stillborn).

MARRIAGES.

HOLBERTON—TWINING.—On the 11th inst., at the Parish Church, Ballinakill, Henry Nelson Holberton, M.R.C.S. and L.R.C.P., of East Mouisey, Surrey, to Julia, fourth daughter of Frederick Twining, Esq., of Gleggan Tower, co. Galway.

RIGDEN—LOVELESS.—On the 12th inst., at St. Nicholas' Church, Brighton, Brian Rigden, M.R.C.S., of Canterbury, to Kate, younger daughter of the late W. Kerr Loveless, M.R.C.S., of Stockbridge, Hants, and Holly Bank, Southsea.

ROSS—WALLIS.—On the 13th inst., at St. Mary's Church, Southampton, Rhey Fairfax Ross, M.D. &c., son of J. Grafton Ross, Esq., of Sydney, to Edith Margaret, second daughter of Thomas Wallis, Esq., of Southampton.

DEATHS.

CUOLAHAN.—On the 20th inst., at 9, Grange-road, Bermondsey, S.E., very suddenly, Hugh Cuolahan, M.D., to the inexpressible grief of his wife and children.

DANIEL.—On the 14th inst., at his residence, Ramsgate, James Stock Daniel, F.R.C.S., aged 80.

JENKINS.—On the 31st ult., at Hawley, Hants, Robert Walker Jenkins, M.R.C.S.Eng., L.S.A.Lond., Medical Officer of Health, New Forest Rural District, formerly of 22, Philpot-lane and 13, Charlotte-street, Bedford-square, London, aged 54. Friends will please accept this (the only) intimation. (Delayed in transmission.)

KEMPTHORNE.—On the 18th inst., John Kempthorne, F.R.C.S., of Callington, Cornwall, aged 62.

LATHAM.—On the 15th inst., at Sandwell House, West Bromwich, Gladys Beverley, only child of George Latham, L.R.C.P., aged 10 months.

MCCULLOUGH.—On the 13th inst., at Wimpole-street, David Moore McCullough, M.D., late Medical Superintendent, Joint Counties Asylum, Abergavenny.

RICHARDSON.—On the 13th inst., through a carriage accident, Richard Richardson, Surgeon, of Bryngwy, Rhayader, Radnorshire, aged 54.

SCRASE.—On the 15th inst., at Lewes, Sussex, George Scrase, M.R.C.S., in his 81st year.

STEEL.—On the 16th inst., at his residence, Southfield, Lewisham, Charles Wilson Steel, M.R.C.S., L.S.A.Lond., aged 73.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

Essay on the Experiences and Opinions of John Howard on the Preservation and Improvement of the Health of Inmates of Public Institutions. By R. D. R. Sweeting, M.R.C.S. &c. The Howard Prize Essay. pp. 96.

CHURCHILL, J. & A., London.

A Manual of Diseases of the Throat and Nose. By Morell Mackenzie, M.D.Lond. Vol. II., Diseases of the Œsophagus, Nose, and Naso-pharynx. pp. 574. Illustrated.

On Tumours of the Bladder, their Nature, Symptoms, and Surgical Treatment. By Sir Henry Thompson, F.R.C.S. pp. 111. With Illustrations.

JOHNSTON, W. & A. K., Edinburgh.

A Guide to the Study of Ear Disease. By P. McBride, M.D. pp. 198. With Illustrations.

LEWIS, H. K., London.

What to Do in Cases of Poisoning. By William Murrell, M.D., F.R.C.P. Fourth Edition. pp. 212.

Lectures on Mental Disease. By W. H. O. Sankey, M.D.Lond., F.R.C.P. Second Edition. pp. 454. With Illustrations.

NEW SYDENHAM SOCIETY, London.

Atlas of Portraits of Diseases of the Skin. Seventeenth Fasciculus.

RELIGIOUS TRACT SOCIETY, London.

Canadian Pictures, drawn with Pen and Pencil. By the Marquis of Lorne, K.G. pp. 224.

RENSHAW, H., London.

Aix-les-Bains, the Medical Treatment and General Indications. By Dr. Brachet. pp. 174. With Illustrations.

SPON, E. & F. N., London.

A Treatise on the Purification of Coal-gas, and the Advantages of Cooper's Coal-liming Process. By R. P. Spice, M.Inst. C.E. pp. 79. With Illustrations.

TRÜBNER & CO., London.

The Principles of Ventilation and Heating, and their Practical Application. By John S. Billings, M.D., LL.D. pp. 216. Illustrated.

Good Words, Sunday Magazine, August.—Scottish Review, July.—Die Zuckerharnruhr; mit einer satzthellichen Diätstik für Zuckerkranke; von Dr. R. Hertzka. (Feller, Karlsbad.)—Poisoning by Canned Goods; by J. G. Johnson, M.D.—Practical Instructions on the Medical and Surgical Uses of Electricity; by S. E. Morrill, M.D., Michigan.—Index Medicus, Vol. VI., No. 6.—Un Viaje a Cerebropolis; por el Dr. D. Juan Giné y Partagás.—Sanitary Arrangements of Dwelling Houses; by Mark H. Judge, A.R.I.B.A.—Heilung des Schreibkrampfes; von Dr. Wolff.—The Extinction of Small-pox and Diseases of Vaccination by a Practical Process; by W. Hempson Denham.—Addresses delivered at the University of Glasgow at the Opening and Close of the Medical Session; by John Young, M.D.—The Cholera Microbe, and How to Meet it; by Charles Cameron, M.D. (Baillière, Tindall, and Cox.)—Clergyman's Sore-throat and Post-nasal Catarrh; by G. Stoker. (Churchills.)—Memoria sulla Cura dell' Ectropio Cicatriziale; pel Dr. R. Castorani. (Piscopo, Napoli.)—Popular Treatise on Consumption; by Wm. Dale, M.D.Lond. (Hodgson, London.)—Picturesque Wales: a Handbook of Scenery accessible from the Cambrian Railways; by Godfrey Turner. (Adams & Sons, Simpkin, Marshall, & Co.)—Lehrbuch der Physiologie, zweite Lieferung; neu Herausgegeben von Dr. A. Gruenhagen. (Voss, Hamburg u. Leipzig.)—The Collective Investigation Record, Vol. II.—International Health Exhibition Handbooks: Cleansing Streets, by W. H. Scott; Salt and other Condiments, by J. J. Manley; Athletics, Part II., by Hon. E. Lyttelton, and G. F. Cobb; Schools of Art, by J. C. L. Sparkes.—London Water; by Major-General A. de C. Scott.—Cholera in Cairo, 1883; ricordi del Dr. P. Sonsino.—Observations on the Efficacy of Burning Sulphur Fires in Cholera Epidemics; by Deputy Surgeon-General J. E. Tuson. (Allen, Waterloo-place.)—A Snailway Guide to Tunbridge Wells; by J. Ashby-Sterry.—Alcohol, its Use by Healthy Persons and its Effects on the Skin; by James Startin.—Programa de Patologia Médica; redactado y Seguido por el Dr. D. N. H. y Pascuets. (Jepus, Barcelona.)—Pamphlets by Dr. Moncorvo, Rio de Janeiro: Contribution a l'Etude de la Sclerose multilocalisaire chez les Infants; De la Nature de la Cequelusche et de son Traitement par la Résorcine: Da Dilatação do Estomago nas Creanças e seu Tratamento.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 21st, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Aug. 15	30·17	N.W.	63	57	106	79	56	..	Cloudy
,, 16	30·15	W.	64	60	114	80	57	..	Hazy
,, 17	30·26	W.	75	69	122	85	59	..	Bright
,, 18	29·93	W.	69	62	118	83	60	..	Hazy
,, 19	29·92	S.W.	65	60	113	73	56	..	Bright
,, 20	30·06	N.	61	56	107	75	54	·03	Bright
,, 21	30·22	N.E.	66	60	90	75	58	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SANITATION AT HYÈRES.

DR. DUBRANDY writes to contradict the reports which have recently been circulated regarding the sanitary state of Hyères. Notwithstanding its proximity to Toulon, and the hospitality shown to the fugitives from that ill-fated town, the cholera has, he states, obtained no foothold in Hyères; and the deaths during the first seven months of this year have been less than in the corresponding periods since 1881, in which year they amounted to 203. In 1882 they were 210; in 1883, 222; and in 1884, 199. From January to the end of July in 1883 there were 231 admissions and 59 deaths at the hospital; in the corresponding period of 1884 the admissions were 184 and the deaths 31. Dr. Dubrandy attributes this happy result not only to the efficient system of sanitation which prevails in the place, but also to the admirable situation of the town.

Mr. J. Percival Hunt.—Application to Professor Liveing of Cambridge will no doubt meet with a response.

"THE LONDON UNIVERSITY PRELIMINARY SCIENTIFIC EXAMINATION."

To the Editor of THE LANCET.

SIR,—All medical students should thank Dr. W. H. Stone for his outspoken letter, published in your last issue. Professor G. C. Foster and Professor Reinold have been teachers and examiners for a great many years. Remonstrances have from time to time been made during the period of their examinership, but without effect. It is well known that this Preliminary Scientific Examination has been the bugbear of students going up to the University of London for at least twenty years. Alterations have been made from time to time; but there is no getting away from the pedantry and want of common sense exhibited by the framers of the ques[illegible] this examination. What is the remedy? In the first pla[illegible] of Physicians and the College of Surgeons combin[illegible] to grant the degree of M.D., as suggested by Dr. [illegible] let all teachers who have not the good fortun[illegible] combine to dissuade all students from going u[illegible] University at all. I see no other way of avoiding the [illegible] misery annually inflicted. There is, I believe, a sort of fiction that the members of the Council revise and sanction the questions set for the examination. But how many of the members of the Council have passed the examination themselves, and would therefore be able to judge of the suitability of the questions propounded?

I am, Sir, yours truly,

Aug. 18th, 1884. A READER OF THE LANCET.

Enquirer.—It does not entitle the holder to be registered or to recover charges as a medical man; but he will not be interfered with for practising. He could not, of course, hold public appointments.

THE MEAN TEMPERATURE OF NEW SOUTH WALES.

NEW SOUTH WALES, lying between 29° and 37° of south latitude, is cooler than the corresponding part of Europe. The mean temperature of the southern parts of England is about 52°, and that of France, near Paris, about the same, increasing as one goes south to 58·5° at Marseilles. The mean temperatures in the colony, on the other hand, are: Kiandra, the coldest township, situated on a mountain, 45°; Cooma, on the high land, 52°; Queanbeyan, high land, 53°; Goulburn, high land, 55°; Armidale and New England district, 57°; Mossvale, 55°; Kurrajong, 55°; Orange, 55°. These towns are scattered along the high table-lands from south to north, and represent fairly the climate of a very considerable portion of the whole colony. Next to this in point of temperature is the strip of land between the ocean and the mountains, and which is affected by the cooling sea-breezes. Here there is a mean temperature ranging from 60° at Eden, the most southern port, to 68° at Grafton, one of the northern ports. Sydney, in latitude 34°, has a summer temperature only four degrees warmer than Paris, which is in latitude 49°. Now, the total difference for a degree in latitude is a degree in temperature; and, therefore, if Sydney were as much warmer than Paris as its latitude alone would lead us to expect, its temperature should be 74°—that is, 15° warmer than Paris, but it is only 4° warmer. This single example is enough to prove the comparative coolness of the coast districts of New South Wales. The investigations made during recent years show that the mean temperature of the whole colony, as derived from forty-five stations scattered over it, is 59·5°, three degrees lower than that of Sydney, or only one degree hotter than that of Paris. It may be mentioned that the highest shade temperature ever recorded in Sydney was 106·9°, and near Paris a temperature of 106°F has been recorded.

Hospital Student.—The list of prize winners at the various hospital schools will, in accordance with our custom, be published in our Student's Number, to be issued on Sept. 13th.

WOODEN HOSPITALS FOR INFECTIOUS CASES.

To the Editor of THE LANCET.

SIR,—I should consider it a favour if you could give me any information about temporary wooden hospitals for infectious cases. I am attending a case of small-pox (imported from Liverpool) at Bangor Isycoed, a village about three miles from here, and there is no hospital for infectious cases in Wrexham, the nearest town to send the patient to. Are there any small wooden buildings for three or four beds to be had on hire in London or Liverpool, as there is no place to send small-pox cases to if it should spread in the village; or are there any tents to be had on hire? I should be glad if you could give me the name of any firm to whom I could apply.

I am, Sir, yours truly,

Overton, Ruabon, Aug. 18th, 1884. J. T. GOBAT.

*** We do not believe that any such wooden hospitals are kept in readiness, and previous experience does not favour their erection in the face of an actual outbreak. Tents may be procured by purchase or some six or eight patients from Messrs. Piggott Bros., 59, Bishopsgate Without, E.C., but we believe they are not hired. Doecker huts may also be obtained, but these have to be sent from Denmark. Under the circumstances, a hospital marquee tent seems most applicable; but otherwise it will be well to trust to vaccination, and at once to commence the erection of a permanent hospital, which would in the future be in actual readiness to meet emergencies of this sort. Even for a tent, a site, means of drainage, nurses' accommodation, &c., must be provided, and at best the plan will be a makeshift.—ED. L.

Subscriber.—We think our correspondent has no redress, as he, at least tacitly, accepted the terms of the guardians.

BORACIC ACID IN CHOLERA.

To the Editor of THE LANCET.

SIR,—Dr. Pegruasson advocates in a French medical contemporary (*Lyon Méd.*, No. 31) the internal administration of boracic acid in Asiatic cholera. He appears to believe that a large dose of thirty grains, while it would not produce any toxæmic effects because of the absorption by the mucous membrane of the alimentary tract being retarded and prevented in the disease, would destroy the bacilli. Having in view Koch's latest researches, it would, I venture to think, seem a trifle out of date to entertain any such view, so far as our knowledge at present goes. According to the illustrious German *savant*, the amount of carbolic (and indeed any other) acid that would be efficacious in destroying his comma-shaped bacilli would, *cæteris paribus*, also kill the patient, if administered therapeutically. Mention may here be made, *en passant*, of the fact that boracic acid has been tried by our Indian medical officers; and the present writer is inclined to think that Dr Bonstead (Transactions of the Bombay Medical and Physical Society) was one of them. It may also be noted that in 1878 Dr. Butler published a paper in your columns treating on the same subject.

I am, Sir, yours truly,

London, Aug. 16th, 1884. JOHN C. LUCAS.

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BEVERAGES IN METALLIC VESSELS.

AT the suggestion of Dr. Cyrus Edson, of the Health Department, says the *Boston Medical and Surgical Journal*, an ordinance has been passed forbidding the use of vessels made of brass, lead, copper, or other metallic substance, in the sale of beer, soda-water, syrups, and other beverages or flavouring materials, on account of the danger of the formation of compounds detrimental to health. An investigation into the character of the lining of the soda-water fountains of Brooklyn is at present being made by Health Commissioner Raymond.

THE IRISH BRANCH COUNCIL AND ERASURE OF NAMES.

To the Editor of THE LANCET.

SIR,—I very frequently receive a circular from the Irish Branch Medical Council, marked "Second application prior to erasure," inquiring if I had changed my address &c., never having received the previous application. I received a similar communication at the end of last September awaiting me on my return from Europe, where I had been absent for two months. This I immediately replied to, and yet before eight months had elapsed I got another, dated May 12th, 1884, threatening erasure if not answered.

It strikes me the Irish Branch Council is in a great hurry to erase names prematurely from the Register. If all its other duties are discharged with equal zeal and promptitude it is a most efficiently conducted office. The circular gives an extract from the Medical Act 21 and 22 Vict., which provides that it shall be lawful for the registrar to send a letter to any registered person which, if not answered within six months, the name of such person may be erased from the Register.

Now, such communications as I have invariably received from the registrar have been in the form of an open circular. I am not sufficiently versed in legal lore to decide what constitutes a letter, but this I do know, that if a sealed letter is addressed by a person in Great Britain to one in the United States it will be delivered, even though the postage has been insufficiently paid or not paid at all, and double postage collected on delivery, whereas a newspaper or other mail matter below the class of a letter, including circulars, if sufficient postage has not been paid, will not be delivered at all, which probably accounts for my non-receipt of the prior communications referred to.

It is a matter of small moment to me whether my name is erased or not, but there are doubtless others who, after an absence from Great Britain, may return to practise their profession there and find themselves debarred from doing so save at the cost of great inconvenience and worry, owing to a miserable official parsimony in the matter of a penny or two.

May 12th seems rather early in the year to send out a final application.

I am, Sir, yours respectfully,

Ashton, R. I. N. O'D. PARKS, L.K.Q.C.P., &c.

*** The publication of this letter has been unavoidably delayed.—ED. L.

"IS DEAFNESS A BARRIER TO PRACTICE?"

To the Editor of THE LANCET.

SIR,—My late father was in practice upwards of fifty years in one place, and brought up six children without any other aid. During this time he was deaf. These are the words of his sister-in-law to me: "Your father never seemed to be at any loss with his patients." I hope his case may prove of some comfort in that of a "Constant Reader."

I am, Sir, yours faithfully,

Kennington-park-road, Aug. 17th, 1884. C. CORBETT BLADES.

To the Editor of THE LANCET.

SIR,—Allow me to suggest to your correspondent "Constant Reader" the advisability of learning "lip reading." Aided by developed seeing-power, he would undoubtedly be able to carry on his practice; and I shall be glad to make an appointment with him to explain the system, and to show its practicability.—I am, Sir, yours truly,

WILLIAM VAN PRAAGH.

School and Training College for Teachers of the Association for the Oral Instruction of the Deaf and Dumb, 11, Fitzroy-square, W., Aug. 19th, 1884.

Mac.—An application for a fee of, say, £2 2s., accompanied by a letter explanatory of the delicacy of the operation, would probably meet with a satisfactory response from the guardians. We should be glad to be informed of the result.

"PREVENTION OF 'HARVEST BUMPS.'"

To the Editor of THE LANCET.

SIR,—Pardon my asking if you think that the letter signed "C. S. Taylor," on the above-named subject, was seriously meant, or whether it was not sent by mistake to you instead of to the Editor of *Punch*? Does the writer believe that a family going for a holiday to the seaside would be provided with all the means and appliances that are suggested therein—means more troublesome than even the irritation of harvest bugs—the antidote worse than the bane—measures totally impracticable under the circumstances referred to?

From personal experience, I can say that carbolic soap is useless to prevent the bites. The suggestion of the use of quassia chips (by Mr. Penny) infused in the water used for ablution or baths has everything to recommend it. Sulphur is too offensive, and fumigations too elaborate for lodgers.

I am, Sir, your obedient servant,

Seaton, Devonshire, Aug. 19th, 1884. M.D.

Medicus.—Muscæ volitantes in a large number of cases arise from errors of refraction. Let "Medicus" have his refraction ascertained, and, if necessary, corrected, by a competent authority, and in process of time the muscæ will disappear. If this be not the cause, then the symptom may arise from disorder of the general health, which an intelligent medical friend will discover, and possibly remove.

Dr. Martin.—Next week.

TREATMENT OF SICK HEADACHE.

To the Editor of THE LANCET.

SIR,—There are few diseases of which the most careful outline of diagnosis, prognosis, &c., is not fully detailed in all our standard works, but I regret to say that the question of treatment is often dismissed as of little consequence. I think, therefore, it is worth while briefly to detail the following case, where the treatment was so marked in its success.

Mrs. N——, aged twenty-six, married, two children, had all her adult life suffered to some extent at the periods, and also was troubled with what is commonly called "sick headache." She was treated by various doctors in the Western States of America, and at length she sought the advice of Dr. Thomas of New York. He came to the conclusion that the only possible relief was to be obtained by removal of the ovaries; that she was then much too broken down for the operation; but after a trip to Europe had set up her health he would, on her return, operate. I first saw the patient in June, 1883. She was then in the second day of the period, and under one of her headaches. These begin in one side of the head, and the pain gradually increases until the patient loses consciousness; the limbs become rigid, the hands clenched, the eyes half open and turned up, and shivering fits come on every few minutes. At other times the attack takes the form of spasm of the glottis. Seeing her first in one of her severe attacks, I introduced my hypodermic needle, and injected one-sixth of a grain of morphine. I left the needle in, and in seven seconds relief was obtained; but as it was not complete, at the end of five minutes I gave the same quantity, and withdrew the needle. The pain subsided, and did not return during that period, but the patient suffered from severe sickness, which lasted thirty hours. In a few days I ordered iron and quinine, with shower-baths, good food, and early hours. When the next period was expected, I gave belladonna and bromide of potassium. As soon as the period came on, I kept the patient in bed, applied a blister of the size of half-a-crown over each ovary, and ordered a morphia pessary at night. The period passed over without a sign of pain or trouble. The tonic treatment was resumed, and the patient's health steadily improved. The next period was anticipated a day or two with the belladonna and bromide, and when the flow began, she was kept in bed the first day with half a mustard leaf over each ovary. No pain; period normal. On the next occasion, feeling the restraint irksome, and forgetting the date, the patient went to a theatre on the very night of the return of the period, and at 1 A.M. I was sent for. I injected one-third of a grain of morphia; the relief was instantaneous, and by increasing the dose to half a grain, the sickness diminished. I tried the addition of atropine, but without effect. By persistence in the treatment, essentially the hypodermic, the patient is freed from headache, and no longer looks sick in mind and sick in body, having regained colour in her cheeks. I have repeatedly seen the same good effect in ordinary sick headache, either from hypodermic injection of morphia or from a dose of chlorodyne.

I am, Sir, yours truly,

Gloucester-road, July, 1884. RICHARD G. JACK, L.K.Q.C.P.I., &c.

THE ILKESTONE "BATHS."

To the Editor of THE LANCET.

SIR,—In your account of home health resorts in THE LANCET of the 9th inst. you mention Ilkestone, near Nottingham. In order to prevent disappointment, I will relate my experience of this place.

Two years ago I spent my autumn vacation in examining some of the English spas, and, attracted by the description in Black's Guide to Derbyshire, I set apart a day to visit Ilkestone. On arriving at that very uninteresting town, I asked for the baths. After several persons had told me that there was nothing of the sort in the place, I was directed to a public-house, and, on inquiring at the bar, found that there had formerly been a bathing establishment attached to the house, but that the baths had been disused for nine or ten years!

I am, Sir, your obedient servant,

Queen Anne-street, Aug. 16th, 1884. F. DE HAVILLAND HALL.

Inquirer.—We do not prescribe. A medical practitioner should be consulted.

"METHOD OF TREATING SPRAINS."

To the Editor of THE LANCET.

SIR,—I am inclined to agree with Dr. Dinin that the efficacy of Mr. Shearer's method of treating sprains lies solely in the compression. The principle of firm, equable pressure is by no means new. For some years it has been practised by Professor Chiene of Edinburgh, who, as far as I know, was the originator of the method. Mr. Chiene's treatment consists in enveloping the parts in a very large quantity of cotton-wool, and then applying firmly an elastic bandage.

I am, Sir, yours obediently,

J. CHALMERS ROBERTSON, M.B., C.M.

Glenkillie, Blairgowrie, Aug. 19th, 1884.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. A. T. Harrison, Sherburn; Mr. W. Thomson, Dublin; Dr. Gayton, London; Mr. J. Carter, London; Mr. Arrowsmith, Bristol; Mr. Percival Hunt, London; Dr. Legge; Mr. Kershaw; Dr. Reed, Montreal; Dr. Armstrong, Newcastle-on-Tyne; Dr. Philipson, Newcastle-on-Tyne; Mr. H. A. Reeves, London; Mr. Maitland, Madras; Mr. H. M. Clark, Umritsur; Dr. Corbett Blades, London; Mr. C. MacDowall, London; Mr. Ellis, Gloucester; Dr. de Havilland Hall, London; Mr. J. C. Lucas, London; Dr. R. Martin, Ardwick; Dr. Orange, Broadmoor; Mr. A. Nive, Kashmir; Dr. Wigglesworth, Rainhill; Dr. Hope, Liverpool; Mr. B. Walker, Spondon; Dr. O'Hanlan, Spennymoor; Miss Sidney, Brighton; Dr. Fry, Swindon; Mr. Whitmore, Dursley; Messrs. Smith and Sons, Dublin; Mr. Grattan, Cork; Mr. Baker, Newport; Mrs. Stubbury; Messrs. Reynell and Son, London; Mr. Taylor, London; Mr. Gray, Armagh; Mr. Carter, Glasgow; Mr. McVittie; Mr. Hill; Dr. Althaus, London; Dr. Kirk, Glasgow; Dr. Suckling, Birmingham; Mr. de Lisle, Arlesey; Mr. C. Higgens, London; Mr. Van Praagh, London; Mr. Cheese, Exeter; Mr. B. Pitts, London; Dr. Dubrandy, Hyères; Mr. A. W. Green, London; Mr. Farrington; Mr. Turner, Knowle; Mr. Brooks, Hull; Mr. Pratt, Cardiff; Mr. Whitford, London; Mr. le Gland, Cork; Miss Downes, New York; Dr. C. Hewett, London; Messrs. Brown and Son, Douglas; Mr. Turner, Eastbourne; Mr. Johnson, Shrewsbury; Dr. Moncorvo, Rio de Janeiro; Dr. Murray, Stockport; Dr. Chipmell, London; Mr. Buckland, London; Mr. Stevens, London; Mr. Collings, Guernsey; Albuminuria; Sigma; Subscriber; Pro Bono Publico; A Reader of THE LANCET; Horse Doctor; X.; C. D, Brighton; Doctor; J. W. E.; C. D.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Skyros; Mr. Morton, Horncastle; Mr. Packham, Croydon; Mr. Bullock; Mr. Gower, Kingston; Dr. O'Keefe, Bury; Mr. E. Smith; Mr. R. Hogg, London; Messrs. Sidney, London; Mr. Teague, Manchester; Mrs. Nicholas, Great Yarmouth; Mr. Hallan; Mr. Curtice, Exmouth; Dr. Pattinson, Exmouth; Mr. Newton, Liverpool; Mr. Cole, Exeter; Mr. Tay, Aylesbury; Dr. Eberle, Thirsk; Dr. Lennox, Truro; Miss Bucler; Dr. Barr Meadows, London; Dr. Rothera, Notts; Messrs. Trubshaw and Co., Mold; Mr. O'Hanlan, Durham; Messrs. A. and C. Black, Edinburgh; Mr. Pilsbury, Eccleshall; Mr. Cooper, Durham; Mr. Maythorne, Biggleswade; Mr. H. Campbell, London; Mr. Latham, West Bromwich; Mr. Tetley, Keighley; Mr. White, Bayswater; Dr. Squire, London; Mrs. Moon, S. Kensington; Mr. Howes, London; Mr. Dalrymple, Leicester; Mrs. Busby, Gravesend; Mr. Hoshin, Stepney; Dr. Bubash, Glasgow; Mr. Richardson; Mr. Hughes, Holyhead; Dr. Linnard, Arbroath; Mr. Jenkins; Mr. Haywood, Manchester; Messrs. Byles and Son, Bradford; Messrs. Fowke and Co., Stratford; Mr. Jacobs, Culwell; Mr. Hollins, Tamworth; Messrs. Giles and Co.; J. D., Ryde; Royal Cornwall Infirmary; Medicus, Dewsbury; X. Y. Z., Lifford; R. W.; J. M. G.; C. M., Huddersfield; M R.C.S., Barnsley; M.D., Bolton; H. B. M., Clapham; Medicus, Islington; Medicus, Sheffield; A. K. M., Harwich; Domus; Lady Superintendent, Liverpool; H.; Medicus, Stow-on-the-Wold; M.D., Shepherd's Bush; Medicus, Turnham-green; Rusticus; J. P., Camberwell; S. J.; Alpha, Southminster; Alpha, Manchester; W. M.; F.R.G.S.; Medicus, Alby-church; Licentiate, Barnet; A. D., Egremont; L. M. N.; D. W., Cavendish-square; A. G.

Glasgow Herald, Manchester Guardian, Liverpool Courier, Toronto Globe, Liverpool Evening Express, East Anglican Daily Times, Liverpool Echo, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, August 26.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, August 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, August 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, August, 29.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, August 30.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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A Sketch
OF THE
LIFE AND PROFESSIONAL CAREER
OF
CHARLES HILTON FAGGE.[1]

BY WALTER MOXON, M.D., F.R.C.P.,
PHYSICIAN TO GUY'S HOSPITAL.

VERY few years have elapsed since the honoured name of John Hilton had for all Guy's men the same melancholy interest as now surrounds the name of his nephew. Hilton's loss was deeply felt, though he died full of years and of well-merited honours. But there is bitter disappointment mingled with our sorrow as we see Fagge take his place in that dimmed light reflected off the face of each one as he finally recedes from the gaze of the men amongst whom he lived and worked. Those who knew Mr. Hilton will not think it out of the course of hereditary nature that another of the same stock should be born to acquire greatness. Indeed Hilton and Fagge were men whose excellence was due to their natural power; and although perhaps their family likeness was not evident at first sight, yet, in truth, it was for the most part the same kind of power that formed the foundation of character in each of these great healers of men. The robust figure and rather rallying address of Hilton might strike one as contrasting with the milder outlines and most unaggressively influential presence of Fagge. But those who knew Mr. Hilton learned to regard in him a refined delicacy of sentiment which was more upon the surface in Fagge. Whilst those who knew Fagge were aware of his most robust strength of resolution when circumstances gave occasion for determination of purpose. He was sensitive, but his sensitiveness was gentleness, not weakness. But in both men the ruling power that governed and controlled and directed alike themselves and all whom their influence prevailed with, was innate honesty and truthfulness—the power in which they lived and moved, and had their being. I say innate, because it seemed as if instinctively Hilton and Fagge always had a sure grasp of the reality and the practical significancy of truth and fact. The reason has its instincts, and it appears to me that some happy men are born with a natural power of ignoring irrelevant bearings in matters under inquiry. People talk as if instinct was always animal and reason always human, but there is human instinct as there is animal reason. True, the human race collectively elects to pride itself on reason, and would for the most part say little about human instinct. Perhaps this is because it has suffered much from the human instincts of its leaders, and under their influence has gone rather unreasonably and unsteadily. So that the world has learned to distrust instinct and to say always its good things in favour of reason, even when not following it. But the true human instinct is social goodness of aim; the identification of self with interests that are socially constructive, and positive, and real. This true type of manhood was embodied in Hilton and Fagge, and made them in the highest sense good men. Men in whose presence the faculty of imitation was a blessing and made a better man of you. Men devoted to faithful inquiry; free, yet always affirmative. It is so tawdry easy to be free and negative. But these men seemed incapable of mere negative questions. Well, call it incapacity if you will. Let it be a limit of vision which keeps some of the most clear-sighted of men from seeing the interest of those questions which in their negative results annul all that humanity is founded on; those questions by forcible aversion from which human society became possible. Perhaps it is partial blindness; but if it were not for the blindness in the backs of our heads, we probably should never have learned to go forward; and any human monstrosities with mental eyes all round, behind and before, need not be proud of such universality of view.

The limitation of the field of inquiry has been the cause of the greater productiveness of modern as compared with ancient philosophy. In modern philosophy we turn away from all questions that do not lead to beliefs, and thus we escape metaphysics. It is only by belief we are saved from metaphysics. It is sound sense and sound sense knowledge that saves us: knowledge always referable to and founded upon our five of six senses; communicable knowledge capable of becoming what we call common sense, which is the mutual use of their senses by a sufficient number of persons. Patience in direct observation of nature, seeing and measuring and weighing and recording, and so having true beliefs—beliefs founded on sense-knowledge of nature; such beliefs as are always mutually realisable, and therefore sure. Belief is, in the mind, the equivalent of sensuous realisation. It is the same thing to believe in the mind as to realise by sensation. Belief is the special sense of the higher intellect. It surpasses sensation, but is founded on it. When there is no belief beyond the evidence of the senses, it is as if the fire fails to glow out beyond the fuel and dies down amongst the embers. Yet belief must be in continuity with sensation, even if that continuity is as indirect as the laying on of hands in the Apostolic Succession. By faithful belief are we *still* saved. Saved from metaphysics, which is mental humanity floundering with eyes all round the back of its head. This philosophy, which I feebly try to express, began with Bacon, and led to the development of what we now call "science," which, as it has all its grounds directly in the senses, might be called "five-sense philosophy." Like all other human things, it is never safe when too confident, and even now might at any time come to a bad end and go off into the most rubbishy metaphysics—such as those shadowed in the latest phases of Comte or of Huxley. That is, if science were so weak as to follow the reactionary turn of its leaders when they grew tired of being five-sense sensible, and try to escape from the narrow limits of sense. For the limits of five-sense philosophy are so narrow that the end can be seen from the beginning. It is very curious that Bacon, in his "Novum Organum," should at once have proceeded on the assumption that forms, as he called them, are kinds of mechanical motion. (He meant by forms forces expressed in terms of laws.) The most advanced five-sense philosophy has got no further than this. And, in truth, our five senses are just five means of analysing, or revealing to us, the properties of motion. And every whim and dream in Bethlem Hospital, alike in the patients and in the physicians, is just an analysis or revelation of the nature of motion. And Bacon saw this in a foreshortened kind of way directly he looked as far as possible ahead along his new five-sense philosophy. I have called it an analysis or revelation, but, of course, you will see that these two are the reverse of each other. Analysis is the human mental progress from the special to the general. Revelation is the divine progression from the general to the special, in which line we enjoy just as much as God lets us; and we may just as well see it all very humbly. If God had given us two or three more senses we should have experienced just so much more of this analysis or revelation of the nature and properties of motion. Hilton and Fagge were instinctively observers. There was no possibility of rubbishy metaphysics about them. They recognised that the world of true and faithful inquiry is still, as always, bounded by a limbo of faithless questioning and faithless doubting—a limbo in which the luxury of doubting makes science as impossible as it makes religion. Science also has its duties of belief, of good faith, of trustworthy purpose; and those who revel in the ethereal joys of idealist and transcendental scepticism are by comparison with such men as Hilton and Fagge merely human flummery. Modern science is securely founded in the sense knowledge of nature. This knowledge is now brought in with ever-increasing enthusiasm. There is a solidarity about the system of its collection. The certainty and communicability of each result give to its discoverer a recognised distinction to reward him amongst his fellows. Each contributor gets credit for his contribution, even the smallest. This is of course extremely satisfactory, seeing that everything contributed is what is perhaps tautologically called "real fact"—tautologically unless facts are liable to be unreal, which in this inscrutable world may be really the case. And for evidence, I need not refer only to the S.P.G.S.—the Society for the Propagation of Ghost Stories. But it is as well to notice the weakness of a too enthusiastic pursuit of the sense-knowledge of nature. Five-sense philosophy has no right to suppose itself to have other grounds of per-

[1] This paper was written too late for its place in the Guy's Hosp. Reports.

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sistence than those enjoyed by the five senses themselves; and we know that the five senses only maintain their place in the animal economy by reason of their constant and continued usefulness. When of no service they go. Why, then, should five-sense philosophy hope to maintain its place in the social economy on any other grounds than those of its continued usefulness? The eyes of creatures in a certain cave in Kentucky have disappeared wholesale. Bats that fly of a night have no eyes to speak of. It is true that owls that also fly of a night have wonderfully great eyes, which is a very remarkable and instructive fact. Taken with the natural history of bats it shows that when the amount of light which exists is insufficient there are two natural ways of dealing with the difficulty; one, like the bat, of giving it up altogether and losing the organ through which light is used, the other of doing the very best you can with what light there is, in which case you are rewarded with extra splendid organs of sight. In this way the owl acquired extremely powerful organs of vision, and was therefore made the type of wisdom, which again is a remarkable thing; because the owl got those wise-looking eyes by a habit of looking after its business in the dusk, whereas the twenty-four hours had always brought as much good daylight to owls as to other people, but the owl chose to be most active in the dusk, and so got great eyes and was taken as the type of wisdom. Whereas other birds remained less wise-looking because they kept active in full daylight, where they were not obliged to goggle their eyes after obscure things. And five-sense philosophy may acquire a reputation for wisdom on principles parallel with those which gave the owl great eyes, and may grow so clever in flying deeper and deeper into the dusk that in the daylight amongst ordinary birds it may be reduced to blinking and looking goggley. For social full daylight treats little questions, not by studying them as stars are studied in the dusk, but by drowning them and overwhelming them as stars are overwhelmed in the daylight. Five-sense philosophy, or science, as it is called, may be lost with bat's eyes, or be grown all a-goggle with owlish exaggeration of acuteness. Too great to fit it for the natural sunlit world in which men will always have their chief enjoyments, and therefore their chief interests, even though their relation to light be much like that of so many blue-bottles buzzing up and down a window pane, unable to perceive that the lightest way is not the best. If we carry inquiry after sense-knowledge into extremes that are out of relation to any natural social requirement, all excess of the kind will prove as flummery, as mere metaphysics. Sense-knowledge beyond what is serviceable is a luxury.

Any who are naturally led to indulge in the luxury of unrestrained inquiry owe more than they are apt to pay to those devoted minds who so use the tree of knowledge that it shall bring forth good fruit for our service. There is so much that is tempting in the vast range of medical study calculated to call men off in even the most praiseworthy spirit of search after sense-truth, as that sense has its thirst for exact results are drawn into exaggerated intricacies of physiology, and others in the charm of inexact results let us into watery glancing whirlpools of psychology with a chapter on the "Disintegration of the Ego." Others wander into social problems. Seeing how many are lured away by these temptations, should we not very highly appreciate those men who are enthusiastic and devoted, and nevertheless are so well balanced that they give their lives to their proper business of laboriously and faithfully following, and patiently studying, those most difficult and fugacious of all objective realities, clinical facts—transitory phases of complicated problems which so readily escape even the quickest eye, and are so difficult to record in the most tenacious memory. Herein was Fagge's special greatness. He was the physician by grace of nature. He was gifted with quickness and with patience in observation. He had a genius of the eye for clinical facts. It needs something almost creative in the eye of the observer who will gather the signification of the successive scattered appearances that make up a clinical fact. It is a high example of that power which, perhaps, is best illustrated by its likeness to what we have all seen in the twirling toy called a thaumatrope? the power which blends fragments and snatches of view into unity of form and vital continuity. We ordinary physicians owe more than a passing tribute to men of this rare power. The genius of the eye which makes an "observer" such as Sydenham and Addison, and in our day Hutchinson, was possessed in a high degree by Fagge. It is an admirable genius; it requires a quick seizure and a tenacious hold of things, whilst they are yet developing and not ripe for communication. Such as each man must know for himself, as perceptions which give him his special experience—things such as each man ought to keep to himself until they are worth communicating. Some would-be Sydenhams have a painful incontinence of these perceptions, sending them out in a hurry, as if they instinctively feel that they will not keep. But there are men who have a much more truthfully realising sight than others. They perceive more quickly what it is that they see, and they remember more tenaciously what it was that they perceived. It is a gift. You may develop your share of it, but you cannot draw yourself up higher in it than you were born to rise, and when you are, so to speak, on tiptoe, such men as Fagge are above you. But such men are rare. This genius of the special senses of eye or ear is a sign of good derivation. Fagge was of good derivation. He had good eyes and a portion of his brain acted instinctively with his eyes. This is another curious thing, and it is worth while to reflect upon it a little. In Fagge the optic lobes, which are the brain of the eyes, wherein resides the genius of sight, had not dwindled quite away. These good eyes and persistent optic lobes saved him—saved him from a danger which was especially perilous to him on account of his amazing power of quickly apprehending and tenaciously holding other people's views. If you can rapidly pick up other people's views you hardly want eyes. And Fagge's power of appropriating views was something almost incredible. It enabled him to perform that startlingly striking feat which at the London University is ever memorable. Lest his great feat of student learning should have been lost sight of in the greater lustre of his later career, I will shortly tell the story of it. When Fagge went up for his First M.B. at the London University there were three exhibitions and four gold medals as rewards for chief distinction in four widely different and large subjects—namely, anatomy, chemistry, materia medica, and botany. Now, Fagge took all these exhibitions and gold medals. Truly, never was an advanced educational embryo in greater danger. Wise men shook their heads, and said, "Ah! these prize-takers never do anything original." And the wise men were almost ready to pity the poor fellow, especially those wise men who had not themselves done quite so much at the First M.B.

It was with this evil presage that my late friend entered upon the real life in which the student and all that he did is soon lost sight of. And as I speak now in admiration of Fagge, I do believe the danger indicated by those wise men was a real danger. Indeed, other prize-takers who did nearly as much remain pitiable examples of the risk. The more thoughtfully you contemplate the circumstances the more real will the danger appear. It is not merely the danger lest the future life of the man should be of small excellence in comparison with the brilliance of first achievement. This danger is real in its way; it spoils the idea of a life when from a large foundation a low elevation is reached. A vast memory spreads a wide base for your edification, and if what you construct upon it goes no higher than that which your competitors raise on their narrower base, then, if I may so metaphorically speak, the proportion of broad base to low height in you makes a squat sort of pyramid of you; and your competitors with narrower base and equal height give the impression of sharper fellows. And so a short memory may even confer advantages on a reputation for sharpness, especially as shortness of memory is apt to first affect the knowledge your competitors have of where they got the little they happen to know. And Fagge had an immense memory, and in his student life spread a vast base for that constructive future, which is the proof of real value by which a life has to be estimated. His immense memory endangered his optic lobes lest he should disuse his own optic lobes and trust to views got at secondhand into his cerebrum from other people without putting his own eyes to any use or practising his own optic lobes. The optic lobe or brain of the eye, like many other good things, has a tendency to dwindle as you go on in life. It begins dwindling very early in you—in fact, almost before you are yourself at all. When your embryo is going through its very early periods in the fish stage, in the bird stage, and so on to the monkey stage, as it is gradually, in the fulness of time, to become a man-child, you—that is, your embryo—have very large optic lobes, corresponding to the great eye-brains which characterise fishes and birds, and so on. But in becoming human the optic lobes dwindle in you so that you cannot, as a human being, realise what sight is in the more perfect eyes—say, for instance, even in a robin, that can see the tail of a worm in the grass 30 ft. off, so that it can go straight off an apple tree to that tail with unerring sureness; or in a chicken,

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that becomes familiar with the whole world as known to chickens in the first two weeks it gives after leaving its egg-shell and stretching its legs. The human sucking embryo stretches its legs and winks for whole months, and sees nothing at all with his miserable dwindled optic lobes and his jelly-looking eyes. The reason, of course, is, that the human baby is not so immediately dependent on his eyes as the chicken is that has at once to look about when to be hatched and pick up all it can for lack of mother's milk. The human mother's eyes do duty for those of her offspring. Hence the eyes and optic lobes of your embryo were allowed to dwindle immensely, whilst your cerebrum grew disproportionately great. As a man-child you begin life by thinking about what other people see, and your thinking machine or cerebrum becomes so much more active a thing that you may think a great deal in proportion to what you see all your life; in fact, your over-active big cerebrum may press down on your tentorium cerebelli, and so sit heavily upon and oppress and squash and quell the more vital parts beneath the tentorium; and the optic lobes are perhaps still worse off, having no tentorium to protect them from the pressure. Everything in nature is on compensation principles. Brains enough to make you stand upright weigh on the roots of your eyes when you are up. And just as your mother will see for you whilst you are a sucking embyro, so your teachers will see for you during your educational embyro stage. As a modern young man with any cerebrum to speak of, you need never use your own optic lobes—in fact, your eyes may almost be kept for mere ornament. Of course, this is not only true of vision, but of much else, so that your mother may supplement your little goodness by her greater goodness, until you shall have no opportunity of practising the little goodness of your own, and when you are left to yourself you may find your little stock of original goodness scarcely enough to keep your character decent when away from your mother's wing. And even when you are what is called adult, everybody all around you will supplement your imperfections, will see for you and hear for you, do anything for you for a very small return of flattery. That is the great advantage of social life in high states of civilisation; everybody will not only hear for you and see for you, but will tell you what you ought to think about it all. And so you may be completely civilised into a kind of Nirvana, and exist without the trouble of either seeing or hearing or thinking; and in this Nirvana you may gaze listlessly across at Schopenhauer and Hegel, express how divine an existence of the Epicurean gods it all becomes—nothing worthy of attention and nothing getting any, because other people do it all for the sake of some equivalent as trifling as the whole affair deserves. Into this Nirvana perfection of civilisation the modern young man can enter without ever having had to use his own eyes except as a kind of ornament on his very intellectual face, or to preserve his mental balance by recognising objects as he has been taught them, or to avoid knocking against inconvenient realities. And modern philosophy is, as we have seen, so thoroughly founded on the real and true, as seriously known, that the modern young man can afford to be tenatful. His teachers do really know, and he may accept their views. Why should he use his own eyes? Because see a little at a time, and with his dwindled and distrust optic lobes perceives so little of what he sees, that looking is a waste of time compared with the facility with which he can pick up other people's views and adopt them in his cerebrum, and say, "I know I see"; and so he says, "Yes, I see" without eyes looking. And he does not move your pity like the poor man blind from his birth who rolls his chalky wasted eyeballs and speaks of sight when of its saddest want he is for the moment oblivious as he says, "I see," in happy delusion that eyesight is his. The modern civilised Nirvana young man, speaking of his views and saying "I see," does not move your pity, though he never did see anything of the fact of the matter any more than if he were blind from his birth. His sad privation is not so touching. You cannot see his poor, wasted, atrophied optic lobes, and his eyes appear all right to look at.

But Fagge was no mere collector of other people's views. He was of good derivation, and had persistent optic lobes. He was a seer; he was no mere cyclopedia with a self-acting index edited on the principle that knowledge is power. His gift of sight brought his large knowledge to bear; there was the man with all his knowledge. But knowledge be power if you will, but another character is wanted to determine the effect of it. The Assyrians seem to have perceived this, and to have inscribed it in a symbolic way at the doors of their palaces, putting the body of a bull or a lion to the head of a man—hinting that if you know like a man you must be ready to act like a bull or lion if you are going to live in a palace. The Assyrian man-headed bull was not far wrong. It was more right than the griffin coat of arms of the Middle Ages, which left the man out altogether; but they were scarcely human then. Knowledge is not power. The relation of knowledge to power, like all high truth, can only be expressed in symbols; but at least one may say that the head full of knowledge needs a character which shall determine its use. The greater the knowledge, the more powerful must be the character; and Fagge was a great physician because, with his immense knowledge, he had the character of a physician. Our modern governments by the lower middle class, the industrial and positive class, who are able to know positively all that can be known positively, and who do not care for symbols nor for whatever can only be expressed in symbols—this lower middle class government has determined that knowledge is power; and, as the nation must be powerful, it compels everybody to know, and fits them with knowledge, as it were with firearms or dynamite. In the lower middle class of great communities knowledge is everything; the vast web of human knowledge surrounds you and occupies the whole horizon, like the brick buildings of the vast community which nearly everywhere shut out the sky. Each man's knowledge is so small and fragmentary that he must for his hold on existence look around to his fellow men whose vast knowledge can supplement his few trifles. He need no longer look up to God, as they used to do when human knowledge had not occupied all the heavens and the earth with five sense certainties. And so the lower middle class, our masters, entirely believe that knowledge is power, and the logic is something thus: Whoever can be taught can know; and whoever can know can do, because knowledge is power; and what care we for intellectual considerations—for instance, whether a beard comes on the face of knowledge. Let us ask of the beard "Whence art thou?" And as it retires abashed, let us treat the widest knowledge as the greatest power. *Hic itur ad astra.* Celestial! Did not the Chinese learn to award all positions of power in virtue of knowledge and success at examinations, and did not they soon find and call themselves celestial? They managed the natural tendency of females to excel in mere knowledge better than we do. They persuaded the sweet creatures that it was the right thing to have their feet pinched, and this drew attention to the other extremity. We have not yet found anything so effectual, but there is time. The Chinese celestial civilisation is much older than ours, and it may have taken centuries to induce the ladies to choose pinching their feet as the correct competition for female excellence.

That knowledge is power is a feminine truth; it belongs to the side of nature that receives impressions. Fagge was no mere receiver of knowledge. He was a man of very great character—of very great medical character. True, great medicine is never grand. It would be absurd in the House of Lords. I know no argument for putting physicians in the House of Peers, unless it be to apply astringents to the eyes of the last conspicuous addition to the Upper House. In the House of Lords, as in the Celestial City, tears shall be wiped away from all eyes. Can you imagine a British noble ever weeping at so much a volume? No; astringents are wanted: a sponge—a big sponge—and to hold it, a big hand, even if a "big merciless hand." But Lord Tennyson himself shall describe it—

BALLADS AND OTHER POEMS, PUBLISHED DECEMBER, 1880

IN THE CHILDREN'S HOSPITAL—EIGHT.

"Our doctor had called in another, I never had seen him before,
But he sent a chill to my heart when I saw him come in at the door;
From from the surgery—schools of France and of other lands,
Harsh red hair, big voice, big chest, big merciless hands.
Wonderful cures he had done; O, yes; but they said too of him
He was happier using the knife than in trying to save the limb.
And that I can well believe, for he looked so coarse and so red,
I could think he was one of those who would break their jests on the dead.
And maybe the living dog that had loved him and fawned at his knee,
Drenched with the hellish Oorali—that ever such things should be!

* * * * * * *

And he said to me roughly, 'The lad will need little more of your care;'
'All the more need,' I told him, 'to seek the Lord Jesus in prayer.
They are all His children here, and I pray for them all as my own.'
But he turned to me: "Ay, good woman, can prayer set a broken bone?"
Then he muttered half to himself, but I know that I heard him say,
'All very well, but the good Lord Jesus has had His day.'"

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And is it thus that great medicine is spoken of in the House of Peers? No, peers speak and write like gentlemen. Scorn seeking scorn to scorn seems the speciality of poets. How came he to be there? Is the House of Lords the seat of the scorner? Ah! that insidious Gladstone! What could he mean by imposing the author of those scurrilous lines on the much-threatened Upper House. A few more such additions, and—— The only just all-round atonement Lord Tennyson could make would be to give the pecuniary proceeds of "In Memoriam" to that hospital which he had in mind when he penned those unspeakable lines. Was it the Evelina Hospital for Sick Children? Dr. Fagge was physician to that hospital. The amends might be made in his honour. But the subject is quite unworthy of Fagge. Fagge's greatness as a physician appeared in his always kind and sympathetic and Christian treatment of the sick poor. It is easy for poets to put their own denials of Christ into other people's mouths, and then as fashionable authors to spread them about on drawing-room tables. It is convenient to be able to work off your baser sentiments in a false character; you yourself then appear pure by contrast with your own creations. But if one's solemn everyday duty is spent face to face and eye to eye with the sorrowful and suffering poor, one wonders how even a poet laureate could be capable of thinking the matter of those loathsome lines of this new peer. I wonder is he yet ashamed of them? What footing has this poet aristocrat on any grounds of charity that justifies him in putting his blasphemous sentences into the mouth of the child he supposes? Let him go into a children's hospital, and see how far the poor sick little ones think as vilely as he of the kind-hearted doctor whose only sorrow is that his best help to his little patients too often proves ineffectual. Fagge was physician to the Evelina Hospital for Sick Children. His sympathies were not with grandeur and the House of Lords. He worked for the suffering poor, and his sympathies were with the poor. And remember it is always more difficult to get the sympathies of the poor. They are poor mainly because they do not sympathise with much that their betters enjoy. It would be a slight to medicine to suppose that this makes them, from the doctor's point of view, more easy to sympathise with. Nay, are not the poor used as the practising ground for extra strong sympathies? But, indeed, just as the Jesuits succeeded splendidly in education through perceiving that the lowest pupil wanted the best teacher, so, if you will condescend to know the truth, you must know that to succeed with the poor needs the best doctor—the most medical doctor. Fagge was, to my mind, the type of true medical greatness. Perhaps he might have been corrupted into grandeur if his life had been spared. There comes a danger of that kind of corruption after forty or forty-five, even in the greatest of truly medical characters, especially if it goes to Brook-street or to Grosvenor-street. I believe Fagge was capable of any kind of excellence, and he might have been tempted out of true medical greatness into grandeur. His greatness as a physician became evident to observers of character very soon after his brilliant student career had placed him on the staff of Guy's Hospital; he did not merely constellate already known facts, but he found new facts. Former volumes of Guy's reports contain ample and most valuable proof of Fagge's greatness as a physician. His genius of eyesight, or power of observation if you will, was sustained by immense memory, and brought into action by vivid and constant suggestiveness of intelligence. I watched Fagge closely, and knew him to be one of the most dynamic minds of the age; certainly, second to none in our profession. Let me instance one fact in his career, not because it is the most brilliant, but because it will serve best to show those points of his character which I am endeavouring to draw attention to.

In Guy's Hospital Reports for the year 1868 appeared Fagge's papers "On Certain Rare Cutaneous Affections" and "On Keloid, Scleriasis, Morphœa, and some Allied Affections." It was at once recognised that these papers were the work of no mere bookworm. True, the literary knowledge of the subject would, indeed, do the highest credit to one whose reputation was to rest on his large reading; but the paper on keloid showed that Fagge meant more than reading. Dr. Addison had, many years before, recorded some cases of keloid, and models of these cases were in the museum. The course and consequences of keloid were, however, unknown. Fagge had seen cases of this disease, and amongst them one which had been in the clinical ward eight months before his paper was written. Whilst writing his paper he visited this patient at her home, and observed that the disease was ameliorated. Hereupon, it struck Fagge that the disease might be transitory, notwithstanding its tumour-like or scar-like appearance. And to learn whether this was really so he at once proceeded to search for Addison's patients of years before, tracing them to their homes, so that, aided by the wax models, which enabled him to know their condition in Addison's time, he discovered and proved that keloid is a temporary disease, and that the affected skin, with all its unpromising appearance, is capable of recovery. When I say that he made a journey into Hampshire in order to see one of these ancient cases of Addison, it will be plain that no common obstacles were likely to prevent Fagge from advancing medical knowledge. The general effect of his work on this branch was to bring together vague and scattered groups of rare skin diseases, and to show their relations to each other, and to arrive at certain conclusions from quite sound facts cleverly lit upon and laboriously followed out; so that Fagge's conclusions may be enlarged or modified by future facts; but the cases he watched to their completion will ever remain types of sound and careful observation, real additions to our knowledge. Let anyone read the papers I am speaking of, and he cannot fail to admire their earnestness and richness in new matter, their sterling honesty and conscientious accuracy, and most unwearying pursuit of all those possibilities for further advancing the question which can be arrived at by faithful discussion of the subject; and every reader of Fagge's papers must indeed be struck, not only with his patient truthfulness as an original scientific observer, but with his literary honesty. Fagge never, in the ardour of any inquiry or in the heat of any phase of competition, forgot to listen to the conscience of an honest man and a gentleman. He was the very genius of candour and truthfulness, of truest modesty. You may read all his papers, and never once will you come across any exaggeration such as worse than falsifies half the medical work that sees the light in our press. He gave to every predecessor in the field all credit that was due. Indeed, his always generous desire to do justice often induced him to credit those he cited for a completeness of idea which in truth belonged properly to himself; so that, in the place of Harvey, I think Fagge would have credited to Cæsalpinus the whole circulation of the blood, and so have saved the labours of those who now seek to acquire for their Italian fellow-countryman a credit that does not properly belong to him.

Fagge had a great memory and great power of application and magnificent honesty, and so there was in him much that goes to make the great, if not the grand, physician; and although there was perhaps something lacking in him which you are accustomed to see in grand physicians, until you are disposed to think it to be of the very essence of medical greatness, yet, in truth, he was not only a great but a successful physician. Steadily he made his way amongst all possible competitors for true greatness, and it was already well known to his contemporaries whose reputation amongst them all would best stand the test of time. His splendid gifts made trickery unnecessary as a means of high ambition. He was such a man as vindicates the truth to nature of that unsparingly severe story known as the parable of the talents. Those less highly endowed have so much excuse for envy, that they might well think it better for their happiness to hide away their poor little natural gifts. But although we are taught that such is the usual and first temptation of very small talents, so that no usury is got from them, it is not meant that this is always the case. In some rarer instances we see the clever possessor of one talent manage to make up with borrowed capital, and so get a surprising percentage on his little talent, enabling him to appear quite rich, with all the fussiness and want of modesty that mark the *parvenu* of science; till high interest proves false security, and the little man's real capital some day disappears, and what he had is swallowed up in what he only seemed to have, and he becomes a mere phantom and a show before his fellows.

I cannot pass on without remarking upon that very curious tendency of "self" to identify itself with its acquired possessions, whether these are stores of learning or such more obviously external property as the clothes from one's tailor. It is so very curious to see how a child prides itself on its new scraps of information, identifying itself with the acquisition just as it also prides itself on its nice new frock,

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and conceives itself with information, frock and all included. And so grown children identify themselves with all they have picked up in the way of knowledge just as they do with the clothes they are wearing. And how complete is this latter identification you may best imagine when after death their ghosts appear generally in these clothes. Mr. S—— recently saw the ghost of a soldier in full uniform; also, a clerk in the Bank of England saw his brother's ghost in dress clothes—truly most curious parts of a spiritual individuality; but really, when one comes to think, they are not more really foreign to the individual himself than most of the remarks which mediums can get from departed spirits, which are always very secondhand remarks, and, indeed, merely what was put into the defunct by the communications of his fellows. In fact, I do not quite know what constitutes a pure individuality such as might appear to the spiritual eye as a true self. How little of what we call ourselves is truly alive; what proves immortal will be rather what moves than what composes angelic features. But when the uniform and dress clothes and scraps of information are stripped away, it is very difficult to form a conception of what will be left. I expect not much will be left of people who have no character. But Fagge was a man of character, and his life conveys a distinct and instructive idea. His gifts were no mere traps to catch fortune. He had little of the art of taking credit for lucky strokes which make you seem, even to yourself, to know more than you really do. He had vast natural abilities, and could afford to wait and to go steadily and easily. Indeed, if there was anything lacking in his career, it was that he perhaps worked with so natural an ease that he did not put himself out to be showy enough. I am thinking of what happened one day when I was trying to buy a horse at Seymour's Repository, at the fashionable part of the West-end. The proprietor was recommending me a handsome creature with beauty and power and pace, and all that I could see desirable in a horse at only 100 guineas. When acutely observing my disappointment at the low price, he said: "Only wants a little of what we call action, sir, and he will fetch 500." This for a moment set me reflecting how much a little of what a West-end judge would call action might do for many physicians gifted with form and power and pace; and I seemed for a moment to see with the mind's eye what in the West-end we call or might call "action" in grand physicians. If Mr. Francis Galton's machinery for making compound pathological photographs could have been applied to my mind's eye, I believe it might at that moment have recorded a valuable image of "action." It is meanness to smile at it. The smile is utterly unworthy. One really ought to carry a stock of spare reverence for use as supplement on occasions when one ought to feel reverence, but cannot quite rise to the required level; for so much, after all, in very truth, depends on how we act towards each other. This interaction constitutes the inter-reality which is the reality of social life, and in a sense we are to each other no more than the impressions we make upon each other. So, at least, you might be weak enough to think if there was in the world no earnestness like the earnestness that made Fagge a great, as distinguished from a grand, physician. He was, before all things, earnest in his work. It is earnestness that makes greatness. I don't quite know what makes grandeur; it is too subtle for my coarse analysis. But without earnestness there is no true greatness. In vain you try to lead a party with quips and sneers. The vulgarest Brummagem earnestness will push you aside. Earnestness taketh by force in the very kingdom of Heaven; and Fagge was before all things an intensely earnest man; and the earnest attaches to the real and moves the real, and whatever Fagge brought forward had a solid reality, which made it useful matter for all concerned. Few medical writers of his age are more frequently quoted, either in his own country or throughout Europe and America. Whoever had Dr. Fagge's facts to support him was sure at least of that part of his ground. His papers on "Intestinal Obstruction," on "Diseases of the Liver and Peritoneum," on "Croup and Diphtheria," and on "Diseases of the Heart" [illegible] be instanced as examples to show the scale on which he [illegible] other facts as raw material from which either he [illegible] following him might reach new and sound [illegible] Fagge's earnestness as a physician made [illegible] original in therapeutics. He was too much [illegible] healing spirit to stand by and see his patients die in accordance with pathology. One of his papers in the reports will show his readiness to initiate bold measures on his own responsibility. In a paper on "Diabetic Coma" Dr. Fagge describes the relief that followed when he injected warm saline fluid into the veins of a person comatose with diabetes. The patient returned to consciousness, and remained sensible until it was judged right to give him some codeia, when he again became insensible and could not be aroused. Dr. Fagge was not hesitative or feeble in therapeutics. But I believe I do his memory no wrong in saying that he never exhibited any enthusiasm for the elaborately theoretical treatment of outlying and superficial symptoms. He did not belong to those who weave interminable accounts of tiresome doubtful details upon the effects of drugs that might possibly be of some good in chorea, if only the remedies for chorea happened to be the same as the remedies for wriggling, which, in the meantime, we know they are not. But Fagge tried honestly his best to relieve his patients with effectual remedies. He was not by any means the man to treat clinical medicine in a spirit of scientific despair, as is the manner of some who teach it so that meaner minds will obtain the despair without the science. He was always ready in the invention of new measures of treatment. Those who write originally on therapeutics may be divided into: (1) Those who love relieving the sick; (2) those who are set upon the laws of action of the drug; and (3) those who wish to push some new remedy for the sake of a name. Of course, all these motives may be blended together in various proportions, but it is generally pretty evident which of them constitutes the true actuating power. Fagge, in his therapeutical teaching, like a true physician, was always plainly actuated by the first and purest of these motives. I will not speak in disrespect of the second kind of motive. Dr. Fagge did good work in this direction. The paper which he, with Dr. Stevenson, wrote on the action of digitaline[2] was no mean contribution to the then existing knowledge of a most important subject. No doubt it is necessary that the doctor should have a clear conception of the range and measure of power belonging to each of the drugs he uses, just as he should have a clear conception of the extent and character of the diseased changes which he means his remedy to reach and combat. And one must not think slightingly of any sound work done seriously and earnestly to measure the size and form of a remedy any more than we think slightingly of pathological work done to estimate the depth and characters of particular diseases. There is something absurd, but for its obvious danger, in throwing drugs of imperfectly known power after diseases whose nature is as little recognisable. Mr. Mill smiled at another philosopher for describing digging as the insertion of the idea of a spade into the idea of the ground. But in much of our treatment do doubt the idea of the remedy is inserted into the idea of the disease when nothing really exists corresponding to the ideas with which we suppose ourselves to be acting. Of course I here speak of treatment as distinguished from cure in the line of distinction so well drawn by that able physician, the late Dr. Peter Latham. When we have a known cure for a known disease we use the cure whenever we meet the disease, and there are no ideas worth speaking of in the whole matter. But when there is no known cure for a disease, we have to form an idea of the disease, and meet it with the idea of a remedy. And although this proceeding is not, as a rule, very satisfactory, yet we have no right to think trivially of a branch of inquiry which tries to give us more definite ideas of the powers of our remedies. Dr. Fagge's work on Digitalis was a good example of the best sort of this kind of work. He was young when he carried it out, and this branch of activity was not followed up by him. The distinction which Dr. Latham drew between cure and treatment is in a half-conscious way recognised by the public. When you can cure the patient he approves of you, and says you know his complaint. When you know no cure for him, but proceed to treat him, he is apt to call that being experimented upon, and to put on an air of doubt and resentment. The public watch jealously all experimental treatment. The justification of it is a matter of conscience, and the public is always ready to impose its conscience on private individuals. Yet the physician is expected to heal. His place at the point of contact between nature and human nature is a delicate and difficult one; and compelled as he is to study nature for the corporeal good of humanity, he must not too sorely try its spiritual side—that spiritual side of humanity which we always hope may prevail as the most

[2] Proceedings of the Royal Society.

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truly human element in our compound nature. Instinctively mankind feels at one with all living things. The love which the world has for science is cold compared with the love with which humanity loves nature—the visible, audible, sensible world; the world of taste and touch which we call nature. It is a beautiful name; it was invented long ago in some golden age; nature, the growing, in such contrast with fabric of all kinds; the sensuous presence of this world in which we live, and out of which we die; the consciousness of which constitutes life to each of us; nature, which we try to analyse in science and to imitate in art, but which ever escapes our analysis and distances all imitation. The clever chemist will take a natural object, say a feather, to find out what it *is*, and he will burn it under certain conditions and collect the results, and measure and weigh, and end by getting the feather into things he supposes he knows better, which he calls carbon, oxygen, nitrogen, and hydrogen. The very special feather has reached its place in his very general generalities; but of the nature of the feather whereby it had its shape for the eye and its resistance to the touch, and its resiliency and all else that makes up feather-nature, if you ask the chemist for this he will bluntly accuse you of metaphysics, which in five-sense science is a heresy. The clever artist, on his part, will paint with lilac paint to represent the distant hills, and will grow so sure that his lilac paint is like the distant hills that he will almost think the distant hills are like his lilac paint; until he never again will see the distant hills as they are, but only as he paints them. Nature, who yields so little to analysis and is so far above imitation, is one with us all in this life of ours, and waits always at our senses full of instruction, which is not mere science, and of beauty which defies all art. And the mode in which we are influenced by sensuous nature constitutes in each of us his character. Your character is what you are and feel amongst the things of the world and amongst men as things. True, a generation is rising in Board Schools in great cities, which in place of natural character will have what? Well, what? I don't know. Nature seems likely to be hidden under brickfields and dustheaps, and character to be lost in science limited by art—in secondhand science limited by secondhand art. What will the future of it all be? Mr. Matthew Arnold, his lips touched from Isaiah as Isaiah's lips were touched from the altar, gives a prophecy, a secondhand prophecy, and says: "There will be a remnant." Well, if so, the remnant will be those who, like Fagge, have character which makes them work real work amongst the realities of their actual calling; those who live as real natural live human beings, and not mere phantoms of science and art. For what is this life of ours out of which Fagge is gone? And what this individuality which places us in it, if not some sort of shadow cast in some sort of light; the cause of which shadow being removed, we shall all be one in the light?

"Bradshawe" Lecture

ON THE

PATHOLOGICAL RELATIONS OF THE ABSORBENT SYSTEM.

Delivered before the Royal College of Physicians of London, August 13th, 1884,

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(*Concluded from p. 311.*)

THE lymphatic vessels are subject to two principal classes of tubal changes—namely, dilatation and hypertrophy, and obstruction. Dilatation may affect the capillary network of the lymphatics; more commonly the larger trunks; or occasionally the thoracic duct or the receptaculum chyli. It presents various degrees and assumes different forms. Thus there may be merely a localised reticular dilatation of the lymphatic capillaries; or more frequently varicose, saccular, tubular, fusiform, or cirsoid dilatation of the trunks; or the enlarged vessels may form a distinct growth, named lymphangioma or lymphangiectodes, which has been divided by Wagner into the three varieties, simple, cavernous, and cystoid, in which cysts are developed. Moreover, enlarged lymphatics constitute an important element in the structure of elephantiasis and other growths, especially elephantiasis lymphangiectodes. The thoracic duct and receptaculum chyli may be enormously dilated, the former in extreme cases reaching the size of the little finger, or even attaining larger dimensions than this. The deep lymphatics and the lacteals are liable to dilatation, as well as those on the surface. Lymphangiectasis is in many cases congenital, and it has been supposed that this may be due to the want of specialisation in the lymphatic system of certain parts. The condition is attributed to different causes. Thus it may follow lymphangitis, in consequence of which the larger tubes are blocked, and the afferent vessels therefore become dilated. In other cases it is not preceded by marked inflammation of the lymphatics, but there is considerable hypertrophy of the cellular tissue, and the vessels enlarge, forming a very free anastomosing network. Again, it is supposed that dilatation may arise from nerve hypertrophy of the lymphatic plexuses, or from paralysis of the coats of the vessels. Any obstruction from internal plugging or external pressure may lead to enlargement of the vessels, the circulation through which is thus impeded; and probably the obstruction may be occasionally seated in the glands. Lymphatic dilatation is most frequently met with in warm and moist climates. When lymphangiectasis occurs on the surface of the body, it can be recognised by objective examination. Dilatation of the superficial lymphatics is generally observed on the inner side of the thigh, the sides of the abdomen, the scrotum, and the penis. It is characterised by vesicles like grains of sago, grouped irregularly (Curnow). Sometimes only ampullæ are formed, which are generally soft and painless. The vessels may rupture subcutaneously, forming vesicles containing a clear or milky fluid. They are also liable to rupture externally, or into various internal parts when situated internally, and it is only thus that the latter can be at all recognised clinically, the escaped chyle or lymph appearing in the fæces or urine. Even superficial dilatation of the lymphatics has been not uncommonly mistaken for other conditions, such as herniæ, abscesses, and strumous enlargement. The discharge of lymph confirms the diagnosis. If inflammation attacks dilated lymphatics, it tends to spread rapidly, and may prove fatal.

Multiple lymphatic nævi of the skin, a newly observed disease of the lymphatics, has been recently described by Hoggan. The condition is believed to be not uncommon, quite as frequent perhaps as venous nævi, which it often accompanies and complicates. It also forms the initial stage or predisposing pathological condition of other diseases, such as lymphatic varix of the larger vessels, and also of elephantiasis, in the production of which it may often be the most important factor. That this has not been observed before is probably due to the fact that no proper histological examination, as apart from microscopical, has been made of the tissues in the initial stages of the diseases. That the condition has not been recognised clinically is probably due to the want of colour in such nævi, as compared with venous nævi. But there can be little doubt, from the frequency with which venous nævi have been observed in elephantiasis, that the two conditions of venous and lymphatic nævi are generally coexistent, and that conditions of hypertrophy, due really to the latter form, have, through being unrecognised, been erroneously ascribed to the former. On the other hand, when the lymphatic nævi were small, and placed so superficially in the skin that distension by lymph, produced at will, made them appear above the general surface, like vesicular papules, such a condition would almost certainly have been described as "varicose lymphatics."[1]

The absorbent vessels may become obstructed. This condition may involve the lymphatic capillaries, their main trunks, or the thoracic duct itself. It may result from the blocking up of their channels by coagulated lymph, from inflammation of the walls of the vessels, or from external pressure. Thus the thoracic duct may be more or less obstructed, or even completely obliterated, by the pressure of enlarged glands in the thorax, or of an aneurysm. The lymphatic trunks in the limbs may also be compressed by glands, aneurysms, and other morbid conditions; and also the capillaries are subject to pressure in consequence of inflammation of the surrounding cellular tissue. Obstruc-

[1] Hoggan: Journal of Anatomy and Physiology, April, 1884, p. 304.

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tion of the thoracic duct is said to arise from disease of its valves. It may be remarked, further, that a certain degree of obstruction to the flow of the lymph and chyle may arise from marked interference with the venous circulation, as the result of cardiac disease or direct obstruction of the principal veins. If the thoracic duct be obstructed, and if the chyle cannot reach the venous system by the establishment of a collateral circulation, grave general symptoms arise—namely, marked wasting and anæmia, tending towards a fatal issue. Various degrees of obstruction of this channel have, however, been found in several cases at post-mortem examinations, in which no symptoms had been observed during life. The most obvious direct effects of obstruction in the absorbents are dilatation of the vessels behind the impediment, in the course of the circulation, and the development of lymphatic œdema. These conditions necessarily vary much in their extent and degree, according to the situation and character of the obstruction. The dilatation may ultimately lead to rupture of the vessels.

When lymph or chyle is discharged from the vessels or glands, either on the surface of the body or into some internal part, the amount varying much in different cases, the term lymphorrhagia or lymphorrhœa is applied in signification of the condition. Lymphorrhagia has been observed as a consequence of a wound, but more commonly of engorgement from closure of the lumen of the duct by inflammation or a tumour. In rare cases it may occur from slight wounds, especially in the neighbourhood of joints, which is probably due to a constitutional defect, a lymphorrhagic diathesis corresponding to the hæmorrhagic diathesis (Bradley). Usually traumatic lymphorrhagia results from wounds of the thoracic duct, of the larger lymphatic trunks, or of the glands. Idiopathic lymphorrhagia is generally due to previous dilatation of the vessels, which ultimately give way. A most interesting case has been reported by Cayley, in which the receptaculum chyli gave way spontaneously as the result of previous extreme dilatation, and fatal peritonitis ensued.[2] Lymphorrhagia may be associated with chyluria, and is then believed to be due to the filaria sanguinis hominis. When lymphorrhagia occurs on the surface of the body, the discharge of the lymph is the clinical sign of the condition. The amount of fluid which escapes varies considerably, ranging from one ounce to five or even ten pounds during the twenty-four hours. It also differs at different times, and the flow has been known to assume a periodic character, increasing during digestion. The fluid which escapes after injury may be clear and limpid lymph, or mixed with inflammatory products or blood. That which comes away in cases of rupture from dilatation of the vessels is more or less white and milky, like chyle, and it contains a variable quantity of fat. The quantity of fibrin present varies much, and therefore the power of spontaneous coagulation of the fluid. When lymphorrhagia takes place internally, it can only be recognised by the presence of the fluid in the urine or fæces respectively—in the former case giving rise to chyluria, and in the latter to fatty stools. Bradley directed attention to the probable origin of certain cases of hydrocele, hydrocephalus, pleuritic effusion, and ascites from a lymphorrhagia into the respective serous cavities. As proved by Cayley's case, the escape of chyle into the peritoneum may set up fatal inflammation. The general condition is more or less affected in cases of lymphorrhagia in proportion to the amount of fluid lost.[3]

The consideration of inflammation of the lymphatic system would now appear to be appropriate. Acute inflammation presents three varieties—namely, where the vessels are alone affected, lymphangitis or angeioleucitis; where the condition is limited to the glands, adenitis; or where both vessels and glands are involved. It will be convenient to consider these varieties together. As a rule the disease is localised, but under certain circumstances the absorbent system is more or less widely implicated, especially if the inflammation be of a septic character. It may be set up and extend with great rapidity.

This class of affections may be of traumatic origin, being due to various forms of injury, such as a wound, contusion, or strain; or they result from various kinds of irritation, such as that produced by neighbouring inflammation, suppuration, ulceration, or diseases of joints or bones. The implication of the glands under the jaw, in cases of diphtheria and scarlatina, is a familiar illustration of irritation from within. External irritation, as, for instance, the strong heat of the sun, may induce superficial lymphangitis. Special forms of inflammation of the absorbent system are set up by specific kinds of irritation, such as that of the syphilitic virus, and septic forms of the disease are induced by various septic poisons. The lymphatics connected with the internal organs are often inflamed when these are the seat of any irritation. Pus has been found in the neighbouring lymphatics in cases of purulent pleurisy. Some forms of pelvic cellulitis have also been regarded as being due to lymphangitis. Inflammation may be immediately excited in the vessels and then travel along to the glands; or the irritation may be conveyed by the current of lymph to a more or less distant part, the intervening portion being unaffected, or the glands may be implicated by extension from the surrounding tissue. When a gland is involved while the vessels between it and the source of the irritation are unaffected, the inflammation is said to be sympathetic. Inflammation is much more readily excited in the lymphatic structures in some persons than in others, and especially in those who are of a strumous habit. The glands are more liable to be affected in the early periods of life. A low state of health may predispose to inflammation of these structures from slight causes.

Lymphangitis is distinguished as reticular or tubular, according as the fine capillary network or the trunks of the vessels are involved. In the former case the skin and its capillaries are usually implicated. In the latter variety the vessels become dilated and their walls are thickened, the endothelium often disappears, and the internal coat becomes opaque and uneven. The lymph coagulates in their interior, blocking up their channels, and the clot may become organised, obliterating the vessels permanently, or occasionally it softens and suppurates in the centre, and the pus may find its way into the circulation, leading to septicæmia or pyæmia. Exudation also takes place, while the surrounding cellular tissue undergoes hyperplasia and becomes thickened. Lymphangitis may lead to inflammation in joints, which may be of a purulent character. In adenitis the affected glands become congested and swollen, as well as the seat of exudation, while the passage of the lymph through them is impeded. Resolution may take place after a time, but not uncommonly the inflammation terminates in suppuration, this beginning in the centre, the cavities of the glands becoming filled with pus, and the surrounding cellular tissue being also involved. In other cases the glands remain more or less indurated, and they may form adhesions to the surrounding structures, especially if the irritation is repeated several times. Glands which are chronically enlarged, as the result of inflammation, are very liable to become the seat of acute inflammation from slight causes. They may subsequently suppurate or undergo a caseous degenerative change, but often remain unaltered for a considerable time. This condition of the glands interferes with the passage of the lymph through them.

When the superficial lymphatic vessels or glands are inflamed, this condition is evidenced by objective signs. Lymphangitis is indicated by wavy or straight lines, running towards the glands, or sometimes there are isolated red patches, the skin and its capillaries being involved along with the lymphatics. The large vessels may be felt as firm and knotted cords. If the glands are affected, these can be felt, and are seen to be more or less enlarged and swollen, at first feeling firm. At the same time pain is experienced, often very acute, with sensations of heat, stiffness, and tenderness. When the affected structures are deeply situated there are no red lines, and redness is not always present. There is induration of the part, more like that of œdema than inflammation. The inflammation may, however, pass through the intervening tissues from the deep to the superficial lymphatics, and *vice versâ*. Owing to the interference with the passage of the lymph more or less swelling from lymphatic œdema is often present, of a firm character, and a limb may be much enlarged from this cause. If suppuration should take place in the glands, this will be evidenced by the ordinary signs characteristic of an abscess. There is more or less pyrexia, in proportion to the extent and intensity of the inflammation. In septic forms of lymphangitis signs of general septicæmia are likely to arise.[4]

In reference to the morbid conditions of the lymphatic glands, manifested by enlargement, if we have regard to the anatomical characters, there are at least three which it is

[2] Pathological Transactions, vol. xvii., p. 163.
[3] Roberts' Medicine, p. 765.
[4] Quain's Dictionary of Medicine, vol. i., p. 907.

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extremely difficult, and often impossible, to distinguish from one another. These are simple inflammatory hyperplasia (lymphoma), the so-called scrofulous form of enlargement, and that morbid condition now generally known as lymphadenoma.

Lymphoma is a comprehensive term, and includes formations which are not strictly tumours, but rather hyperplasias of the tissue proper to lymphatic glands, lymphadenoid, or, briefly, adenoid tissue, as it is called. Lymphoma as a neoplasm would imply the development and deposit of new adenoid tissue in the form of a tumour within a lymphatic gland or follicle, or some other structure of the connective tissue group. In what is usually called lymphoma this does not happen. What does happen is that the tissue of the lymphatic gland or follicle increases in size because the lymphoid cells it contains are multiplied, while the reticular tissue undergoes hyperplasia. The process is often inflammatory in character; in other cases the lymphoid hyperplasia seems to begin idiopathically—that is, without any cause hitherto discovered. It may often be doubtful whether the increased growth of a lymphatic gland should be regarded as neoplastic or as hyperplastic. Many cases of lymphoma, especially the leukæmic kinds, seem referable to hyperplasia. The lymphatic glands, adenoid structures of the intestine, and lymphoid follicles of the spleen, all maintain their structure as they grow in size, or alter but slightly. Moreover, the functions of the glands seem to be more actively performed. This does not seem to indicate that they are invaded by anything of the nature of a neoplasm.

In addition to the hyperplastic lymphomata, there is a true or heteroplastic tumour, whose structure agrees with that of lymphadenoid tissue. As the term lymphoma has been perverted to describe the hyperplastic formations, we may do well to distinguish the genuine tumour as lymphadenoma or lympho-sarcoma. It is a sarcoma whose structure somewhat resembles that a of a lymphatic gland. It most commonly originates in lymphatic glands, and in the adenoid tissues of the mucous membranes; it may, however, arise elsewhere. When it attacks a lymphatic gland it may be distinguished from mere hyperplastic lymphoma by its rapid growth, and by its tendency to overpass the limits of the gland and to form metastases.[5]

The term scrofulous is commonly applied to the slow and painless enlargement of groups of lymphatic glands, which occur for the most part in children, and almost invariably ends in the destruction of the glands by an imperfect kind of suppuration. Scrofulous glands are generally met with in either the neck, thorax, or abdomen, and are commonly limited to one of these regions. Indeed, in the neck, where their progress can best be followed, we often see that the enlargement commences in one gland only; that the glands in the vicinity are successively affected, and often at long intervals; and that after a while the morbid process ceases with the destruction of all the implicated glands, those on the opposite side of the neck possibly remaining all the time perfectly healthy. In the earlier stages of the affection the glands differ little, either to the naked eye or under the microscope, from such as are simply hyperplastic from inflammation, but they tend soon to become opaque, yellow, and friable, and to undergo caseous degeneration. This change commences in the central parts, and gradually involves the whole mass, which presently breaks down into a semi-fluid detritus. Occasionally the caseous swelling dries up, earthy salts are deposited in it, and it becomes an inert earthy concretion. There is a good deal of vagueness in the sense in which the term "scrofulous" is generally employed. It is taken for the most part to imply that the morbid process to which we attach it is dependent upon some peculiar condition of the constitution, and, further, that there is some close affinity, if not actual identity, between it and tubercle. But the so-called scrofulous glands are certainly not tubercular, and although their appearance is sometimes followed by that of tubercle, in a very large number of cases no such sequence is observed. As regards cachexia, it is certain that scrofulous glands often develop in persons who appear in all other respects in the best of health; and, furthur, if we may judge of the limitation of the morbid process, that if we admit their dependence on a pre-existing state of cachexia, that cachexia must in many cases be limited to a definite part or district of the organism. It is well known, moreover, that when a single gland has undergone scrofulous proliferation there is a remarkable tendency for the morbid process to spread thence to other glands in its immediate neighbourhood, and thence again to others; it seems in fact to spread from gland to gland, through the agency of some infective material, which the diseased organs evolve. It is well known, also, that scrofulous enlargement of the glands of the neck not unfrequently follows upon certain diseases affecting the throat—such as parotitis, diphtheria, and scarlatina. Now, basing his arguments upon such facts as these, Virchow maintains, and I think with reason, that scrofulous proliferation of the lymphatic glands, like ordinary inflammatory hyperplasia of the same organs, is always secondary to some peculiar process going on at the mucous surface or other part which is in direct relation with them by means of the lymphatic vessels; that scrofulous disease of the glands of the neck is traceable to some inflammatory condition of the throat, fauces, or contiguous parts—of the bronchial and mediastinal glands, to pulmonary or bronchial inflammations, and of the mesenteric and retroperitoneal glands, to similar conditions of the alimentary canal. He considers that there may be some specific quality or element in the primary inflammation, and a tendency in its products to undergo rapid decay similar to that which characterises the morbid products of the diseased lymphatic glands, but that generally they are not recognisable, from the fact that in this case the cells are mostly developed at a free mucous surface, and are speedily shed from it. But he considers, further, that there may be some special aptitude or weakness, congenital or acquired, in the lymphatic glands of certain persons, or of certain parts of them, which makes their inflammations, induced by indifferent causes, assume the scrofulous character.[6]

In contradistinction to the scrofulous enlargement, tuberculous lymphadenitis may be mentioned. It attacks certain parts of the lymphatic system rather than others, especially those through which the lymph is as it were filtered—namely, the lymphatic glands. It is in the glands that the tuberculous eruption is most intense. Generally the process makes a kind of halt at these gland stations, but it sooner or later finds opportunity to spread onwards, and at length reaches the main trunks and the thoracic duct itself. Wherever the tuberculous process has become established, it is distinguished by the development of tubercles, and this in the lymphatic vessels as well as the glands. A more or less intense inflammation of the surrounding tissue is always associated with the tubercular eruption; it is manifested by hyperæmia with infiltration and swelling. If the process lasts for a certain time, it not unfrequently happens that young connective tissue is developed at the seat of eruption. The usual fate of the tuberculous growth is caseous necrosis, and disintegration. It rarely issues in the formation of fibrous tissue, and still more rarely in complete resorption of the tubercle. The virus which engenders tubercle may be carried out of the lymphatic system into the blood, either from a tuberculous focus in a gland or a tuberculous ulcer in the thoracic duct. It may thus be conveyed to distant organs.

In the morbid condition known as lymphadenoma the enlargement of the lymphatic glands consists at first of mere hyperplasia, and subsequently of fibroid induration. It varies much in its extent. A few glands only may suffer, or every gland in the body may be enlarged. The former cases have the character of a local growth, the latter is distinctly a general disease, for which the term "lymphadenosis" seems the most exact. The glands vary in consistence; when soft, there may be a considerable excess of leucocytes in the blood; when hard, there may be simple anæmia. Microscopic examination reveals that the enlargement is due to hypertrophy of the glandular tissue, the whole structure being converted gradually into lymph cells, with a fine network of cellular tissue. In addition to the hypertrophy of the glands, other organs in course of time present growths of a similar nature, especially the spleen, and less commonly the liver, lungs, kidneys, and alimentary canal. Even the canals of the bones may be filled with lymphoid cells. Very little is positively known as to the etiology and pathology of the condition; but it is assumed that it is a primary affection of the lymphatic system, depending upon some special constitutional condition or diathesis, named lymphadenosis. By some pathologists it is regarded as malignant, and is placed by Wilks between cancer and tubercle. In many cases the disease seems to begin without any obvious cause, but in

[5] Zeigler: Macalister's translation, vol. i., p. 216.

[6] Bristowe's Medicine, p. 62.

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others it evidently starts from some local irritation, and such irritation has probably been present in other instances where it has been too slight to attract attention. As regards predisposing causes, the disease is most common in early and late adult life, in males, and amongst the poor, its development being aided by bad food, insufficient clothing, cold, and damp, and unfavourable hygienic conditions. When the affected glands are superficial, their enlargement is evident on objective examination, and their extension and growth can be observed. In the large majority of cases there is neither pain nor tenderness, but if the enlargement is very acute and rapid, sharp shooting pains may be complained of. When situated in internal cavities, the existence of lymphadenomatous growths can generally be made out by physical examination. Some of the most important symptoms result from pressure and irritation by the enlarged glands, these necessarily varying according to their position and their relation to adjoining structures. Obstructive dyspnœa is often a marked symptom when the growth is situated within the chest. Along with the local signs of the disease, the constitution is obviously affected as a rule. This may occur before any local symptoms appear, but usually the general symptoms are gradually developed as the glands progressively enlarge, including emaciation, anæmia, and its attendant phenomena, often combined with an appearance of serious illness, marked muscular weakness, the patient often tottering and trembling, and feeble circulation. More or less pyrexia is present in most cases, especially in young patients. Free perspirations are common, and the skin is pale and usually moist. Œdema of the legs is a frequent symptom. The blood does not present any excess of white corpuscles, but is often very watery and wanting in its normal colour, the red corpuscles being markedly deficient. The patient is much depressed and low spirited, and attacks of syncope are not uncommon. Bronzing of the skin arises from enlarged retro-peritoneal glands surrounding and compressing the solar plexus. Unless death should occur from the local effects of the enlarged glands, the course of the disease is generally chronic and progressive. In most cases death occurs within two years, either from gradual asthenia and exhaustion, from the effects of pressure, rarely from hæmorrhage, owing to perforation of a bloodvessel, or from some intercurrent complication, such as pneumonia, pleurisy, erysipelas, or kidney degeneration.

Hard lymphadenoma or lympho-sarcoma occurs as a primary growth most frequently in the superficial lymphatic glands. Other groups may be attacked in the further course of the affection. For example, if the affection start in some of the cervical glands, the rest of the cervical glands and the thoracic and abdominal glands lying near the large vessels are attacked in succession. The glands are transformed into firm, tough, elastic, or hardened knots, forming dense clusters in combination. Single glands may reach the size of a walnut. On microscopic examination the lymphadenoid structure is seen to be preserved, while the cells are increased in number and the reticulum is thickened. Fatty degeneration, calcification, or softening rarely supervenes. In later stages the follicles of the spleen may be affected, and be changed, like the glands, into hard nodules. The spleen is never primarily affected in this form of lymphadenoma.

Sarcoma of the lymphatic glands is a somewhat uncommon affection. It occurs in single glands, or several of the same group are simultaneously affected and cohere into a nodular tumour. It often overpasses the limits of the gland and invades the adjoining tissues. Secondary growths are usually developed; small round-celled sarcoma, spindle-celled sarcoma, fibro-sarcoma, and alveolar sarcoma, or alveolar baglo-sarcoma are all forms which occur. All the forms of tumour which give rise to metastases may affect the lymphatic glands. Cancers especially are apt to do so, and the glands become enlarged and altered as the disease advances. Sarcomatous metastases, like the carcinomatous, may originate in sarcoma cells which have entered the gland through the lymphatic vessels.

THE following lecture demonstrations will be given in the Hygienic Laboratory of the International Health Exhibition during the forthcoming week, by Mr C. Cassal, F.I.C., F.C.S., Sept. 2nd, Arsenic in Wall Papers and articles of Clothing; Sept. 3rd, Drinking Water; Sept. 5th, Common Food Adulterations. The lectures will commence at 4 P.M.

ON A CASE OF PISTOL-SHOT WOUND OF THE CEREBELLUM.[1]

By WILLIAM THOMSON, M.A., F.R.C.S.,
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ON Nov. 26th, 1882, I was asked by the authorities to assist Dr. Egan in making a post-mortem examination on the body of a detective officer, who had been shot on the previous evening during an attempt by him and his comrades to arrest a number of suspected men. He was carried to a neighbouring hospital, and being then dead, the body was transferred to the morgue, where the autopsy was held on the 27th. On external examination a small round wound was found in the occipital region, about an inch to the right of, and an inch below, the occipital protuberance. There was no mark of powder on the scalp, or anything to indicate that the shot had been delivered at close quarters. On reflecting the scalp, and thus exposing the aperture in the bone, I found a piece of lead upon the right margin of this opening, and tolerably firmly fixed to the bone. For the time, this was left *in situ*. The calvaria was then removed. This was a very difficult operation, because the dura mater was closely adherent, and a great deal of laceration of this membrane was unavoidable. Between the dura mater and the right parietal bone was a considerable effusion of blood, showing some wound of a meningeal vessel. The brain was next removed and inspected. Corresponding to the wound in the occipital bone, the right lobe of the cerebellum was pulpy and disintegrated for a depth of half an inch. Some small fragments of bone and lead were found in the débris. The portion of lead referred to as attached to the occipital bone was examined, and was found to consist of the anterior half of a revolver bullet. The apex was directed towards the right and slightly upwards, the base was oblique and had evidently been thus cut and shaped by the edge of the bone. The bullet had apparently impinged upon the part at a very acute angle, had crushed in the bone, and in its onward course had met with the sharp margin of the hole so made and been divided upon the right edge where it was found. The remainder of the bullet was not found at this time. The cerebellum was carefully sliced, then the right hemisphere, but no trace of the missing portion could be found in either of these parts. The left hemisphere was then examined from above downwards, slices being made as before, and it was only on coming to the inferior part of the anterior lobe of the left hemisphere that the edge of the knife struck upon a piece of lead. This proved to be the remainder or basal portion of the bullet. It was embedded in the superficial part of the brain substance, to about its own depth, with the base directed inwards, and the cut surface, which corresponded to that already described in the other portion, directed outwards. The question arose how the fragment got there, having entered on the right side of the occipital bone, and a careful examination of the sections of brain was made, but no track of a passage through the substance of the organ could be found. A second wound was found on the left arm a little above and between the olecranon process and the internal condyle. This was traced upwards to the armpit, and a bullet was found lying behind the pectoralis major as it forms the anterior boundary of the axilla. A contusion on the left forearm was the only other mark of violence.

The point of surgical interest in this case, thus far, is as to the course of the basal fragment of the bullet found embedded in the brain. I have stated that there was no trace of a track through the organ by which the bullet could have passed; and we are therefore driven to the conclusion that the fragment moved round the inner surface of the vault of the skull, between the dura mater and the bone, until it was stopped where I found it. The adhesions of the dura mater rendered laceration unavoidable, and I was therefore unable to determine any openings made by the bullet in that membrane. But the effusion of blood under the right parietal bone showed that some rupturing force had been introduced there, and there was in addition a very distinct

[1] Read in the Surgical Section of the Academy of Medicine, Ireland, February 8th, 1884.

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lead patch, on the inner surface of the same bone, showing that lead had traversed that region. We are all aware of the fact that bullets are very easily deflected from their course, and that they especially adapt themselves to curved surfaces, if, with a certain velocity, there is present a sufficient restraining or directing material even so soft and pliable as muscle. Here the course of the bullet was from left to right, and the division of it took place when it struck upon the right margin of the bone wound. The anterior portion remained adherent there; the basal portion was deflected inwards, but continuing its course with diminished velocity dissected its way, so to speak, between the dura mater and the bone, to the position in which it was found. This is a very remarkable occurrence, and it is especially so when we remember that the sinuses which had to be crossed in the course escaped uninjured. That it is possible, however, is quite clear. Dr. Thomas Little has directed my attention to a case of a somewhat similar character, and as it is the only one that I have been able to find I may refer to it here. Baron Larrey reports that a soldier was struck in the middle of the forehead by a ball which penetrated the os frontis and then passed obliquely backwards between the skull and the dura mater, in the course of the longitudinal sinus, as far as the lambdoidal suture, where it stopped. Larrey traced the situation of the ball by the introduction of a gum elastic catheter into the opening; and measuring the distance between the fracture and the place where he felt the ball, he cut down upon that part of the skull beneath which he concluded that the ball was lodged. The bone was then perforated with a large trepan, a good deal of pus was discharged, the ball was extracted, and the patient recovered.[2] This bears out very strongly the view I have taken as to the course of the bullet in this case. It has been suggested that the bullet did traverse the brain substance and that the track had closed; but, as I have said, careful search was made for any trace of a passage through the organ, and none could be found. There would at all events have been some sign of contusion shown by small effusions from the torn vessels, but not even this was discoverable. The original course of the bullet was also undoubtedly from left to right and somewhat upwards, as was shown by passing a catheter into the wound before any incisions were made, and by the position of the anterior portion of the bullet when found. It is unnecessary to adopt such a theory as I have just referred to, when we have sufficient data to show that the course here described was not only possible, but that the facts before us prove the bullet to have taken the direction I have indicated.

But more important than the surgical are the medico-legal questions which arise in this case. In order to make these intelligible, I may shortly mention the circumstances under which the wound was inflicted. A number of detectives were anxious to follow a body of men whom they suspected. The officers were on the right hand footpath, the suspects on the left. They were both proceeding in the same direction. The detectives crossed the street obliquely towards the other men, and when the former were still in the carriage way, one of the persons followed turned round, stepped into the channel, and facing the first detective, but standing at the left side of the officer as he advanced, fired. At the moment that this took place it was sworn that the deceased, still moving onwards, had turned his head to the right in order to extract a revolver from his side-pocket, where it had been caught in his effort to draw it. But it was further sworn that after this first shot the deceased advanced upon his assailant, and fell upon him, both going to the ground. There was much firing then, and the prisoner was struck twice.

Now, the first difficulty in the case arose from the fact that the prisoner's revolver had only one discharged cartridge, while I found two bullets in the body. One therefore must have come from the police, or from one of the companions of the prisoner. It was stated that there was general firing on both sides, and therefore the second wound may have been inflicted by either party, but certainly not by the prisoner. A comparison of the bullets might determine this question, but unless we had all the revolvers fired against the police for comparison it would be impossible to say whence the second bullet came. We have, however, nothing to do with that matter here. I may only mention, in order to make the narrative complete, that the man was then arrested, and although committed for murder, was only tried on the minor charge of firing a loaded weapon at the officer, and was convicted. The authorities had, from a comparison of the bullets, satisfied themselves that the fatal shot was not fired by the prisoner. We will suppose, however, that in this case both the bullets were of the same size and marking. The question would then arise, Which wound was inflicted by the person charged, who only fired one shot? The discussion of this point may be taken under three heads: 1. Could a person in the position of the prisoner have inflicted the wound on the back of the head? 2. If the wound in the cerebellum had been first inflicted, could the person so injured have made any advance? 3. Is a wound of the cerebellum necessarily an immediately fatal injury?

1. The answer to the first question cannot of course be quite satisfactory. In a struggle like this men are naturally excited, and the relative positions of two persons, as told by others also engaged in the affray, has always to be accepted with some modification due to the circumstances. But there appears to me to be no doubt that a wound such as this could be inflicted by one person upon another advancing towards him in the positions which have been described. The assailant was to the left front of the detective, who, it was sworn, had to turn his head well round to his right, in order to see what impediment there was to the removal of his pistol from his side-pocket. If you place persons in similar positions you will see how much of the back of the head is exposed to the individual standing on the left front. In this case the wound passed from the left slightly upwards and to the right, making a very small angle with the surface at the point of impact—in fact, if the head had been thrown forward half an inch the deceased officer would have escaped, or at worst have received a scalp wound. At the same time, however, there are other sufficient explanations of this injury, one of which is that it might have been inflicted while the man lay on the ground, back up, and with his face in the struggle turned somewhat to the left. Here a bullet coming from a person firing at either detective or prisoner as they lay on the ground might have produced the same results, and shown the same course.

2. If the wound in the cerebellum had been first inflicted, could the person so injured have made any advance? This is a question of the greatest importance, because in this case it was proved that after the first shot was fired the deceased advanced upon his assailant and reached him. The prisoner only fired one shot, and therefore upon this would largely turn the decision whether he had really produced the fatal wound. Now, in viewing this branch of the subject we must carefully consider what are the functions of the cerebellum. We know that this question forms a very debatable one in physiology. There are, however, certain ascertained facts which will help us to a decision. There is no doubt that some lesions of the cerebellum are attended by loss of coördinate movement. Flourens says: "I removed the cerebellum of a pigeon in successive slices. During the removal of the first layers there appeared only a weakness and want of harmony in its movements. On removal of the middle layers the animal exhibited a general agitation, without true convulsions. It made brusque and irregular movements, and continued both to see and to hear. On removal of the last layers the animal entirely lost the power of standing, flying, leaping, or walking, which had been gradually affected by the preceding mutilation. Placed on its back it was unable to rise. Instead of remaining quiet and immovable, like pigeons deprived of their hemispheres, it was in a continual state of restlessness and agitation, but could never make any determinate movements. ..... Sensation, volition, and intelligence remained."[3] We know, on the other hand, that in some cases of diseases of the cerebellum the patient does not exhibit any marked want of power of coördination. Andral has noted ninety-three cases of disease of the cerebellum, and on analysis comes to the conclusion that only one of them quite supports Flourens' theory that the cerebellum is the organ of coördination of movements.[4] Combette[5] gives the particulars of the symptoms observed in a young girl in whom there was complete absence of the cerebellum. This patient could stand and walk up to a short period before her death, and the only characteristic symptom noted was that *se laissait souvent tomber*. Another case reported by Bouillaud, and referred to by Longet and Vulpian, is that of Guérin, whose cerebellum was found after death to be almost completely destroyed by disease. This patient still retained the

[2] Cooper's Surgical Dictionary, vol. I., p. 900.

[3] Ferrier: Functions of the Brain, p. 87.
[4] Op. cit., p. 89.
[5] Revue Médicale, 1831.

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power of coördination of movements, and could walk, only he was observed to reel and totter when he walked. In reference to this case Vulpian remarks: "Here we have a case in which the cerebellum was destroyed, and yet the patient could walk, though in an unsteady manner. But if this (Flourens') hypothesis were well founded, he ought not to have been able to stand or walk a step, for the combination of muscular contractions necessary for locomotion or maintaining the erect attitude ought to have been altogether impossible."[6] Ferrier, while admitting that lesions of the cerebellum cause disturbances of stability and locomotion, believes that the evidence from all sources tends "to show that the cerebellum is not specially concerned in the coördination of locomotion—a function which we have seen reason to localise in the optic lobes." It is necessary, however, that we should observe a distinction between injuries suddenly inflicted and diseases slowly progressing, for in the former case we have in addition the element of shock in operation. But it will be observed also that even allowing for this, Flourens' incisions, while they were confined to the outer parts, caused very slight disturbance, and that it was only when the deeper parts were reached that the symptoms of want of coördination were well established. Consciousness was never lost during the operation, and intelligence remained unimpaired. It may be stated then—and this will be further illustrated in the consideration of the next question—that in a wound of the cerebellum the person injured need not necessarily fall, and that it would be possible for him to make forward movements for some distance, irregular it may be, but so long as the cerebral functions were not interfered with, with absolute consciousness and intelligence.

3. Is a wound of the cerebellum a necessarily fatal injury, immediate or remote? Any lesion of the brain substance is always dangerous, and may be attended with immediately fatal consequences. But, on the other hand, there are numerous instances on record in which the most severe injuries have been unattended with any symptoms. Professor Bigelow vouches for a case in which an iron bar, weighing 13½ lb., 3 ft. 7 in. long, and 1¼ in. in diameter, was driven through a man's skull by a blasting charge. It entered the cranium opposite the left angle of the lower jaw, behind the zygoma, and emerged on the left side of the centre of the frontal bone, near the saggital suture. The man was conveyed home in a cart, in which he sat upright, descended of his own accord, and then with but little help mounted a long flight of stairs leading to a piazza, where he sat down, perfectly conscious, until aid could be procured. He recovered.[7] A case more in point is that recorded by Brown-Séquard,[8] which is from notes supplied by Mr. Brownfield, house-surgeon to the Poplar Hospital. A man fell into the hold of a ship a distance of sixteen feet. He fell so that the back of his head struck against a railway bar. The immediate effect was a slight stunning, but so slight that he was able to walk out of the ship's hold on to the deck. The surgeon who saw him found no symptoms, and told him to go home and rest. He walked one-third of a mile to the hospital, and on admission walked upstairs to bed. He, however, died the same night. On post-mortem examination there was a blood effusion under the dura mater on the surface of the left hemisphere. It was traced forwards and downwards around the anterior lobe, and then backwards along the base of the skull to a laceration of the cerebellum. This laceration was of the left lobe, on the inferior and posterior surface. It was vertical, an inch and a half in length, and half an inch deep. It was situated in the lobe quite away from the pons or crus cerebelli. Other cases from the history of the American war show certainly that injury is not immediately fatal, and the case I have just cited proves that a very extensive lesion of the cerebellum may be present without giving any symptoms whatever of want of power of coördination.

[6] Op. cit., p. 89.
[7] Medical and Chirurgical Review, 1850, vol. vi., p. 544.
[8] THE LANCET, Nov. 30th, 1861.

HOSPITAL DEMONSTRATION AT HAMPSTEAD.—A Friendly Societies' demonstration and church parade was held at Hampstead on the 24th inst. on behalf of the North London Hospital for Consumption. On the route of march to the parish church, where a specially arranged service was held, tables and collecting boxes were placed at convenient points, and a liberal collection was made at the church.

CYSTINE IN THE URINE SUCCESSFULLY TREATED BY LARGE DOSES OF CARBONATE OF AMMONIA.

BY LIONEL S. BEALE, M.B., F.R.S.,
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CYSTINE is one of the most persistent of urinary deposits. After it has once appeared it may be produced, and in considerable quantity, over a period of twenty years or more, or its production may only cease with life. It is among the least common of urinary deposits, and usually its presence is not associated with any symptoms more serious or definite than malaise, a feeling of weakness, fatigue, or exhaustion, with depressed or very low spirits. One of the most remarkable cases of cystine deposit which I ever saw came under my notice many years ago, and has been under observation for fifteen years or more. During part of this time I saw the patient very frequently, and made many examinations of the urine, of the deposit, and of the calculi, which he passed in considerable numbers.

The patient (E. H. O——) was a fairly healthy-looking man, of thirty, 5 ft. 5½ in. in height, weighing 9 st. 6 lb., who was by trade a packer, an occupation involving pretty hard work and long hours. For four years before he came to me he had suffered more or less from lumbar pain and discomfort about the thighs, especially on exertion, and he often felt weak and low. He sometimes had to walk with a stick and had had to give up work now and then for a week or two at a time. About two years after the first commencement of the symptoms he suffered from a fixed pain in the left groin, and soon afterwards several stones were passed, sometimes to the number of twelve or more at once. One of the calculi, however, was so large that it remained in the bladder, and Mr. Coulson had to crush it.

I put the patient on carbonate of ammonia and told him to increase the dose gradually until it amounted to about fifty grains a day. He found the remedy agree with him so well that he soon exceeded this quantity, and for twelve months he took as much as fifty-five grains daily on the average, on some days consuming much more, on others considerably less, than this amount. In this time he did not pass as many calculi as before he had passed in a single month, and his weight increased to 9 st. 11 lb. In the next year he took about thirty-five grains of carbonate of ammonia per diem, and in the following only an average of about twenty grains a day. This patient's family history was not very satisfactory. His mother died at the age of fifty-two of phthisis, and two sisters died under the age of twenty-five of the same disease. He did not look a strong man, and the muscles of his arms and legs were below the average size and prominence. When a young man he used to take violent exercise and rowed in races. The quantity of urine passed was generally about the average, and never exceeded three pints. Every specimen that passed during a period extending over at least five years, he feels sure contained cystine. Afterwards the cystine was very frequently detected in considerable quantity. The crystals could be seen in the urine immediately after it was passed as small sparkling grains. The ammonia not only diminished the formation of the cystine, but the patient found that while he was taking it his bowels acted freely and he never required an aperient, although previously he had been much troubled by obstinate constipation. When the ammonia was not taken he says he did not feel as well as when he was taking it. He found no inconvenience from taking these large doses of carbonate of ammonia, and soon became so accustomed to the taste that he did not object to it in the least. I have seen this patient at intervals during the last few years, and although cystine in small quantities was generally present in the urine, it gave him no inconvenience, and no calculi seem to have been formed for the last three or four years. In this case, then, cystine has been found in large or small quantity during a period of at least eighteen years, and for the first five or six years of this time hundreds of cystine calculi were passed, the largest being about three-eighths of an inch in diameter, the smallest not larger than the head of a very small pin. The cystine crystals formed a visible whitish deposit, which varied much in quantity, even from day to day, but sometimes formed a sediment.

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Another case was that of a gentleman about fifty, who had suffered from abundant cystine deposit for two years before I saw him, and had passed seven or eight renal calculi, some of them beautifully crystalline, and entirely composed of cystine. This patient took fifty grains of carbonate of ammonia dissolved in two ounces of distilled water three times a day after a meal for upwards of two years without any inconvenience, and during this time he had not even once required an aperient. If he gave up the ammonia he did not feel "up to the mark." As the amount of ammonia seemed very large in proportion to the water in which it was dissolved, I had twenty-five grains of Howard's volcanic carbonate of ammonia dissolved in an ounce of distilled water, and found that, although it tasted very strongly, it was not caustic. On inquiry, Mr. D—— informed me it was only gradually that he reached this degree of concentration, but that he experienced no difficulty in taking it. He took it immediately after a meal—"on an empty stomach it produced nausea." For three years, with scarcely an intermission, 1050 grains of carbonate of ammonia were taken per week. The cystine deposit ceased during the last year of taking the medicine, and three years have now passed without its recurrence. I think, therefore, we may regard this case as really "cured" by the large doses of carbonate of ammonia.

It is to be feared that the tendency in the present day is rather to prescribe new remedies which are being continually introduced than to select from old ones such as are known to have valuable properties, and which have been proved by long experience to be really beneficial in certain pathological conditions. Far from condemning the new because they are new, like all who know the extreme value of such things as salicylate of soda and bromide of potassium I am most anxious to acknowledge my gratitude to those who devote themselves to the study and the discovery of the healing properties of every substance that can possibly be of use in treatment. But, while I am desirous not to say anything that could suggest to the reader that I am condemning the new things, I would impress upon the rising generation of practitioners the importance of being careful not to neglect the old. One cannot but desire that a drug like ammonia, so valuable in many forms of disease and departures from the healthy state, should not be forgotten or laid aside. The cases of cystine deposit to which I have drawn attention prove not only that large quantities may be taken without detriment or inconvenience, but that the use of the drug may be continued for a considerable period of time with advantage, and without the slightest derangement of any of the physiological processes being occasioned.

In our endeavours to help those who have acquired the vicious habit of consuming too much alcohol, ammonia is of great use, but it ought to be given in doses far larger than those in which it is usually prescribed. One of my patients assured me that he found ammonia very beneficial, that it relieved him of the feeling of tiredness from which he frequently suffered, and enabled him to perform hard work without getting exhausted. Not only have I found great benefit result from giving ammonia in considerable doses in many low forms of illness, but I have experienced its good effects by taking it myself. It acts very differently from any form of alcohol, although its effect upon the patient as judged from his own sensations appears to be somewhat similar. Though no feeling of hilarity seems to be induced by it, the lowness and depression of spirits and the tired feeling affecting the muscles, or rather the nerves and nerve centres by which they are supplied, are often removed in the course of half an hour or less by a dose of ammonia.

The cases I have adduced are sufficient to show that ammonia may be given in much larger doses than are generally prescribed, and that it need not be diluted to the degree generally supposed to be necessary. We used to be taught that five grains of carbonate of ammonia should be dissolved in at least an ounce of water, but as one of my patients took as much as twenty-five grains per ounce, and continued this three times a day for three years, we may feel satisfied that a solution of from ten to fifteen grains per ounce may be taken without difficulty, and I have prescribed this as often as once an hour in cases where the heart's action was very feeble and a decided stimulant was evidently necessary.

The public have discovered the value of sal volatile in cases of [illegible] and many minor ailments, but ammonia, like many other [illegible] of real value in the treatment of many departures from the healthy state, has lately been somewhat neglected, and is, like some other valuable remedies, in danger of being forgotten amid the multitude of new preparations which thrust themselves upon our notice; and it is therefore desirable that attention should be directed to its usefulness, as well as to the value of many other drugs which have been of real service to past generations of patients.

Grosvenor-street, W.

ON FIVE CASES OF

SPORADIC CRETINISM IN SCOTLAND.

BY ROBERT KIRK, M.D., F.F.P.S. GLASG.,
OUT-DOOR PHYSICIAN-ACCOUCHEUR TO THE GLASGOW [illegible] INFIRMARY.

(*Concluded from page 316.*)

CASE 4.—J. R——, male, aged thirty years, born at Falkirk, where he still lives. His parents are both in good health, free from goitre, and state that they knew nothing of the malady until it appeared in three of their children; to be noticed presently. The history is in other respects like that of the others, except that the father has occasionally indulged in drink. The patient is the third of eleven children, eight of whom are quite healthy; his eldest sister, who died lately, was affected like himself; his youngest sister is the subject of Case 5. Nothing was thought to be wrong with any of these three at their birth: they were like other children. It would seem, however, that there were certain indications of the malady, although of a very different kind from those existing in the former cases; for the mother stated that J. R—— was an extremely beautiful infant, having a fine pink flush on his cheeks and ears like wax. After some time, although it was impossible to find out exactly when, he gradually changed; his complexion became dull and sallow; he grew slowly, and had a small appetite; years elapsed before he cut his first teeth; at seven he began to walk with a feeble and tottering step, and he was ten before he made the first feeble efforts to articulate. The neck is the only part of the body that has ever been swollen, where there is a bronchocele of considerable size. His height is 4 ft. 6 in.; circumference of the head 21½ in.; there is a considerable posterior curvature of the spine in the cervical region; the head, trunk, and limbs are fairly proportioned; except a slight doughiness of the ears, there is no sign of myxœdema about the skin; no swelling anywhere. On the contrary, he is emaciated, and the skin is soft and free from desquamation. He has a double goitre, the swelling being as large as the fist on the left side, and somewhat less on the right; there is no trace of supraclavicular swellings on either side of the neck. He has the following features of the cretinous type of conformation:—Wide interval between the eyes; root of the nose much depressed; alæ nasi very wide, and the point of the nose elevated; arch of the palate narrow and high; lower lip depending, markedly thick in comparison with the upper, which is thin; tongue thick but moist; tendency to salivation. He is beardless but the hair of the scalp is abundant; abdomen slightly tumid; genitals not examined, but I had the opportunity of observing that there was a fair amount of pubic hair. The skin is generally dry; there are numerous pink spots over it, somewhat like faint petechiæ, some of these being apparently older and fainter than the others; veins are everywhere noticeable over the surface. He has his permanent teeth, and the lower incisors are notched as in Case 3; the upper are much worn. He is extremely slow in all his movements and cannot be hurried; he breathes heavily on the least exertion, from evident compression of the trachea; pulse and cardiac sounds weak; temperature in the axilla 97·8°; his skin always feels cold and he often becomes blue; he is extremely sensitive to cold, and last winter his mother says he was on one occasion nearly frozen to death. His articulation is hurried and indistinct, and seems almost painful to him; it is perhaps not so nasal as in other cases, but I heard only a few words, thrown out with a jerky effort. He could never be taught to read, write, or do any sort of work. All his senses are good, and he has no perverted idiotic propensities. His mother says the goitre is growing faster of late, and he is getting gradually weaker. The eldest sister of this patient was in a rather worse condition than himself, and was at

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one time, apparently, swollen; she had a bronchocele on the right side as large as a two-pint pitcher. She died at the age of thirty-two of dyspnœa with gradually increasing emaciation, stiffness, and feebleness. She was about the size of a girl of twelve years.

CASE 5.—A. R——, aged fourteen, sister of the foregoing, and youngest of the family, is 4 ft. in height. She does not present so bad a case; the limbs are fairly proportioned, but the hands and wrists are thick; the fingers are tolerably long; the abdomen is slightly tumid. She can walk well; though weak on her legs and not so forward as girls of her age, she has made some progress with her education. Nevertheless, she is a decided cretin. There is marked flattening of the nose, with elevation of the point, and very wide alæ nasi; wide interval between the eyes; both lips thick, especially the lower, the face having a prognathous appearance; tongue moist but thick, and too large for the mouth, while its movements are precisely the same as those seen in adult myxœdema; palate vaulted; intensely nasal intonation. The neck is remarkably broad at the base, although not in the least myxœdematous; there is a goitre on the right side, about the size of an egg; no trace of swellings above the clavicles. Skin generally dry and cool, and nowhere rough; no desquamation; upper eyelids slightly tumid, forming slight folds, which rest nearly on the eyelashes; ears a delicate pink, showing fine veins behind. Permanent teeth developed, and the lower incisors are notched, as in Cases 3 and 4. The upper incisors require special notice. These are quite normal in front, but the posterior surface is excavated into a hollow having two sides, united at nearly a right angle. One of these sides is horizontal, and nearly on a level with the gum; the other forms the posterior surface of the tooth. This latter side is marked by three distinct black lines, radiating from the bottom of the cavity. These features are most pronounced in the central pair, the lower half of which is thus very thin. They have none of the marks of syphilitic teeth. I examined the teeth of both parents, and of their eldest son and two daughters, and found them excellent; none of them being syphilitic, nor having any of the characters above described. The patient is always cold, and fond of sitting by the fire; temperature 98°; she sometimes sweats a little. Her heart and pulse are tolerably strong, but her mother thinks she is becoming weaker of late, especially in walking. These three members of the family have never had scarlatina, measles, or whooping-cough.

Remarks.—I do not find in the latest French treatises on cretinism — as for instance, Baillarger's "Enquête sur le Goitre et le Crétinisme" (1873), or the article in the "Dictionnaire des Sciences Médicales" (1879)—any reference to the characters of the upper incisors I have just mentioned. I would draw special attention to them; they are very distinctive, and should they be found constant might be of some diagnostic value. It is true there are numerous cases where this will not be available, for many cretins never get the second teeth, and when these do appear they are very carious and are soon lost. But where they exist this point should be attended to, and might be found of service in thoses cases, of which a few have been recorded, where myxœdematous symptoms supervene in childhood after the second dentition, and in which it is difficult to determine between myxœdema and congenital cretinism.

It cannot be doubted that the above cases are all examples of cretinism. Cases 3 and 5, which present the malady in its slighter forms, have a considerable number of marks which belong only to this disease, and which certainly differentiate them from the subjects of any other cachexia. This being granted, there is one point which appears very striking. While all have something in common there is a wide divergence between them in many respects. The same seems to be the case, too, with endemic cretinism, for we meet with descriptions of cases which are evidently the exact counterparts of the above, and even others besides. Yet we scarcely find any attempt made at classification, except with reference to the different degrees of severity of the symptoms. One might suppose that cretins ought to be divided into classes founded on well-defined differences of morphological type, with divergence in symptoms, history, and other particulars. Amongst many other features which seem to characterise one class more than another, we find, for instance, a remarkable difference with respect to myxœdema, some being even thin, while others are much swollen. In the light of recent researches can we doubt that this alone is an important distinction, probably having reference to various conditions of the thyroid, and that these two classes of cases will show characteristic discrepancies in a variety of other points, as in the cases above detailed?

These cases, further, have an important bearing on certain views which have been lately entertained as to the supposed difference between endemic and sporadic cretinism. Mr. Curling, as is well-known, in a post-mortem examination of two cases of the latter found that the thyroid was absent and that the supra-clavicular swellings were composed of fat, and the late Dr. Fagge formed the opinion that these two features constituted an anatomical distinction between this affection and endemic cretinism, and he published four additional cases in which during life the thyroid seemed also to be absent. Subsequently, however, he had the opportunity of making an autopsy of one of his own cases, and he found that the thyroid was not only present, but was goitrous in its right lobe. He duly emphasised this fact, but still believed that the fatty tumours remained as a constant distinction between the two diseases, having been found in all cases of sporadic cretinism, even in those accompanied with goitre, of which two had been reported at that date—namely, Dr. Fagge's own case just mentioned, and one reported in the *Medical Times and Gazette* for 1855 (vol. ii. p. 266). But the present series of cases clearly shows that this distinction was not founded on a sufficient basis of fact. Besides, are we sure that the thyroid is never absent, and the tumours in question never to be found, in endemic cretinism? After a careful search I have found no positive statements with regard to the thyroid in French authors, except as to the presence or absence of bronchocele; indeed, this was all that was proposed to be kept in view when the French Commission, of which Baillarger gives the report, was instituted. Again, in the article on Cretinism in the "Dictionnaire des Sciences Médicales" (1879), it is stated that the greater number of autopsies which have been made of cretins are untrustworthy, and we find no reference made to the neck except when goitre existed. We may suppose it possible that the point has been wholly overlooked. It would appear very probable that in some of the non-goitrous cretins, who are generally of the lowest type and correspond closely to the majority of cases of sporadic cretinism reported in this country, the thyroid will sometimes be absent. With regard to the fatty tumours, we have positive evidence that they were noticed by some observers. Thus M'Lelland, in his "Medical Topography of Bengal," states that the swelling in the necks of cretins does not always begin in the thyroid gland, but may commence with "a fulness of the base of the neck on one or both sides above the clavicles." If we do not find these mentioned in descriptions of endemic cretinism in France, neither do we find them referred to in cases of the sporadic affection in the same country until quite recently. In a case of sporadic myxœdematous cretinism in *Le Progrès Médical* for 1880, p. 709, by Bourneville, they are expressly mentioned, but in otherwise precisely similar cases reported in France ten years ago we find no reference to them. It is probable that they are in proportion to the myxœdematous condition generally, and are to be found in many cases of endemic as of sporadic cretinism.

But probably the chief interest of the preceding cases will be found to lie in the light they may shed on the question of the relationship of cretinism to the cretinoid affection or myxœdema of adults. The subject can only be glanced at within the limits of this article. How far are these two conditions related to each other? If we confine our attention to the first two cases, it would appear that we might fairly designate them as examples of congenital myxœdema. They closely resemble the adult affection in all essential points, with only such modifications in Case 1 as might plausibly be accounted for by the period of life at which the disease existed; although it is certainly curious that Case 2 should rather correspond to myxœdema at a very advanced age. But if affinity in essential features be granted, the question arises, Is myxœdema the principal factor in producing the various symptoms of cretinism, as has been suggested, and as it has been held to do in the adult affection also? The answer would seem to be in the negative. Case 2 belongs to a rather lower type than Case 1; the mental and muscular powers are weaker, while the deposition of mucin in the tissues, if such there be in this case, must be very much less. It might be compared, perhaps, to Dr. Goodhart's case of myxœdema, in which little mucin was found in the tissues after death, and appears to teach the same lesson. If we go a step further, and admit that the remain-

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ing three cases have anything in common with myxœdema, we must widen our range of view still more; and there would appear to be an intimate bond of connexion between the two. In Case 3 the ears, the cheeks, the thick lips (which, in framing themselves, to speak more especially, at once reminded one of myxœdema), and the furfuraceous desquamation, were all distinctive. In Case 5 the size and movements of the tongue and many other features could not be referred to any other cachexia. It is probable, too, that Case 4 was at one time more swollen than he is now, though in many points he still resembles a case of myxœdema; while in all there were marked nasal intonation, slow movement, defective mental capacity, susceptibility to cold, and other symptoms. It is evident that these symptoms were far from being in proportion to the apparent degree of myxœdema, neither did they correspond in gravity to the lowness of the bodily type of conformation as much as might have been expected. It is certainly curious, too, that the various features of myxœdema should crop up in such a variety of modified forms in these several cases, and that such characteristic phenomena as the furfuraceous desquamation should be present in one case and absent in others. The nasal intonation and the peculiarities of nasal conformation were more nearly alike in all than any other features. It might almost be said that the myxœdema of adults is but a single and stereotyped form of a disease which admits of numerous modifications, only to be found and studied in cretinism. The entire subject abounds in paradoxes. The apparent connexion of cretinism with goitre, on the one hand, and yet the existence of facts which have suggested an antagonism between the two on the other; the greater liability of females to the former and of males to the latter disease; the special susceptibility of women to goitre at the climacteric period of life and after confinement,[1] and to atrophy of the thyroid and myxœdema in the same circumstances—these are all facts probably connected by some yet hidden and secret links.

Partick, Glasgow.

ACUTE INTUSSUSCEPTION IN AN INFANT EIGHTEEN WEEKS OLD.

STERCORACEOUS VOMITING; INFLATION BY WATER PER ANUM; RAPID SUBSIDENCE OF SERIOUS SYMPTOMS; RECOVERY.

BY HERBERT COLLIER, M.D. BRUX., &c.

WILLIAM B——, aged eighteen weeks, was brought under my notice on Feb. 16th last, suffering from great collapse, and with marked signs of acute obstruction of the bowels. The mother stated that she suckled the child from birth, but as she did not have sufficient milk she supplemented this diet with small quantities of bread soaked in water and sweetened with sugar. The infant had never rejected his food till about a week previous to my seeing him, when he commenced to return a small portion of the milk after each meal; the bowels also became costive, and the evacuations alimy and highly offensive. The child, however, "appeared quite well, and seemed more hungry every day." At the age of ten weeks he had a slight attack of bronchitis, which, under medical treatment, passed off in a few days. Since his recovery no medicines of any kind had been given. On Feb. 15th, whilst lying asleep in his mother's arms, he suddenly became convulsed and appeared in great pain, screaming loudly and struggling, so that it was with difficulty that he could be held. After the fit had lasted a few minutes the struggling gave place to violent straining, "as if he was trying to relieve himself," and during these efforts a large quantity of gas was discharged per anum. On the diaper being inspected, it was found to be soaked with bright blood and slime, but did not contain any fæcal matter. He now appeared more calm, and after a short time took the breast, but almost immediately afterwards became very sick, bringing up a large quantity of milky fluid. Since then he had mostly been quiet, crying and straining only by "fits and starts." He had taken small quantities of milk-and-water from a teaspoon, but nearly always returned them immediately. No natural action of the bowels had occurred since an hour before the onset of the attack, although the diapers were several times found stained with "bright watery blood." Urine was passed more frequently, but in smaller quantities than usual.

When seen by me on Feb. 16th, at 4 P.M., I found the condition of the child to be as follows. He was well nourished, but much collapsed, with pale face and pinched, drawn features; pulse 100, feeble and irregular; respiration 30, shallow; skin cold and perspiring; temperature 100·5°, taken in the rectum. There was much distension of the abdomen, and percussion yielded a tympanitic note, except where the right inguinal and hypogastric regions were occupied by an elongated swelling, which ran in a direction upwards and inwards, and could plainly be seen and felt. Pressure over this tumour gave rise to crying and struggling on the part of the infant. On account of his tender age it was not considered advisable to extend the examination to an exploration of the rectum. Three blood-soiled diapers were shown by the mother, and one of them, said to be in use at the onset of the attack, contained about two ounces of blood and mucus. Having diagnosed acute intussusception, it was thought best to resort to inflation of the bowels as soon as possible, but as an anæsthetic was necessary for the more perfect execution of this operation, some valuable time was lost in procuring the requisite assistance. In the meanwhile hot fomentations were applied to the abdomen, and a mixture containing tincture of belladonna, chloric ether, and sal volatile, in appropriate doses, was prescribed every two hours. At 6 P.M. the child was in much the same condition. The pulse was slightly stronger, and he had not vomited since my last visit. He had refused the breast, but had taken and retained two doses of the medicine. The same treatment was continued, in addition to which ten drops of brandy in a teaspoonful of ice-water were given every half hour. At 8 P.M. the pulse was still more improved, although vomiting had occurred twice since I last saw him. About an ounce of blood-stained mucus was passed per anum during this visit. The treatment was continued. At 9 P.M., after a consultation with my friend Mr. Blake of Great Yarmouth (to whom I am indebted for kind assistance during the subsequent inflation of the bowels as well as for giving chloroform), it was decided to anæsthetise and attempt to dislodge the prolapsed portion of bowel by injecting water. After chloroform had been inhaled some few seconds, and before insensibility was produced, the patient became violently sick, ejecting about half a pint of pale-yellow fluid, having a strong fæcal odour. The pulse at this moment became scarcely perceptible, and the child appeared in the gravest danger; but on chloroform being suspended and ammonia applied to the nostrils, the pulse returned, and remained fairly strong throughout the remaining stages of anæsthesia. The fingers of one hand being kept in contact with the sausage-shaped tumour described above, warm water was slowly injected into the rectum by means of a Higginson's enema syringe, care being taken to prevent its return by the side of the nozzle. When about twenty ounces had been injected, a sense of the tumour slipping away was plainly perceptible to the fingers in contact with the abdomen. By the time some thirty-five to forty ounces had been injected the tumour had entirely disappeared, and the most careful examination failed to detect it. The patient was now wrapped in warm blankets, and the injected fluid allowed to drain off. During returning consciousness the child once more vomited freely, bringing up fluid of the same colour, and possessing the same strong fæcal odour, as before. Ten drops of brandy in a teaspoonful of ice-cold water were subsequently administered and retained, and the child afterwards manifested an inclination to sleep. The hot fomentations were again ordered to be applied to the abdomen, and the belladonna mixture to be given every two hours. At 12 P.M. a large quantity of water was found to have been passed per anum. The child appeared more comfortable, and was sleeping calmly. He had not evinced a desire for milk when placed to the breast. On the diapers being changed in my presence, about two tablespoonfuls of dark-yellow fæcal matter were found to have been passed. The fomentations were ordered to be continued to the abdomen, and the mixture given every four hours.

Feb. 17th.—9 A.M.: The child had taken the breast twice during the night, and had another natural action of the bowels at six o'clock this morning. From this time the patient made an uninterrupted recovery.

The features of interest in this case are so obvious that it

[1] Baillarger, p. 18.

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is unnecessary to particularise them. I may, however, be permitted to state that, so far as I am able to ascertain by reference to several authors upon the subject, it affords the earliest example of recovery in so young a victim to this disease.

Gorleston, Suffolk.

A Mirror of HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nullas autem ostalia pro certo noscendi vias, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI, *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF DISEASE OF THE THYROID GLAND; REMOVAL OF ISTHMUS AND PART OF LATERAL LOBES; CURE; REMARKS.

[Under the care of Mr. SYDNEY JONES.]

FOR the following notes we are indebted to Mr. W. H. Battle, surgical registrar.

CASE 1.—E. H——, aged twenty-four, married, and having one child, was admitted on Jan. 23rd last. The patient had not suffered from any previous illness, excepting periodical severe frontal headache, accompanied by nausea. When she was eight years old a swelling was first noticed in the neck, and thenceforward it steadily increased in size. For the last ten years it had at times caused difficulty in breathing. During the attacks of dyspnœa the respiration was noisy but there was not any lividity of the face or lips. Each attack generally lasted a few hours, but once it continued for three days. During the last two years there had occasionally been difficulty in swallowing, and for about the same period of time there had been palpitation of the heart, and "faint sickness" at the catamenial periods. For the last six months the difficulty in swallowing had been more frequent, and she stated that she had been getting paler.

On admission, she was a pale but well-nourished woman, of rather dark complexion, holding her head down a little on the right side. She complained of a throbbing swelling in front of the neck, and attacks of difficult breathing, coming on once or twice a week. There was a tumour in the position of the thyroid gland, moving upwards when the patient swallowed. Examination showed it to consist of two divisions, somewhat egg-shaped, the larger being situated under the right sterno-mastoid, and the smaller in the middle line of the neck, and connected with the larger by means of a broad isthmus. In the middle line the tumour extended from the cricoid cartilage to the sternal notch, its vertical measurement being 2½ in. On the right side the tumour passed under the sterno-mastoid, which it pushed forwards, and reached from the point where the external jugular vein crosses the posterior border of the muscle to the clavicle. This lateral portion of the tumour was softened, and there was more pulsation visible over it than over the median line (communicated by the carotid). There was no fluctuation anywhere. The vertical measurement of the right lobe was 3½ in., widest transverse measurement 5½ in. The enlargement of the left lobe was comparatively slight, excepting near the isthmus; it, however, extended from the right of the middle line to underneath the anterior margin of the sterno-mastoid. The superficial veins were not enlarged, and there was no exophthalmos. Temperature normal. Further examinations made during the time intervening between her admission and the operation (fifteen days) proved absence of cardiac and renal disease. There was no venous murmur in the neck, the breathing became easier, and she had no attack of dyspnœa, but complained of occasional difficulty in swallowing and of palpitation. The catamenia were regular, and there was no increased difficulty in respiration at the period. A tender spot was found on the left side of the tumour under the sterno-mastoid, over a part which felt firmer than the surrounding substance.

On February 6th, the patient having been placed under the influence of chloroform, Mr. Sydney Jones made an incision in the middle line from the upper border of the tumour downwards to the episternal notch. When the deep fascia was divided, the tumour, covered with its capsule, bulged forwards through the incision; the isthmus was at once seen to the right of the middle line, and it became more evident that the bulging in the middle line was due to a displacement of the left lobe of the gland. There were only two or three vessels of any size which required to be ligatured. The finger was passed behind the isthmus from below; and, with this as a guide, an aneurysm needle, carrying a double ligature of strong silk, was passed through the middle of the left side of the isthmus, the ligatures being locked and tied above and below. A similar double ligature was passed on the right side and tied; the isthmus was then divided with the scalpel. A double ligature was then passed through part of the left lobe so as to include about the mesial third, and the portion internal to the ligatures was cut off. The section exposed semi-translucent whitish matter scattered thickly through the substance of the gland. A few small vessels required to be ligatured in the wound, but there was no hæmorrhage from the cut surface of the gland.

An examination of the trachea proved it to be keel-shaped and compressed laterally, the sharp edge pointing forwards; it was also displaced to the right. The ends of the strong silk ligatures were left long and tied in a knot outside the lower angle of the wound, from which a drainage-tube passed the whole length along the floor to the upper margin. Alternate silk and catgut sutures were used to close the wound. Carbolised oil, iodoform wool and salicylate wool, secured by means of antiseptic gauze bandages, were applied as dressing, and the patient placed in bed, sand-bags being used to keep the head steady. In the evening the wound was redressed; there was slight venous oozing and the temperature was 97·4°. On the 7th the wound was again dressed; the discharge was blood-stained; there was also a quantity of clear unstained serous-looking fluid. The head and shoulders of the patient were raised, to permit of free discharge. Temperature, morning, 102°; evening, 102·8°. On the 8th the pulse was 92; respiration 24; temperature, morning, 101·2°; evening, 100·8°. On the 11th the remaining sutures were removed, the wound having quite united. On the 16th a lotion of chlorinated soda was applied and strapping was placed across the wound. On the 29th a lotion of sulphate of copper (two grains to the ounce) was applied, and on March 4th the patient was allowed to get up, but it was not until nine days later (thirty-fifth after the operation) that the last ligature came away, after which the wound soon closed. She left the hospital on March 16th.

After February 17th the temperature did not reach 99·6°; between the 8th and the 17th the morning temperature varied from 99·2° on the 15th to 101·4° on the 12th, and that of the evening from 100° on the 10th to 102·4° on the 13th, there being an average difference of one degree between them during that period.

CASE 2.—H. K——, aged seventeen, a fitter, was admitted on March 24th. The mother of the patient had, it was said, a swelling in the neck similar to the patient's, but nothing definite could be discovered about it. In the present case the enlargement was first noticed in the lower part of the neck six months before admission. It slowly increased, but for three weeks had grown more rapidly, especially on the left side. Some alteration in the voice had been noticed for about four months; there had also been slight difficulty in swallowing. During the whole time since the commencement of the enlargement he had had aching pains in the eyes, and he has also had slight palpitation on unusual exertion.

On admission, there was considerable enlargement of the thyroid gland, extending from the level of the hyoid bone to the root of the neck, the greatest prominence being at the level of the isthmus, which, however, did not appear to be affected. The swelling was limited to the lateral lobes; it was soft but without fluctuation; there was slight pulsation to be felt. There was no fulness of the superficial veins. There was some cardiac hypertrophy, and a lengthening of the first sound at the base. No exophthalmos; no evidence of visceral disease. The circumference of the neck on a level with the seventh cervical vertebra was fifteen inches, round the root of the neck fifteen inches and a half, being a quarter of an inch more on the left than on the right side.

On April 2nd, Mr. Sydney Jones operated, making an incision in the mid-line of the neck, about four and a half inches in length, down to the capsule of the thyroid isthmus, which was exposed. Some veins required ligature, and after they had been secured, the isthmus was isolated by means of the director; the isthmus, which was very friable, gave way

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when it was being separated from the front of the trachea; a double silk ligature was then passed through the anterior part of the lateral lobes and tied in each case above and below, a considerable portion being thus removed. The substance of the gland was granular and easily broken down. The trachea had been slightly compressed laterally by the growth; its anterior surface was quite cleared by the operation. A drainage-tube was placed along the wound, the edges of which were brought together by means of silk sutures, the long ligatures of thick silk which were attached to the thyroid being brought out at the lower angle. The wound was dressed under the carbolic spray in the usual manner.

For some hours after the operation the patient had a headache, but otherwise felt quite well. The day after the operation the wound was redressed; six days later the sutures were removed, plaster being placed across the wound to keep the edges well apposed. Two days later chlorinated soda lotion was substituted for the antiseptic dressing and the drainage-tube removed, and twelve days after the operation the last ligatures came away. He got up on the sixteenth day, and twenty days after the operation the neck measured fourteen inches. When seen after he had left the hospital there had been further diminution in the size of the neck.

On the evening of the day of operation the temperature was 98·8°, rising next morning to 103·2°, falling during the day to 99°, and rising later to 101·8°. There was then a gradual fall (excepting on the 6th, when it rose to 102·2°) to 96·8° on the 9th; from that date until the morning of the 12th there was a gradual rise, reaching 103°, and falling next day to 96·4, after which it rose to normal, and continued so.

Remarks.—In the cases which have been operated on in the median line by Mr. Sydney Jones, in some a well-marked isthmus, drawing tightly together the lateral lobes, has been observed; in others the isthmus has not been so well marked. In all cases the object aimed at has been to form a deep sulcus in front of the trachea so as to make a wide separation between the lateral lobes, and to effect this wide separation when the isthmus has not been well marked, and when the lateral lobes have been approximated part of each lateral lobe has been removed after transfixion with a double ligature. In all cases shrinking of the lateral lobes has occurred, in addition to the relief to the difficulty of breathing and deglutition. Free drainage has been secured in the middle line by a drainage-tube in front of the trachea, and no symptoms causing any anxiety have occurred.

LIVERPOOL NORTHERN HOSPITAL.

ANEURYSM OF ARCH OF AORTA; EMBOLISM OF ABDOMINAL AORTA; NECROPSY; REMARKS.

(Under the care of Dr. DICKINSON.)

FOR the following notes we are indebted to Mr. S. W. Roughton, M.B.Lond., house physician:—

A. H——, a sailor, aged twenty-eight, was admitted into the hospital on March 29th of the present year. He stated that for four weeks he had suffered from pains in his joints and across the front of his chest. On examination, no physical sign of disease was discovered. The urine was natural. He denied ever having had any venereal disease, and said that he had always been temperate. The pains in the joints subsided in a few days, but the pain in the chest persisted and became worse. On April 12th he first complained of slight cough, and on April 16th an area of dulness over the upper part of the sternum, continuous with the cardiac dulness, was first noticed. Over this dull area the heart sounds were very loud, but no bruit was audible; the right radial pulse was also noticed to be a little smaller than the left. He was ordered ten grains of iodide of potassium three times a day. On April 20th, distinct pulsation could be felt over the upper part of the sternum and costal cartilages on the right side. A bruit was also audible at the right second intercostal space and conducted into the subclavian. A sphygmographic tracing showed a curve with rather slow ascent and a well-marked round top; this was more apparent in the tracing given by the right radial artery. On May 22nd the patient was put upon Tufnell's treatment. At first he behaved very well, and at the end of a week the bruit was a little softer and the pain not so severe. The pulse, however, always remained rather rapid, varying from 90 to 110 per minute. About June 17th the patient began to complain that he could only lie upon his right side, for if he turned upon his back his breathing became much impeded, and he began to cough. By June 23rd he had become tired of lying still, and insisted upon sitting up in bed. His face soon became slightly blue and œdematous, and the veins of the neck were a little distended. All these symptoms gradually increased, the pain in the chest becoming so severe that he could not sleep without morphia.

On July 9th he was feeling rather easier than usual, but at noon he was suddenly seized with violent pain in the abdomen, became greatly collapsed, and bathed in a cold perspiration. He complained of numbness in his legs, and of inability to move them. No pulsation could be felt in either femoral artery, and both legs were cold and livid. At 6 o'clock the same evening he spat up some blood and gradually sank, death occurring at 10.30 P.M.

Necropsy.—Immediately above the attachment of the aortic valves the aorta was dilated, forming a large, irregular, but more or less spherical cavity, about the size of a fœtal head. The aneurysm involved the whole of the circumference of the artery from its origin to the beginning of the descending portion. Its walls were very thin, and very little laminated clot was found adherent to them; but the cavity contained a large quantity of soft, dark clot in places indistinctly laminated. The remainder of the aorta was fairly healthy, but was completely filled by a soft dark clot terminating at the bifurcation of the aorta. On cutting into the clot, no portion of different consistence was found in its interior, the whole clot resembled very closely that found in the aneurysm. Besides some hæmorrhage into the substance of the left lung, there was no other pathological change.

Remarks.—The chief points of interest in this case are:—(*a*) The absence of any discoverable cause, and the age of the patient—viz., twenty-eight years; (*b*) the gradual appearance of the symptoms made the case very interesting to watch clinically; (*c*) the failure of the method of treatment employed was no doubt mainly due to the aneurysm involving the whole circumference of the aorta, and thus being very badly suited to the deposition of laminated fibrin; (*d*) the immediate cause of death was, no doubt, the detachment of a portion of the soft clot contained in the aneurysm and its impaction in the bifurcation of the aorta, followed by secondary thrombosis filling nearly the whole vessel.

CUMBERLAND INFIRMARY, CARLISLE.

LARGE IRREDUCIBLE UMBILICAL EPIPLOCELE; REMOVAL OF OMENTUM, SAC, AND REDUNDANT SKIN; WOOD-WOOL DRESSING; RECOVERY; REMARKS.

(Under the care of Dr. LEDIARD.)

THE patient, a married woman, first applied at the out-patient room with an umbilical hernia of large size, containing omentum and bowel, the latter only being reducible. The tumour had gradually increased in size since the date of origin—viz., six years previously. As the patient was seven months pregnant she was advised to return after her confinement, which she did upon July 9th, 1884. The pyriform tumour was central and about the size of a fist.

On July 14th an incision was made over the hernia; the sac opened, and the few adhesions which united the omentum to it were broken down. The omentum was then ligatured and cut away and the pedicle secured by catgut stitches to the margins of the ring; the sac was next separated from the cellular tissue and cut away, and the skin was also freely cut away so that a few stitches brought the edges together neatly over. A drainage-tube and some wood-wool was the only dressing used. The wound healed in two weeks.

Remarks by Dr. LEDIARD.—This is the fourth case of hernia treated in nearly the same manner. Two cases were small femoral ruptures, the sacs of which contained irreducible bits of omentum, and upon which the pressure of a truss was unbearable. The other case was an inguinal hernia the size of a duck's egg, containing adherent omentum. In each instance the sac was cut away, ligatured, and stitched to the margins of the ring. In all good recoveries were made, and the dressings were strictly antiseptic. It is especially desirable to obtain a radical cure in umbilical hernia, on account of the increasing disability they seem to cause, and not disability only, for sooner or later they generally become a positive source of danger. The patient whose case I have given was but twenty-nine years of age, and future pregnancies may imperil the lasting success of the treatment. When the history of the rise and progress

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of Listerism comes to be written one, by no means the least important, of the gains to be recorded will be the dating of the performance of operations which were formerly considered either impracticable or dangerous, and amongst these I venture to place herniæ of all kinds, for in the future we shall hear more of the knife and the needle than the truss in the treatment of this class of ailments.

Reviews and Notices of Books.

Compendium der Pathologisch Anatomischen Diagnostik. Von Dr. JOHANNES ORTH. Dritte Auflage. (A Compend of Diagnosis in Pathological Anatomy. By Dr. JOHANNES ORTH. Third Edition.) Berlin: A. Hirschwald. 1884.

THE first edition of this useful work is known to English readers in the translation (New York: Hurd and Houghton) of Drs. Shattuck and Sabine; but so numerous have been the additions and so careful the revision that this third edition is practically a new work. Dr. Orth, who is Professor of Pathology at Göttingen, has made many contributions to the subject, and is at present engaged upon a handbook which promises to take a prominent place in the literature of this subject. The plan of the present work is that of a guide to the post-mortem room. It opens with general directions for the performance of post-mortem examinations and microscopical investigation, and then deals in turn with the external appearances of the body, cutaneous and subcutaneous lesions, before treating of the internal organs. The description of these latter is taken systematically with reference to the cavities of the body, the spinal canal and the cranium, the thoracic and abdominal cavities; and lastly the extremity is considered. Directions are given for the examination of all these parts before the detailed systematic description of the morbid anatomy of the various organs is entered upon. As an example of the method pursued may be cited the chapters dealing with the lungs. The lesions of the pulmonary pleura are first described, and the external characters of the lung as regards size, form, colour, and consistence. The method of incising the lung and the general characters of the exposed surfaces follow, with directions for microscopical examination of the fresh organ. The author then describes in turn the diseased conditions, commencing with disorders of circulation—hyperæmia, hæmorrhage, infarction—distinguishing with Rindfleisch between the "simple" infarction from rupture of vessels, and the "embolic," which leads to mention of metastatic suppuration and fat embolism. Pulmonary œdema closes this section. The varieties of pneumonia are fully described—fibrinous, catarrhal, suppurating, and caseous. As to caseous pneumonia, he distinguishes three main forms—caseous bronchitis or bronchiolitis, pneumonia proper, and caseous peribronchitis; holding apparently to the view that tubercle is a secondary event in these conditions. Under the head of "productive" inflammation is described cirrhosis of the lung in its various degrees. Specific inflammations follow, the chief being tuberculosis, which is described in the disseminated form, in the acute partially disseminated, and in the infiltrating or pneumonic form. He explains that the distinction of these varieties is arbitrary, and employed only for the sake of facilitating description, for he admits that they are one and all the result of the same virus, the "bacillus Kochii"; and he shows that all depends upon the sense in which the term "tubercle" is applied. Tumours of the lung, atrophic and degenerative changes (including emphysema), are next dealt with, which enables him to dwell at greater length upon the distinctive lesions of phthisis. The chapter closes with abnormalities in the amount of air (atelectasis) in the lung, foreign bodies (pneumono-koniosis) and parasites. A comparison with the former edition shows here, as in other chapters, how widely the author has departed from the arrangement there adopted, with the effect of rendering his descriptions more comprehensive and exact.

Post-Nasal Catarrh. By EDWARD WOAKES, M.D. Lond. London: H. K. Lewis, Gower-street. 1884.

THIS work is the first volume of the third edition of "Deafness, Giddiness, and Noises in the Head"; it treats not only of post-nasal catarrh, but also of the various diseases of the nose causing deafness. The author has taken great pains throughout this volume to establish a physiological theory, on the full understanding of which he attempts to explain all the phenomena met with in the region to which he has devoted so much labour and attention. Every theory or principle which may be held by any physician or surgeon is unquestionably open to attack, generally from more points than one. We do not care in this place to enter into an elaborate discussion of the *pros* and *cons* of Dr. Woakes' hypothesis, but we may state that his principle of reflex nervous action in the sympathetic nervous system may fairly be accepted as a tenable position, which, if perhaps taken up somewhat too positively by its promoter, will nevertheless stand many of the tests of a scientific examination. The brief chapter on chronic or post-nasal catarrh and its sequences is a graphic description of the symptoms from which the patient suffers, as anyone who has the misfortune to know from personal experience will testify. The section on the hygienic management of the catarrhally predisposed is one with which we find ourselves in almost complete accord. The author is in his element in treating of the diagnosis of chronic catarrh by the aid of the various appliances and methods of examining the fauces, nose, and post-nasal space. Fig. 4 however, does not convey much information to our minds of the normal appearance of the fauces. The pathology and treatment of acute catarrh are briefly but ably dealt with. The various forms of chronic pharyngitis are all considered, and taught as modifications of one and the same process. The chief varieties discussed are the chronic hypertrophic catarrh of the naso-pharynx, follicular hypertrophic catarrh of the pharynx, or follicular pharyngitis, and chronic atrophic catarrh of the naso-pharynx, or pharyngitis sicca. Chapter IX. is concerned with simple hypertrophy of the pharyngeal tonsil; and the opinion that "although it is possible to effect some slight subsidence in the enlargement of the pharyngeal tonsil by the repeated application of such styptics as nitrate of silver &c., this method of treatment gives only a partial result, and requires a long period to accomplish even this. Evulsion of the mass is the only measure in which confidence can be placed." Lymphoid papillomata of the naso-pharynx form the subject of a lengthy chapter, which deals with their etiology, pathology, and diagnosis in an able, and with their treatment in a practical, manner. Stenosis of the nasal fossæ is considered as resulting from (1) diseases originating in connexion with the turbinate bones, and (2) diseases originating in connexion with the nasal septum. Considerable space is occupied with the pathology and treatment of the various affections blocking the nasal passages. Taken in every way, this excellent manual is well fitted as a guide to the student of the subject of which it treats.

OUR LIBRARY TABLE.

The Asclepiad. Vol. I., Nos. 2 and 3. London: Eade and Caulfield.—This quarterly periodical is solely the production of Dr. B. W. Richardson, and evinces, it need not be said, considerable labour as well as ability; we wonder what fractional part of the author's labours these volumes alone represent. Dr. Richardson succeeds in making the material at his command both instructive and

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interesting. We were much pleased with the articles on John Keats (with original portrait on steel), and William Gilbert, M.D. (with portrait and three illustrations). To the Useful Notes for Busy Practitioners, we have on several occasions referred elsewhere. There is a great deal of truth in the chapter on the Folly of Scepticism in Remedial Art, though we should not be disposed to grant the writer all his propositions. Upper London, a project for radical reconstruction, was an amusing address delivered before the Society of Arts. The even level of the roofs of the houses in that part of Regent-street known as the Crescent is certainly favourable to the suggestion of an Upper London.

Abstracts of Medical and Surgical Cases treated at the General Hospital for Sick Children, Pendlebury, Manchester. Manchester: J. E. Cornish. 1884.—This is the third year of issue of the abstracts, which are drawn up at considerable labour, and reflect much credit on the staff of the hospital. Special features are made of the cases of scarlet fever, diphtheria, rheumatism, tuberculosis, laryngitis, empyema, heart disease, nephritis, and tumours of the brain. A synopsis of seven cases of typhoid fever in children, treated at the hospital during the year 1883, is given by Mr. F. H. Mayo. An analysis of forty-four cases of croupous pneumonia has been drawn up by Mr. Chester Nance. Thirty-five cases of chorea have been analysed by Mr. Wilson. Dr. Ashby appears to be mainly responsible for the medical account, and Messrs. Hutson and Wright for the surgical cases. We hope for a continuance of these useful notes.

Series of Diet-rolls for Special Diseases. By HARVEY J. PHILPOT, L.R.C.P. London: Sampson Low, Marston, Low, and Searle. 1884.—This series comprises the dietetic treatment of diabetes, gout, and dyspepsia. It is good to have such a concise view of foods as has here been drawn up. The tablets ought to be of service more to patients than to busy practitioners. Every hospital physician must know how wearisome it is to repeat the accustomed restrictions of diet to diabetic, gouty, and other patients. We have often wished that slips were printed wholesale containing the name of every ordinary food in use, with a view to striking out by a few or many dashes of the pen those articles which are forbidden to each individual patient. We do not for a moment lose sight of the fact that no two patients are exactly alike in their alimentary requirements.

A Defence of Harvey. By GEORGE JOHNSON, M.D., F.R.S. London: Smith, Elder, and Co. 1884.—These twenty-three pages constitute a reply to a discourse delivered by Professor Scalzi of Rome in February, 1883. Dr. Johnson's answer appears more than a year later, for the simple reason that he was unaware of Scalzi's publication until it was recently pointed out to him by Sir James Paget. We recommend everyone who wishes to grasp the whole matter of the contention concerning the discovery of the circulation of the blood to peruse the clear statements so aptly laid down by the distinguished author of the Harveian Oration of 1882.

Handy Guide to Public Health. By THOS. W. HIME, B.A., M.B. London: Baillière, Tindall, and Cox. 1884.—An Act of Parliament is generally a cumbersome document, and it is especially so when it numbers several hundred sections; besides which, it needs, for the purposes of the majority, to be supplemented by notes, references, and explanatory comments. All this has been attained by the issue of Mr. Hime's elegant Handy Book of the Public Health Act, 1875; and more too, for its compass is such that it can be carried about with ease. It is supplemented by abstracts from other Acts, Orders, and Memoranda relating to matters with which medical officers of health and inspectors of nuisances have special concern; clauses not bearing upon their duties have been eliminated, and a good index is provided. The Guide is handy, as it professes to be; and it will certainly be useful.

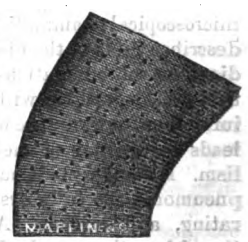
Liverpool Medico-Chirurgical Journal.—The original articles in the current number are:—Surgical Treatment of Hæmaturia, by Reginald Harrison, F.R.C.S.; Cases of Bladder Diseases, by W. Alexander, M.D.; Local Treatment of Respiratory Organs, by Frederick T. Roberts, M.D., F.R.C.P.; Acute Yellow Atrophy of the Liver in Children, by Hyla Greves, M.B.; Syphilis and its Treatment by Erythroxylon Coca, by Fred. W. Lowndes, M.R.C.S.; Gout, by H. Colley March, M.D. All these articles well sustain the reputation of the journal. Mr. Greves' paper is a careful summary of all the principal facts and views concerning acute atrophy of the liver. Dr. Roberts' essay is an able and exhaustive account of the subject of local treatment of respiratory organs.

A Short Account of the Tercentenary Festival of the University of Edinburgh, including Speeches and Addresses delivered on the occasion. Edited by R. SYDNEY MARSDEN. Pp. 217. Edinburgh: Blackwood and Sons. 1884.—As we gave an account of the proceedings at Edinburgh on the occasion of the great festival, it is unnecessary to enter at any length into a notice of this book. We shall content ourselves with recommending it to the graduates and former *alumni* of the University as giving a brief but clear account of the proceedings and an accurate transcript of the speeches and addresses delivered on the occasion, most of them revised by their authors. We regret the want of an index to the book, which would have added greatly to its value.

New Inventions.

PERFORATED INDIARUBBER KNEE-CAP.

THE accompanying diagram is that of a knee-cap which I have recently applied with manifest success in cases of varicosity of the veins about the knee; also those recovering from synovitis of that joint, as well as enlarged bursæ patellæ, and in one case convalescing from transverse fracture of the patella itself. It is made of the ordinary rubber in one piece to any size, and is perforated over every half-inch of its surface. The advantages claimed by this over the usual appliances of silk and cotton elastic web in ordinary use seem to me to be: 1. That it gives a better and firmer support to the affected part, thus affecting a more speedy recovery. 2. It is more durable, and therefore less costly. 3. Being perforated, and, from its structure, more elastic, it keeps the part cooler, and exerts less undue pressure upon it. They are manufactured by Messrs. Mappin and Co., instrument-makers, New-street, of this town, who can supply any size.



Birmingham. HUGH THOMAS, M.R.C.S.

INTERNATIONAL CONGRESS OF SURGICAL AND ORTHOPÆDIC INSTRUMENT MAKERS.—The second annual meeting of the International Association of Surgical and Orthopædic Instrument Makers will take place at Dresden on September 14th next. The object of this Association, which was founded only last year, is to attain by mutual instruction the highest standard of excellence in the improvements of instruments and mechanical appliances, assurance of priority of inventions, and to exclude intermediate dealers, who from want of technical knowledge furnish instruments of inferior description. The Secretary, Mr. C. Walter-Blondetti, Basle, or Mr. C. W. Krohne, 6, Duke-street, Manchester-square, London, W., both members of the committee, will receive the names of persons desirous of assisting in the forthcoming Congress.

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THE LANCET.

LONDON: SATURDAY, AUGUST 30, 1884.

ONE of the most important problems in respect to pathogenic micro-organisms is whether, under any conditions, these can be developed from organisms having no such specific quality. The statement has been made that such is occasionally the case, and the instance of the bacillus anthracis is quoted as affording proof of this. The importance of the matter is enhanced by the fact of attenuation of the virus, which has led to the adoption of measures of preventive inoculation. Again, the question was raised by Dr. KOCH in reference to the cholera bacillus, as to whether, under any conditions, this could have been transformed from a harmless variety. The latest contribution to the subject is that of Dr. KLEIN, published a few weeks since in an Interim Report to the Medical Officer of the Local Government Board, and the results of his researches may be summed up in the statement that there is no sufficient ground for the belief that septic can be transformed into pathogenic organisms. At present he says it is a debated question whether an organism which under ordinary conditions is only to be met with in association with putrefaction, can under extraordinary conditions become endowed with the power of growing and multiplying in the body of a living animal so as to induce therein an infective disease. If the converse can be proved—viz., that a micro-organism known to be pathogenic can be made to lose its property, ground might be given for that conclusion. The instance of the bacillus anthracis and its attenuation is shown by Dr. KLEIN to be of less significance than is supposed, for he finds that when new cultures are made the bacilli retain their full virulence. At the same time the fact that these bacilli do apparently lose their pathogenic activity is undoubted, and it is explained by Dr. KLEIN by the assumption that such a change is not an intrinsic one, but in all probability due to the bacilli appropriating, under certain conditions, some chemical substance or ferment which produces a weakening effect upon them; and that the immunity conferred upon some animals depends upon the restraining influence of this substance on the activity of the bacilli. He quotes in support of this the attenuation produced by the addition of carbolic acid or bichromate of potash to the nutrient medium in which bacilli are cultivated. The inhibiting material, probably of various kinds and nature, does not operate in preventing spore-formation or in checking the growth of the bacillus. Nor does it modify the virulence of subsequent inoculations with other fresh bacilli, so that on this view protective inoculation with "attenuated virus" is reduced to a vanishing point.

Dealing next with the three alleged examples of the conversion of a putrefactive or septic organism into a specific or pathogenic one—viz., BUCHNER's view of the transformation of the hay bacillus into bacillus anthracis, the assumption of pathogenic properties by the bacillus subtilis in jequirity infusion, and of aspergillus when grown in neutral and alkaline material—Dr. KLEIN in the first place points out that the hay bacillus differs morphologically from the anthrax bacillus, and also in its mode of growth and action in culture fluids. He deals with BUCHNER's arguments in turn, and proves that KOCH was right in rejecting them, and that the alarming doctrine that the hay bacillus is capable of being transformed into the pathogenic anthrax bacillus is chimerical. Each of these organisms is distinct from the other during its whole existence, and the only explanation of the error that has been made in arriving at a different conclusion is that of accidental contamination. Dr. KLEIN gives instances of the remarkable way in which such contamination can take place without the experimenter's knowledge, and amongst them he quotes the erroneous conclusion respecting the artificial production of tubercle in rodents by non-tubercular substances, which were quite upset when sufficient precautions were taken to avoid such contamination. Nothing illustrates better the extreme care that is required of the experimenter in his researches on these microscopic and ubiquitous organisms; and how a quite unintentional oversight may vitiate the whole result and lead to the formation of a quite erroneous conclusion. Then as to the jequirity bacillus, concerning which so much has lately been written, owing to the practical use to which this substance has been applied in exciting ophthalmia, Dr. KLEIN shows that *per se* this organism (the bacillus subtilis) is as powerless to create an infective ophthalmia as BUCHNER'S hay bacillus is to cause anthrax. For by taking suitable precautions he has obtained a perfectly sterile infusion of the jequirity seed, and has shown that this possesses the property in question. Further, he finds that after a very short exposure to the air this infusion contains a large quantity of bacilli derived from spores floating in the air, and that boiling which deprives jequirity of its poisonous action does not destroy the spores. To Dr. SATTLER's statement that cultures of the bacillus can excite ophthalmia, Dr. KLEIN urges that this must have been due to contamination with some of the original jequirity infusion, for by isolating the bacillus and cultivating it through two generations he was unable to produce any poisonous effects. Lastly, as to the aspergillus, which GRAWITZ showed to have infective properties when injected into the blood, he concurs with KOCH and GAFFKY in the belief that certain species of this fungus possess pathogenic properties *ab initio*, whereas others are non-pathogenic, and can never acquire such properties. Similar explanations hold for the forms of septicæmia and pyæmia produced in mice and other animals by injection of putrid organic substances—namely, that such infection is due to organisms that are pathogenic throughout, but capable, like the anthrax bacillus and the micrococcus of erysipelas, of growing outside the animal body. A final section of the report details the negative results (*quoad* pathogenic action) obtained by inoculations with various forms of non-pathogenic micrococci and bacteria. In these experiments the singular result was found that inoculations of bacillus subtilis in mice were followed by a fatal pyæmia; which, however, on examination was proved to be due to the presence of a micrococcus, that obviously could not have been derived from the bacillus, but must have been introduced accidentally when the

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latter was inoculated. As a contribution to a very vexed question, and as supporting very strongly the notion of specificity under prevailing conditions, these researches of Dr. KLEIN deserve careful attention.

DR. MOXON'S picturesque sketch of the character of the late HILTON FAGGE is as full of truth as it is of humour. It would be easy to compile a chapter of aphorisms from the columns we print elsewhere, and each might be made the text of a homily for the edification of medical men. We scarcely know which most to admire, the subject of the sketch or the work of the sketcher. This much we must be allowed to say before we proceed to jot down briefly a few of the thoughts which the perusal of Dr. MOXON'S paper has suggested.

"Five-sense philosophy" is beyond question the true definition of science as it falls within the ken of the medical student and practitioner. To see clearly, hear distinctly, and bring all the organs of the life-of-relation to bear on the subject matter of study and work, is the duty, the privilege, and the safeguard of the physician. To be able to do this worthily is to be what Dr. MOXON aptly calls "a physician by grace of nature." Meanwhile something more than this is necessary if the physician is to be great in a true sense. There must be "the identification of self with interests that are socially constructive and positive and real." This is a sentence that should live. It is pregnant with the soundest of good sense. It goes right inside things, and takes a human view of facts and the world and nature. It does not prate of "unselfishness" or "self-sacrifice," those utterly absurd and canting hypocrisies of a maudlin moral sentiment, but sees clearly, and candidly admits that a man must be selfish—if he be a human creature; and only asks as the proof and fruit of his greatness of mind that he shall identify his selfishness, his self-seeking—let us be plain—with social constructive and positive and real interests. How much more forcibly does this appeal strike home to the consciousness, and how much greater the influence it exerts on the will and the life, than mere vague platitudes about the grace and beauty of unselfishness! It seems to say to the heart honestly and intelligibly, This is the way; walk ye in it.

As Dr. MOXON justly affirms, "It is so tawdry easy to be free and negative." If nothing more than an odour of sanctity and a halo of sentiment were needed to make a man good and great, educated folk who have been decently indoctrinated would be paragons of virtue all the world through and in every profession! To be *positive* is altogether a different and higher attainment, and few there be that achieve it. The truly great physician must be gifted with not one but all the five senses, and he must have them, or their inner counterparts, in the intellectual being, properly concerted for action under the directive and protective guidance of a well-balanced mind. Then he must be thoroughly honest, and as patient and persevering as he is energetic. It is one thing to be able to see truth, and another thing to understand it; and yet another to love and reverence it for its own sake. The true scientist has nothing to do with the "limbo of faithless questioning and faithless doubting" which lies beyond the reach of a "five-sense philosophy." It is strictly true of that limbo, as Dr. MOXON puts it, that therein "the luxury of doubting makes science as impossible as it makes religion." The true man, who is also a scientist, never wanders over the borders of that limbo, because he simply goes as far as his five senses will carry him, and not a step further. He does not deny that there may be things beyond his reach. He is quite prepared to believe that "if GOD had given us two or three more senses we should have experienced just so much more" of the analysis and the revelation of nature, as those additional faculties were able to appreciate. He is not free and negative, and therefore he does not feel at liberty to affirm a negative. He humbly accepts the known, and without superstition pays reasonable homage to the unknown.

Those who do not think—and there are too many of us to whom real thinking is a rare exercise of the understanding—have no adequate notion of the nature and qualities of true greatness in medical life and work. It is one thing to have a grand "action"—as a horse may have,—but quite a different thing to be really grand. The two qualities are not only separable, but often separated; we might almost go the length of saying that they are seldom found together. Just as the advanced scientist is seldom a practitioner, so the man who has been endowed with those powers which fit him for the discovery and collocation of facts is not, as a rule, also found gifted with the faculty of using his gifts as "traps to fortune." And as a "belief formed on sense-knowledge" saves from metaphysics, "which is mental humanity floundering with eyes all round the back of its head," so the earnestness that inspires by a consciously "sure grasp of the reality and the practical significancy of truth" renders the mind incapable of stooping to the commercial enterprise of packing and retailing small parcels of truth as a marketable commodity. It is not so much that the wholesale dealer is superior to the petty shopkeeper, as that he is so engrossed with broad views and large considerations that he cannot bring his mind to the narrower and smaller subjects of thought and purpose. Both the merchant and the shopkeeper are good and necessary in their respective places. The retailer and adapter of knowledge is as much in request, and rightly so, as the collector and comparer of facts and the drawer of inferences; but the two are distinct. If there be a defect and danger in the genuine hero-worship which prevails, and must always prevail, among the disciples of true greatness in science, it lies in the failure to recognise that giants would cease to be great if the average stature of man were equal to the ideal of our idolatry. It is neither necessary nor reasonable to condemn the mice on the score that they are not lions, because sometimes the lion may be indebted to the mouse. The great physician may be indebted to the little practitioner. It is not given to every good and earnest man to be a head and shoulders taller than the rest of the people; but it is none the less to the advantage of all to look up to the truly great—men like HILTON and FAGGE, whom Dr. MOXON so truly and eloquently characterises as "men in whose presence the faculty of imitation was a blessing, and made a better man of you."

THE Health Exhibition has much to answer for. Amongst the rest it is responsible for a very warm discussion on the merits of Alcohol. A leading contemporary had it in its

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power to allow that delicate question to sleep. But it is a tempting one in the dull season; and the temptation proved too great to be resisted. Accordingly, coincidentally with the summary of the session, *The Times* published a very able digest of the alcohol question, decidedly from another standpoint than that of the humanitarian or the teetotaller. The writer argued that the dominant nations have all used alcohol in some form or other. Those who wear the badge of abstinence are obviously persons of inferior physical development, and, so far as they can be judged by facial expression, not "remarkable for intellectual power." The best work of the world is done by moderate drinkers, and, as far as we are aware, the work of total abstainers is of a very commonplace kind. Barring cases of manifest disease, drunkards now are either professional criminals, who had better be drunk than sober, or persons of slender self-control, who are ready at any time to lapse into criminality. There may be half a million such, and they are so worthless as to make it wrong for the remaining twenty-nine millions and a half to exchange moderation for abstinence on their account, or with the vain hope of doing them any good. Such people drink on account of a morbid state of the nervous system, inherited or acquired. When reclaimed by teetotalism, they are striking examples of its power, but the ordinary experience is that after many relapses they ultimately die, directly or indirectly, from the effects of drink. On the whole, the writer concludes that the teetotal societies do very little good and a great deal of harm. It was not to be expected that such a summary of the alcohol question as this could be accepted by the teetotal section of the community without much pain and protest.

It is to be regretted that on each side of this controversy there seems an indisposition, almost a determination, perhaps an incapacity, to see the best points in the argument on the other side. It appears almost as if there were something in the nature of alcohol that affects all who think about it, even those who abstain from it, with a kind of intemperance. The intemperance of teetotallers has greatly hindered the cause of temperance. Their denunciations of moderation and of moderate drinkers have estranged whole classes of men that would have brought strength and help to the cause. Their dogmatism about what constitutes food and what poison, and about the injurious effects of every drop of alcohol, has excited ridicule and laughter rather than intelligent interest. Their refusal to see that many who are not against them are on their side, and their general attitude of superiority, have been most unfortunate. By such an attitude the medical profession has been prevented from hearty co-operation with those who see in the drunkenness of the country a gigantic evil and disgrace, to be remedied at any cost short of that of talking nonsense. Similarly, a large section of ministers of religion have been obliged to stand aloof from those who, against Scripture, common sense, and examples of the good in all ages, have refused to recognise in wine and its congeners things capable of use as well as abuse, and things to be reasoned about calmly in the light of experience and science.

One result of this extreme position on the part of teetotal reformers is to bring down on them and their cause such cold water as the article which occasions our present notice of alcohol and its *rôle* in human life. We cannot much approve of the article in our contemporary, but it is rather of its tone and spirit than of its substance that we have to complain; rather with its scant and reluctant praise—its actual dispraise—of men with a great cause and with good motives, than with its scientific propositions, that we have to quarrel. The world is not so much in danger of neglecting to take a proper amount of alcohol that it needs three or four columns of ingenious argument to prevent it falling a prey to indigestion and nervous exhaustion from drinking water alone. But the excuse for such writing would be less if there were a little more reasonableness and temperance on the part of those who seek to abate the national consumption of alcohol. Their case is by no means so contemptible, logically and medically, as the writer referred to above would make out. There are some very good-looking fellows among them; they are not by any means intellectually contemptible; they live quite as long as, if not longer, than other people, and escape many diseases that affect others, though they have their own liabilities; they are good workers. There may not have been yet a teetotal SHAKESPEARE or MILTON—there has not been time;—but much of the best work of the world now-a-days is done by men who either do not use alcohol or use it in such quantities as to be inoperative physiologically or pathologically. And the common work of the world is done well by abstainers; they are industrious, reliable, healthy. According to Lord WOLSELEY they make good soldiers. Sir WILLIAM GULL has said that "it is one of the commonest things in our society for people to be injured by drink without being drunkards. It goes on so quietly that it is very difficult to observe. To the professional eye the effect is perfectly marked and distinct." Many other eminent men have given similar testimony. So that there is an amount of drinking deemed moderate by society which, in the opinion of judges, is very injurious to the liver, the lungs, the nervous centres, &c. Further, the actual impression made by the teetotal school on public opinion and social habits is considerable, so that sensible men do not take stimulants in the quantities they used to do, or on an empty stomach and without food. No doubt much of this is due to sounder medical science and to the extreme moderation of medical prescription and example. But part of it is due to teetotalism and to religious efforts to promote sobriety, which it should be the desire of everyone to second, the more so as there is still a frightful amount of ignorance abroad as to the impunity with which alcohol, even in strong forms, may be taken into an empty stomach. A physiologist may still be shocked every day in a restaurant or a railway refreshment room—of course physiologists never go into public-houses—by seeing young men order and toss off without thought and without food glasses of spirit more or less raw. He knows how infallibly and how quickly that leads to mischief. But for evils and follies like this there is room for common protest and effort, apart from intemperate doctrines of teetotalism on the one hand, and too easy disparagement of those who hold them on the other.

UNDER the title of "A Romance of War, or how the Cash goes in Campaigning," Dr. CAMERON, the Member for

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Glasgow, has published a brief summary of the facts brought out in evidence before the Select Committee of the House of Commons, which, on his motion, was appointed to inquire into the working of the Supply and Transport Services in the Egyptian campaign. He has adopted this somewhat unusual course in anticipation of the publication of the Report of the Committee, in consequence of an article in *The Times*, which, it was clear to him, "was directly inspired by the War Office," and in which the correspondent asserted "that with regard to failures in the working of the supply and transport services at the seat of war the evidence seemed to show that there was none," and that "it seemed manifest that the expedition as a whole was, from a purely administrative point of view, a success." A perusal of Dr. CAMERON'S pamphlet has led us to a very different conclusion, for it would be difficult to imagine a more complete picture of rascality, incompetence, ignorance, and mismanagement than is there represented. It would be beyond our province to go into the whole question, but we may note what he has said regarding the Medical Transport. The mules, which had been trained for *cacolets* or litters for ambulance service, were taken to make up regimental transport, and replaced by untrained animals from Spain. These on arrival at Ismailia were at once appropriated to the important work of dragging trucks on the railway; and when the principal medical officer applied for others, in anticipation of the battle of El Magfur, he got only fifteen, and these so utterly unsuited for the work that he would not allow any wounded men to be placed on them. Dr. CAMERON sums up the history of this branch of the service in these words: "Inability to move forward field hospitals for want of transport, and army hospital corps taken away from their proper duties to remedy, as far as they could, the want of transport and labour." Dr. CAMERON exonerates the Commissariat and Transport Department from much of the blame attached to the shameful mismanagement and blundering which took place. The head of the department was not consulted as to the purchase of stores or transport animals, nor in the selection of carts or shipment of stores; his request for labour was disregarded; and when, on appointment, "he busied himself with suggestions and demands, he was given to understand that his interference was not desired." The officers of the Department very fairly complain "that under the existing system, in time of war they are debarred from performing the duties to which they are trained in time of peace, and are blamed for the miscarriage of supply and transport arrangements, in carrying out which they have had no voice." In an appendix Dr. CAMERON has pointed out the waste and extravagance which occurred in connexion with the transport service in the Afghan War. The facts which he has brought before the public in connexion with these two expeditions will, we trust, compel the War Office authorities to consider carefully the whole question of commissariat and transport arrangements, and lead to the introduction of a system which may be relied upon in the hour of danger, so that our troops may not be placed in circumstances similar to those in the Crimea and Egypt whenever any unusual or unforeseen event may occur in the course of field service. Dr. CAMERON is entitled to great credit for the persistence with which he has followed out this inquiry, and we most sincerely trust that his labours may be followed by those improvements in organisation and working which he has been so anxious to see introduced into our army.

THE principal points secured by the Amended Canal Boats Act are the registration of such boats and the maintenance of the education of children connected with them. Provision is made for frequent inspection by local registration and sanitary authorities, and by the Education Department, with the presentation of annual reports to Parliament directly or through the Local Government Board. The enactment of these regulations, by giving efficiency to a measure at one time too loosely administered, has supplied a want which cannot be said to have been unfelt because perhaps not fully realised by the nation. The registration and supervision of inland water traffic are at certain times and in several ways not less important to the public interest than those of the mercantile marine. On July 5th we drew attention to the obvious bearing of such a system on elementary education and on the detection of crime. With reference to school instruction particularly, it must be clear to all that without some special action on the part of the Government, many, if not most, of the boat children must grow up in ignorance. The difficulty of obtaining regularity of attendance is not considerable, even in the most settled circumstances, but it is greatly increased when to many accidental causes of absence is added the fact that the home itself is a ready means of transit over wide areas. Under no conditions, however, is it likely that the beneficial operation of the Act will be more apparent than in the presence of infectious diseases. Foci of population are, of course, foci of diseases, and not only of such as are endemic, and in so far autogenetic, but in the case of commercial towns of exotic and epidemic maladies which come to them as the accidents of trade. The good effect of inspecting the state of health of merchant vessels has been well shown in the prevention of the spread of cholera which recently approached one or two ports on our own shores. The control of the next link in the invasion of an epidemic, the commercial centre, is carried out by the sanitary department. It is no less necessary that the further communications with the interior of any country should be controlled with equal strictness, and of these the inland waterway is perhaps the most important. The canal population while under cover is peculiarly subject to the hurtful influence of overcrowding, bad ventilation, and restricted means of cleanliness. Clearly, then, if disease be planted and reared in circumstances so favourable to its growth, the results may be understood without description. Everything relating to these boats, therefore, their starting point and destination, their crew, cargo, and accommodation, and not less their disposal of refuse and their use or abuse of the waterway for this purpose, are matters of much and general consequence, and justify the official regulation which they have received.

SURGEON-MAJOR FERNANDES, of the 3rd Battalion Grenadier Guards, was on the 21st inst. at Dublin acquitted on the charge of felony, the jury expressing the opinion that the accused left the Court without the slightest stain on his character.

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Annotations.

"Ne quid nimis."

"LEGACIES TO THE HOSPITAL SUNDAY FUND."

DR. WAKLEY'S suggestion that benevolent persons who have money to bestow should leave it to the "Hospital Sunday Fund" instead of to particular hospitals is eminently practical, and we are convinced that, on consideration, it will be found to be sound. It is impossible that any individual, however judicious, should be able to arrive at so good an estimate of the work of a hospital as a committee having for its permanent function the consideration of the claims of the hospitals generally to pecuniary assistance. It must be obvious that the Council of the Hospital Sunday Fund is peculiarly well placed for the formation of correct judgments on the cardinal points of a hospital claim—namely, its value to the sick poor, its service in the cause of science and consequently of the public, and the wisdom and fidelity of its administration. It will be of great and lasting advantage to the interests of humanity if Dr. Wakley's suggestion is accepted and acted upon. We can readily understand that, on the first blush of the case, it may seem more congenial to the feelings of a testator to make his own choice of a charity to which to leave his bequest; but on reflection it will be perceived that the wisest course must be to entrust the duty of distributing aid to a responsible committee able and willing to make the best possible use of any fund for the general advantage. The recommendation is as simple and obvious as it is just, and neither argument nor explanation is needed to enforce it.

THE ORIGIN OF SEA-BATHING.

THE sea was held in dread by classical antiquity; immersion in its waters was an experience to look back upon with a shudder; and the Greek or Roman who came out of it alive repaired to the nearest temple, and there suspended his dripping garments and a votive tablet to the forbearing Poseidon, or Neptune. This horror of the sea descended to mediæval times, when indeed ablutions of every kind were almost dispensed with, and the human integument so sparingly refreshed with fair water as to earn for the Ages in question a double title to Dark. A compulsory dip in the sea was a sentence sometimes passed on the mediæval offender, often with exemplary effect. The legend has it that a first-class misdemeanant, who, though ill at the time, was visited with this penalty, emerged from it so much the better physically as to shake belief in its deterrent virtue. Ronsard, the French poet and scholar, sang the praises of the ocean and its health-giving waters, but this was only a faint and far-off anticipation of its modern worship. It was in England and towards the middle of last century that the sea was first recognised as the mighty sanitary agent the world now acknowledges it to be. At that time Western Europe was heavily scourged by scrofula—king's evil, as it was called—and all ranks of society, from peer to peasant, were more or less sufferers. Dwellers on the seaboard, guided by instinct apparently, drank of the briny water, bathed in it, washed their sores in it or bound them up with seaweed. And they had their reward in physical as well as moral invigoration. The profession took note of this practice, and Dr. Russel, a Court physician, who was the first to become cognisant of it did not wait for a chemical or physiological theory of its efficacy, but prescribed it at once to his patients, and was followed by others of his contemporaries. Soon the English coasts were planted with villas and cottages; and hamlets, from their sea-bathing advantages, expanded into towns. At the close of last century Germany imitated England, then Belgium, then France, until in the year 1812 Dr. Lefrançois of Dieppe published a treatise on the internal and external virtues of sea-water, and raised his native town into a much-frequented health resort. So that from having been first used in scrofula, the touch of ocean is now employed in countless other evils than the "king's"; and invalid Britannia repairs, with yearly recurring alacrity, to the waves over which she rules.

EXPERIMENTAL NEURITIS.

CLINICAL observations of motor and sensory paralysis, in certain cases, after the hypodermic injection of ether, have led MM. Arnozan and Salvat to study the action of ether and cold on the peripheral nerves. The first experiment was made on the left sciatic nerve of a guinea-pig by exposing the nerve and isolating a few centimetres of it on a thin strip of cardboard. Under these circumstances the application of a feeble electric current induced pain. By the aid of a drop measure ether was instilled over the nerve for thirty minutes. The nerve was then replaced and the wound sutured. The next day and the day after there were manifest signs of paralysis and loss of sensation in the left hind limb. At the necropsy the wound was found to be free from suppuration, and with the exception of redness of the nerve at the site operated on there was no disease in the limb. Sections of the inflamed nerve showed segmentation of the myeline. In the second experiment the right sciatic nerve was simply exposed to the air for half an hour. The sensibility of the corresponding limb was a little lowered and the movements were a little weakened; these disorders passed away in a few days. Some days previously, however, the left sciatic nerve of the same guinea-pig had been isolated, but instead of simple exposure to the air it was surrounded with ice for half an hour. At the end of that time, though the edges of the wound were not anæsthetised, yet the sensibility was notably diminished in the limb below the part operated on, and the muscles supplied by the nerve were paralysed. At the end of four days the sensibility had returned to the normal and the muscular paralysis had passed away; moreover, after some weeks the faradaic reactions of the muscles were quite natural. Nevertheless, trophic lesions were observed. The limb was at first much wasted, but this did not last. The hair had all fallen off around the wound fifteen days after the operation. At the same time ecchymoses were seen on the left heel, which afterwards became ulcerated. All the nails of the foot were shed. Later, the ulcer healed, the hæmorrhage disappeared, and the limb became sound. No signs of neuritis were discovered microscopically after the animal was killed. The authors point out the interesting observation that the trophic troubles lasted much longer than either the sensory or motor paralysis.

TWIG AND TREE.

"JUST as the twig is bent the tree's inclined." Pope's monumental verse inspires philanthropic effort in every stratum of society, from the crusade against overpressure in schools to the various attempts at organising a moral *orthopædia* for the development of the boy into the man. The impressionable and plastic nature of childhood is not secured against distorting influences by surveillance over its school-life only. At home much remains to be done and much is disastrously done in the moulding of early character, and in determining the career of ingenuous youth. The Society for the Prevention of Cruelty to Children just formed at Glasgow hits a blot in our educational system, and deserves imitation wherever the juvenile population, of the lower strata especially, is numerous enough to overtax the control of schoolmaster, clergyman, and parent alike. The diffi-

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culties thus engendered in humbler families occasion nine-tenths of the cases of maltreatment which come from time to time before the magistrate; just as in lunatic asylums where the surveillance is insufficient the much-exercised keeper is goaded into acts of cruelty to intractable inmates. The maltreatment of children, however, has its passive as well as its active side, and it is questionable whether absolute neglect of them is not more prejudicial to their development and future well-being than the savage usage they encounter from evil-tempered parents. The Earl of Glasgow, who presided at the first meeting of the Society above mentioned, dwelt ably on the problem it it had set itself, of which he indicated a threefold solution. Legal coercion may prevent the maltreatment of children; in difficult cases knowledge gained by careful study and experience of the scope of existing laws may be effectively applied; while moral suasion, exerted, for example, on too indulgent or practically negligent parents, might come in abatement of their co-operating with the children's dislike to school or of their failure to check premature smoking and drinking, those frequent causes of diseased development, physical and moral. The Society, Lord Glasgow was careful to show, sought in no sense to supersede parental responsibility; but, on the contrary, to enlighten and to stimulate it. It further dissociated itself from all attempts to interfere with the religion of the children within the scope of its operations; nay, protection of their faith, as well as protection of their persons, was part of the Society's programme. That programme is, indeed, in the best acceptation, a humane and enlightened one, and we are confident our professional brethren, wherever a similarly instituted Society may spring up, will give it the sympathy and the co-operation they have never withheld from any nobly intentioned and well-organised undertaking.

TUBERCULAR SEROUS EFFUSIONS.

AN experimental study by MM. Chauffard and Gombault of the virulence of certain pleural and peritoneal effusions is still in progress, though a preliminary report has been published in the "Bulletins et Mémoires de la Société Médicale des Hôpitaux." These observers, having never been able to discover the bacillus tuberculosis in peritoneal or pleuritic effusions, which were obviously of a tubercular nature, determined to employ the experimental method. Instead of making use of the artificial cultures, as recommended by Koch for the demonstration of the bacillus, they resorted to the living organism, and for the most part the guinea-pig. The *raison d'être* of these researches is easily told. If the bacilli be present in the morbid fluids, but are so sparsely scattered that their histological demonstration is almost impossible, the method of cultivation so as to increase and multiply their number is obviously the plainest way out of the difficulty, seeing that the bacillus cannot multiply if it be not present. Injections of the serous fluids have been performed in the subcutaneous tissues of the guinea-pig by means of a Pravaz syringe or Potain's apparatus. Super-heating the trocar and needle and repeated washing of the instruments with antiseptics were the precautions used. About three cubic centimetres of the serous fluid were injected into the peritoneal cavities of a number of guinea-pigs. The animals were killed at intervals of two, three, or four months. Twenty-three guinea-pigs and twenty-one serous effusions were employed in the first series of experiments, one patient serving to inoculate three animals. The fluids inoculated were either serous, sero-fibrinous, or purulent. Of the twenty-three inoculations, four gave no result, the animals having died rapidly. In nine, the autopsy made at the end of three or four months revealed no tubercular lesions. In one case a positive result, the necropsy discovering miliary and yellow tubercles, as well as infiltrations, in the liver, spleen, and lung. The spleen was always considerably enlarged, and a number of mesenteric and peritracheal glands were swollen and partly caseous. The great omentum was also infiltrated. Sometimes there were lesions of the intestines, and also of the genital organs. The kidneys were usually spared. Characteristic bacilli were discovered in all the cases where macroscopic tubercular disease was present. The existence of widespread lesions of tubercular appearance and the detection of the bacillus were taken as sufficient criteria of tuberculosis, so that a further series of inoculations was not undertaken. Of course Gombault and Chauffard believe the tuberculosis to have been due to the inoculation. All the inoculated animals lived together in three or four hutches, and with them a certain number of non-inoculated ones to serve as test experiments; none of the latter became tuberculous. That the mere puncture could hardly have been the cause of the tuberculosis was shown by the escape of nine animals. M. Déjérine, joining in the discussion which followed the reading of the paper, said that he had succeeded in demonstrating the bacilli in purulent effusions by allowing the fluid withdrawn to stand, and then, decanting the liquid, to search in the lower strata for the bacilli. M. Gombault admitted the facility with which bacilli in purulent fluids were demonstrable, but said that decantation failed when serous or sero-fibrinous effusion had to be dealt with.

THE SANITARY STATE OF WIGAN.

THE sanitary state of Wigan is, according to the statistics published by the Registrar-General and to details given in the local papers, deserving of very serious attention. Scarlet fever has now for many months past been widely prevalent throughout the district, and, in a population of some 50,000, the deaths from this cause alone have numbered 67, 61, and 58 respectively during the past three quarters. What the efforts which are being made to check the progress of the disease may be we cannot say, except in so far as they include some measures of school closing and disinfection; but it is very certain that the principal measure by which the outbreak should have been met at the onset—namely, effective isolation—could not possibly have been brought to bear upon the extending disease; for Wigan, with its large population, has only for an infectious diseases hospital an old villa, with three available bedrooms. The startling mortality from scarlet fever has led to revelations concerning "Insanitary Wigan," and to conditions of housing in connexion with prevalences of enteric fever, which, if not exaggerated, reflect the reverse of credit on the sanitary authority. In a street leading out of Frog-lane, for example, a correspondent of the *Wigan Examiner* finds twenty-seven cases of this disease. In a district called Scholes, with its "damp alleys, its damp and decayed houses and ear-rotted inhabitants, who herd and are packed together like negroes in the middle passage," the sanitary conditions as described are of a revolting character. Stopped-up drains and sewers, stagnant and offensive filth, garbage in an advanced state of putrefaction, liquid manure, open middens and closets, &c., were met with, all indicating that, whatever nuisance inspection may be carried on, little is done towards preventing the recurrence of nuisance by adequate permanent works and structural alterations. The overcrowding which exists in this locality must be as subversive of all decency and morality as it is opposed to physical health. In one place, a man and his wife, with their family of young men and maidens, whose ages varied from eighteen to twenty-seven years, all slept in one filthy, grimy room. Elsewhere a man aged thirty-six and a girl aged eighteen slept in the same dormitory with their parents. Again, two young men and their wives and a young unmarried woman of twenty-two years of age occupied one small sleeping apartment. This

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certainly is a state of things which should be put an end to. Section 90 of the Public Health Act, and the corresponding section of the Sanitary Act of 1866, were specially framed to meet such conditions; and it behoves the corporation to secure without delay such supervision of houses so sublet as shall lead to the abolition of such intermingling of sexes as has been described. The necessary bye-laws and regulations are also urgently needed in the sanitary interests of the houses and of their occupants.

DR. SHOEMAKER'S OLEATES.

IT would be difficult to over-estimate the value of the different oleates and oleo-palmitates in the treatment of various forms of skin disease. The subject is by no means new, but attention has been directed to it of late by papers and experiments recently published by Dr. Shoemaker of Philadelphia. In THE LANCET of July 19th we gave a full report of a lecture on this subject delivered by him at the Westminster Hospital. His oleates are prepared from the sodium oleate by a process of double decomposition, and it is claimed for them that they are definite chemical combinations, differing entirely from the old so-called oleates, which are nothing more than solutions in an excess of oleic acid. These new oleates are undoubtedly very useful compounds, and it is probable that many of them, at all events, will come into extensive use. The zinc oleate is a fine pearl-coloured powder resembling French chalk, and when mixed with a small proportion of thymol forms an excellent dusting powder for all kinds of excessive sweating. The oleate of copper is used in the treatment of ringworm and other parasitic skin diseases; and it is said to be a good application for freckles. The mercurous oleate is found to give good results in plantar and palmar psoriasis, and in old cases of eczema, especially when the integument is hard, dry, and thickened. The oleate of bismuth is a bland, soothing application adapted for the treatment of acute eczema and other inflammatory conditions. There are some twenty or thirty oleates in all, each having its special use and sphere of action. The oleates of various alkaloids have been prepared, but they are of comparatively little importance, and their therapeutical indications are as yet not well established.

THE VACCINATION PANIC IN LEICESTER.

IT is to be hoped, in the interest of Leicester and of the whole country, that the waywardness of that town in regard to vaccination has reached its height. Twelve hundred persons are awaiting trial, and others are now undergoing terms of imprisonment, for having evaded the Act. In such a case there is but one course open to the authorities—namely, to execute the law with just though moderate firmness. It cannot be permitted that one town, even though not large and protected from contagion in some degree by its comparatively secluded position, should become the possible centre of an epidemic. At the same time all must regret that compulsion should be required to support a measure of the undoubted practical value of vaccination, and those who know the characters of small-pox and its history in this country must be driven to the conclusion that this, its only remedy, has been resisted by some simply because its successful operation has shorn the disease of much of its terror. There can be no question that the opposition in Leicester rests chiefly upon misunderstanding. It has been maintained by agitation, conscientious enough, perhaps, but inspired by misinterpretation and irrational feeling, which would seek to fix on vaccination the discredit due to neglect or constitutional fault, and in no way connected with it. In these days every facility is afforded to the qualms of diffidence. One may be vaccinated where, by whom, or from whom he chooses; he may go to the infant or the calf, and may adopt almost any measure he pleases to satisfy himself of his security. In the face of all this consideration—we might say unnecessary consideration—for nervous apprehensiveness and of the essential safety of vaccination itself, the rebellion in Leicester must appear to most people as meaningless as it certainly is injurious. We recommend all who now oppose this practice to consider the subject from every point of view and with every kind of proof, and we do not doubt that they will then admit that a custom which has fairly won and holds its ground in every civilised country does not deserve, as it never can experience, the swift perdition to which they would consign it.

DISUSED BURIAL GROUNDS.

THE Disused Burial Grounds Act, which has for its chief object the prohibition of building within the spaces described in it, is a fairly complete measure, though not in our opinion quite perfect. Certain buildings which are required for purposes of worship are exempted from the prohibition referred to. The advisability of any such exemption is open to question, inasmuch as the opening of graveyards, even after long disuse, has in several cases been followed by outbreaks of local disease, referable to no other cause than exhalations from the disturbed sites of burial. Any risk from this source is necessarily increased if excavations should happen to be made during the prevalence of infectious disease in a district. In any case where such excavations are carried on, it should be a part of the duty of the sanitary authority to superintend them and to take whatever measures may be necessary to obviate all danger to health from the burial ground itself, or from the use of the building erected on it. We cannot leave this subject without once more recommending that as many such vacant spaces as possible may be left free of buildings, and converted into playgrounds, with appropriate means of amusement for the many town children who might profit by such an arrangement. The disturbance of soil from such a proceeding would be trifling, and the substitution of tottering gravestones and nameless garbage by flowers and level pavements would be a point gained in health as well as in beauty.

CHOLERA MICRO-ORGANISMS.

THE more one considers the subject matter of Dr. Koch's researches the more one is convinced that amongst the numerous workers who have been engaged in the search after specific organisms in cholera there must be several who have seen the same objects he describes, without, however, having attached to them the same significance. In lately referring to this matter we gave a hasty glance at some of these previous efforts, based upon the review afforded by Hirsch in his well-known work. One name was omitted wholly unintentionally, and perhaps rather strangely, seeing that a few weeks before we had published a letter from Dr. A. H. Hassall upon the special point. In justice to him we are pleased to revert to his researches made more than thirty years ago, and to be found in his report to the Government of 1853. We should be sorry, indeed to think that the labours of one who amongst us has been a pioneer in microscopical analysis had been overlooked, and therefore we mention Dr. Hassall's name here in order that full justice may be rendered him. We are reminded that amongst the forms he detected and described were some spiral-shaped threads much resembling those which Dr. Koch believes to be a further stage in development of the comma bacilli. It is, we confess, highly probable that what Dr. Koch saw in 1883 Dr. Hassall perceived in 1853. It is one penalty we have to pay for the high-pressure life of the present day that new discoveries are made because the old ones are forgotten, and the labours involved in the latter are lost sight of in the present glories

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of the former. Of course the lines of investigation pursued by Koch are, as compared with his predecessors, quite novel and searching; for he does not content himself with mere detection and description, but studies his micro-organisms from the point of view of the biologist, and records their behaviour under every conceivable test. It is work in this physiological direction which is doing so much to elucidate the nature of disease, and until the same spirit is applied to the whole domain of pathology the latter will be incomplete. We know no more about a disease by ascertaining its morbid anatomy only than we know about a bacterium by mere familiarity with its morphology. Useful up to a certain point, such knowledge is of value to us in the separation of diseases, but tells us little of their essential nature. And, as far as cholera is concerned, although many have believed that they found the living entity peculiar to it, not one of Koch's forerunners has carried the question so far as he has done, and studied this "germ" in all its life-relations. So thoroughly has this been done by Koch that it will require demonstrations as searching and as thorough to prove that he has not been on the right track, but has been pursuing an *ignis fatuus*. Nothing to our mind is more striking than the remarkable reception which his researches have met with, not only among leading German pathologists and physicians, but even in France, where the bias was till lately quite the other way. All this enhances the interest with which we shall look forward to the approaching inquiry in India, although there, too, we doubt not, are to be found men like Dr. Vandyke Carter, who can weigh and appreciate the evidence adduced by Koch, and who are not blinded by prejudice or enchained by preconceived ideas.

ISOLATION ARRANGEMENTS AT BRISTOL.

THE renewed discussions which have taken place at Bristol as to the question of isolation for infectious diseases, and especially the manner in which the subject was dealt with by the urban sanitary authority, show clearly that Bristol fails to understand the important position which adequate means of isolation hold in the sanitary defences of the community. Some of the opinions which were expressed by the medical officer of health are also, in our opinion, but little calculated to set this question on a proper footing. Thus, Dr. Davies is reported as having expressed the opinion that large hospitals containing typhus and other fevers were, from a sanitary point of view, a great evil. Now, it is difficult to understand how such an infectious hospital as Bristol needs can, under ordinarily efficient control, become a danger; and, apart from the question of small-pox, all experience of such hospitals in England is entirely opposed to this view. The details given in Dr. Thorne Thorne's official report to the Local Government Board as to the influence of the London Fever Hospital, where some thousands of cases of typhus, relapsing fever, typhoid fever, and scarlet fever were under treatment, are a striking answer to the contention maintained at Bristol. Then again, Dr. Davies would not receive a patient into the hospital belonging to the sanitary authority unless he had a guarantee that payment would be forthcoming; and, at the same time, he would refuse admission unless he could assure himself that his action would go towards diminishing centres of infection in the city. In other words, work, which is admittedly carried out for the benefit of the community, is to be paid for by the individual who, in the interests of others, submits to isolation; and this in a building which has been erected and is maintained out of the public rates. Such views will, we believe, before long be altogether of the past, and sanitary authorities will come to see that it is as much to the public advantage to remove centres of infection from their midst at the public cost as it is to use the public funds in order to get rid of accumulations of refuse from amongst the community generally. Indeed, many authorities already take this common-sense view of the question, and the result is that they succeed where Bristol fails. The mere bargaining as to expenses has over and over again defeated its object; for, whilst waiting to know where the few pounds were to come from which would defray the cost of the isolation of cases of fever, the disease has spread, and whole families have been thrown on the rates. In every sanitary hospital there should be one uniform sort of accommodation open to all free of cost, and where possible a small amount of superior accommodation should be maintained for those who seek some measure of privacy, and who are able and willing to pay for it. The low social status of a patient forms no criterion as to the extent to which he or she may endanger public health, and it is often far more important, in the interests of a community, to secure the instant isolation of respectable people from dairies, hotels, and houses of business than it is to remove the sick from a labourer's cottage.

PAYING PATIENTS AT ST. THOMAS'S HOSPITAL.

A WRITER in *The Times* depicts in glowing colours the advantages of St. Thomas's Hospital as a place for paying patients. We cannot quite share the satisfaction. The wards of hospitals are, as a rule, meant for the poor, and, from this point of view, every case of the kind described by the correspondent of *The Times* means the exclusion of a poor person who cannot afford to pay. We are not denying the utility of hospitals in certain cases for persons who can pay, nor do we forget that there are circumstances attending St. Thomas's which do not obtain with other general hospitals. But we hold that where cases can be treated equally well at home, home is the best place for them. There is need of care, in the interest of the poor, that the great hospitals be not wrested from them. It may be very satisfactory to the writer of the letter to have had a "very expensive operation" performed, and subsequent attendance, at the rate of nine shillings a day, including operation, food, nursing, and medical attendance; but it would be necessary to know much more of his circumstances to be able to justify such a use of the hospital, or such an under-payment of medical services.

HEALTH AND HOLIDAY RESORTS COMPETITION.

THE competition for public favour among health and holiday resorts is keen, and in so far as it induces a laudable desire for favourable health reports, is not altogether without public advantage. Our attention has, however, been called to an endeavour to "influence" local mortality statistics in a way that cannot be approved, and which might easily lead to most mischievous results. A circular letter has recently been issued to all the medical practitioners of Southport, signed by the medical officer of health for the borough, and by the chairman of the Health Committee, also a medical practitioner, calling their attention to the "desirability of limiting as far as possible the certification as deaths from 'diarrhœa' to those cases which are strictly and undoubtedly zymotic in their nature." Bearing in mind that the causation of infantile diarrhœa is still the subject of an extended Local Government inquiry, and that much difference of opinion prevails as to its zymotic origin, it is easy to guess that if the Southport practitioners respond to the invitation of Dr. Vernon and Mr. Pilkington, the result will be a remarkable decline in the death-rate from infantile diarrhœa in that borough during the present season. The circular concludes with the following sentence: "Believing that you are as anxious for the credit and repute of the borough as ourselves, we have ven-

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tured to place this matter before you." The intention would seem to be to steal a march upon other health resorts by preparing the way for a low death-rate from summer diarrhœa in Southport. We must, however, enter a strong protest against any such local attempt to influence or limit the discretion of medical practitioners in the certification of causes of death; and we think that, on further consideration, the sanitary authorities of Southport will admit that their zeal for the "credit and repute of the borough" outran their discretion in the issue of this circular.

DAIRY SCHOOLS.

MUCH good ought to be effected by the establishment of a system of dairy schools, which is now under the consideration of the Dairy Conference Association, and of which Lord Vernon's school at Sudbury is the type and pioneer. There are many ways in which educational method may aid the perfection of the milk industry. The manufacture of butter and cheese, for example, presents a field of enterprise capable of rewarding a wider and higher degree of cultivation than it has yet received. This is probably even more the case with the largely pastoral countries of Scotland, Ireland, and Wales than with England. If the introduction of system into dairy training should help to develop this branch of industry, something will have been done towards the settlement of the social and sanitary question, How to find for poor as well as rich butter at once pure, wholesome, and cheap. Another matter which may well form a subject of instruction is the clean and healthy housing of cattle, with the equally important consideration of the kind of food best suited for nourishment of the animals and for milk production. One hears perhaps too little of the employment of other animals besides cows for dairy purposes. In the interest of invalids and children, though not of these only, it is to be hoped that the promotors of this scheme may have time to turn their inquiries in this direction.

THE RECENT REVELATIONS AT ALNWICK.

THE conditions associated with a death from English cholera at Alnwick in Northumberland, as revealed at a coroner's inquest, certainly call for the term "scandalous" which has been locally applied to them. The actual conditions of filth under which the death occurred are not the most important feature in the revelation that was made, for they might either have been accidental or have escaped detection. But when the medical officer of health and the inspector of nuisances are, in their evidence, compelled to admit that the reports on the sanitary state of the town and of the disgusting conditions of housing [illegible] brought before the local board are almost habitually ignored, and when this admission is supported by details which are simply revolting, the sanitary administration to which the town is subject is placed in a very discreditable position. Thus in Shield-yard a room was found in which there were two standing beds, two shake-downs, an old table, and a form. Inhabiting the room were five men, three unmarried women, and two children. On a straw mattress on the floor were lying a man and a woman, and two men on another mattress. Two men, one woman, and two children occupied one standing bed; the keeper of the lodging slept in the other. The room measured about 10 ft. by 16 ft. by 7 ft.; it was dirty and dark, with no ventilation, and in the centre was a pan containing human excrement. These conditions, it appears, had often been brought under the notice of the authority, and yet they still remained. Such is an example of the sanitary administration to which Alnwick is subject, and it is to be hoped that at the next election the ratepayers will remember that the real responsibility lies with themselves, for they choose their own representatives to govern them. The coroner, in summing up, declared that the inquest had exposed a scandalous state of affairs in the town. The case is well deserving of the attention of the Local Government Board.

THE INDIAN CHOLERA COMMISSION.

SOME surprise has been expressed in India that the Government have appointed Dr. D. D. Cunningham and Dr. J. J. Cuningham to the cholera commission. It is feared that the last-named gentleman, who, in his capacity as Sanitary Commissioner, has written much on the subject, may be too much hampered in his research by his well-known views of the nature of the disease (he has strongly upheld the non-contagious theory) to be entrusted with this new inquiry. We hardly reciprocate these fears; feeling assured that the inquiry will be conducted upon a strictly scientific plan, and that the conclusions arrived at will be drawn up with a sense of responsibility which should neutralise any of the effects of personal preference for a particular hypothesis.

CRUELTY TO GOATS AND DONKEYS AT THE SEASIDE.

No one who has taken the trouble to look carefully at the goats and donkeys employed in drawing children's carriages or bearing on their backs heavy burdens of troublesome and irritable humanity, at the seaside in the spring and summer seasons, will need to be reminded that these animals are the subjects and victims of much needless and wanton cruelty. We are glad to see that the case of the "goats" has attracted attention of late. We venture to hope it will not be long before the poor donkeys are pitied and protected.

GOOD NEWS FOR MAN AND BEAST.

THERE are few societies more benevolent in their design and operation than the Metropolitan Drinking Fountain and Cattle Trough Association. In such a droughty summer as this it is pleasant to bring its claims under the notice of our readers. To say nothing of work in progress or preparation, the twenty-fifth annual report is able to announce the erection of fifty-two new troughs for animals and fifty-one new fountains for human beings. Most of the structures of the Society are examined and cleaned by its servants three times a week.

CHOLERAIC MICROSCOPY.

THE late Professor Filippo Pacini has left records of a series of original microscopic observations on cholera, which are in course of publication by Vallardi of Milan, under the editorship of Dr. Aurelio Bianchi. It will be very interesting to compare with Professor Koch's, the observations of one so eminent in histology as the discoverer of the Pacinian bodies.

THE DEATH OF A MIDGET.

THE papers contain accounts of a poor diminutive baby that was let out by its mother in Birmingham for 30s. a week for a show. It was but six weeks old, nine inches long, and weighed only ten ounces. The child was exhibited every five minutes, with an interval for dinner and tea. When the mother was sober she suckled the child; when otherwise, as she usually was, it was fed on scalded biscuits. On Sunday convulsions came on, and in the course of a drive the day after, meant to revive the child so as to enable it to go on show to Nottingham, it was unkind enough to die. The wretched mother expressed her regret to the coroner that she had not sold the child, after death, for £20, as she might have done but for scruples about the law! She was severely

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reprimanded by the deputy coroner, and not one whit too severely. But it strikes us as a great omission that no censure was passed on the showman, who was scarcely, if indeed at all, less culpable than the debased and unnatural mother.

IN the *Indian Medical Journal* of July, Dr. P. Cullen gives a table of thirty-eight cases of leprosy, setting forth age, sex, occupation, family history, &c., of the sufferers. Asiatics, as a rule, do not believe in communication of the disease by personal contact, but are highly suspicious of food which has been handled by a leper. In no case out of the thirty-eight were the living children of the lepers affected with leprosy, and in only four cases was admission made of the disease being present in the parents or grand-parents, thus far indicating the absence of heredity in the causation of the malady.

THE honour of knighthood has just been conferred upon Dr. William Carter Hoffmeister, Surgeon-Apothecary to the Queen at Osborne. Dr. Hoffmeister obtained the degree of M.D. at the University of Glasgow in 1840, the diploma of Fellow of the Royal College of Surgeons in 1855, his membership diploma bearing date 1840, and the licence of the Royal College of Physicians of London in 1861. He is Honorary Consulting Physician to the Royal Isle of Wight Infirmary, and Surgeon to the Royal Yacht Squadron.

FROM the report of the examination made by Colonel Sir Francis Bolton, C.E., of the water supplied by the several metropolitan water companies during the month of July, it appears that the Thames water was of about the same average quality as in the previous month, being again, for river water, remarkably free from organic matter. The water drawn from the Lea exhibited some improvement on the previous month's samples.

SURGEON T. K. ROGERS, Professor of Chemistry, Madras Medical College, and Chemical Examiner to the Government of Madras, died of typhoid fever on June 12th. He entered the service in 1877.

REPORT through Russian sources states that the "plague" at Bagdad is subsiding. Quarantine regulations are, however, still in force.

THE BIOLOGICAL LABORATORY AT THE HEALTH EXHIBITION.

No. III.

BACTERIA ASSOCIATED WITH DISEASE IN MAN.

SPIRILLUM OF RELAPSING FEVER.

(*Spirochæte Obermeieri.*)

These are the threads, having a spiral form, (Fig. 9.) In length they usually measure from 16 to 40 μ. When alive they progress rapidly, and an undulatory movement may be seen passing from one end of the thread to the other. They occur in the blood of patients affected with recurrent fever, during the onset of the attacks, but are not found in the intervals. They cannot be cultivated in the usual manner, but the threads retain their mobility for a long time in blood serum and in half per cent. salt solution. Blood containing the spirilla, inoculated into monkeys, causes them to become affected with relapsing fever, and the blood of an animal killed at the height of an attack is found to contain the organisms in abundance.

BACILLUS OF MALIGNANT ŒDEMA.

(*Vibrion septique* of Pasteur.)

This is a rod-shaped bacillus (Fig. 10), which varies considerably in length, reaching 3·5 μ. The breadth is 1 to 1·1 μ.

FIG. 9.



FIG. 10.



FIG. 9.—Spirilla from the blood in a case of relapsing fever. Objective $\frac{1}{5}$ in.

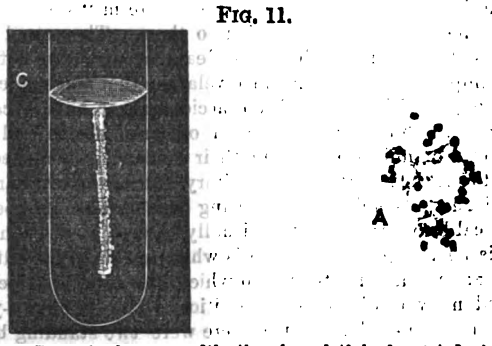
FIG. 10.—Bacilli of malignant œdema in the œdematous fluid. The nuclei of two pus corpuscles are represented. Objective $\frac{1}{5}$ in.

They often lie in chains of two or more bacilli, and are found also as long threads, in which no jointing is observable. They are distinguished from the anthrax bacillus by their smaller breadth and their less abruptly truncated ends; they are, moreover, frequently motile. This bacillus is widely distributed, and occurs, among other places, in the upper layers of cultivated ground. When such earth is placed beneath the skin of a guinea-pig it frequently happens that extensive subcutaneous œdema occurs, and the animal dies in the course of twenty-four to forty-eight hours. The bacilli are then found abundantly in the œdematous fluid and in the lymph of the different organs, though they do not appear in the blood of the heart for some time after death. The same phenomena appear when a considerable quantity of the œdematous fluid is injected beneath the skin of another animal. The bacillus is one of the "anærobien" whose growth is hindered by the presence of oxygen. It is cultivated with difficulty outside the body, and then only without free access of oxygen. Injection of the cultivations again gives rise to the symptoms of the disease.

BACTERIUM LACTIS.

This is an actively moving oval bacillus (Fig. 11), which exists in milk in great numbers. When isolated and cultivated in gelatinised meat infusion (Fig. 11, c) it forms a rather

FIG. 11.



A, Bacteria from a cultivation in gelatinised meat infusion. Objective $\frac{1}{5}$ in. C, Test-tube cultivation.

slender white growth along the track of the inoculating needle, but spreads on the surface of the gelatinised mass, forming a thin transparent expansion. When a small quantity of such a cultivation is inoculated into a flask of milk which has been plugged with cotton-wool and sterilised, the milk "turns sour," the milk sugar is converted into lactic acid, and curds and whey are formed in the usual manner. The milk so altered remains without undergoing any further change.

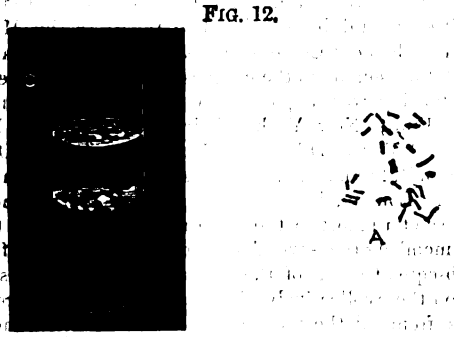
BACILLUS BUTYRICUS.

This bacillus (Fig. 12) is about 3 to 10 μ long and less than 1 μ broad. It often occurs in chains, and sometimes as long, apparently, conjoined threads which exhibit active move-

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ment. In solutions of starch, dextrin, and sugar it sets up a fermentation with the production of butyric acid, carbonic oxide, and hydrogen. The process of spore formation takes place as follows:—The bacilli become shorter and increase in breadth up to 2·6 μ. In the shorter rods this widening takes place in the middle, in the longer at one end. At the same time the protoplasmic contents become more highly refractive, and the limiting membrane thickens. The spores are set free by dissolution of the membrane of the mother

FIG. 12.



a, Bacilli from a cultivation. Objective $\frac{1}{16}$ in. c, Test-tube cultivation.

cell. They are ovoid bodies, measuring 2–2·5 μ long and 1 μ broad. When they germinate, the double contour of the spore disappears at one end, and the contents grow out into a bacillus. The young bacilli may often be seen with the empty spore membrane attached to one end. The bacillus may be cultivated in gelatinised meat infusion (Fig. 12, c.), and causes it to become liquid. The bacilli fall to the bottom of the liquid part, but a white scum is formed at the surface.

MILK MICROCOCCUS.

This is a small micrococcus (Fig. 13), frequently found in milk. So far as has yet been discovered, it produces no fermentative change in it. It may be cultivated in gelatin-

FIG. 13.

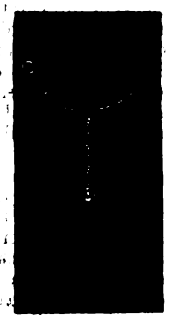


FIG. 14.



FIG. 13.—A micrococcus commonly found in milk. A, Micrococci from a cultivation. Objective $\frac{1}{16}$ in. c, Test-tube cultivation.

FIG. 14.—A, Bacilli from a cultivation. Objective $\frac{1}{16}$ in. c, Test-tube cultivation. The appearance beneath the surface expansion is to indicate the deep smoky-brown colour induced in the gelatinised infusion by the growth of the organism.

ised meat infusion (Fig. 13, c), and forms small round white balls along the track of the inoculating needle, but no surface expansion.

BACILLUS OF BLUE MILK.

Milk which is turning sour is sometimes observed to become blue, the extent to which it does so varying greatly at different times and different places. This change is due to a rod-shaped bacillus (Fig. 14, A). When cultivated in gelatinised meat infusion (Fig. 14, c), it forms a very slender growth along the course of the inoculating needle, and spreads on the surface after the manner of the bacterium lactis. The infusion on which it grows undergoes a remarkable change of colour, a change which extends far beyond the limits of the growth itself. The colour is a deep smoky-brown when seen with transmitted light.

THE INTERNATIONAL HEALTH EXHIBITION.

GERMANY AND AUSTRIA.

THE sister court to that occupied by the French section contains the exhibits of Austria, Germany, and Italy. These in many respects are attractive and interesting, but they suggest a general rather than a special exhibition. Lobmeyer's hand-painted glass from Austria; the art pipes and cigarette-holders, some of them carved by mere children, shown by Raunegger of Vienna; the German potteries of the Neuremberg type; Adarneck's soap, moulded and painted so as to resemble clusters of luscious fruit; the Italian filigree jewellery; the Florentine mosaics,—these and many other objects are deserving of admiration, but are not closely connected with the preservation of health. The Germans, however, show some inventions which have met with much approbation among continental hygienists: notably, Schomburg's spark and soot arresting apparatus, and Trentler and Schwarz's "Aërophor." The latter has received in England the greatest of all homage—imitation. This is an apparatus placed within an ornamental column which pumps air out of or into a room according to the manner in which the fan is made to rotate. The motive power is a small jet of water under slight pressure. A pulveriser is provided by which moisture or scented and medicated aromas may be mixed with the air. The smallest-sized apparatus will pump into a room 1800 cubic metres of air in an hour, at an expenditure of 0·35 metres of water. This is the invention which at the Berlin Health Exhibition took the only and highest award given for ventilation. Some English manufacturers have similar but not such complete methods, nor have they been so scientifically worked out.

Immediately opposite this ventilator are the ingenious contrivances devised by Dr. Ernest Sandow, of Hamburg, which he proposes to use both for the prevention of infection and for the treatment of infectious cases. For instance, there is a bed surrounded by curtains of a waterproof material to render them air-tight. At the foot of the bed is a box containing some felt and wool to filter the air, which can only gain admittance at this point; while at the other extremity a clockwork apparatus causes a revolving fan to draw out the air at the rate of forty to sixty feet per minute. If the case be infectious, the air drawn from the bed is conveyed by a flue underneath a stove, where it is burnt before being discharged into a chimney. Perambulators and carriages are similarly enclosed and ventilated, so that patients may enjoy the air of the street without having to breathe the dust, dirt, and floating matter which render town air especially dangerous, and which is arrested by filtering through felt. Dr. Sandow has also the happy idea of covering the stretchers or ambulances used for conveying patients to the fever hospital in such a manner as to allow no air to escape save that drawn by the clockwork ventilator through a filtering and disinfecting medium. Thus one of the principal objections to transporting fever patients to the hospital may be overcome. All these contrivances are susceptible of very wide application, and we should like to see some experiments made with respect to the ventilating powers of the clockwork machinery.

The improved adjustable scholars' desks, manufactured by the celebrated Berlin firm, H. Simon and Co., are to be found alongside Dr. Sandow's exhibits. This firm has taken a leading part in seeking to initiate reform in school furniture, which it designs after models calculated to prevent deformity among children. The desks shown are adjustable to the height of children of the age of six to sixteen years. The lower portion can be turned up so as to hold books and prevent stooping while reading, and the seat is so contrived as to keep the spine in its proper position. The fact that the Duke of Edinburgh has purchased some of these desks for his own family will, we hope, encourage the use of furniture constructed to harmonise with the laws of human anatomy.

Schomburg's spark and soot arresting apparatus is a somewhat complicated form of chimney-cowl, and cannot be easily described, but as it is widely used in Germany, is patronised by the Government, and adopted by the German navy, it should be carefully examined. The apparatus consists of a metallic box and chimney, to be placed on the roof of buildings or on the decks of ships. There is a circular brush and weight

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attached, which when let down sweeps automatically the chimney. The smoke on ascending strikes a spiral division, which throws the soot into a box; while the smoke escapes into the air. The action of lowering the brush opens the soot-box, thus letting out at cleaning time what has been collected in it. The system has the extra advantage of preventing the escape of sparks from the chimneys, thus reducing the risks of fire.

Most of the other German exhibits relate to the creature comforts, not least among these being the Berlin automatic ash tray; this at once extinguishes and hides from sight the tips of cigars and cigarettes, which cause by far the larger share of the nuisance due to smoking. There are, of course, some German wines and beer; but those reformers who connect the cause of temperance with hygiene will be especially interested in the Weissbier, which, though brewed from wheat, malt, and hops, is a non-intoxicating beverage. It should be sold at a very cheap rate, and would then constitute a popular nutritive drink. Perhaps Hermann Stibbe's elaborate array of liqueurs is also as nearly connected with the cause of temperance. Alcoholic excesses must destroy the power of appreciating the varied and refined flavours of maraschino, crème de theine, and Dutch curacao; thus we always find these delicacies to be best appreciated among essentially temperate people. In England the consumption of liqueurs is very limited, a consequence probably of the exorbitant prices charged. In this case, however, the prices quoted are exceptionally moderate, a result attained by the establishment of a branch manufactory at Cologne, which enables this old Amsterdam firm to avoid the heavy Dutch duties on alcohol. We have tasted these liqueurs, which are now imported into the English market, and find that cheapness does not detract from their body and flavour. There are also some celebrated German mineral waters exhibited, notably the Juliushall, an effervescing water that is very similar to though cheaper than Apollinaris, and is highly recommended for its digestive qualities. These waters are sold in London.

Mingled with the exhibits of Germany are those of Austria—to be recommended, however, for their gastronomic and artistic excellence rather than for their direct connexion with sanitation. There are, for instance, the Austrian mineral waters from the alkaline and acidulous spring of Giesshübler; and the digestive and flavouring Paprika (capsicum annum), which, in various degrees of strength and pungency, may be considered as the Hungarian curry. Samples from the shiploads of prunes from Bosnia and Turkey that are sold in England as French prunes are also shown here by Markó and Weyden of Budapest. There may also be seen the curious honey-cakes popular in Central Europe, and a "nectar" liqueur which professes to work wonders. This is an alcohol flavoured with the extract of ten different herbs, including camomile, vermouth, ginger, black pepper, vanilla, &c. But the exhibits that will be most welcome to the traveller and connoisseur are the celebrated Hungarian wines of the Château Palugyay, near Presburg. These have now been introduced into the English market by Messrs. Josaphat and Co., and merit special notice, for by reason of their purity and moderate price they may well compete with the French wines. In these wines there is much choice and variety; there are the Château Palugyay hocks, Karlowitzer, and some exquisite Tokay. Among the less known wines we would recommend the Ofneradelsberger as a rough, strong, nutritious wine, apparently free from too much sugar, and containing probably a large proportion of iron and tannin. The Château Palugyay claret has a soft, round flavour that will suit the English palate; while, for medical purposes, the Tokay Szamorodny and the Adelsberger may be recommended. Most of these wines are cheap; and, from a sanitary point of view, all cheap pure wines should be welcome, as tending to fortify the system and to check intemperance by engendering refined tastes.

In conclusion, we should mention Haus Denk's patent cross-stitch print, which will save the eyesight of the thousands of children employed in Central Europe to ornament table-linen by coloured embroidery. The counting of stitches is avoided by this method, and much economy of time and visual power realised.

VACCINATION GRANT.—Mr. T. H. Tidswell, of Morecambe, has received the Government grant for successful vaccination (third time).

THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

(From our own Correspondent.)

AMONGST the papers read on Monday, August 11th, that by Professor Austin Flint from New York, in the Section of Medicine, was one of the most interesting. At the meeting of the last Congress in London, 1881, it was resolved that a committee should be appointed to report to the Medicine Section of the next Congress on a uniform nomenclature of auscultatory sounds in the diagnosis of diseases of the chest. The following were appointed members of this committee: Austin Flint, New York (chairman); Professor Ewald, Berlin; Professor D'Espine, Geneva; and Drs. Douglas Powell and Mahomed, London. At a meeting of this committee in London, it was agreed that each of its members should send a report to the chairman, who engaged to send to the members the several reports or an abstract of them, the subsequent report of the chairman to the Congress to be based on these collectively. Professor Flint had now received reports from all the members of the committee and from them he had made the accompanying tabulated lists. Professor Flint concluded his paper by laying stress upon the great international importance of a uniform nomenclature. The work had been very difficult for the members of of the committee, and they would be glad to have suggestions from the medical profession. In the discussion that followed Professor Ewald, Dr. Mahomed, and Dr. Acland took part. Professor Ewald called attention to the great difficulty of the question, of which the lists ought to be considered only provisionary, but he hoped that an addition to the number of the committee would make its solution easier.

In the Section of Surgery it was expected that Sir Joseph Lister would read the first paper, but that gentleman was not present. Professors Esmarch, Trélat, and Verneuil read papers on the Operative Treatment in Malignant Diseases of the Rectum.

The Section of State Medicine was that most numerously attended on Monday, Professor Tommasi Crudeli, from Rome, reading a paper on Asiatic Cholera.

At the general meeting on Tuesday, Professor Crudeli read an interesting paper on Malaria. After apologising for using the word "malaria," instead of the more strictly scientific term, as the title of his paper, he proceeded to combat the theories which ascribed malaria to telluric causes. That idea was, he said, entirely false, as had been proved by various observers; nevertheless, the nature of the soil had much to do with the development of the disease. The term "malaria" had long been associated with the theory of a ferment independent of the soil. The nature of this ferment had not been definitely ascertained, and many theories had been formed with regard to it. Some observers were of opinion that it originated in a living contagion, which appeared only under special circumstances. Others sought it amongst different water-plants, and whole series of seaweeds have been described as the conductors of the disease. In his opinion, however, the enemy was a living ferment, the representative of a parasitic organism, the peculiarities of which he further described. Its development depended upon certain conditions—viz., (1) a temperature of more than 20° Celsius, (2) a soil favourable to the reception of the organisms, and (3) the influence of the atmospheric oxygen upon the soil. With regard to the effect of temperature, Crudeli laid stress upon the fact that the health of the inhabitants of malarious districts improved during the winter, but that a sudden rise of temperature was frequently accompanied by an outbreak of the disease. It was of course impossible to reduce the temperature by artificial means, but it was possible to improve the state of the soil. With this view drainage and canalisation had been proposed, by which means the subsoil was drained and the escape of the surface-water facilitated. Anchisi, in the last century, propounded the theory that malaria could be prevented by planting trees. He (Crudeli) had but little faith in this method, and in support of his opinion adduced the fact that eucalyptus trees had been planted in the Roman Campagna, and had given great hope, until, in 1882, malaria broke out in that part, whilst other malarious districts had remained free from disease. Nevertheless, these means should not be neglected.

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The object should be to make the soil sterile for malaria without robbing it of its fertility; a thorough cultivation of the soil was to be highly recommended. The principle, however, which, in combating malaria, it was most important to keep in view, was that by promoting the general health the disease might be kept at bay. Many experiments had been made in this direction with quinine and eucalyptus preparations, Bosnia experiments had been made upon sixty-seven individuals, and had been attended with happy results. Of course, the use of arsenic required much caution, as it was not desirable that the population should become arsenic eaters. His experiments were, however, far from being concluded. Moreover, they met with considerable opposition, as patients often objected to taking sufficiently large doses of the drug. In

ENGLISH & AMERICAN LISTS.	GERMAN LIST.	FRENCH LIST.
I. PALPATION.		
1. Vocal fremitus.	Stimmfremitus oder Vocalfremitus.	Vibrations thoraciques.
2. Rhonchal fremitus.	Rhoncofremitus oder Bronchialfremitus.	(Not included.)
3. Friction fremitus.	Pleuritisches resp. Pericarditisches Reiben.	Frottement.
II. PERCUSSION.		
1. Tympanitic resonance.	Tympanitischer Schall.	Son tympanique : (*a*) grave ; (*b*) élevé.
2. Amphoric resonance.	Metallklang.	Bruit de pot fêlé.
3. Diminished resonance ; dulness.	Dämpfnung.	Submatité.
4. Absence of resonance ; flatness.	Absolute oder starke ; Dämpfnung.	Matité.
5. Increased resonance.[1]	Hypersonover Schall.	Son pulmonaire exagéré.
6. Bell sound	(Not included.)	(Not included.)
III. AUSCULTATION.		
A. First Group. Varieties of Breath Sounds.		
1. Exaggerated. Syn. : Puerile ; compensatory ; supplementary.	Verschärftes Athemgeräusch.	Respiration exagérée.
2. Diminished. Syn. : Feeble ; weakened vesicular murmur.	Abgeschwächtes Athemgeräusch.	Respiration diminuée.
3. Suppressed. Syn. : Absence of breath sound.	Fehlendes Athemgeräusch.	Respiration supprimée.
4. Prolonged expiration, general or local.[2]	Verlängertes Expirium.	Expiration prolongée.
5. Interrupted inspiration. Syn. : Jerking, wavy, cog-wheeled.	Saccadirtes Athemgeräusch.	Respiration saccadée.
6. Tubular. Syn. : Bronchial ; high-pitched blowing.	Bronchiales Athemgeräusch : (*a*) stark ; (*b*) tief.	Souffle bronchique : (*a*) superficiel ; (*b*) profond ; (*c*) doux ; (*d*) fort.
7. Vesiculo-tubular. Syn. : Broncho-vesicular ; harsh, coarse, subtubular.[3]	Unbestimmtes Athemgeräusch.	Respiration rude ; broncho-vesiculaire.
8. Amphoric.	Amphorisches Athemgeräusch.	Souffle cavitaire amphorique, avec écho musical ou métallique.
9. Cavernous.	(Not included.)	Souffle cavitaire simple, sans écho, musical.
B. Second Group. Adventitious Sounds.		
1. Rhonchi. Dry musical sounds : (*a*) Sonorous ; (*b*) sibilant.	Rhonci. Trockene Rasselgeräusche : (*a*) sonor oder schürrens ; (*b*) sibilant ; oder pfeiffend.	Rhonchus. Râles secs : (*a*) Ronflants ; (*b*) sibilants.
2. Stridor.	Stridor. Stenosengeräusch.	Sifflement laryngé. Bruit de cornage : (*a*) Trachéal ; (*b*) bronchique.
3. Râles. Syn. : Bubbling râles—(*a*) Medium ; (*b*) large ; high or low in pitch.[4]	Feüchte Rasselgeräusche : (*a*) grossblasige ; (*b*) mittelgrossblasige ; (*c*) kleinblasige.	Râles humides : (*a*) gros, (*b*) moyens, (*c*) fins ; (*a*) avec timbre bronchique, (*b*) sans timbre ou simples.
4. Gurgling.	Höhlenrasseln.	Gargouillement.
5. Clicking.	(Not included.)	Craquements : (*a*) secs ; (*b*) humides.
6. Crepitation. Syn. : Crepitant râles.	Knisterude Rasselgeräusche ; Knisterrasseln.	Râles crépitants.
7. Metallic tinkling.	Metallische Rasselgeräusche ; Metallklang.	Tintement métallique.
8. Splash.	Succussionsgeräusch.	Succussion hippocratique.
9. Friction : (*a*) dry ; (*b*) moist.	Reibegeräusch.	Frottement.
C. Third Group. Varieties of Voice Sounds.		
1. Increase of vocal resonance.	(Not included.)	Voix exagérée.
2. Diminution or absence of vocal resonance.	Abschwächung und Fehlen der Stimme.	Voix diminuée.
3. Bronchophony.	Bronchophonie.	Bronchophonie.
4. Pectoriloquy.	Pectoriloquie.	Pectoriloquie.
5. Ægophony.	Ægophonie.	Ægophonie.

[1] American : Increased or vesiculo-tympanitic resonance. [2] American : Prolonged expiration ; high or low in pitch.
[3] American : Broncho-vesicular. Syn. : Vesiculo-tubular.
[4] Moist or bubbling râles—(*a*) large, (*b*) medium, (*c*) small ; high or low in pitch.

but as yet none had proved satisfactory. Certain experiments which the speaker had made with arsenic had yielded good results, and these experiments were now being conducted on a larger scale. They had been commenced in the beginning of 1882, and had been continued last year and this year. As a rule for the treatment by arsenic, he pointed out that it must be commenced before the malarial season sets in, and the doses must be gradually increased. In conclusion, Crudeli pointed out the great advantage of high and airy sleeping places. He reminded his audience of the facts that the Greeks slept on the roofs of their houses, that in malarious districts the inhabitants often used the lofty monuments as sleeping apartments, and that the engineers of the Panama Canal slung their hammocks high up between two bamboo poles.

Dr. Verneuil of Paris then spoke on the Neoplastic Dia-

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thesis, after which Dr. Billings of Washington presented the Congress with the following invitation :—

"In behalf of the medical profession of the United States, we, the undersigned members of a committee appointed for that purpose by the American Medical Association, have the honour to offer to the International Medical Congress an invitation to hold its next meeting in the City of Washington in September, 1887.

"AUSTIN FLINT.	GEO. J. ENGELMANN.
JERVOIS A. SAYRE.	F. M. BROWNE.
CHRISTOPHER JOHNSTON.	JOHN S. BILLINGS."

The most interesting event in the sections on Tuesday, the 12th, was Dr. Sayre's demonstration of his plaster-of-Paris jacket, and the exhibition of three leprous patients by Dr. Hansen from Bergen in Norway.

Wednesday, August the 13th, was almost entirely devoted to pleasure, the reception committee having arranged an excursion to Elsinore for the members of the Congress and their ladies. At 10 A.M. five large steamers left Copenhagen with about two thousand persons on board, and reached Elsinore at midday. Here luncheon was prepared in the ancient fortress of Kronborg; after partaking of which the guests visited the various points of interest in the neighbourhood. At 4 P.M. three long trains left Elsinore for Copenhagen, but part of the company stopped on the way to visit the beautiful Castle of Fredricksborg. In the evening, before a large audience, Professor Esmarch read his paper on Samaritan Schools.

On Thursday, the 14th, Sir William Gull read a paper on the International Collective Investigation of Disease, a report of which has already been published in our columns. The speech was received with great enthusiasm. Sir Henry Acland, the president, proposed a vote of thanks to Sir William, and laid great stress upon the importance of the matter in hand. The whole meeting then rose to express their appreciation of the address, which was remarkable not only for its practical and theoretical importance, but for the elegance and ease of its style. Sir James Paget seconded the motion, which was supported by Professors Ewald, Bouchard, and Billings, and carried unanimously.

The following Committee was then elected :—Professors Trier and Lange for Denmark; Professor Bull (Christiania), for Norway and Sweden; Professor Rauchfuss (St. Petersburg), for Russia; Professors Schnitzler (Vienna) and Pribram (Prague), for Austria; Professor D'Espine (Geneva), for Switzerland; Professors Ewald and Bernhardt (Berlin), for Germany; Professors Bouchard (Paris) and Lepine (Lyons), for France; Professor Jacobi (New York) and Dr. Daries (Philadelphia), for the United States; Sir Wm. Gull, Professor Humphry, and Dr. Mahomed, for Great Britain; and Sir Joseph Fayrer, for India. The representatives of Greece, Italy, Spain, German Switzerland, Holland, Belgium, Cuba, and Japan are still to be elected. Dr. Isambard Owen (London) was appointed General Secretary.

Prof. Panum, the Danish president, then said, "The importance of the resolution passed at this meeting is so great that this International Congress has perhaps the distinguished honour to open a new epoch in medical history. We to-day send into the world the basis of the most important investigations, only to be obtained by the co-operation of all civilised nations. At the same time that I congratulate our Congress on the resolution of to-day, I will express the hope that this new committee, which will girt the world, may be productive of happy results, and continue a blessing to humanity and a benefit to science."

(To be concluded.)

THE FIFTH INTERNATIONAL CONGRESS OF HYGIENE.

(From our own Correspondent.)

FAVOURED by the most exceptional and splendid weather, the Sanitary Congress met under favourable auspices, though the recent death of the Prince of Orange necessarily threw a certain chill on the proceedings. All who spoke in the name of Holland had to deplore this national loss. Nor was this all. Death and disease had been active in the ranks of the organisers of the Congress. Sir G. J. G. Klerck, formerly a member of the Dutch Government, who had promised to act as president, died last January, and two of the vice-presidents were afflicted with severe illness. There are not so many members as at Geneva two years ago, though I have counted 212, including undoubtedly the most eminent sanitary authorities of France and Holland, and many distinguished reformers from twenty-one different nationalities. Many governments, municipalities, and learned societies have sent their delegates. But, as usual, England is more feebly represented than any other nation. We have, it is true, Dr. Corfield with us, and he is a host in himself; but in spite of distance, there are a greater number of members present from the United States than from England. Yet as England is the most prominent among European nations in carrying out practically the laws of hygiene, it should not only be represented by a powerful delegation, but the Congress should have been held in London, and during the Health Exhibition.

The proceedings commenced on Thursday afternoon, the the 21st inst., the Congress being opened by its President, Dr. de Beaufort, Senator. His speech was simple and cordial; he apologised for the absence of illuminations, for the quiet character of the reception, on account of the national mourning. But he not only promised a sympathetic reception, he declared that the Dutch people would not fail to take an intelligent interest in the proceedings of the Congress. (The Dutch newspapers have given full accounts of the debates.) Dr. de Beaufort was very sanguine as to the adoption by legislature of the discoveries of science, and thought that those pessimists who described this as an age of decadence were altogether in the wrong. When we saw doctors devoting themselves, heart and soul, to the development of those sanitary measures which were best calculated to reduce the number of their patients, we could not doubt the disinterested nature of their sentiments. Then there were those heroic scientific expeditions to the borders of the Ganges, and other places where epidemics were raging, that will not fail to elicit the admiration of future generations. In spite, however, of all these efforts, the cholera had invaded France; but union and mutual consultation would strengthen action, and the Congress might be described as a council of war held to combat the cholera. The members would meet in the ancient hall where the Dutch Senate held its sittings. On the roof, painted in the sixteenth century, when the Dutch Republic was in the zenith of its prosperity, we might see the civilised world gathered together to render homage to the greatness of Holland. This painting might serve as an emblem for the Congress, which had brought together representatives from all parts of the world to render homage to the great cause of humanity, the preservation of public health.

The general secretary, Dr. Van Overbeek de Meijer, who has had all the hard work and drudgery incident to the organisation of the Congress, then spoke and showed the difficulties that had to be overcome. The outbreak of cholera rendered the holding of the Congress a questionable matter; but with the approval of the French sanitary societies it was ultimately decided that a great international movement could not be checked by an epidemic in a mere corner of Europe. He denounced internal quarantines as vexatious and useless. After rendering homage to the doctors who bravely fought the epidemic and sought to check its development, he quoted the motto of the Prince of Orange, "*Je maintiendrai*," and of Holland, "Union is Strength." The Congress would also seek its strength in union, and against ignorance would maintain and propagate the knowledge and teachings of hygiene.

Dr. Corradi, of Pavia, recalled how Holland and Italy had been in the vanguard of civilisation, especially in respect to the medical sciences; and Dr. Caro, in the name of the Spanish Government, also returned thanks.

The real business of the Congress began on the morrow, when all the five sections met. It would, however, be impossible to describe even briefly the proceedings of all these groups. Each section meets five times, and for two hours, so that this represents twenty hours of close debate, not to mention the lectures delivered each afternoon. In the evening of the first day a brilliant reception was given to the members of the Congress by the municipality of Amsterdam at the Palace of the Arts and Sciences. The Burgomaster delivered a speech of welcome, and one of the best military bands discoursed sweet music. On the Friday there was an open air concert in the Zoological Gardens of the town and a soirée at one of the hotels, while on Saturday another concert was held at the pavilion of the literary club, in the celebrated wood which is one of the attractions of the Hague.

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But the Sunday's excursion to Rotterdam, Feyenoord, Dordrecht, and Moerdijk was undoubtedly the most pleasurable event. The greater part of the day was spent on a steamer in contemplation of the dykes, the towns, and the marvellous industry of the Dutch people. The remaining three nights of the Congress are to be devoted to receptions and manifestations of hospitable welcome. In spite of all this much serious work has been done, and a fierce battle is now being waged on the question of quarantines. As a final result has not yet been attained, it will be necessary to postpone the analysis of the proceedings, for they will not be without influence on the various continental Governments who have sent special delegates to the Hague.

The Hague, August 25th, 1884.

CHOLERA AND QUARANTINE.

So far as Marseilles and Toulon are concerned, the reduced cholera mortality remains much at a standstill, the deaths at Marseilles varying from some six to ten, and those at Toulon from some two to four a day. A few fresh localities continue to receive infection in the south of France, but in no place does the disease make headway, and it is to be hoped that, although the subsidence of the epidemic is but slow, yet that it will soon be complete. Unfortunately, however, the extension to Italy has assumed serious proportions. At the commencement of August several of the northern provinces became infected, those of Cuneo, Bergamo, Turin, and Massa Carrara exhibiting as the month went on the largest number of attacks. Campo Basso, further south, was next attacked. Suddenly the disease took a further leap; it was asserted that suspicious cases had occurred at Naples, and then genuine attacks were reported from the neighbouring province of Cosenza. But it is in the north that the extension has been most severe, and during the past few days the epidemic has assumed very serious proportions both at Busca and Spezzia, in which places fifty-eight and eighty-four deaths respectively had occurred up to August 25th. But it is doubtful whether even this represents the real magnitude of the outbreak, for it seems clear that secrecy was maintained by the officials until it was no longer possible. The Italian Government are still seeking to control the diffusion of the infection by means of sanitary cordons and fumigations, and some thousands of troops are now engaged in an endeavour to effect the desired object. But even in Italy a strong feeling is beginning to show itself against the quarantine regulations as at present carried out. So long as they mainly affected foreigners all went fairly well, but now that the Italians themselves are suffering both from the actual nature of the restrictions and also in their commercial relations, a feeling of opposition is manifesting itself. Milan, it is said, is taking the lead in an agitation against measures which, whilst interfering with freedom of movement both of persons and of goods, have been ineffectual in so far as their professed purpose is concerned; and it is also believed that some members of the Ministry are beginning to doubt the value of the existing practice.

So far no case of cholera has been imported into this country, and every week that the season advances tends to make us more secure. Cholera in Italy is also less dangerous to us than the prevalence of the disease in France. The week has, however, not been entirely free from rumours of mischief at home, and the account which Mr. Holder of Hull published in *The Times* as to the passage across the country, from Cardiff to Hull, of a sailor who, after arriving at Marseilles, was still suffering from somewhat copious diarrhœa, can hardly be passed over in silence. It is true that, as yet, the truth of the statement that he successfully evaded the system of medical inspection at Cardiff rests solely on the word of a man who apparently had only recently got over a fit of drunkenness; and the sanitary officials at Cardiff have the reputation of being thoroughly efficient. But there is always the possibility that the most vigilant may be deceived by fraudulent statements, and the story as told hitherto rather savours of some such device. We hope to learn the true circumstances of the case.

The *London Gazette* of August 22nd and 26th contains notifications to the following effect:—

All vessels from the Italian peninsula arriving at Greek ports will be subjected to eleven days' quarantine. On arrivals from the French coast of the Atlantic five days' quarantine will be imposed.

The Danish Government has ordered that the provisions of sec. ii. chap. i. of the law of July 2nd, 1880, be enforced against ships coming from any ports of the mainland of Italy on the Gulf of Genoa or the Sea of Tuscany.

At Malta, arrivals from Sicily and Sardinia are admitted to free pratique.

All vessels proceeding to Monte Video from Toulon, Marseilles, or other places where cholera is known to exist, have to undergo eight days' quarantine on arrival.

At Gibraltar, a quarantine of seven days is imposed on arrivals from Italy, and all vessels arriving from ports east of Suez are admitted to free pratique, provided they are furnished with clean bills of health and that the health of all on board is satisfactory.

The Norwegian Government have declared all the ports in Great Britain and Ireland, Belgium, and Holland, as well as the German ports in the North Sea, infected with cholera, no quarantine, however, being imposed upon vessels arriving from an infected port unless cases of cholera have actually occurred on the passage.

The Portuguese Government have issued a notice intimating that the port of Cette is declared infected with cholera morbus since the 1st inst.

The Governor of the West African Settlements reports that all vessels arriving from any infected place (Toulon and Marseilles, and all places in free communication with those ports) will be subjected to seventeen days' quarantine, to count from the date of leaving an infected port, or from the date of the recovery of the last case of sickness on board.

WILLS OF MEDICAL MEN.

THE Scotch Confirmation under seal of office of the Commissariot of the county of Edinburgh, of the trust disposition and settlement of Alexander Wood, M.D., late of 12, Strathearn-place, Edinburgh, who died on Feb. 26th last, granted to John James Graham Brown, M.D., the Rev. James Wood Brown, and Mr. Daniel Molloy Massey, the executors nominate, has now been sealed in London, the value of the personal estate in England and Scotland amounting to over £26,000.

The will of Henry Allen Aldred, M.D., late of 4, Westbourne-park, who died on May 21st last in Hyde-park, was proved on the 13th ult. by Mrs. Jane Fraser, the sister, the value of the personal estate exceeding £17,000. The testator leaves all his real and personal estate upon trust for his said sister for life, and then for her children as she shall appoint.

The will of Joseph John Alphonsus Brown, M.D., late of Grantham House, Grantham, Lincolnshire, who died on June 13th last, was proved on the 11th inst. by Mr. Richard Dunkling Beasley and Mr. George William Shipman, the value of the personal estate amounting to over £15,000. The testator, after giving all his medical books to his eldest son, Joseph L'Oste Brown, leaves the residue of his estate between all his children and Anne L'Oste Norris, the child of his deceased daughter, Josephine Anne Norris.

The will of George Harriss Strange, late of Wardrew House, Lyonsdown-road, New Barnet, Herts, and of 92, Hatton-garden, surgeon, who died on June 2nd last, was proved on the 4th ult. by Mrs. Emily Strange, the widow, Mr. Robert Fisher Young, and Mr. Samuel Durham Kember, the executors, the value of the personal estate exceeding £1200. The testator bequeaths £100 and all his household furniture and effects to his wife and complimentary legacies to his other executors. The residue of his real and personal

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estate is to be held upon trust for his wife for life, and on her death or marriage again for his son George William Davies Strange.

The following legacies have recently been left to hospitals and other medical institutions:—Mr. Hanson Freeman, of Bilton Court, near Knaresborough, Yorkshire, £1000 each to the Halifax Infirmary and the Harrogate Bath Hospital.—Mrs. Jane Brown Grieve, of Orde House, Berwick-on-Tweed, £1000 to the Catholic Hospital of St. John and St. Joseph, Great Ormond-street, in affectionate remembrance of the late James Grieve.—Mrs. Mary Armitage, of 1, Redcliffe-square, the Boltons, Brompton, £200 each to Charing-cross Hospital, the Hospital for Diseases of the Hip in Childhood, Queen's-square, Bloomsbury, and the Convalescent Institution, Chatham, near Redcar, Yorkshire.—Mr. Joseph Nutter, of Park-terrace, Halifax, £1000 each to the Halifax Infirmary and the General Infirmary, Bradford; £500 to the Bradford Fever Hospital; and £100 each to the Blind Asylum and the Eye and Ear Infirmary, Bradford, and Ilkley Bath Hospital.—Mr. James Lyne Hancock, of Blenheim Lodge, Putney-heath, and of 266, Goswell-road, vulcanised india-rubber manufacturer, £1000 each to King's College Hospital and St. George's Hospital; and £500 each to St. Bartholomew's Hospital, the Hospital for Diseases of the Chest, City-road, the Royal Hospital for Incurables, Putney, and the London Hospital, Whitechapel.—Mrs. Catherine Abram, of Belsize-terrace, Hampstead, £1000 to the North London Consumption Hospital.—Miss Martha Butler, of 25, Marlborough-buildings, Bath, £200 to the Bath United Hospital.

EXAMINATION OF CANDIDATES FOR THE ARMY, INDIAN, AND NAVAL MEDICAL SERVICES.

THE following were the questions set at the recent competitive examination for Her Majesty's British Medical Service:—

Anatomy and Physiology (Monday, August 11th, 1884, from 10 A.M. to 1 P.M.)—1. Describe the tibia, giving an account of the origin and insertion of the muscles arising from or inserted into it. Describe also the structure of the knee-joint. 2. Describe the abdominal aorta, giving an account of its relation to neighbouring parts. Enumerate its branches and describe in detail the relation and distribution of those of the cœliac axis. What are the sources of animal heat, and the nature of the mechanism by which it is regulated and distributed? Explain how it is that a mean temperature of the body is preserved under exposure to the influence of either extreme heat or extreme cold. 4. Describe the origin, distribution, anatomical relations, and functions of the spinal accessory nerve and its branches. 5. Describe the dissection by which you would expose the parotid gland. Give an account of its connexion and relation to the various neighbouring structures.

Surgery (Monday, August 11th, 1884, from 2 P.M. to 5 P.M.)—1. What are the causes which give rise to extravasation of urine in the perineal region? Describe the appearance of the parts in the various stages of extravasation, and the treatment, and the consequences of such an injury. Describe the symptoms by which chronic inflammatory swelling of the testicle may be diagnosed from any other enlargement of that organ, and the treatment to be adopted for the relief of the first-mentioned condition. 3. Explain generally what is understood by the term "tertiary syphilis." What tissues does it most frequently affect, and what should be the treatment under its various conditions? 4. What are the constitutional and local causes and general characteristics of gangrene affecting any portion of the lower limb in old age, independent of any severe accident; and what should be the treatment, according to the various stages or conditions of the malady? 5. Describe the conditions known as "caries" of bone. What bones are most commonly thus affected, and what serious complications may follow when it attacks certain bones? What are the best local and constitutional measures to be recommended under these various circumstances? 6. Describe the appearance and conditions of a knee-joint when the seat of acute synovitis, the treatment of such a case, and any unfavourable symptoms that may ensue when the acute state has subsided.

Medicine (Tuesday, August 12th, 1884, from 10 A.M. to 1 P.M.)—1. Explain the meaning of vaccination. Describe its purpose as first applied to the human race; and mention how, when, and by whom it came to be so employed. Explain what is meant by primary vaccination, and what by secondary vaccination or revaccination; and describe the regular phenomena which follow each of these operations; also describe the appearance of a perfect vaccine pustule, and of the scar which is typical of a gen[illegible] and how its characteristic appearance is brought about. [illegible]er, the *rationale* of "arm to arm" vaccination, and [illegible]ge at which primary vaccination is to be done, and the [illegible] to secure its success. Lastly, explain how "sufficien[illegible]vaccination is to be judged of, and how [illegible]. What are the indications afforded by the [illegible] of its membranes, and the [illegible] [illegible] [illegible]

organised, that the building bye-laws should be strictly observed, that polluted wells should be closed, and that adequate means of isolation should be provided. There can be no question but that the work here indicated is necessary. We can only regret that, in view of the past history of the place, as shown by the want of action at Aveley, we cannot look very hopefully into the future sanitary history of the district.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hexham (Rural).—Dr. Maclagan's annual report for 1883 is prepared with much care, although the matters it contains are this year mainly of interest to the locality itself. An account is given of the long-continued attempts to provide Prudhoe with a proper water-supply, the almost endless correspondence between the authority, the Local Government Board, and the Newcastle and Gateshead Water Company having so far led to little more than delay. A detailed account is given of the sanitary circumstances with which the several cases of infectious disease have been associated, and the occasion of their occurring is utilised for the purposes of getting sanitary work carried out. In a population of 34,086, the death-rate was 15·9 per 1000. A considerable increase took place in the deaths from the several so-called zymotic diseases; but the infantile mortality, a matter to which much attention had been devoted, underwent diminution, and fortunately the number of deaths uncertified by any medical practitioner has also been reduced.

Holme Valley (Urban).—The population of this district being estimated at 21,341, the birth-rate was 32·1 and the death-rate 19·0 per 1000. At Honley an outbreak of enteric fever took place, the number of attacks being 23 and the deaths 6. The cause was obscure; but it was probably due to defective drainage, and it is satisfactory to learn that in consequence a complete system of public drainage is now being carried out, and that Dr. Scougal has pressed upon the sanitary authority the importance of compelling all householders to connect their houses with the system. Although it is evident from the description of sanitary work which is given that disconnexion and like improved structural alterations are carried out in the district, yet it does not appear whether or no bye-laws are in force for Honley which will ensure that the new house-drain connexions shall be made after the manner illustrated in the Annotated Model Bye-laws. If not, the needed code of bye-laws should at once be adopted, otherwise it will be difficult to secure such works of house drainage as shall be free from danger to health.

Peterborough (Urban).—The death-rate for this city was 20·1 per 1000 in 1883. It is painful to read, year after year, of illness associated with the use of contaminated wells in an ancient town like Peterborough. Indeed, it is impossible to understand how the soil on which Peterborough stands can be regarded by anyone as affording a source of water-supply which can possibly be free from the risk of contamination. Dr. Paley has, however, again to refer to the subject, and shows clearly how unwise it is to trust to the mere chemical ingredients of a single sample of water when the question of its possible pollution is under consideration. The outbreak of typhoid fever and diarrhœa in one locality, which should have been replaced by proper closets, and the water, long suspected, was let alone because it was never found to contain organic matter in more than a very small quantity. Unfortunately, a very infinitesimal quantity of one kind of organic matter may be more potent for mischief than a large quantity of some other organic contamination. Another recurrence of illness in the same locality fresh investigation led to the discovery that the well was polluted owing to a blocked drain. Here, as elsewhere, a careful examination of the surroundings of a well gave a more valuable information as to its possible pollution than mere chemical examination.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 23rd inst., 5864 births and [illegible] were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which in the two preceding weeks had been 21·9 and 24·1 per 1000, further rose last week to 25·6. During the first seven weeks of the current quarter the death-rate in these towns averaged 22·2 per 1000, against 20·4 and 20·1 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 17·4 in Bristol, 17·9 in Derby, and 20·5 in London. The rates in the other towns ranged upwards to 35·9 in Bolton, 36·9 in Cardiff, 37·3 in Leicester, and 39·3 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which in the two preceding weeks had been 911 and 1106, further rose last week to 1314; these included 995 from diarrhœa, 77 from whooping-cough, 71 from measles, 67 from scarlet fever, 53 from "fever" (principally enteric), 27 from small-pox, and 24 from diphtheria. These diseases caused the lowest death-rates in Plymouth and Bristol, and the highest in Sheffield, Preston, and Norwich. The highest death-rates from diarrhœa were recorded in Hull, Preston, and Norwich; from measles in Bolton and Halifax; from scarlet fever in Sheffield and Cardiff; from whooping-cough in Huddersfield and Halifax; and from "fever" in Cardiff and Bolton. The 24 deaths from diphtheria in the twenty-eight towns included 17 in London. Small-pox caused 21 deaths in London (exclusive of 2 metropolitan cases registered outside Registration London), 3 in Sunderland, 1 in Liverpool, 1 in Sheffield, and 1 in Birkenhead. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had declined in the six preceding weeks from 1368 to 640, further fell to 587 on Saturday last; the cases admitted were 53, against 110 and 64 in the two previous weeks. The Highgate Small-pox Hospital contained 28 patients on Saturday last, 5 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had declined from 198 to 162 in the three preceding weeks, further fell to 157, and were slightly below the average. The causes of 108, or 2·5 per cent., of the 4293 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Leicester, Nottingham, and in four smaller towns. The largest proportions of uncertified deaths were recorded in Sunderland, Oldham, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·7 per 1000 in each of the two preceding weeks, rose to 21·8 in the week ending the 23rd inst.; it was 3·8 per 1000 below the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 13·4 and 14·5 in Perth and Edinburgh, to 26·5 in Glasgow and 29·4 in Paisley. The 524 deaths in the eight towns included 74 which were referred to diarrhœal diseases, 28 to whooping-cough, 14 to scarlet fever, 13 to diphtheria, 6 to measles, 6 to "fever," and not one to small-pox; in all, 141 deaths resulted from these principal zymotic diseases, against 114 and 109 in the two preceding weeks. These 141 deaths were equal to an annual rate of 5·8 per 1000, which was 2·0 below the average rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 51 in each of the two previous weeks, rose to 74, and considerably exceeded the number in the corresponding week of last year; 45 occurred in Glasgow, 8 in Dundee, and 6 in Paisley. The 28 deaths from whooping-cough were within 1 of the number in the preceding week, and included 13 in Glasgow and 5 in Aberdeen. The 14 fatal cases of scarlet fever were all returned in Glasgow. The 13 deaths from diphtheria showed a considerable increase upon recent weekly numbers; 5 occurred in Glasgow, 3 in Aberdeen, 2 in Dundee, and 2 in Paisley. The 6 fatal cases of "fever" corresponded with the number in the preceding week, and 5 of the 6 deaths from measles were recorded in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns, which had declined in the four preceding weeks from 89 to 64, further fell to 58, and were 9 below the number returned in the corresponding week of last year. The causes of 72, or nearly 14 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 22·4 and 24·2 per 1000 in the two preceding weeks, further rose to 30·3 in the week ending the 23rd inst. During the first

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eight weeks of the current quarter the death-rate in the city averaged 23·1 per 1000, the rate during the same period being equal to 22·7 in London and 16·7 in Edinburgh. The 204 deaths in Dublin last week exceeded by 41 the number in the previous week, and included 45 which were referred to the principal zymotic diseases, against numbers increasing from 16 to 33 in the four preceding weeks; of these, 25 resulted from diarrhœal diseases, 13 from scarlet fever, 3 from whooping-cough, 3 from "fever," 1 from diphtheria, and not one from measles or small-pox. These 45 deaths were equal to an annual rate of 6·7 per 1000, the rate from the same diseases being 4·7 in London and 2·5 in Edinburgh. The 25 fatal cases of diarrhœa showed an increase of 3 upon the number in the previous week. The deaths from scarlet fever showed a considerable increase upon recent weekly numbers, and were higher than in any preceding week of the year. The fatal cases of "fever" showed a further decline from those returned in the two previous weeks. Five inquest cases and 3 deaths from violence were registered in the city during last week, and 51 deaths occurred in public institutions. The deaths both of infants and of elderly persons showed an increase upon recent weekly numbers. The causes of 30, or nearly 15 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

INDIAN MEDICAL SERVICE.

WE learn from the *Indian Medical Gazette* that junior medical officers of the Indian Medical Service having been made available, under certain conditions, for duty with British troops, are to receive, when marching with British troops from one station to another, charge allowances on a scale equivalent to what is at present sanctioned for the temporary charge of native troops—viz., for an entire regiment 100 rupees a month, for a wing of a regiment or detachment of numerical strength equal to a wing 75 rupees, for a battery of Royal Artillery 50 rupees.

ARMY MEDICAL DEPARTMENT.—Surgeon-Major Hugh Mackay Macbeth to be Brigade-Surgeon, vice R. C. Lofthouse, M.D., granted retired pay; Surgeon-Major William West Quinton, M.B., is granted retired pay, with the honorary rank of Brigade-Surgeon.

ADMIRALTY.—The following appointments have been made:—Staff Surgeon William H. Putsey, to the *Boscawen*, for service in sick quarters at Portland; Staff Surgeon William J. Rankin, M.D., to the *Boscawen*; Staff Surgeon Robert W. Biddulph, M.B., to the *Duncan*, additional; Surgeon Alfred H. Kelly, M.D., to the *Valiant*; Surgeon James A. Collot, to the Royal Marine Artillery Division at Portsmouth; and John Paulin to be Surgeon and Agent at Peel, Isle of Man; Surgeons William W. Jacobs, Alexander F. Harper, Herbert W. A. Burke, and Edward R. D. Fasken, to the *Royal Adelaide*; Surgeon Evan St. M. Nepean, to the *Pembroke*; Surgeon Arthur S. Nance, to the *Indus*; Surgeon Alexander G. Andrews, to the *Asia*; Surgeon James C. F. Whicher, to the *Impregnable*; Surgeons Edward W. von Tunzelmann, M.B., Edward B. Townsend, Alexander G. Wildey, Patrick B. Handyside, M.B., Harold R. Osborne, James M. Rogers, Charworth L. Nolan, M.B., Harold F. D. Stephens, Francis H. Julyan, Edward C. Ward, M.B., William R. Minching Young, George L. Baker, Herbert W. G. Doyne, Alexander B. Murdoch, M.B., Thomas Dunlop, M.B., Samuel Johnson, M.B., George A. Dreaper, and William H. O'Meara, to the *Duke of Wellington*.

ARTILLERY VOLUNTEERS.—1st Lanarkshire: Surgeon Robert Watson, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement.—1st East Riding of Yorkshire: Surgeon Archd. Megget resigns his commission.

ENGINEER VOLUNTEERS.—2nd Tower Hamlets (East London): The services of Acting Surgeon Reginald Archfield Fergusson, M.D., are dispensed with.

RIFLE VOLUNTEERS.—1st Cornwall (Duke of Cornwall's): Acting Surgeon James Blamey resigns his appointment.—20th Middlesex (Artists'): Walter Pearce, Gent., to be Acting Surgeon.—3rd Monmouthshire: Acting Surgeon Octavius Edward Bulwer Marsh resigns his appointment.—5th Lanarkshire (Glasgow 2nd Northern): Ernest Kingscote, Gent., M.B., to be Acting Surgeon.

Correspondence.

"Audi alteram partem."

"REARING OF HAND-FED INFANTS."

To the Editor of THE LANCET.

SIR,—I fear, good as the substitute advised by Mr. Walker in your last issue may be for the artificial rearing of infants, he will find but few who would take the trouble, even if his, or rather Dr. Frankland's, method were commonly known of compounding the daily supply; it is too complicated for the purpose, and the knowledge how to make it can never be sufficiently promulgated among mothers and nurses to bring it into general use; and I must say here I think the advice of Dr. Owen is excellent, as his system is within the reach of the most indolent and the most ignorant.

In my letter in THE LANCET of Aug. 9th, I think I pointed out more likely reasons why artificial feeding is so disastrous to infant life, and I believe that if those who have the care of dry-nursed children could be induced to feed them for the first few months of existence on new cow's milk diluted with an equal, or rather more than an equal, part of water, and sweetened with sugar of milk instead of common sugar—which induces lactic fermentation, and therefore increases the tendency to infantile diarrhœa—we should not hear so much of the awful mortality of young infants. I have never found this turn curdy, or disagree where I have recommended it, because when any complaint has been made to me of the infant rejecting it, and before permanent mischief was done, I have advised the addition of a little lime-water, and a slight curtailment of the supply. We all know that cow's milk is acid in reaction and human milk is alkaline, and knowing this it is always advisable to tell the nurse or mother how to correct this state of affairs. Under any system of artificial feeding an infant takes in a much larger quantity of food than when it is suckled; but it is not digested, and herein lies the cause, combined with irregular feeding and dirty bottles, of the mischief. It must not be supposed for one moment that I advocate the cow as the proper mother of an infant. I think the present system of rearing dry-nursed children the curse of this generation, and posterity will have to pay a bitter price for the indolence—if nothing worse—of the mothers of the present day, who, obeying the dictates of fashion, delegate to the nurse the duty that nature assigned to themselves. "Can a woman forget her sucking babe?" asks the prophet. Alas, the answer is not far to seek, and the infant mortality of the present day supplies a melancholy answer. Fancy this advice of Chavasse, advice followed by thousands of mothers; here is pandering to laziness with a vengeance: "A good plan is for the nursemaid to have a half-pint bottle of new milk—which has been previously boiled—in the bed, so as to give a little of it instead of the breast. The warmth of the bed will keep the milk at the proper temperature, and supersede the use of lamps, candlesticks, and other troublesome conveniences." Of course it will, and also cause it to turn and decompose in a few hours. No; our duty as medical advisers is to teach mothers that dry nursing is only another name for either killing their offspring or being blessed, or rather cursed, with weakly, rickety, puling children, that develop as they grow older, if they live long enough, tubercular disease and the other ills that follow in the train of early malnutrition. Must we go to the ancients for lessons? Mahomed, in the Koran, commands mothers to suckle their children for *two* years. "Mothers," he says, "after they are divorced, shall give suck unto their children full two years to him who desireth the time of giving suck to be completed." (Koran, chap. ii.) Dion relates that the nurse of Caligula anointed her nipples with blood before she gave him suck, which accounted for his cruelty, as he did not inherit it from his father or mother. Giraldus was of opinion that men and beasts participate in the nature and conditions of the animal whose milk they were brought up on, and he cites the case of a pig that suckled a brach, and when she was grown "would miraculously hunt all manner of deer and that as well, or rather better, than any ordinary hound." Who was that Queen of France, I wonder, of whom it is said that so careful was she that her child

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should be suckled by herself alone, that when in her absence a strange nurse had done so, she was never quiet till she had made the infant vomit it up? What an example to the present race of mothers. Cato, it is said, would make his servants' children suck upon his wife's breast because by that means they would love him and his the better. If there is anything in these opinions of the ancients, and the children imbibe with the mother's milk a greater love for the parent, it may be an inducement to many mothers, if it were known, to suckle their own offspring; and if feeding, as is done in the present day and has been done for the last twenty years to many of the rising generation, on cow's milk gives to the infant the attributes of its foster mother, we need not go very far to seek for the origin of the "masher," though we may deplore the fact that so many calves have been robbed of their due quantum of nourishment to aid in bringing him to his present state of perfection.

I am, Sir, yours truly,

NATHANIEL EDWARD DAVIES.

Sherborne, August 24th, 1884.

THE ANCOATS MURDER: CASE OF J. J. DONNELLY.

To the Editor of THE LANCET.

SIR,—I have read Dr. Hughes Bennett's letter in your issue of to-day with interest, yet also with surprise and regret. Dr. Bennett is to be admired for his warm sympathy with the unfortunate, but there is something else required: a true man is just as well as generous. As was so well said in your article of the 9th inst. on the above subject—"Science knows nothing of sentiment, and we cannot afford to strain points for the sake of humanity." How can we expect judges, juries, or the public to treat us with respect if we allow our feelings or prejudices to warp our judgment—if, instead of giving evidence or expressing opinions in strict accordance with facts, we act as partisans? Is there anything more humiliating than to see or to read of medical men in a court of justice ranging themselves on opposite sides? It is the duty of a medical witness to speak the truth, the whole truth, and nothing but the truth; he has nothing to do with the consequences—those must be left to the judge and jury.

Dr. Bennett intimates that if he had been called as a witness in Donnelly's case, "he could have strongly advocated his irresponsibility." We are further told that "no one acquainted with the mental condition of the prisoner, and reading the public reports of his trial, could have the slightest doubts of his irresponsibility in the crime he committed." Dr. Bennett is dominated by the notion that Donnelly, on the night when he committed the crime for which he was sentenced to be hung, was suffering from epileptic furor. But there is no evidence to support such a view—at least, I cannot find any in the published reports. The deputy coroner, who is a barrister, went very carefully into this matter; he elicited from the prisoner's father that he had not had a fit that night; neither had he the premonitions or accompaniments or consequents of a fit. The father, after more than twenty years' experience, would know well the symptoms indicating a seizure. Both father and brother described these, but, with the exception of turbulence, Donnelly showed no signs of an attack; the family knew too well the true cause of his misbehaviour. Donnelly, unfortunately, was addicted to drink.

A consideration of the whole of the facts will, I think, show that Donnelly, from the time he came home at half-past nine on Sunday night up to that of his capture, knew not only what he was doing, but the probable consequences of his acts. After the father took up the poker and threatened to strike the young man with it, the latter checked his turbulence; and when finding himself locked out, it burst forth again. Instead of venting his anger on his father, who he knew had shut him out, he rushed to his own room out of his father's way. When subsequently his father somewhat cruelly refused him water, he again repressed any manifestation of rage. After having committed the murderous assault on two defenceless women, he precipitately made his escape and tried to conceal himself. Now, an epileptic suffering from maniacal excitement is as devoid of craft as he is blind to danger. Opposition renders him furious and reckless; neither poker nor pistol has any terrors. It is true that Donnelly attacked his sister in a paroxysm of anger, but it is certain that if his father had been in the room armed with the poker he would again have restrained his rage. Had Donnelly's father had any reason to believe that his son was threatened with a fit, instead of thwarting him he would have tried to calm and soothe the young man; but the family knew well that what Donnelly was suffering from was the effect of drink.

In summing up, the deputy coroner told the jury that "there was no evidence that the man was out of his mind at the time he committed the act, and if he was the worse for drink, that was no excuse, but rather an aggravation." The jury which tried Donnelly at the Assizes, having all the facts before them, came to the conclusion that Donnelly was sane when he committed the murder, and therefore found him guilty. The law blunderingly fails to discriminate between a deliberate cold-blooded murder and one committed in a sudden outburst of anger; it barbarously decrees death in both cases. The jury which tried Donnelly marked their sense of the difference, and therefore recommended him to mercy; but, so far from having deserved censure, the jury deserve the utmost credit for having discharged an onerous and very painful duty in a thoroughly conscientious and intelligent manner.

I am, Sir, yours truly,

Manchester, Aug. 16th, 1884. R. MARTIN.

"OUR MONSTER COUNTY LUNATIC ASYLUMS."

To the Editor of THE LANCET.

SIR,—Your article on the above, in the issue of August 23rd, is well-timed, and cannot fail to draw attention to the subject. It is now pretty generally recognised that asylums containing more than 800 patients are difficult of management, if not unwieldy and less economical than smaller institutions. You, however, allude to cases in which "from 1500 to 2000 insane individuals, *supposed to be patients*, are under the care and control of one medical man." Surely you should have added "aided by one, two, or more assistant medical officers." Otherwise the statement is misleading. In these days of scientific advancement, and the development of the healing art, the word "asylum" ought to be almost an anachronism. Patients struck down with mental disease should without delay be placed under the most skilled treatment possible in "hospitals for the insane," institutions in which the main object is to combat the disease in its earliest stage, and to restore the individual to the community with *mens sana in corpore sano*. Such hospitals would require a highly qualified medical staff with clinical assistants and all the necessary means of treatment, and should not contain more than from 100 to 150 beds. Cases after a fixed time deemed incurable should be transferred to the "asylums," the "homes for incurables requiring no special medical treatment." The "hospital for the insane" would be costly at the outset, but in the end would prove the more economical, the more humane, and the more creditable to civilisation. Heretofore the lunacy laws have been framed on the score of humanity solely. Surely the day is not far distant when the advancement of psychological science and the increased facilities for cure will demand consideration at the hands of our legislators. At the present time the medical staff of the county asylums do their utmost for the treatment with view to cure of the patients under their charge, but, from the ever-increasing numbers of the insane, "an enormous mass of material annually passes under their eyes which is almost wholly unutilised." Moreover, the four shillings per week Government capitation grant for the insane poor has of late years flooded the pauper asylum with idiots, imbeciles, and aged dements, because their transfer rids the unions of troublesome cases which, with this pecuniary aid, can be maintained as cheaply, if not more economically, in the county asylums.

I am, Sir, your obedient servant,

ERNEST W. WHITE, M.B. Lond., &c.

Kent Lunatic Asylum, Chartham, August 23rd, 1884.

*** Our statement relative to the number of patients under one medical man is in no way invalidated by the presence of assistant medical officers. The treatment of every patient in an asylum devolves virtually upon the Superintendent, and upon him alone the responsibility in the matter rests.—ED. L.

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NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

THE ROYAL VISIT.

THE Royal week and visit have come to an end, and from what I hear and see on all sides I think we may fairly say they began and ended well. The general arrangements were complete and satisfactory, while the order maintained by the vast concourse during the visit, occupying several days, was remarkable indeed. The police report states that there were fewer cases of intemperance and disorderly conduct than during an ordinary week. The Mayor has scored a great success, and he deserves the special thanks of his fellow citizens, as he has already received those of Royalty. Where all have worked so well, it is no harm to mention the special and useful services of the Ambulance Corps rendered on the day of the procession. Owing to the extreme heat prevailing and the pressure of the crowd, as many as eight or nine people dropped down exhausted at one of our street corners. They were immediately attended to and removed to the tents of the corps, and not allowed to depart until fully restored. As might be expected, during the following days a very large number of minor accidents were admitted into the infirmary, and were duly attended to, but there was a remarkable absence of anything serious.

NEWCASTLE INFIRMARY.

At the last quarterly meeting the House Committee was charged with the nomination of a special committee for the consideration of the pressing need for a larger infirmary, and of the ways and means by which either the present building can be enlarged or a new one erected. Our *Daily Chronicle* points out, in reference to the above resolution, that the site of the building, although a good one in 1750, is not a desirable one now; and that while during the last quarter of a century the augmentation of the city and surrounding district, as regards population, has been enormous, the increased accommodation provided since the opening of the new wing in 1854 has been very small; that the great changes which recent years have developed in our social system render it very desirable that the old plan of admission by subscribers' tickets should be abolished; and that the institution should be converted into a free hospital. The *Chronicle* also points out that, although the present building possesses two undeniable advantages—namely, its central position and its open frontage to the south,—its drawbacks are serious, and more than counterbalance these benefits. A line of railway, on which busy traffic is conducted day and night, runs along the whole length of the main front, and two sides of the building are surrounded by the cattle and sheep markets of the city. The noise and bustle arising from their contiguity are seriously detrimental to the purposes of the infirmary. It was further pointed out at the meeting that, although the house has accommodation for 200 beds, there has often been 230 in use; and that in times of pressure female patients have to be sent to the lock ward—a procedure, to say the least of it, very undesirable.

SANITARY DEFECTS AT ALNWICK.

A recent coroner's inquest on a case of English cholera at Alnwick has brought to light what is described as "a scandalous state of affairs" as regards sanitary matters in the ducal town. From the evidence of Mr. J. H. Davidson, it would appear that there is no registration of lodging-houses in the town, and that he has frequently drawn the attention of the Local Board to these defects, yet no action has been taken. Mr. Davidson has seen as many as twenty people crowded into two small rooms in a very filthy condition. The verdict of the jury was in accordance with the evidence—namely, "Death from English cholera." The coroner, in opening the inquiry, stated he considered it to be his duty as much to inquire into the death of a person from preventable causes as from accident.

Newcastle-on-Tyne, August 26th, 1884.

AMERICAN EXHIBITION.—An exhibition of the arts, manufactures, products and resources of the United States of America will be opened in London on May 1st, 1886.

IRELAND.

(From our own Correspondent.)

CASES OF ALLEGED CHOLERA IN KILMACTHOMAS WORKHOUSE.

A MAN named Kennedy, a native of Glasgow, who had stowed himself on board a Liverpool vessel, and was landed at Kinsale, was admitted on the 20th inst. to Kilmacthomas Workhouse. On the following morning he complained of being attacked with vomiting and purging, and a couple of hours afterwards was seen by Dr. Walsh, medical officer of the union. Dr. Martin of Portlaw also saw the patient, and he and Dr. Wynne considered it an undoubted case of Asiatic cholera. Kennedy became worse, and died at nine o'clock the same evening. Dr. Walsh is doubtful of the case, and he considers it an open question whether the disease was Asiatic or English cholera. The Local Government Board having been communicated with, sent down Dr. Brodie to inquire into the matter, but so far the result has not been made known. I may add that since Kennedy's death a female of weak mind, resident in the workhouse, presented choleraic symptoms and died on the following day. So far all sanitary precautions have been taken by Dr. Walsh; the patient's clothes have been burned, as well as the clothes worn by the male nurse and attendants, and the casual ward and room in the Fever Hospital have been disinfected and closed.

THE ROYAL UNIVERSITY.

Plans for altering the University buildings and for adding a new wing have been approved, and will be commenced immediately, at an estimated cost of £25,000. A chemical laboratory 120 ft. by 30 ft. will form a portion of the wing, and adjoining this will be smaller laboratories, and an apartment for the study of histology 58 ft. by 16 ft. The physical laboratory will be 90 ft. by 30 ft., and close to this will be the physiological museum, 57 ft. by 20 ft. Behind these apartments will be the dissecting room, 120 ft. by 30 ft., and in connexion with it a smoking room for students, lavatories, and retiring rooms. At the centre of the building there will be placed a tower, at an elevation of 90 ft., which will be utilised as a ventilating shaft, in connexion with which the different apartments will communicate. The works will probably occupy two years.

THE DUBLIN HOSPITALS.

From the twenty-sixth report of the Board of Superintendence of the Dublin Hospitals which receive grants from Parliament, it appears that there are nine of these institutions, two being lying-in, two ophthalmic, two fever, one lock, and three general hospitals. On the 1st April, 1883, there remained 815 patients in these hospitals, while the number admitted during the year was 9560, making a total under treatment of 10,375, of whom 9226 were discharged cured or relieved. The deaths amounted to 433, or a mortality of 4·69 per cent. on the cases treated to a termination. The average annual cost per bed for maintanance and for establishment charges ranged from £26 18*s.* 2*d.* in the Hospital for Incurables, to £72 4*s.* in Cork-street Fever Hospital, and £85 14*s.* 6*d.* in the Coombe Lying-in Hospital.

The post of lecturer in Operative Surgery in the Medical School of Trinity College, which has been resigned by Mr. Butcher, will not, it is stated, be filled up.

A good many children in the North Dublin Union have recently been suffering from ophthalmia, which, owing to overcrowding, assumed the proportions of an epidemic. The medical officer has recommended that these cases should be sent to the new buildings at Cabra.

The Local Government Board have threatened to dissolve the Midleton Board of Guardians should they persist in neglecting to procure a proper water-supply for the inhabitants.

Dublin, August 26th, 1884.

BELFAST.

(From our own Correspondent.)

QUEEN'S COLLEGE.

FROM the report of the President of Queen's College, Belfast, for the session 1883-4, which has just been issued, I gather that the total number of students enrolled during

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the year in each faculty was as follows:—Arts, 205; Law, 22; Engineering, 8; Medicine, 264. Of these, 18 attended in more than one faculty, so that the entire number of students upon the books was 481, of whom 456 matriculated. As compared with the previous year, there was an increase of 13 in Arts, a decrease of 7 in Law, 4 in Engineering, and 21 in Medicine. The total aggregate decrease was 21. The main cause of the decrease was, the President thinks, the dissolution of the Queen's University in the session of 1881–82. He states that up to that time the annual increase in the number of students had been steady and rapid, while at this date it ceased, and a serious decrease at once began, amounting in the session 1882–83 to 65. While the President shows the baneful effect the destruction of the Queen's University had upon the College as a whole, he points out that the Medical School has suffered most. The Royal University, which took the place of the Queen's, at once made a change in the medical curriculum. Candidates for medical degrees are by it compelled to pass the first university examination in Arts before being permitted to present themselves for the first professional examination. Large numbers of the students, the President says, who under other circumstances would prefer to study in Belfast and to take degrees in the Royal University, now go to the Scotch Universities and to the examining boards where no such rule exists. He thinks that the study of an Arts course should not be enforced, but should be optional. The taking of a degree in Arts should likewise be left to the choice of the student.

PROFESSOR REDFERN, M.D.

I am very glad to be able to announce that arrangements have been made by which the distinguished Professor of Anatomy and Physiology will continue to lecture at Queen's College. His resignation at the present juncture would have been a great loss to the medical school in which he has been so long a conspicuous figure. His brilliant address at the late meeting of the British Medical Association will long be remembered by those present during its delivery.

THE ROYAL HOSPITAL.

The quarterly meeting of the General Committee was held on Monday last. From the report I learn that Lord Ashley has become President of the hospital in the place of the late Marquis of Donegal. Reference was made to the refurnishing of one of the wards by Miss Duffin, and to the fact that the Board, by the decision of the Master of the Rolls, may use a portion of the Convalescent Home for the treatment of consumptive patients. In this way they will be able to utilise, for the treatment of consumptive cases, the gift of Mr. Forster Green of £5000. The unpleasant feature in the report is the fact that the balance against the hospital at the end of July amounted to £2295. To meet this there is to be a bazaar and fancy fair in the Ulster Hall next November. Dr. J. W. T. Smith was re-elected physician in accordance with the rule that members of the staff are elected for terms of four years, but are eligible for re-election. Dr. Smith is the senior physician. For the post of surgeon, vacant through the resignation of Dr. John Moore, there were two candidates—viz., Dr. T. K. Wheeler, who has been assistant-surgeon for two years, and Dr. Sinclair, the demonstrator of anatomy at Queen's College; the former gentleman was elected by a very large majority.

HOSPITAL SATURDAY.

On Saturday next this new scheme will be inaugurated, when an appeal will be made to all classes of the community at the corners of streets and in public thoroughfares, where ladies and gentlemen will gladly receive any contributions.

PARIS.

(From our Paris Correspondent.)

THE CHOLERA EPIDEMIC.

The cholera continues to reign in the South of France, but the epidemic is as yet localised in the departments of the littoral of the Mediterranean. The mortality fluctuates between three and eight daily at Toulon and Marseilles, but there has been a slight recrudescence during the past week, which has been attributed to the influx of the fugitives, and to the continued insanitary condition of these places. Panic has again set in among the inhabitants, which is extending to the other parts, and has caused a considerable decrease in the number of persons returning to their homes. At Toulon the unhealthy condition of the troops has been somewhat aggravated, and it is, in consequence, proposed to disperse them. The ambulances, which were about to be closed, have received orders to be kept open. Two medical men have succumbed to cholera — Dr. Maurice Cathala at Cette, and Dr. Eugene Fanton at Arles. Intelligence has also been received of the death at Aix of a Sister of Charity (Sœur Catherine), who has fallen a victim to the disease in the execution of her duty among the sick.

ENTERTAINMENT IN HONOUR OF M. CHEVREUL.

A rather interesting demonstration in the form of a public entertainment is being prepared, to be held in the Quartier Latin on the 1st September, to celebrate the birthday of M. Chevreul, the illustrious chemist and academician, who then enters upon his ninety-ninth year. He was born at Angers on the 31st of August, 1786.

AN EXHIBITION OF BABIES.

An exhibition of infants is to be held in Paris on the 30th of October next, and during as many days after as may be necessary. The infants are to be divided into four classes: 1st, from 1 year to 18 months old; 2nd, from 18 months to 2 years; 3rd, from 2 years to 30 months; 4th, from 30 months to 3 years. The jury will be composed of medical men and artists. The children who win the prizes will not be those of the fattest, but those of the best physical conformation as regards development of bone and muscle. There have been already upwards of 2000 applications, and the register will be closed on the 15th of September.

ERRATUM.—Near the end of my letter in your impression of last week, for "Grousi" read *Proust*.

Paris, August 27th.

Obituary.

DR. JULIUS COHNHEIM.

THE closing days of the Copenhagen Congress were saddened by the news announced in the section of Pathology by Professor Virchow of the death of one of the foremost of pathological investigators, Professor Julius Cohnheim of Leipsic. The event took place on the 14th inst., from the chronic affection (renal disease) from which he had been so long a sufferer. At the Congress a vote of condolence was at once passed to the widow of the eminent man; but no one cared then to attempt to review the labour of his too short life. His name stands at the head of the long list of illustrious pupils of an illustrious teacher; and from the time when he held the office of pathological assistant at Berlin to within a few months of his death he had been at work upon the problems of pathological phenomena. Although it is too soon to do justice to all the labours of his life, or to consider in what respects his work has advanced our knowledge, we cannot but feel that in his death science has sustained an irreparable loss. It is some consolation to know that in his "Vorlesungen" he has left behind an enduring monument of his work, which combines the results of physiology and pathology to an extent never before attained. Much of Cohnheim's teaching may be open to criticism as being speculative and transcendental, and yet he seldom advanced a theory without having it supported by well-attested facts. He combined in himself the qualities of the thinker and practical experimenter, and there can be no question that pathology has advanced considerably under his guidance. Julius Cohnheim was still in the prime of life, having just completed his ninth lustrum. After having studied medicine from 1856 to 1860 at Berlin, Würzburg, Greifswald, and Prague, he commenced practice at Berlin. In 1864 he served under Rudolf Virchow as assistant in the Pathological Institute in Berlin. In 1868 he was professor of the same department in the medical school of Kiel, and four years later he was transferred to the chair of Pathology in the University of Breslau, where his prælections attracted so much attention that on the first vacancy he was called to fill the professorship at Leipsic which became immediately associated with his best work. His name will live chiefly for his signal contributions to the doctrine of inflammation, his experimental proofs—by vivisection mainly—having been universally admired for their careful exclusion of every source of fallacy. In all inflammatory processes, without exception, such is his

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demonstration, the greatest part of the pus-corpuscles consist of white blood-corpuscles that have passed through the walls of the veins and capillaries. Till this induction was arrived at, Virchow's view was the prevalent one—namely, that the pus-corpuscles are connective-tissue corpuscles transformed through cell-cleavage (*durch Zellentheilung umgebildete Bindegewebskörperchen*). Medicine, indeed, has formulated few more pregnant truths than that which Cohnheim put on a scientific basis:—"Without bloodvessels no inflammation is possible." An anticipation of this doctrine was made in 1848 by our countryman Waller, who occupies towards Cohnheim much the same position that Pacini does to Koch in the discovery of the cholera bacillus. In both cases the honour of converting partial into complete induction rests with the German pathologist.

GEORGE DOWNS, M.D.

DR. DOWNS, of St. Petersgate, Stockport, who died after a brief illness on the 17th inst., was born in 1807. At an early age he was apprenticed with Drs. Killer and Flint, of Stockport, where he remained until he proceeded to the Richmond School of Medicine and to Dublin for a course of study. In the year 1830 he took the degree of M.R.C.S., and fourteen years later the F.R.C.S. Eng., the M.D. of St. Andrews being conferred upon him in 1860. Throughout the whole of his career Dr. Downs has been a zealous and enthusiastic supporter of the Stockport Infirmary, and by his death that institution has suffered a great loss. In 1836 he was appointed honorary surgeon to this institution; in 1858 he resigned that position and was put upon the consulting staff; and at the time of his death he was senior consulting surgeon.

In 1866 Dr. Downs was added to the borough bench of magistrates. For many years he had acted as the certifying surgeon for the district under the Factories and Workshops Act. He was appointed to that position immediately on the passing of the statute and was understood to be the oldest living certifying surgeon in the country.

Medical News.

UNIVERSITY OF LONDON.—At the recent Intermediate Examination in Medicine the following candidates passed in Honours in the subjects mentioned:—

ANATOMY.

FIRST CLASS.

Thompson, J. E. (Exhibition and Gold Medal), Owens College.
Bradford, John Rose, B.Sc. (Gold Medal), University College.
Spencer, Walter George, St. Bartholomew's Hospital.
Clarke, James Jackson, St. Mary's Hospital.
Lys, Henry Grabham, London Hospital.
Wheatley, James, King's College.

SECOND CLASS.

Bowman, Henry Claxton, Owens College.
Clarke, William Frederick, Guy's Hospital.

THIRD CLASS.

Alexander Sidney Robert, Guy's Hospital.
Helme, Thomas A., University of Edinburgh and University College.
Brook, William Henry Breffit, St. Bartholomew's Hospital.

MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

FIRST CLASS.

Helme, Thomas A. (Exhibition and Gold Medal, University of Edinburgh and University College).
*Spencer, Walter George, St. Bartholomew's Hospital.
*Smith, John Anderson, St. Bartholomew's Hospital.
Bahadhurji, Kaikhosro Nasarvanji, University College.
Eq. Brook, William Henry Breffit, St. Bartholomew's Hospital. / Lyndon, Arnold, St. Bartholomew's Hospital. / Young, Charles Wheeler Forrest, St. Bartholomew's Hospital.
Eq. Burghard, Frédéric François, Guy's Hospital. / Permewan, William, University College. / Sunder, Charles Edward, University College.
Eq. Brown, Frederick Nathaniel, St. Bartholomew's Hospital. / Gardner, William Thomas, St. Bartholomew's Hospital. / Toogood, Frederick Sherman, University College.

SECOND CLASS.

Smith, Hugh, Guy's and London Hospitals.
Trevelyan, Edmond Fauriel, St. Bartholomew's Hospital.

THIRD CLASS.

Luff, Arthur Pearson, B.Sc., St. Mary's Hospital.
Eq. Featherstone, William Barltrop, Queen's and Mason Colleges, Birmingham. / Hamel, Julius, University College. / Holder, Sydney Ernest, University College. / Macevoy, Henry John, B.Sc., St. Thomas's Hospital. / Nevins, John Ernest, Guy's Hospital and Liverpool School of Medicine.

ORGANIC CHEMISTRY.

FIRST CLASS.

Young, Charles Wheeler Forrest (Exhibition and Gold Medal), St. Bartholomew's Hospital.
†Luff, Arthur Pearson, St. Mary's Hospital.
Burghard, Frédéric François, Guy's Hospital.

SECOND CLASS.

Bradford, John Rose, University College.
Macevoy, Henry John, St. Thomas's Hospital.
Eq. Alexander, Sidney Robert, Guy's Hospital. / Brown, Frederick Nathaniel, St. Bartholomew's Hospital. / Mariette, Ernest Paul Alphonse, King's College. / Rowell, George, Guy's Hospital.

THIRD CLASS.

Eq. Seville, Charles Frederick, Owens College. / Spencer, Walter George, St. Bartholomew's Hospital. / Trevelyan, Edmond Fauriel, St. Bartholomew's Hospital.

PHYSIOLOGY AND HISTOLOGY.

FIRST CLASS.

Bradford, John Rose (Exhibition and Gold Medal), University College.
Brown, Herbert Henry (Gold Medal), University College.

SECOND CLASS.

Burghard, Frédéric François, Guy's Hospital.
Spencer, Walter George, St. Bartholomew's Hospital.

THIRD CLASS.

Luff, Arthur Pearson, St. Mary's Hospital.
Bahadhurji, Kaikhosro Nasarvanji, University College.
Alexander, Sidney Robert, Guy's Hospital.
Eq. Lindow, Albert, King's College. / Seville, Charles Frederick, Owens College.
Smith, John Anderson, St. Bartholomew's Hospital.

* Obtained the number of marks qualifying for the Exhibition and Medal.
† Obtained the number of marks qualifying for a Medal.

BRITISH MEDICAL SERVICE.—The following is a list of candidates who were successful for appointments as Surgeons in this service at the competitive examination in London on Aug. 11th:—

	Marks.		Marks.
J. R. Forrest	2475	C. W. Johnson	2100
M. W. Russell	2395	W. E. Berryman	2100
W. R. de Morinni	2370	A. T. J. Lilly	2080
B. F. Zimmermann	2355	R. Caldwell	2075
A. F. Stace	2340	C. C. Reilly	2065
A. Stables	2295	S. E. Duncan	2060
J. F. E. McCraith	2285	J. Maher	2030
E. A. C. Smith	2265	A. Perry	2030
W. M. Hewson	2210	S. M. Cordozo	2010
G. E. Moffet	2210	A. de C. Scanlan	2000
H. A. Haines	2185	H. W. James	1990
J. D. Moir	2175	R. Trevor	1990
R. Crofts	2150	H. P. James	1970
G. M. Dobson	2140	W. Turner	1970
G. E. Hale	2130	B. O. W. Norton	1960

INDIAN MEDICAL SERVICE.—The following is a list of candidates for appointments in this service who were successful at the competitive examination held at Burlington House on Aug. 11th and following days. Fifteen candidates competed for five appointments; all were reported qualified:

	Marks.		Marks.
D. Prain	2625	U. N. Mukerji	2411
A. T. Bown	2610	W. L. Price	2378
J. T. W. Leslie	2560		

NAVAL MEDICAL SERVICE.—At the competition for commissions in this Service, held on Aug. 11th and following days, in the Hall of the University of London, Burlington-gardens, the undermentioned gentlemen were the successful candidates:—

	Marks.		Marks.
Von Tunzelmann	2375	A. B. Murdoch	2040
E. B. Townsend	2310	T. Dunlop	2030
A. G. Wildey	2295	S. Johnson	2030
P. B. Handyside	2200	G. A. Dresper	2000
H. R. Osborne	2170	W. H. O'Meara	1940
J. M. Rogers	2150	W. W. Jacobs	1910
C. L. Nolan	2135	A. F. Harper	1900
H. F. D. Stephens	2135	H. W. A. Burke	1855
F. H. Julyan	2095	E. R. D. Fasken	1840
E. C. Ward	2090	J. C. F. Whicher	1840
W. R. M. Young	2085	A. G. Andrews	1820
G. L. Baker	2064	A. S. Nance	1820
H. W. G. Doyne	2050	E. St. M. Nepean	1820

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 21st:—

Alcock, Samuel King, Sytch House, Burslem.
Coker, Owen Cole, Uxbridge-road.
Heath, Charles Joseph, Cromwell-road.
Hughes, Edgar Alfred, Onslow-gardens.
Pemberton, John Oliver, Lawrence-terrace, Tidal Basin.
Piggott, Frederick Cecil Holman, Ormond House, Richmond.

The following gentleman also on the same day passed the Primary Professional Examination:—

Samuel Gordon Smith, University College Hospital.

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At the recent examination for the prizes in Materia Medica and Pharmaceutical Chemistry given annually to medical students by the Society of Apothecaries, the successful candidates were adjudged to be as follows:—

1st.—John Henry Garrett, University College: Gold Medal.
2nd.—Henry Hamilton, Bristol School of Medicine: Silver Medal and Books.

MEDICAL MAGISTRATE.—Mr. John Ferra Watson, M.R.C.S., has been placed on the Commission of the Peace for the City of Norwich.

TWO cases of maltreatment of lunatics by attendants have been under judicial investigation this week—one in Kent, the other in Dumfries. In the former the defendant was convicted; in the latter the charge was not proven.

SHEFFIELD GENERAL INFIRMARY.—On Wednesday last the new wing of this infirmary was formally opened. The new structure has a separate entrance, but is connected with the main building by a corridor. Its cost is under £5500, the whole of which, with the exception of some £600, has already been raised.

THE HAMPSTEAD SMALL-POX HOSPITAL.—The memorial recently adopted at a meeting of ratepayers of the parish of St. John, Hampstead, asking that an injunction be moved for to restrain the Metropolitan Asylums Board from the further use of the Hampstead Small-pox Hospital, was presented to the vestry on the 14th inst. After some discussion, the matter was referred to the Sanitary Committee for consideration and report.

THE LATE DR. CUOLAHAN.—At the meeting of the St. Olave's Board of Guardians, on the 21st inst., the clerk was directed to write a letter, expressing the sympathy of the board for the widow and family of the late Dr. Cuolahan, one of the medical officers of the union, who died very suddenly on the previous day. For twelve years the deceased had served the board most faithfully, and only two hours before his death was engaged in the performance of his duties.

HOSPITAL SATURDAY FUND.—On the 26th inst. meetings were held in various parts of London to devise the best means of augmenting the resources of this fund, and of consequently extending its utility. Amongst the different means it was resolved to follow are church parades and sermons on behalf of the fund. Facilities will be afforded for the purposes of the street collection at Marlborough House, the Health Exhibition, Crystal Palace, and other places of public resort.

EXETER HOSPITAL SATURDAY.—For the Devon and Exeter Hospital, the Hospital Saturday Committee at Exeter collected last year £300. In return they had a right to occupy eight beds as patients; and if these were always engaged, it would represent an annual cost of £4200. Some of the governors having recently expressed an opinion that it was not worth their while to continue to receive the Hospital Saturday subscription, at a meeting of the committee of the fund on the 24th inst., the expression of such a spirit by the governors was very warmly condemned, and it was decided to communicate with the authorities, so as to determine whether or not the subscription to the hospital should be continued or devoted to some other institution of interest to the subscribers.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ADKINS, GEORGE, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health to the Plympton St. Mary Union Rural Sanitary District till July 20th, 1887.

BERRY, THOMAS FOLEY, F.R.C.S.I., L.M.Dub., has been appointed Medical Officer to the Workhouse, Enniskillen Union.

CAIGER, F. F., M.B., B.S., M.R.C.S., L.R.C.P., has been appointed Resident House-Physician to St. Thomas's Hospital.

CLARKE, JAMES, M.D.Q.U.I., Surgeon Bengal Army, has been appointed Resident Physician to the Eden Hospital for Diseases of Women and Children, Calcutta.

FOTTRELL, W. J., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Resident Surgeon to the Jervis-street Hospital, Dublin, vice Chance.

GREEN, C. D., M.R.C.S., L.R.C.P., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

GREENSILL, J. NICHOLAS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Workhouse, Martley Union.

GUY, WILLIAM, L.R.C.S.Ed., has been appointed Medical Officer for the Gosforth District of the Whitehaven Union, vice Parker.

HUDSON, Mr. ERNEST, has been appointed Senior House-Surgeon to the Royal London (Moorfields) Ophthalmic Hospital.

HUDSON, HUBERT ERNEST, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Sixth District of the Battle Union, vice Duke.

HULL, W., M.B., M.R.C.S., L.R.C.P., has been appointed Resident Accoucheur to St. Thomas's Hospital.

JOHNSTON, G. D., M.R.C.S., L.R.C.P., has been appointed Resident House-Physician to St. Thomas's Hospital.

JOSEPH, J. RAPHAEL, L.F.P.S.Glasg., L.M., L.S.A.Lond., late Surgeon-Superintendent Queensland Emigration Service, has been appointed Resident Surgeon to the Hospital for Pacific Islanders in the Maryborough District, Queensland.

KEARNEY, MATHEW, L.R.C.S.I., has been appointed Medical Officer to the Dundalk Workhouse.

LAWSON, R., M.R.C.S., L.S.A.Lond., has been appointed Assistant House-Physician to St. Thomas's Hospital.

LYON, T. GLOVER, M.R.C.S., L.R.C.P., has been reappointed Clinical Assistant in the Skin and Ear Department, St. Thomas's Hospital.

MACKENZIE, H. W. G., M.A., M.B., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat, St. Thomas's Hospital.

OXFORD, J., M.R.C.S., L.R.C.P., L.S.A.Lond., has been appointed House-Surgeon to St. Thomas's Hospital.

RICHARDS, WILLIAM, M.B., C.M.Ed., has been appointed House-Surgeon to the Queen's Hospital, Birmingham, vice Charles Sanders, M.B.Lond., resigned.

ROBINSON, H. B., M.R.C.S., L.R.C.P., has been appointed House-Surgeon to St. Thomas's Hospital.

ROWLANDS, HUGH PUGH, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Llanegryn District of the Dolgelly Union, and for the Towyn District of the Machynlleth Union.

RYAN, JAMES D., L. & L.M.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Dungarvan Dispensary District, co. Wicklow.

STONE, F. W. S., M.R.C.S., L.R.C.P., has been reappointed Non-resident House-Physician to St. Thomas's Hospital.

Births, Marriages, and Deaths.

BIRTHS.

DUDLEY.—On the 18th inst., at the Royal Naval Hospital, Lisbon, the wife of John Dudley, M.B., B.A., Surgeon R.N., of a son.

DUKE.—On the 25th inst., at 9, Cornwall-road, Westbourne-park, W., the wife of G. Amos Duke, M.R.C.S.Eng., L.S.A.Lond., of a daughter.

MASTERS.—On the 12th inst., at Westhall House, Brook-green, West Kensington, the wife of J. Alfred Masters, L.R.C.P.Lond., &c., of twin daughters.

MULLIN.—On the 21st inst., at Miskin-street, Cathays, Cardiff, the wife of James Mullin, M.A., M.D., of a daughter.

MARRIAGES.

GABB—PRICE.—On the 20th inst., at St. Anne's Church, Bewdley, by the Rev. W. O. Parker Ford, M.A., Vicar, assisted by the Rev. H. H. Winnington Ingram, M.A., Rector of Ribbesford, J. Percy A. Gabb, M.D.Lond., Guildford, Surrey, eldest son of John Gabb, Surgeon, Bewdley, to Ada, only daughter of Samuel Price, J.P., Bewdley.

HERRON—BATHURST.—On the 21st inst., at St. Mark's Church, West Hackney, James Herron, M.D., to Sarah Elizabeth (Bess), only daughter of the late H. M. Bathurst, Broseley, Shropshire.

JOHNSTON—SMITH.—On the 20th inst., at St. John's Church, Dronfield, by the father of the bride, assisted by the Rev. J. T. F. Aldred, Vicar of Dore, Rev. A. E. Auchinleck, Rector of Car-Colston, and the Rev. E. S. Rounds, Curate of St. John's, Dronfield, John Somerville Johnston, Physician and Surgeon, Spital Hill, Sheffield, to Frances Mary (Fannie) only daughter of the Rev. W. H. Smith, M.A., Vicar of Dronfield.

SYDNEY—HORNSBY.—On the 26th inst., at the Parish Church, Bedfont, Middlesex, by the Rev. Morley B. Saunders, uncle of the bride, Henry Sydney, M.D., of Townall Gardens, Hounslow, to Ellen Isabel, third daughter of the late Colonel H. A. Hornsby, 2nd Madras E.L.I.

DEATHS.

CHAMBERS.—On the 21st inst., at Margate, Frederick Chambers, L.S.A.Lond., J.P., aged 83.

EVERETT.—On the 21st inst., at Sydenham, David Everett, F.R.C.S., late of Worcester, aged 66.

HAVERS.—On the 20th inst., at White Hill, Great Berkhampsted, Herts, John Havers, F.R.C.S., in his 70th year.

HILLMAN.—On the 19th inst., at Beech House, Charmouth, Dorset, William Hillman, Brigade Surgeon A.M.D. (retired), youngest son of the late Robert Hillman, of Lyme Regis, Dorset, aged 51.

PEAR.—On the 21st inst., at his residence, Park-crescent, Brighton, Geoffery Pear, M.D., late of Windsor, 78.

WESTMACOTT.—On the 23rd inst., John Guise Westmacott, M.D., L.R.C.S.Edin., of Howley House, Maida-hill, aged 78.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 28th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Aug. 22	30·21	S.E.	67	58	112	82	58	..	Hazy
,, 23	30·14	E.	65	63	120	82	59	..	Hazy
,, 24	30·12	W.	75	65	122	87	60	..	Bright
,, 25	29·97	N.E.	68	64	85	70	64	·02	Cloudy
,, 26	30·16	N.	55	50	94	63	49	·02	Bright
,, 27	29·95	N.W.	55	51	72	61	51	..	Overcast
,, 28	29·66	W.	61	60	105	63	54	·26	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

NEW HOUSES.

THE *Gesundheit* quotes a proposal drawn up by a Magdeburg society for defining the period during which new houses should be allowed to dry before being inhabited. It is suggested that if the building has been roofed during the winter months (Oct. 1st to April 1st) it should be allowed to dry for four months, while three months would suffice at other times of the year. There should be at least eight weeks between the completion of the internal plastering and the beginning of the occupation. In special cases, where technical and medical experts agreed that the rooms (as ascertained by hygroscopic observation) were fit for habitation, it would be optional for building inspectors to shorten the above-named period from three to two months.

"RUPTURE OF THE COVERINGS OF AN INGUINAL HERNIA."

To the Editor of THE LANCET.

SIR,—With regard to Mr. Bernard Pitts' letter relative to the above in your issue of last week, I may mention that I believe the correctness of the man's statement, for the following reasons. I myself saw the cab drive up to the hospital, and saw the man leave it unaided and alone; and the manner in which he walked into the hospital (ten or twelve yards), without any apparent difficulty, proved there was no physical reason why he could not have walked the distance specified. That he did see a surgeon, or someone at the surgery, there was no denying, for there was the lint wrapped round the parts. Judging the distance from where he said the rupture took place to the surgery, I do not think a quarter of a mile was any exaggeration.

I am, Sir, yours truly,

Brockley, S.E., Aug. 27th, 1884. W. MILNE ANDERSON.

M.R.C.S. (St. Leonards).—The cases, as stated, are not parallel. An unregistered practitioner is liable to a penalty for taking or using a title implying that he is registered, and he cannot recover charges in a court of law.

Miss Richardson is referred to our advertising columns, and to a letter which appears in our present number.

Rev. F. Smith.—It would be against our rules to publish a letter of the kind.

ACUTE MANIA IN CHILDREN.

To the Editor of THE LANCET.

SIR,—Can you or any of your readers tell me of any recorded cases of acute mania occurring in a child of five years. If so, I should be glad to know where I could see such records.—Yours truly,

HARDING H. TOMKINS, M.R.C.S.,

Infirmary for Children, Liverpool, Assistant House-Surgeon.

Aug. 26th, 1884.

SEWING MACHINE WORK.

THE question of the effect upon the system of continuously working the sewing machine as an employment has lately been receiving attention in Germany. Herr Eulenburg, a leading Prussian official, has written in vindication of the machine, quoting Dr. Blaschka's testimony in its favour. Dr. Ohausen, who was connected with the Berlin Hygienic Exhibition of last year, has expressed the opinion that the sewing machine does away with the principal disadvantage of hand needle-work—the continued bent position of the worker. Only beginners at the sewing machine bend forward, those who have learned its use being able to maintain a healthy position of the body. The movement of the foot he considers beneficial to the organism, as it encourages circulation. The movements of the body in arranging and holding the work are, he thinks, such as to resemble in a certain degree a gymnastic exercise. When carried on in good air the working of the sewing machine is of advantage to the digestive and respiratory organs. Importance is attached to the kind of chair used, so that it may readily accommodate itself to the movements of the body. The garments should on no account be worn tight. Dr. Ohausen has found no consumptive tendency amongst the many sewing machine workers he has attended, and considers the work may even neutralise a hereditary disposition of that kind.

Mr. James Cheese.—Such specimens may be obtained from Mr. A. Cole, Notting-hill; from Messrs. Beck, 68, Cornhill; and from other microscopical dealers.

SKILLED NURSING.

To the Editor of THE LANCET.

SIR,—Everyone knows in case of illness the comfort of skilled and competent nursing; but until the need for a nurse arises few persons are aware that there is any difficulty in at once securing a first-rate one, or have any idea of the disadvantages with which this most useful class has to contend.

A nurse must spend no inconsiderable amount of both time and money ere she attains proficiency; and when this is accomplished, how is she to obtain remunerative employment? She must either become an inmate of a home, or a member of the non-resident staff attached to an institute, or she must trust to private recommendation. In the first case she is boarded, lodged, and paid £20, or at most £25, a year. She is sent out as patients apply at the home, and may be in constant employment; but her earnings, whether small or great, are entirely forfeited to the funds of the home. Thus the nurse uses her skill and exhausts her strength for a bare subsistence, and it is evident can make no provision for old age or failing health. If she joins the out-door staff, she has, when out of work, to provide for herself, and when employed the rate of pay is fixed by the institute, and one-half of it, in some cases even more, is claimed by the home. What chance is there that the nurse can lay by any part of her earnings? Last comes private recommendation; and to a few, but only to a very few, this proves an El Dorado. A doctor is struck by the tenderness and skill of a nurse, notes her name and address, places her at once with another patient, and, fortunately for the nurse, gets her name and capabilities well imprinted on his memory, so that when asked to recommend a nurse, "Nurse ——, 14, —— street," immediately occurs to him, and, in consequence, she is often applied for when already engaged. But the doctor's busy brain cannot retain several addresses, though he is sure he knows of many good nurses. If again applied to, he is very sorry Nurse —— is unavailable, but assures the applicant that some one else can be obtained from the homes. The case of the nurse seems hard enough as regards payment; but she is also harassed by numerous restrictions. Her testimonials must be deposited at the home, and are thus useless to obtain an engagement, except through that medium, and she is forbidden to be transferred from one patient to another without the intervention of the institute—in fact, it seems decided that the nurse shall be debarred from most of the advantages her profession would naturally give her.

Some physicians, realising the hardships of the case, have suggested to us to open an institute for first-class nurses, through which, by abolishing all vexatious restrictions and excessive payments, they may reap the benefit of their own toil, and be enabled to save a portion of their earnings for the time of need. All means taken to free the nurse from personal anxiety, every inducement that can be offered to increase her liking for her work, must conduce to the welfare and comfort of her patients; and it is therefore in the interests of all sufferers that we would appeal to the public to support this endeavour to benefit a miserably underpaid and most deserving class.

I am, Sir, yours obediently,

126, Regent-street, Aug. 21st, 1884. E. FAITHFULL.

Vox Medicinæ.—It would be hardly fair to insert our correspondent's letter without the name of the writer being attached thereto.

A QUERY.

To the Editor of THE LANCET.

SIR,—I shall feel obliged if some of your readers will tell me of an institution in which a dumb child, seven years old, of defective intellect, could be received either gratuitously or by payment of a small sum.

I am, Sir, yours truly,

Aug. 27th, 1884. MEDICUS RUSTICUS.

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H. B. S (Bristol).—In Continental Europe during the Middle Ages, and in England down to the time of Queen Elizabeth (see Sir Walter Scott's "Kenilworth," chapter xiv.), the physician was frequently called an artist. In German the word in this sense still survives in "arzt" (physician), which is an abbreviation of "artista," which, in turn, is itself a Middle High German derivative from the Latin "ars."

Forvet.—The point suggested has certainly not been overlooked.

FUNGI AND CHOLERA.

To the Editor of THE LANCET.

SIR,—As a fungus eater, grower, and observer, I desire to make a few suggestions derived from personal experiment and observation. My reason for communicating anything calculated to imply impertinence and to deprive me of a later honour is, that my suggestions may give a wider scope and basis to those who are making cholera their study. It, moreover, removes the burning germ question into the cooler regions of general biology.

1. Some of the symptoms of cholera are analogous to those produced by the genus agaricus—namely, to those which act by an alkaloid, such as muscarin, and not by an irritant resin. 2. Many micrococci, bacilli, and leptothrix forms are identical; penicilli, toruli, and saprolegnaceæ are identical; and all these, if not identical, are closely related in their physiology. 3. Chemical products in penicillum are in many cases the same as those in agaricus; moreover, the movements are common to the sporangia of both, these movements being related to the escape of the nuclei or spores, and apparently absorption of water. 4. The chemical principle occurring in the sporangia almost constantly makes up a large portion of the contents of the sporangia of both penicilli and agarics. It is soluble in ether and spirit, separates in feathery crystals and volatilises by heat. The odour is that of oil of amber. 5. I would recall to mind the power fungi have to break up albuminous materials, such as mucin, into crystalline nitrogenous principles. As regards the chemical substance before mentioned, it seems to be the substance from which the metacellulose of the hyphæ is formed. The crystals, moreover, treated by weak oxidisers, show an abundance of micrococcous forms. Whether this arises from impurities I have not yet ascertained.

Hence it is the chemico-physiology of larger fungi which will help to throw light on the chemico-physiology of germs.

I am, Sir, yours faithfully,

St. Thomas's Hospital, Aug. 21st, 1884. S.

A REMARKABLE CASE.

To the Editor of THE LANCET.

SIR,—Perhaps the novelty of the following case may induce you to find space in your journal for its notice.

A man much distressed, and evidently in great pain, came to me the other evening, saying he had a "soda-water bottle in his fundament." Upon at once letting down his trousers (which were covered with blood), I noticed blood trickling from the rectum. On introducing a forefinger into the bowel I could just detect the edge of the mouth of a bottle, and, by inserting the middle finger as well, was able, after some difficulty, and employing all the traction my limited hold permitted, to extract, not an ordinary soda-water bottle, but one which is, I think, used to contain ginger ale, the length of which was seven inches and a quarter, and the circumference seven inches. His story was that, as his bowels had not been opened for more than a week, and as aperients had not acted, some one advised him to open them by means of a bottle, and that in attempting this it had slipped from his grasp, and all his efforts to get it again were unavailing.

I am, Sir, yours obediently,

Finchley, Aug. 27th, 1884. AUG. DIXEY, M.D.

HYDROCELE.

To the Editor of THE LANCET.

SIR,—During the past two years I have met with two cases of hydrocele, of a similar nature to the one described by Dr. H. C. Cameron in THE LANCET of May 10th. One occurred in my own practice, and one in the practice of a friend, who sent me the fluid for examination. In both cases the fluid was similar to that in Dr. Cameron's case. It had the appearance of milk, a neutral reaction, and was coagulated by heat. The microscopical appearances were similar to those of chyle. Sir W. Fergusson's case was presumably one of filarial disease, as similar fluid was found in the other serous cavities, and the urine was chylous. In my case there was no evidence of filarial disease.

I am, Sir, yours truly,

General Hospital, Madras, July 26th, 1884. J. MAITLAND.

CANNULA FOR INJECTING.

To the Editor of THE LANCET.

SIR,—In answer to inquiries, I beg to state that the hollow, blunt, or closed cannula, with an eyelet at the sides like a catheter, left by me at Marseilles, for injecting fluid into the peritoneum, was supplied me by Messrs. Krohne and Sesemann of Duke-street, Manchester-square, from a model, I believe, of Dr. B. W. Richardson's. I fancy a small catheter, male or female, would answer. The whole is then attached to a syringe by an indiarubber tube. A Dieulafoy's aspirator needle answers well for injecting the cellular tissue. Messrs. Krohne and Sesemann supply both for 12s.

I am, Sir, yours faithfully,

London, Aug. 23rd, 1884. CAMERON MACDOWALL.

Medicus.—We see no good to be served by publishing the exceedingly rude letter forwarded to us by our correspondent. We sincerely congratulate him on not securing the services of a locum tenens who could indite such an epistle.

WILL *Constant Reader*, whose letter appeared in our columns on the 16th inst., forward his address, which has been mislaid?

Mr. Knight Treves.—Next week.

Mr. H. B. H. Turner.—We are not publishing the papers in full.

"PREVENTION OF 'HARVEST BUMPS.'"

To the Editor of THE LANCET.

SIR,—If "M.D." will read Dr. Ringer's remarks on Sulphur in his work on "Therapeutics," p. 131, and various comments on this drug, he will be better able to judge whether my recommendation "was seriously meant." I am aware of the disagreeable smell of sulphur, and so recommended lavender water to be added. As "necessity is the mother of invention," fumigations in lodgings, I think, will not be impossible. "M.D." fails to comment vividly on the usage of carbolic soap. I may, however, refer him to the researches of the late Sir Erasmus Wilson, and Drs. Roberts of Manchester, Anderson, and Hebra, and he will find thereby that opinion differs. He also seems to ignore the fact that a family going for a holiday to the seaside need not trouble themselves about, or provide themselves with, all the means mentioned in my letter, as at all seaside places and health-resorts plenty of chemists are to be found. Harvest bumps seem more prevalent in the country than at the seaside. Seaside bumps, I think, therefore belong to a different nomenclature of the acarus autumnalis, as described by Professors Owen and Latreille.

I am, Sir, yours obediently,

Woburn-place, Aug. 25th, 1884. C. S. TAYLOR, M.D., M.Ch., B.Sc.

Albuminuria.—We should advise the perusal of Senator's article on the Hygiene of Albuminuria, published in the *Berliner Klinische Wochenschrift* for 1882, vol. ii.

X. X.—A list of public vaccinators authorised to grant certificates of proficiency in vaccination is issued by the Local Government Board.

Mr. Norman.—We do not prescribe.

"THE LONDON UNIVERSITY PRELIMINARY SCIENTIFIC EXAMINATION."

To the Editor of THE LANCET.

SIR,—The Censor of the Royal College of Physicians deserves the best thanks of students and their guardians or parents for his exposure of the absurd and cruel examination as regards Physics at the late Preliminary Science Examination of the London University. My ward informs me that, although a pupil of Professor Cary Foster, and regularly attending his lectures, he was never taught some of the subjects referred to in the questions. As the Professor was paid for imparting knowledge on subjects relating to the examination of which he was one of two examiners, I think he failed to carry out his duties; and surely it would have been but fair to have given questions which tested the student's knowledge of what his Professor had taught him. It appears to me that it would be a great waste of a medical student's time, to devote so much of it as would be required to make him proficient in an outside subject, such as Physics, if the examinations are to be conducted in a like manner as the last was; and I trust the authorities will exercise their discretion in prohibiting such an unfair set of questions in future.

I am, Sir, yours truly,

Aug. 23rd, 1884. AN OLD SURGEON.

Mr. William A. Duncan.—Zur Frage der Behandlung der Uterus-carcinome, Wiener Klinik, 1882.

Mr. J. B. Harrison.—Either, provided the vaccinifer is healthy.

CASE IN DENTAL PRACTICE.

To the Editor of THE LANCET.

SIR,—The following case, being of unusual occurrence, will perhaps be deemed of sufficient interest to merit a place in your columns.

A patient aged fifty-five, the widow of a physician, had complained of pain and deafness on the left ear for about three years, for which she had been treated by several medical men, one of whom at last advised her to consult an aurist. Previous to doing so she came to me, on Aug. 11th, complaining of pain in an upper canine, at the same time mentioning the above circumstances. This tooth was extensively decayed, and the pulp cavity full of pus, but with no extensive peridental mischief. Thinking this a possible cause of the deafness (no other tooth or stump being on that side), I advised its removal, which I did under gas on the same day as the patient visited me. Upon returning next day she assured me that she had felt no further pain or faintness in the ear, and the deafness was quite cured."

I am, Sir, yours truly,

PERCY MAY, M.R.C.S., L.D.S. Ed.

Endsleigh-gardens, N.W., Aug. 22nd, 1884.

M.D.—Either Cassell's or (a much larger work) Wood's Household Practice of Medicine (London: Sampson Low, Marston, and Co.).

A Seeker of Fair Play has not enclosed his card.

ERRATUM.—Under the heading "Stray Notes on the Congress," in our issue of last week, p. 336, for Professor "Panum" read *Plank*, as President of the Surgical Section.

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COMMUNICATIONS, LETTERS, &c., have been received from—Sir E. C. Owen, London; Dr. Laffan, Cashel; Dr. W. A. Mackay, Huelva; Mr. E. Owen, London; Dr. Van Iyke Carter, Bombay; Mr. J. Wilson, Glasgow; Mr. P. T. Ourry, Leighton Buzzard; Mr. N. E. Davies, Sherborne; Rev. R. L. Bamfield, West Anstey; Mr. T. Croke, London; Dr. Philipsen, Newcastle-on-Tyne; Mr. Wm. Thomson, Dublin; Dr. Kirk, Glasgow; Mr. Harrison, Mansfield; Dr. Warren (Boy), Paris; Dr. Mantle; Mr. T. Fletcher; Messrs. Le Grand and Sutcliffe, London; Dr. Saundby, Birmingham; Mr. Prosser Wight, Wigan; Rev. F. Smith, Wickwar; Dr. Cimeron; Dr. D. Lindsay, Cockermouth; Mrs. Keelan, Parkstone; Mr. Scott, London; Dr. Gobat, Overton; Mr. Percy May, London; Mr. J. P. Glover, London; Mr. H. E. Friend, London; Dr. E. W. White, Chatham; Mr. Jesse, Henbury; Mr. Greenwood, Hanley; Mr. Mason; Dr. McNaughton, London; Dr. Harrison; Mr. Woodland, London; Mr. F. Jordan, London; Dr. Whitla; Mr. Thorpe; Messrs. Dawson Bros., Montreal; Mr. Barwell, London; Mr. Whiteley, Leeds; Mr. Miller, Glasgow; Miss Cooper, London; Mr. Watkins, Worcester; M. Huband, Gironde; Mr. Withe; Mr. Kesebone, Bedford; Mr. Hawkins, Bushey; Messrs. Arnold and Sons, London; Mr. Browne; Mr. Armstrong; Mr. Hubbard, New Haven, U.S.A.; Mr. W. H. J. Brown, Cochranefield; Mr. Johnston; Messrs. Smith and Son, Birmingham; Messrs. Oliver and Boyd, Edinburgh; Mr. Pearson, Cork; Mrs. Tillet, Cheltenham; Messrs. Boake and Co.; Messrs. Blackie and Sons, Edinburgh; Mr. Creddock, Gloucester; Dr. Harding, Cape Colony; Dr. Lionel Beale, London; Dr. Collier, Gorleston; Mr. Sydney Jones, London; Mr. Pybus; Dr. Dixey, Finchley; Dr. F. E. Wilkinson, Sydenham; Mr. E. S. Bishop, Manchester; Dr. H. MacDonnell, Dundalk; Mr. Knight Treves, Margate; Dr. Ledlard, Carlisle; Mr. Trenerry, Bristol; Mr. Villican, Dublin; Dr. Mackintosh, Dublin; Mr. Sullivan, Leicester; Mr. Mann, Bradford; Messrs. Whitehead and Co., Manchester; Messrs. Robertson & Scott, Edinburgh; Mr. Martin; Mr. Armstrong; Mr. Makuna, Ystead; Beta, Finsbury; Mechanic; A. B., Swansea; S.; An Old Surgeon; Vox Medicinæ; Medicus Rusticus; Ferret; St. George's; M.R.C.S.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Foot; Mr. Robson, South Shields; Mr. Potter, Brixton; Mr. Brandfoot, Sunderland; Miss Mayer; Mr. Hamilton; Mr. Ferguson, York; Mr. Kerr, Glasgow; Mr. Brown, Douglas; Mr. Wheeler, Manchester; Mr. Durie, Olmskirk; Mr. Roberts; Mr. Birchall, Liverpool; Mr. Brown, Perth; Mr. Jess; Mr. Brittain; Dr. Eberle, Thirsk; Mr. Jenkins, Tawley; Mr. Patterson, Exmouth; Mr. Laing, Southport; Mr. MacPherson, Middlesborough; Messrs. Feltoe and Sons, London; Mr. Oakfield, York; Mr. Grattan, Cork; Mr. Hopkins, Bath; Messrs. Mills and Co., Trinidad; Mr. Heskins; Dr. Fletcher, Bury; Mr. Dixie, Oxford; Dr. Clarke, Tunbridge Wells; Mr. Heaton; Miss Stutchbury, Clifton; Mr. White, Bayswater; Miss Peace, Barton; Messrs. Kegan Paul and Co., London; Mr. Saunders, Peebles; Dr. Dunas, Leytonstone; Tutas; Ebor, York; A. W. W.; A. T. S., Biggleswade; Invalid; G., South Kensington; F.S.A., Wye; Ergates; Medicus, Sheffield; Celeritas; C. H.; T. J. H., Streatham; Medicus, Ashburton; H. H., Lowestoft; S. A. B.; North Hants; Dens, Chester; Prove; N. R., Salisbury; A. B., Egremont; Medicus, Aberdeen; A. M. J., Ramsgate; Austral, Howdon-on-Tyne; Lecturer, Edinburgh; Medical, Paddington; J. R., Camberwell; A. C., Ryde; C. M., Huddersfield; P. P.; Medicus, Bristol; Lex; P.P., Notts.

Kimberley Daily Independent, Times of India, Pioneer, Calcutta Englishman, Demerara Daily Chronicle, Newcastle Daily Journal, Liverpool Courier, Invergordon Times, The Australasian, Sheffield Daily Telegraph, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, September 2.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, September 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, September 4

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, September 5.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, September 6.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

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SUMMARY OF A

Lecture

ON THE

TREATMENT OF LUNG TUBERCLE.

Delivered at the City of London Hospital for Diseases of the Chest, on July 2nd, 1884,

BY G. A. HERON, M.D.,

PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—In dealing with the subject of the treatment of lung tubercle, it is not my intention to go into details concerning all the modes of treating that disease which are in general use. To do that would require much more time than we have at our disposal; and, indeed, I much doubt whether any attempt of the kind would be really useful. The history of the treatment of consumption, remarkable though it is in many respects, does not, I think, strike one who studies it as being the record of a great triumph of medical science over disease. The fact that many different remedies are now employed in the effort to combat this disease proves, that no one remedy can be implicitly relied upon for good results in all cases. It falls to the lot of medical men, in their every-day work, to make many curious experiences; and amongst these experiences there are some unpleasant ones. Everyone who practises medicine will certainly make two unpleasant experiences before he has been long engaged in the treatment of disease. It will often happen to each one of us to stand by the bedside of some poor sufferer, whose every look, whose every word, speaks eloquently of the hopeful trust he has placed in the skill of the man to whom he has turned for help in his time of sore need. How sad and how bitter it is, in such a case, for the physician to find that, beyond the shadow of a doubt, medical science can do nothing to turn death away from his patient! The knowledge that the conditions are few in which, even in the most desperate cases, suffering cannot be lessened, and the way to death made easier by the use of remedies, does not bring very much consolation with it to the physician. There is bitterness enough for us in such an experience as that, without, as now and then happens, the additional sting of hearing, after the case has ended, that certain of the patient's friends had felt sure that had Dr. So-and-so been consulted things might have turned out very differently for the sick man: that is one of two unpleasant experiences certain to happen to us all. It will also certainly happen to us all to receive the expression of the heartfelt gratitude of a patient, who tells us that he owes his life to our efforts, and that, but for our able treatment of his case, he would have been lost to those who are nearest and dearest to him; and while our patient is pouring out his eager thanks, a horrible thought may arise in us, and we may be obliged to confess to ourselves and to him, that we have very good grounds for doubting whether our interference in his case has been of so high a value as he believes it to have been. Now, I think that those of us who are often asked to direct the treatment of consumption are especially apt to suffer both of these painful experiences, and I do not know which of the two is the more distressing.

It is important to bear in mind that the progress of consumption is rarely one of rapid decline. In the majority of instances lung tubercle progresses by leaps and bounds, interspersed with frequent, and sometimes prolonged, periods of apparent arrest of the disease. That fact must never be forgotten when one is endeavouring to estimate the value of any given line of treatment. Until we can point to a long series of cases where permanent arrest of the disease has practically always followed the use of certain remedies, the most that we are entitled to say of any treatment of lung tubercle is that its use is often followed by improvement in the patient's condition. That that improvement is occasionally the beginning of the permanent arrest of the disease, and of the consequent restoration of the patient to health, is a matter within the experience of everyone who has seen much of lung tubercle. But if, in such a happy event, we attempt to make an estimate of the value of the treatment we have used, we are at once confronted with the fact, that in very many cases no good whatever—or practically none—has resulted from this same treatment; and also that failure, so far as permanent arrest of the disease is concerned, has, in the majority of cases, followed the use of the treatment under consideration. Let us suppose that we send a hundred patients abroad to spend the winter in a mountain climate, having previously detected in their expectoration the bacillus of tubercle. We select these persons with due regard to those conditions of disease which, it is said, ought to mark cases as being of the type most likely to benefit from a residence in such a climate. Well, of the hundred a considerable majority will return to England distinctly the better for their trip to the mountains. Amongst the majority will be found a few who, judged of by their appearance, are literally "pictures of good health." We shall probably see amongst them a young man who left home pale, emaciated, feeble, tormented by a constant cough, distressed by profuse night sweats, and who, it may be, had suffered from the effects of lung hæmorrhage, more or less severely. Instead of the emaciated frame, the pale face, and the stooping shoulders, which characterised this young man's appearance before he left home, we see a sun-browned face, an erect and seemingly vigorous frame, and we have the pleasure of hearing that our patient seldom or perhaps practically never coughs, and that night sweats and blood spitting have long since ceased to trouble him. Fortunately it does occasionally happen that such a patient seems to have been permanently cured, and an examination of his chest shows us that the evidences of active disease have disappeared. But in the majority of such hopeful-looking cases we find, on examination, that in spite of the great and strikingly evident improvement in our patient's appearance, the cavity which he had in one of his lungs when he left home is not healing, and it may even be larger than it was when we last saw him. In short, though his general health has benefited vastly, new colonies of bacilli have made fresh lodgments in his lungs. The meaning of all this is that our patient's disease has passed into a condition of comparative quiescence, owing, most probably in great part, to the good effects of the climate he has just left. But then, such good results are by no means very common amongst those who spend a winter amongst the mountains. The benefit, as a rule, is less marked, and, even at the best, is too apt to be but temporary. Nor are such benefits to be obtained only from residence at a mountain station. Egypt, Algiers, and many other parts of the Mediterranean littoral, not to speak of Australia, the Cape colony, parts of America, and many other places, can show as good "cures" as can any mountain station. Our own English health resorts are, also, by no means without similar records,—a fact which, it seems to me, is in some danger of being too much overlooked in the present day. The most that can be said in favour of any health resort is, that a majority of the consumptives who frequent it benefit in health as a consequence, and that in many cases the downward course of the disease is retarded. But I submit that we have no proof that permanent cure of lung tubercle is ever wholly owing to climate influence. A large majority of those who are affected with lung tubercle die of that disease whether they go to health resorts or not; and I do not know that it would be very wide of the truth to say that many of those who go abroad, in the hope of being cured, would do quite as well at home, where they would be amongst friends who would take care of them, and where they would be spared the pain of separation from the home life and all its comforts. In saying this I am not forgetful of what has been said about the importance of carefully selecting cases before recommending to them residence abroad.

It is a fact which I know could, if necessary, be vouched for by several of my colleagues in this hospital, that apparent recovery from lung tubercle is not unknown in our practice here; and that the cases are not few where years have passed between the first appearance here of the consumptive and the last time that he was seen at the hospital. And we must not forget that the great majority of the people who consult us here are poor, many of them very poor indeed. Change of climate is out of the question for the bulk of these poor people, and many of them live and die in this East-end of London without ever having journeyed so far west as St. Paul's Cathedral. I have often spoken to men and women in this hospital who had never seen Cheapside, had no notion where the Houses of Parliament are, and had not visited, and did not care to visit, Hyde-park. When we know that

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amongst a class of people so circumstanced and living, in too many instances, amongst most insanitary surroundings, recoveries from lung tubercle are, though rare, not so very rare we must admit that that disease is sometimes apparently cured without the help of a change of air and climate, and without even the advantages of a residence in ordinarily healthy houses.

If, again, we turn to the drug treatment of lung tubercle we find that we can never say to any patient, "Take this, and you will surely find that your health will improve." Good results in abundance can be quoted as having followed the use of, for instance, cod-liver oil in lung tubercle; but equally good results could be quoted, I believe, where soda and gentian had been the only drugs prescribed. And I have no doubt, judging from the results of my own observations, that precisely the same remark may truly be made concerning the use of arsenic, the hypophosphites, and numerous other drugs which have had ascribed to them much success in the treatment of lung tubercle. It is true that in certain cases improved health results after the use of drugs, but that is not known till after the event; and we cannot foretell with certainty that the use of any drug will of necessity be followed by improvement in the health of any consumptive.

It was only about twenty-seven months ago that our knowledge of the cause of tubercular disease received its greatest addition from the genius of a man of whom the whole profession of medicine in every country has good reason to be proud. No sooner did Dr. Robert Koch discover that tubercular disease is due to a living organism than he set to work to search for a remedy for that disease—the most fatal of all the diseases which affect civilised man. Koch did not seek the remedy at the bedside of the consumptive, for he believes that, if such a remedy exists, it will be found in the outcome of experiments conducted in the laboratory and tested at the bedside. He and his assistants were able freely to conduct these experiments, for the great German nation have not yet learned to regard human interests as standing upon a lower level than those of the lower animals.

I propose now to lay before you, as shortly as I can, the results of practical importance which those experiments have established in connexion with our present purpose. I shall quote observations made by Drs. Ernst Schüll and Bernhard Fischer, in the Imperial Health Office in Berlin, whose chief is Dr. Koch. The object that these two gentlemen had in view was the ascertaining of how perfectly to disinfect the excreta of tuberculous patients. With the details of the elaborately exact series of experiments carried out by these observers for that purpose I need not now trouble you. In the end they established these two important facts, amongst others:—1. That a 5 per cent. solution of carbolic acid in water, mixed with an equal bulk of fresh sputum containing a large number of tubercle bacilli, in twenty-four hours destroyed the virulent properties of the sputum. 2. That ten parts of a saturated solution of anilin in water, freshly prepared, mixed with one part of fresh sputum containing a large number of tubercle bacilli, completely sterilised the sputum in twenty-four hours. Drs. Schüll and Fischer established these facts by injecting some of the fresh sputum, before its disinfection, into the bodies of animals, and found that tubercular disease was invariably developed as a consequence in the lungs, liver, and spleen; whereas, after disinfection of the sputum in the way just indicated, no tubercular disease followed its injection into the bodies of animals. Besides carbolic acid and anilin, several other substances were experimented with by Drs. Schüll and Fischer, amongst them were some which proved more or less efficient in destroying the virulence of tuberculous sputa. Of these, absolute alcohol gave the best results, for it sterilised one part of the infected sputum with ten parts of absolute alcohol; sterilisation of the sputa was slower. Corrosive sublimate did not yield satisfactory results; for it was found that the animals experimented upon with this substance died of sublimate poisoning when they were subjected to an injection of equal parts of a mixture of tuberculous sputa and 1 in 500 solution of perchloride of mercury. So far as our present knowledge helps us we can only use carbolic acid and anilin in the treatment of lung tuberculosis from these experiments. In the choice of [illegible] acid is limited [illegible] the method of disinfection [illegible] the sputum is [illegible] cost [illegible] [illegible] [illegible]

amount of carbolic acid vapour in the air rather more than 1-1000th of 1 per cent.

Experiment 2.—The vessel was sixteen times refilled with water, which is equal to 0·7 cubic feet of air drawn through the apparatus. Duration of experiment not mentioned. Weight of carbolic acid obtained = 0·1386 grain. Total weight in whole ward room air = 82·02 grains. Volume of carbolic acid vapour at 80° F., corresponding to the weight of acid found, 2·13 c.c., or 0·141 cubic inch. Total volume of vapour in ward air = 84·7 cubic inches. Percentage amount of carbolic acid vapour in the air = not quite 1-1000th of 1 per cent.

These two experiments, which were made with an interval of about a week between them, seem to show that the ward-room air maintains a fairly constant composition at a definite temperature, but, owing to the difficulty of dealing with such a very small quantity of vapour, they must only be taken as of tentative value, for many more experiments would have to be made under varying conditions of temperature &c., before any definite conclusion could be arrived at."[1]

We know very well, from the results of cultivation experiments, that the bacillus of tubercle increases in number with considerable rapidity out of the body, though its exact rate of multiplication is not yet known. We know also, from our observations at the bedside of the consumptive, that the organism forms new colonies with distressing perseverance after it has made its first lodgment in the human lung. When we remember that a mature bacillus contains from two to six spores, and that probably each one of these spores will in its turn become a full-blown organism, and the parent of a numerous progeny; and when, in addition to all that, we call to mind how difficult, and how rarely successful, is any attempt thoroughly to disinfect, or, in Listerian phrase, to "make sweet" a moderately deep wound to which there is easy access from the surface of the body—we can form some estimate of the extreme difficulties that lie before us in our attempts to destroy the growth of the bacillus of tubercle within the lung.

One thing seems clear to me, and that is the absolute necessity of submitting patients night and day, without any intermission, to the action of the vapour of carbolic acid, if we wish to test thoroughly its action in cases of lung tubercle. It must be obvious to everyone, after studying the experiments of Schüll and Fischer, and reading Mr. Ansell's report, that nothing short of strict confinement to the inhalation room by night and by day and for a long period can be of real use in materially impeding the growth of the bacillus in the lungs. It is upon that condition being distinctly accepted by patients that admissions to the inhalation room upstairs are granted. Of course certain short absences from the ward must be allowed, the lavatories being at some little distance from it. During even these short absences the patients are required to wear a respirator, through which they inspire air charged with carbolic acid vapour. Now, I beg you not to misunderstand me in this matter of the respirator. It is with no object of filtering the air or raising its temperature that I have advised the use of the respirator. The sole object that I have in view is to impress upon the patient's mind that he must keep up the supply of carbolic acid vapour without a moment's intermission. Perhaps I may as well now tell you that no case of carbolism has occurred amongst the patients in the ward, and it has been used as an inhalation room since last January. It is almost superfluous to state that the patients' urine has been carefully watched from day to day.

I much regret that the patients who have passed through the inhalation room are too few in number to warrant any special reference to them at present. Those of you who are interested in their clinical history are welcome to go into the ward and see and examine the cases. A journal containing a detailed report of all the cases hitherto submitted to treatment there, by inhalation, is on the ward table, and is, of course, open to your inspection. You can therefore, as practitioners of medicine accustomed to the study of disease, form your own opinions concerning these cases. For my own part, I will only say that I find in the record of these cases sufficient encouragement to pursue still further this line of treatment; and so I, in common with all my colleagues here, was asked to contribute to the course of lectures now being given at this hospital, I thought this subject worthy of your notice, and therefore selected it for consideration to-day, for I cannot shut out from my mind the hope that the road to success in treating consumption, should we ever find it, may be found to lead in the direction which seems to be indicated by Koch's researches.

[1] From the above data it follows that patients in the inhalation room pass seven cubic feet of carbolic acid vapour through their lungs in twenty-four hours.—G. A. HERON.

Clinical Lecture
ON THE
LOCALISATION OF A CEREBRAL CLOT.

By W. R. THOMAS, M.D., M.R.C.P.,
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GENTLEMEN,—You have all noticed what a large number of patients we have to treat suffering from hemiplegia owing to cerebral hæmorrhage. Sometimes we find the arm, the leg, and the face paralysed on one side; at other times the arm and leg of one side are affected and the side of the face of the other; in some cases we have aphasia with right hemiplegia; and thus we meet with an endless variety of paralyses and cross paralyses. Some of you have told me that you have found great difficulty in understanding the subject of localisation of cerebral hæmorrhage, so I shall embrace this opportunity, as you have recently seen a large number of these cases, and as your attention has been drawn to them, of saying a few words on the subject, and of endeavouring to make the matter plain to you. I shall not weary you by relating a number of examples, but shall at once proceed to the subject under consideration.

I may remind you that hæmorrhage takes place more frequently into the corpus striatum and optic thalamus on either side than into any other part of the brain. As these are parts of prime importance, receiving fibres which converge here from all parts of the brain, the effect of pressure is very serious. When hæmorrhage takes place into the corpus striatum the arm and leg are generally paralysed. The arm is always (if there be any difference) the more paralysed, and is longer in recovering its healthy state. On the same side as the paralysis of the arm and leg there is also generally a similar affection of the muscles of the face; but the loss of power is not so complete as it is in the extremities. Some say that if the hæmorrhage is great there is partial paralysis of the muscles of the chest and abdomen. Some deny that the muscles of the chest are affected. Dr. Todd says, "it must be an extensive lesion which will paralyse the intercostal and abdominal muscles." The greater the hæmorrhage the more extensive are the symptoms; and it is only in extreme cases that the head and eyes are affected, and even then they are the first to recover. The head seems to be turned to the side corresponding to the seat of the clot, owing, of course, to the paralysis of the muscles of the other side. Both eyes also are turned in the same direction; there is not any squint, but both eyes seem to be turned to one side and slightly upwards. The branches of the middle cerebral artery, which pass up from it through the anterior perforated plate, are those which rupture. Sensation is unaffected in the paralysed parts. The upper part of the arm and leg regains power before the lower part, before the hand and foot. The symptoms vary much according to the part of the corpus striatum affected; but I shall refer to this another time.

Slight hæmorrhages may occur on the most superficial or ventricular surface of the optic thalamus without giving rise to any appreciable symptoms, and it is difficult or almost impossible to say what are the direct symptoms produced by hæmorrhage into the optic thalamus alone, as such hæmorrhage hardly ever occurs. The arterial supply of the corpus striatum and optic thalamus are so intimately connected that hæmorrhage into the one extends more or less into the other, or if it do not extend it exercises pressure. When there is hæmorrhage into the optic thalamus there is anæsthesia more or less on the side opposite to the lesion, with sometimes tonic or clonic spasms of the same parts. There is also invariably paralysis of the opposite side, which no doubt is due to pressure on the corpus striatum. It has been noticed that when hemiplegia is present from hæmorrhage into the corpus striatum, the more posterior the

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hæmorrhage, or, in other words, the nearer it is to the optic thalamus, the greater the amount of anæsthesia.

Small clots have frequently been met with in the cerebrum which have not produced any symptoms during life, as indeed post-mortem evidence of disease of the cerebrum has been met with where no evident symptoms during life have pointed to such. If the hæmorrhage be great, apoplectic symptoms are present, followed by paralysis; but that is no doubt more dependent on pressure on the subjacent ganglia—i.e., the corpora striata or optic thalami—than on injury to the cerebrum itself. It is astonishing how the brain can tolerate the presence of a small clot, or non-extensive disease, without giving rise to any very evident symptoms during life.

Hæmorrhage into the lateral ventricle is accompanied by coma, steadily increasing. It often occurs in this way. Effusion first takes place into the corpus striatum or optic thalamus, as evinced by hemiplegic symptoms. After a time the bleeding begins again, and then we have ventricular hæmorrhage with its coma, and the coma is frequently preceded by convulsions, which occur at the moment the hæmorrhage takes place.

Hæmorrhage into the under surface of the crus cerebri gives rise to paralysis of motion on the opposite side. Hæmorrhage into the upper surface causes loss of sensation on the side opposite to the lesion. But if the back and inner part is pressed upon, we have not only the hemiplegia, but also paralysis of the muscles supplied by the third nerve on the same side as the lesion—not on the same side as the hemiplegia, because the nerve is pressed upon here before it has entered the brain. These paralyses can only be said to depend on a clot when they commence at the same time; for if they do not, the paralyses may be dependent on other causes, as syphilis.

Lesions in the pons are somewhat more difficult to understand than those I have just described to you, and the symptoms present during life vary according to the position of the clot. For instance, a clot in the upper part of the pons on one side will give rise to paralysis of the face, arm, and leg of the other side; whereas a clot in the lower part of the pons on one side will occasion paralysis of the arm and leg of the side opposite to the lesion, and of the face on the same side as the lesion. The fibres of the portia dura, which enter the pons at its posterior margin between the middle and inferior peduncles, decussate about the middle of the pons as they are passing on to the opposite hemisphere. Keeping this in mind, we can quite understand that a small clot in the lower half of the pons will, because it presses upon the portia dura nerve before it has decussated, of course produce paralysis of the muscles of the face on the same side as the clot, and, because it presses on fibres passing up from the opposite side of the body, which have decussated at the lower part of the medulla oblongata, will produce paralysis of the opposite leg and arm. A clot in the upper part of the pons on one side will produce paralysis of the face, arm, and leg on the opposite side, because all fibres here have decussated—those from the arm and the leg in the medulla oblongata, and those from the face in the pons. We may also find that the fifth nerve is implicated in the same way as the portia dura of the seventh, so that we have not only paralysis of one side of the face, but also anæsthesia, with paralysis of the temporal and masseter muscles. Often, too, there is paralysis of the sixth nerve on the same side; so that there is, in addition to the symptoms already mentioned, an internal squint. Of course, a clot about the middle of the pons on one side may involve fibres which have and fibres which have not decussated, and thus we may find paralysis of both sides of the face. In fact, there are many combinations of paralysis met with, such as paralysis of both sides of the face, of one side of the face and both sides of the body, both sides of the face and one side of the body, the paralysis depending upon the amount and locality of the clot. When the hæmorrhage is very extensive, there is general paralysis of the arms, legs, and all the muscles of the body, with frequently a contracted state of both pupils. This is a state which has often been mistaken for poisoning by opium.

Hæmorrhage into the medulla oblongata is generally fatal, and death is usually instantaneous. It hardly ever gives rise to any symptoms of a chronic character. When there is disease of the medulla oblongata, there is paralysis more or less of the tongue, palate, lips, and vocal cords; but you will remember that extensive hæmorrhage is rapidly fatal.

There are not any distinct symptoms accompanying cerebellar hæmorrhage. There may be hemiplegia or hemianæsthesia on the side of the lesion or on the opposite side; but of course these symptoms are not peculiar to this hæmorrhage. They are probably caused by indirect pressure upon the motor tracts below. Brown-Séquard says that in cerebellar hæmorrhage there is neither facial nor lingual palsy; and severe vomiting or severe pain at the back of the head would point to the cerebellum as being the seat of disease, as they so frequently are present in other diseases of the cerebellum.

ON THE

IMPORTANCE OF ISOLATING SLIGHT AND DOUBTFUL CASES OF SCARLET FEVER.[1]

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I SHALL take it for granted that we are all pretty well of one mind as to the desirability of imposing some artificial check upon the spread of scarlet fever. Most of us, at any rate, are accustomed to regard epidemics as increasing in intensity as they extend. All of us will certainly admit that children of the school-going age are more obnoxious to the infection of scarlet fever than grown-up persons. Very few would hesitate to separate a child with sore-throat, strawberry tongue, red rash, and a temperature of 104° F., from his playmates, and to keep him away till desquamation had ceased. In doing so, we should for the first few days have the cordial coöperation of his parents, and although the coöperation might be less readily granted during the later stages of convalescence, and his friends might not altogether see why the little fellow, well wrapped up, should not be sent in a comfortable first-class compartment to a health resort, when the change would do him so much good, still, when our care has resulted in the escape of the rest of the family from the disease, we shall perhaps have a certain amount even of gratitude from the powers that be. Different is it, however, when we hesitate at all as to the nature of the case. The British parent cannot live in an atmosphere of doubt. The case certainly either is or is not one of scarlet fever; and if we cannot say positively that it is, he concludes, and acts upon the conclusion, that it is not. The object of the present paper is to strengthen the hands of my professional brethren in dealing with impatient parents. I propose, therefore, briefly to narrate three instances which have lately come to my knowledge in which, as it seems to me, there were strong reasons to think that certain doubtful cases of the disease had formed foci of contagion. In each instance my information came in the first place from medical men; in all three cases the delay in giving information was not on the part of the practitioner, but was, I believe, due to the ignorance of the parents as to the real nature of the ailment.

The case I propose to relate first was that of a middle-class day school for girls. One of two sisters attending this school was subject to slight feverish attacks; these had been so frequent and so trifling that her parents had given up sending for their medical man on account of them, and were in the habit of treating her themselves. Her sister slept with her, and continued going backwards and forwards to school during an illness apparently of the usual character. One of the girls in the same class took ill of scarlet fever, and the medical man attending her being also called in to see the girl first mentioned, and who had not made as quick a recovery as usual, found the latter covered by a fine desquamation. He very prudently at once ordered her sister to remain away from school, the schoolroom was disinfected, and fortunately no further case occurred. Had the girl whose sister was attending school recovered rather more quickly, no medical man would most likely have been sent for, and probably one or two other cases would have occurred before a clue to the cause of the outbreak had been obtained.

The next instance I shall give has been already referred to in my report to the sanitary committee of the Corporation

[1] Read before the annual meeting of the Yorkshire Branch of the British Medical Association, held at Huddersfield, June 25th, 1884.

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for 1883 (p. 14). The cases occurred in children attending the same class in one of our large board schools. Two children, living in houses half a mile apart, were reported ill of scarlet fever, and a few days later one case more occurred in each house. On visiting the school I examined every member of the class to which these children belonged, and obtained from their teacher the names of those members of the class who were or had lately been away from school. One child was actually present in the class-room with a sore-throat, a tongue covered with bead-like papillæ, and free desquamation from the neck. At my request she was sent home, where I saw her again, and whence I sent her, and, a few days later, her younger sister, to the fever hospital. Her ailment had been so slight that she was, I believe, kept away from school only one day on account of it. The commencement of her attack corresponded in time with that of the two cases already mentioned, so that it was necessary to carry the search for the common cause of these cases, one of which proved fatal, yet further back. I will put down the dates of these three cases:—B. B——, the girl last named, aged seven years, sore-throat and retching on Saturday, the 20th, and rash on Sunday. A. M——, aged nine years and nine months, throat dry on Sunday, the 21st; at school on Monday. S. A. H——, aged nine years, at school on Monday, the 22nd; sickly on Tuesday; rash on Wednesday. Leaving out cases which manifested themselves later in other members of the same family and other members of the class, I pass on to what was, I think, the case really infecting those already mentioned.

E. A. C——, a girl, aged eight, had complained of feeling "starved" (which in Yorkshire means a slight rigor), and on Oct. 9th, 1883, as nearly as her mother could remember, she developed a slight rash upon her chest. Her mother seemed to think she had kept her at home on the day of the rash, and it may have been so; but in that case she must have given me the wrong date, for on referring to the school register, I found that she had attended on that day.[1] When I examined her on Oct. 30th she still had the smooth-based, rather red tongue, covered with rounded papillæ of the same colour, like small beads studded on its surface, that one so frequently finds in children who are recovering from scarlet fever. The girl was of course kept away from school, as were also a few other children about whose condition there was some doubt, principally because they had slight sore-throat; and, as far as I can remember, no new case has occurred at that school up to the present time. I feel no moral doubt that this girl was the efficient cause of the disease in her class-mates. Her illness was, however, so slight that even had she been seen by a medical man at the time the case would probably have been regarded as doubtful—too doubtful, very likely, to send into hospital. And yet, as I have said, I cannot doubt that this slight case was the immediate cause of several others, one of which proved fatal.

The remaining instance was even more painful. The first cases heard of were two children in whom there was said to have been no rash, and death was ascribed to nephritis and dropsy. The medical man called in to certify the cause of death kindly drew my attention to the matter, and going with him to inspect the house on Jan. 20th last, we sent two other members of the family to the fever hospital, and within a few days four others followed from houses only a few yards distant in the families of their intimates. A month later I was called to a dirty little "yard," a stone's throw from the house in which the children had died of nephritis. Here I found four new cases of scarlet fever (two of them proved fatal within a few hours) and three convalescents. The illness in the latter dated, in two out of the three cases, four weeks back, and had been so slight that the children ran about the whole time, thereby in all likelihood infecting the four others. No medical man had been called in, not unnaturally, for the children could not be said to be ill. The history of the exposure of these children to the infection in the house where the dropsy cases occurred was clear enough. The two families were on very intimate terms, and constantly visited each other's houses. The three convalescents and three of the four new cases were sent to hospital; the seventh was too ill to be removed. The mother of some children already mentioned as having been taken to hospital had also an attack of nephritis, probably scarlatinal, and was taken into hospital at her own request. Counting her case, but omitting four other clear cases of scarlet fever occurring during the next few weeks within a radius of a quarter of a mile, in which I was, however, unable to trace direct contact with any of the infected persons, may we not conclude that had the first two cases been isolated at once the other fourteen would probably have escaped, and two deaths less would have been registered as from this disease? I should be inclined to seek the cause of the four other cases in infection from those I have mentioned, for (1) no cases had been heard of in that part of the town for some months, and (2) some of them were, I believe, attending the school to which the two children who had scarlet fever without being ill were going until I stopped them. Still, as the evidence was less clear in these cases, we may leave them out. About the other fourteen, the evidence as to the contagion was as clear as it could be, and the cases to which we traced it were not recognised at all as cases of scarlet fever.

These three instances, I think, help to strengthen the evidence as to the infectiousness of slight cases of scarlet fever; of cases so slight or so doubtful as to be difficult to recognise. I think every medical man will agree with me that in view of such cases as the foregoing, and of similar ones which will rise to the mind of every one, it is of the highest importance to isolate slight and even doubtful or suspected cases of this deadly malady.

[1] She was absent, however, according to the register, on the 8th, 12th, 17th, 22nd, and 26th of October, and the last ten or twelve days of September. In the report referred to I find I have called her a girl of twelve. This was done from memory. She was a big, well-grown girl, and looked as old as that, but I find I had put her down in my note-book at the time as eight years of age.

CASE OF

RESUSCITATION AND RECOVERY AFTER APPARENT DEATH BY HANGING.

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THE following case, from its hopelessness at the outset, yet ultimate recovery under the duly recognised forms of treatment, is of such interest as to demand publicity, and will afford encouragement to others in moments of doubt.

M. A. S——, aged fifty-three, was admitted into the Kent Lunatic Asylum at Chartham on Oct. 3rd, 1882, suffering from melancholia, the duration of which was stated to have been three months. She had several times attempted suicide by drowning and strangulation. She was on admission ordered a mixture containing morphia and ether thrice daily, to allay her distress. On Oct. 10th she attempted suicide by tying a stocking, which she had secreted about her person, round her neck. Shortly afterwards, with similar intent, she threw herself downstairs. On Jan. 4th, 1883, she attempted to strangle herself with her apron. On the 30th of November following, at 4 P.M., she evaded the attendants, and made her way to the bath-room of No. 1 ward, the door of which had been left unfastened by an attendant. She then suspended herself from a ladder there by means of portions of her dress and underclothing tied together. A patient of No. 1 ward discovered her suspended from the ladder eight minutes after she had last seen her in the adjoining watercloset, and gave the alarm.

The woman was quickly cut down, and the medical officers summoned. In the interval cold affusion was resorted to by the attendant in charge, but the patient was to all appearances dead. The junior assistant medical officer, Mr. J. Reynolds Salter, M.B. Lond., arrived after about three minutes, and at once resorted to artificial respiration by the Silvester method. A minute or so later the medical superintendent and myself joined him. At this time the condition of the patient was as follows. The face presented the appearance known as facies hippocratica; the eyeballs were prominent, the cornea glassy, the pupils widely dilated, not acting to light, and there was no reflex action of the conjunctivæ; the lips were livid, the tongue tumefied, but pallid, the skin ashy pale, the cutaneous tissues apparently devoid of elasticity. There was an oblique depressed mark on the neck, more evident on the left side; the small veins and capillaries of the surface of the body were turgid with coagulating blood; the surface temperature was extremely low. She was pulseless at the wrists and temples. There was no definite beat of the heart recognisable by the stethoscope. There was absolute cessa-

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tion of all natural respiratory efforts, complete unconsciousness, total abolition of reflex action and motion, and galvanism with the ordinary magneto-electric machine failed to induce muscular contractions. The urine and fæces had been passed involuntarily during or immediately subsequent to the act of suspension. As the stethoscope revealed that but a small amount of air entered the lungs with each artificial inspiration, the tongue was at once drawn well forwards, and retained in that position by an assistant, with the result that air then penetrated to the smaller bronchi. Inspiration and expiration were artifically imitated about ten times to the minute. In performing expiration the chest was thoroughly compressed. The lower extremities were raised, and manual centripetal frictions freely applied. In the intervals of these applications warmth to the extremities was resorted to. About ten minutes from the commencement of artificial respiration we noticed a single weak spasmodic contraction of the diaphragm, the feeblest possible effort at natural respiration. Simultaneously, very distant weak reduplicated cardiac pulsations, numbering about 150 to the minute, became evident to the stethoscope. The reduplication implied that the two sides of the heart were not acting synchronously, owing to obstruction to the pulmonary circulation induced by the asphyxiated state. Artificial respiration was steadily maintained, and during the next half hour spasmodic contractions of the diaphragm occurred at gradually diminishing intervals, from once in three minutes to three or four times a minute. These natural efforts were artificially aided as far as possible. At 5.45 P.M. natural respiration was fairly, though insufficiently established, the skin began to lose its deadly hue, and titillation of the fauces caused weak reflex contractions. Flagellation with wet towels was now freely resorted to, and immediately the natural efforts at respiration were increased to twice their previous number. The administration of a little brandy-and-water by the mouth failed, as the liquid entered the larynx. Ammonia was applied to the nostrils, and the surface temperature was increased by warm applications and clothing. At 6 P.M. artificial respiration was no longer necessary. The heart sounds then numbered 140 to the minute, the right and left heart still acting separately. A very small radial pulse could also be felt. At 6.45 P.M. the woman was put to bed, warmth of surface maintained, and hot coffee and beef-tea given in small quantities. Great restlessness and jactitation set in with the renewal of the circulation in the extremities. An enema of two ounces of strong beef-tea was administered at 10 P.M. The amount of organic effluvium thrown off by the lungs on the re-establishment of respiration was very great and tainted the atmosphere of the room and adjoining ward. The pupils, previously widely dilated, began to contract to light at 11 P.M. Imperfect consciousness returned at 5 A.M. the following day (Dec. 1st), and about an hour later she vomited the contents of the stomach (bread &c. taken on Nov. 30th). Small quantities of beef-tea were given by the mouth during the night. At 9 A.M. air entered the lungs freely, and there were no symptoms of pulmonary engorgement beyond slight basic hypostasis; the pulse remained at 140 and the heart sounds reduplicated; she was semi-conscious, very drowsy; in a state of mental torpor, with confused ideas when roused, and she complained of rheumatic-like pains all over her. The temperature was 100·2°; the facial expression more natural; the tongue remained somewhat swollen and sore; she was no longer restless; she took tea, beef-tea, milk, &c., well; the functions of the secreting organs were being restored; she perspired freely; had micturated; the mucous membrane of the mouth was moist, and there was a tendency to tears without corresponding mental depression. The patient was ordered a mixture of ether and digitalis every four hours. On December 2nd the pulse was 136, and the heart sounds reduplicated. The following day she was given bromide of potassium in place of the ether in the digitalis mixture. On the 4th the pulse was 126; reduplication gone. On the 6th the pulse was 82, and the temperature fell with the pulse rate. She was well enough to get into the ward for a few hours. Her memory, especially for recent events, was at that time greatly impaired. On the 12th she still complained of muscular pains like those of rheumatism. Apart from that she was enjoying good bodily health.

A curious fact in connexion with this case is that since this attempt at suicide she has steadily improved mentally, has lost her delusions, is cheerful, and employs herself usefully with her needle. She converses rationally, and tells me she recollects the impulse by which she was led to hang herself, and remembers the act of suspension; but from that time her memory is a blank, until two days subsequently, when her husband came to see her, and when she expressed great grief at having been guilty of such a deed. Her bodily health is now (June 30th, 1884) more robust than formerly, and she is on the road to mental convalescence.

Remarks.—The successful issue of this case leads me to draw the following inferences:—1. That in cases of suspended animation similar to the above there is no symptom by which apparent can be distinguished from real death. 2. That in artificial respiration alone do we possess the means of restoring animation when life is apparently extinct from asphyxia, and that, with the tongue drawn well forwards and retained there by the hand or an elastic band, the Silvester method is complete and effective. 3. That artificial respiration may be necessary for two hours or more before the restoration of adequate natural efforts, and that the performance of the movements ten times to the minute is amply sufficient, and produces a better result than a more rapid rate. 4. That galvanism, ammonia to the nostrils, cold affusion, and stimulants by the mouth, are practically useless in the early stage. 5. That on the re-establishment of the reflex function we possess a powerful auxiliary agent in flagellation with wet towels &c. 6. That centripetal surface frictions and the restoration of the body temperature by warm applications aid recovery. 7. That the heart, if free from organic disease, has great power of overcoming the distension of its right cavities and the obstruction to the pulmonary circulation, although its action may for a time be seriously deranged, as evidenced by reduplication of its sounds. 8. That when the heart's action remains excessively feeble, and the right and left heart fail to contract synchronously, it would be justifiable to open the external jugular vein. 9. That during recovery the lungs are heavily taxed in purifying the vitiated blood, as shown by the excessive amount of organic impurities exhaled. 10. That restlessness and jactitation accompany the restoration of nerve function, and that vomiting occurs with returning consciousness. 11. That pains like those of rheumatism are complained of for some days subsequently, these probably resulting from the sudden arrest of nutrition in the muscles.

Chartham, near Canterbury.

THE PREVENTION OF DENTAL CARIES.[1]

BY HENRY SEWILL, M.R.C.S., L.D.S.

SUMMING up the knowledge which we possess as to the etiology and pathology of caries in the papers which I have recently contributed to the Journal of the British Dental Association, I found that there exists much more than enough of fact—anatomical, physiological, pathological, and experimental—to establish incontrovertibly the following truths with regard to caries.

Caries is a process of disintegration, commencing invariably at the surface, proceeding inwards, and due entirely to external agents; enamel and dentine are perfectly passive under this process, and manifest neither pathological action nor vital reaction of any kind. The predisposing causes of caries are, first, innate structural defects in the teeth, which render them more susceptible to the action of agents; secondly, all such diseases as are accompanied by vitiation of the oral secretions, or which tend to the formation or deposit of acid and the accumulation of products of decomposition within the mouth; and, thirdly, crowding and irregularity of the teeth, due to smallness and malformation of the maxillæ. The direct agents in initiating caries are acids, the products of chemical change and fermentation set up in fragments of organic matter which are commonly present in the mouth and lodged about the teeth. These acids are often assisted in their action by acid mucus secreted by unhealthy gums, acid saliva in some diseases, and acid eructated from the stomach in others.

For any useful discussion of my present subject it is necessary to state at the outset the fundamental facts upon which reliance is placed. Enamel is the starting-place of caries, and with this tissue we are mainly concerned in studying the etiology of the disease. Enamel is a densely hard,

[1] Abstract of a paper read at the meeting of the British Dental Association at Edinburgh, Aug. 29th.

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almost homogeneous calcareous mass, containing not more than from 1 to 5 per cent. of organic matter. The enamel organ—that portion of a developing tooth from which enamel is formed—consists of epithelial cells, and it retains its epithelial nature throughout the process of calcification. The completed tissue results from direct calcification of the internal layer of cells. Vascular papillæ arising from the contiguous tissue of the dental sac penetrate to a slight depth the external layer of cells and convey nutriment to the developing tissue. On completion of the enamel these external cells with the vascular loops undergo atrophy and disappear. Dentine consists of a homogeneous calcareous matrix with a basis of fibrous tissue, about 28 per cent. of the mass. It is permeated by minute tubes, occupied by fibrils which endow the tissue with sensibility, and which form the sole protoplasmic element in dentine. The bearing of these anatomical and physiological considerations upon my subject depends upon the obvious fact that enamel is totally devoid of any physiological mechanism whereby either vital or pathological changes could be brought about in it, and that whatever changes enamel undergoes are induced by external agencies. Not only is enamel not capable of intrinsic changes, but it is not in relation with any mechanism capable of influencing it from within. To believe in the possibility of nutritive changes in enamel we must first conceive some means by which this calcareous mass, devoid of cellular elements and incapable of imbibition, could assimilate nutritive material when conveyed to it; and we must next imagine the conveyance of new and effete material to and from the vessels of the pulp through the odontoblast layer of the pulp by way of the dentinal fibrils to its destination within the substance of the enamel.

By the end of the twelfth week of intra-uterine life a cap of calcified material may be demonstrated on the pulps of all the temporary teeth. By the sixth month the first permanent molar has advanced to a similar stage of development. By the first month after birth the permanent incisors and canines are advanced to the same degree, and at the third year and twelfth year respectively calcification has commenced in the second molars and wisdom teeth. It is usual to assume that ill-made teeth result from deficient supply of the lime salts which go to build up the tissues. We do not really know whether this is ever actually the case or whether the defect arises always or sometimes from other causes affecting the tooth germ, whereby it is prevented from undergoing the process of conversion; but be this as it may, we can perceive that it would be useless to attempt, directly or indirectly, by medical treatment to influence the formative process, to promote the production of enamel of good quality, after the lapse of the periods named in the different classes of teeth. The one dark spot in our knowledge of the remote causation of caries is found in the first predisposing cause which I have named: inherent structural weakness of the tissues. The dental tissues vary infinitely in strength in different individuals. We meet with well-made teeth, exceptionally it must be confessed, the sound enamel of which tries the steel of our best-tempered chisels; on the other hand, we encounter, and much more frequently, teeth the soundest enamel of which is throughout chalk-like in its softness. Between these extremes all varieties are to be found; and teeth of general defective character often present patches of surface, the enamel of which consists merely of an imperfectly united mass of granules. Similar defective spots are to be found here and there in teeth of better formation. Sometimes enamel fibres at parts are penetrated at their centres by minute tubes, thus making the tissue at such places porous. Defects in quantity are equally variable in extent. Honeycombed teeth have enamel full of small pits and fissures, and there is scarcely a set of teeth to be found in which, here and there, in one or more teeth, an isolated crack or cleft, a solution in the continuity of the tissue, does not exist.

Our knowledge, I repeat, of the origination of mal-development of the dental tissues is very incomplete. We know that vast numbers of individuals in highly civilised states have ill-made teeth; and we know that the quality of the dental tissues varies very much in the different peoples. To instance a few nations in this regard, and to speak somewhat from my own experience, I should place the Scotch as a people in the first rank of dental development, after them I would place the North Germans, thirdly the English, then the French, and lastly the people of the United States. Among the last, I of course only refer to that part of the population native by sufficiently long descent; those upon whom the climate and other forms of evolution have set their mark. There is evidence, although not conclusive, that in all races of advanced civilisation there has been, in later generations, a notable further deterioration in dental development. To account for these circumstances, we have very few solid facts. One at the outset may be recorded—namely, that comparative disuse of the organs of mastication has led in civilised races to decrease in size and strength of the whole apparatus of mastication—jaws, muscles, and teeth. This fact has been quite recently demonstrated by Professor Flower. He shows, as a result of examination and measurement of many thousands of skulls, that there is a gradual diminution in the size of the teeth, from the anthropoid apes, through the lower races of man, to the European. He has constructed a perfect dental index, in which the average size of the teeth of the gorilla being represented by 50·8 and the Tasmanian by 47·5, the European stands at 40·5. It has been plausibly argued that progressive dental deterioration may be accounted for by the overwhelming demands upon the vital powers by the growth of the brain and its increased exercise in modern life. The brain and the jaws are alike fed from the common carotid artery, and, it is urged, the demand for blood by the growing and working brain leads to imperfect supply of the masticatory organs. Again, dental deterioration has been ascribed entirely to improper and imperfect feeding of children, to insufficiency in the food of lime salts, the proper pabulum of the developing teeth. If this were true, the whole osseous system—which is built up of the same chemical constituents as the teeth—must in every case be equally ill-constructed; it would thus be impossible to find a single individual with a solid skeleton, and such cases as so commonly present themselves, a massive bony system in conjunction with faulty dental tissues, would be unknown. Perhaps with one exception there is no modern people displaying general progressive physical degeneration likely to be accompanied by ill-developed teeth. But it must be recollected that there has been among the populations a constant augmentation in the numbers of the physically imperfect. Vast numbers of the phthisical, the scrofulous, the rickety, and the congenitally syphilitic, who would formerly have perished in childhood, are now by science preserved alive, and these imperfect types are all associated with faulty dental development. Least of all among the nations can the people of these islands be suspected of general physical degeneration. On the one hand, no doubt, injury has been caused by the aggregation of great masses of the population in towns, the sanitation of which is imperfect, and in the employment of great numbers of men, women, and children in crowded, ill-ventilated factories. On the other hand, never before were the great bulk of the British so well sheltered, so well clad, and so well provided with food and the smaller luxuries of life; never before was the public health so well cared for, and never before was there more freedom from diseases which leave their mark on the constitution, and lead to degeneracy in the descendants of their victims.

In discussing questions of evolution we must be on our guard against hastily drawn generalisations, and must recollect that vast periods of time are needed to work permanent changes. Admitting that deterioration of the apparatus of mastication and of the dental tissues has advanced in the present and in recent generations, we are not therefore to believe that this decadence is to continue. So long as mastication is an advantage to the race in making the man a better animal, it is absurd to suppose that the forces of evolution will go in the end to produce a toothless man. And the nations are not interfering improperly with natural forces nor retrograding in physical development. To this, however, I believe there is one exception. The French, having adopted almost universally the practice of restricting population by artificial means, are preventing the action of those evolutionary forces, which, given fair play, ensure in the end the survival of the physically fittest as surely now in the nineteenth century as in the ages of primitive man. The French are carrying on what is really a gigantic system of artificial selection, and by ensuring the survival of the least fit progeny are producing a stunted inferior race. The physical deterioration of the French seems almost proved; but there is not evidence to show that their teeth are bad in proportion; and we must not forget a possible fallacy as regards the teeth. The French use their jaws less than any other nation; they are the best cooks in the world, and the whole population, without exception, lives upon the softest food, including bread of the most delicate manufacture. It

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is puzzling to observe that the teeth of the French are better than those of the Americans, who cannot be accused justly of adopting extensively those vices of civilisation practised by the French. These observations and contradictory facts are intended to show that the cause of dental deterioration—inherent structural weakness of the tissues—is extremely complex. We do not know yet what are all the factors which can possibly go to produce the results which we note.

When we turn from the general consideration of this subject to the narrower question of the association of defective dental tissues with particular diatheses, we find ourselves on firmer ground, and we may take a solid fact to start with—the fact that hereditary syphilis, which seems to interfere with the development of all the structures derived from the epiblast, leads also in many cases to imperfect formation of the tooth tissues. The amount of injury to the developing teeth depends upon the stage of the disease in the affected parent. It is, of course, most common for the father to be the subject of the disease. A woman pregnant by a man suffering from secondary syphilis of recent date will usually either abort in the earlier months or bring forth a dead child about the full term. As the virulence of the disease in the parent abates under treatment or by lapse of time, the mother begins to bring forth living children; these may perish early or may survive in accordance with the extent to which their constitutions are modified by the syphilitic poison. It is a fact, I believe, that only secondary syphilis is transmissible, and thus so soon as that stage in the parents is passed, children, although often unhealthy, will not display signs of specific hereditary taint. In my experience the typical syphilitic tooth described by Mr. Hutchinson (and which must not be confounded with the merely honeycombed tooth), occurs only in children displaying the worst form of hereditary syphilis; but it by no means forms an invariable accompaniment to this condition. Indeed, I have been struck with the rareness of the malformation in children with unequivocal signs of syphilis. I reckon roughly I have not seen it in more than 1 per cent. of cases. I have observed, however, that in every child begotten of syphilitic parents, and even in those cases where no specific symptoms existed, the teeth, although often good in form and colour, have been of imperfect formation, the enamel soft and easily broken down. I have noticed, also, that the children's teeth were, as a rule, markedly inferior to those of the parents; and I am strongly of opinion that children begotten of syphilitic progenitors may often display inherently defective dental tissues as the sole sign of the attenuated taint. Considering that children of the third and fourth generations would inherit the dental characteristics of their parents, hereditary syphilis may be reasonably looked upon as one of the main causes of imperfect development of the dental tissues.

An intimate connexion between dental mal-development and any other diathesis besides the syphilitic cannot be fully demonstrated, yet there are some of these constitutional conditions with which badly made teeth seem more or less associated. My experience goes to show that imperfect dental tissues are found in the majority of cases of scrofula. I would say that ill-made teeth are not at all a constant accompaniment of any form of phthisis, nor are they especially noticeable in a majority of cases in patients of undoubted tubercular tendency. There is one class of patients, however, the subject of phthisis of tubercular origin which almost invariably presents faulty dental tissues. This is the type most frequently found in females, in which there is often, with a fragile form, considerable facial beauty, in which the eyes are large and expressive, the complexion fair, with the blue veins visible beneath the skin. This is the not uncommon type, in which I have invariably found the teeth, although well-shaped and beautiful to look at, covered with the softest enamel. With rickets I have generally found inherently defective teeth. I can in no way associate faulty tooth development either with the rheumatic or gouty constitution. Indeed, with the latter both teeth and jaws are often of unusually massive and solid character.

What general measures can be suggested likely to aid in the prevention of dental deterioration? We, with other reformers, can direct attention to the need of national sanitation in the broadest sense. Syphilis is an affair mainly of police, and will surely be extinguished in this nation when the people are sufficiently educated in science. Scrofula and rickets are mainly poor children's diseases, and are the direct products of filth, darkness, and starvation. The observance of the well-known general laws of health, we may be sure, will tend to produce good teeth in the race, if not in the individual, and among these laws we must insert one inculcating the use of articles of diet that shall give due exercise to the muscles of mastication, and prevent them, and the bones to which they are attached, from wasting.

It may next be asked, Can we, by any treatment, influence beneficially the developing teeth of the fœtus in utero, through a mother the subject of either of the diatheses or cachexiæ which have been named? Little reliance can in most cases be placed upon treatment specifically directed to this end, and we must depend mainly upon measures for the amelioration of the mother's general health, and the eradication of any definite morbid constitutional taint. To show that defective teeth might occasionally result from deficient supply of the necessary pabulum through the mother, Dr. Thorowgood has brought forward several cogent facts. He has pointed out that a hen with a broken bone lays, during the time the fracture is uniting, soft eggs; the earthy salts which should go to harden the shell being needed for the repair of the fracture. In a pregnant woman the union of a fracture is slow; the inference being that the lime salts are all required for the formation of the bones of the fœtus. In presence of these facts a rule may be established that in every case of cachexia during pregnancy, and particularly where there is a tendency to atrophy and bony wasting, there should be administered mineral nutrition, both dietetic and therapeutic. It is difficult to believe that any treatment could influence some cases in which a strong hereditary influence proceeding from the father gives a bias to the process of dental development. A mother with good dental tissues will often bear children with defective teeth, having the closest resemblance in form and structure to those of the father, in whom this may be the sole physical defect. We are ignorant of the actual physiological or pathological causation of defective enamel; but, as uncertainty exists, we had better err on the right side—especially as the error would be harmless—and enforce the rule that in every case in which ill-made tooth tissues are likely to appear, an attempt by diet and therapeutics should be made to supply to the developing tissues the mineral constituents of which they may stand in need. Also the dates at which the classes of teeth are calcified must be borne in mind, and that after the formation of enamel any attempts to prevent caries by improving the quality of that tissue must be futile. The exteriors of the crowns of all the temporary teeth—from caries of which children suffer so much—are fully formed at birth; these teeth can therefore be influenced only through the mother. By this time the first permanent molars and the permanent incisors and canines are so far advanced in development that it is open to doubt whether our further treatment can have any effect upon the enamel of these teeth. There is, however, no difficulty in administering lime to an infant from birth, as lime-water is an admirable aid to the digestion of milk in infancy.

We must recollect that although structural defect in the enamel is a prime factor in the causation of caries, there is another factor as potent—viz., vitiation of the secretions of the mouth. The diseases of our times, unlike those of earlier days, are largely those which give rise to the formation of such agents in the mouth, for many or most of them are either diseases of the digestive organs, or maladies accompanied by disturbance of the functions of digestion. In this way we may account for the prevalence of caries among certain portions of the community whose physique and general health in other respects are not to a corresponding degree inferior, and whose dental tissues are not of the worst structure. For example, the constant presence of dyspeptic troubles in some classes of factory operatives is enough to account for the rapid tooth decay from which they suffer. These people earn good wages, and are well housed and clothed; but their occupation is sedentary, their food is usually ill-cooked and too solid and coarse; they drink bad beer and coarse spirit, and the result is chronic dyspepsia. This disease is so common in some communities that it is regarded as one of those evils from which there is no escape. When speaking of the association of ill-made dental tissues with certain diatheses, I was not unmindful that some of these diatheses have also as a common accompaniment vitiation of the secretions of the mouth. Thus one type of scrofulous subject—that with coarse features, muddy complexion, and long thick upper lip, has usually a chronic condition of congested oral mucous

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membrane with secretion of viscid mucus and saliva. Rickets, again, is often preceded and attended by a virulent form of acid dyspepsia.

The broad facts now before us are—first, that without acid, without vitiation of the secretions of the mouth, caries is impossible; and secondly, that acid capable of dissolving enamel—and of more rapidly dissolving enamel in proportion as the tissue is soft and ill-made—is always being formed in greater or less quantity in every mouth in which absolute cleanliness does not exist. In the term absolute cleanliness I include the absence of vitiated secretions such as accompany, in greater or less degree, every derangement of local or general health. Although the third predisposing cause to which I shall come presently takes an important part in determining the localisation of caries in some cases, this second cause should, with the first, which has been already discussed, account fully for the association of caries as an accompaniment or sequel to constitutional disease. As factors these causes vary infinitely in quantity in different individuals. It is not possible to find two individuals with teeth exactly alike in structure, and with organic defects occupying exactly similar situations. Add to this that vitiation of the oral secretions as a factor in the causation of caries is of constantly changing potency in the daily life of each individual, and we fully account for the variability in different cases of the time of onset, the point of attack, and the rate of progress of the disease, as well as for its frequent intermissions.

In combating this second cause of caries, the patient's general health must first be considered, recollecting that probably every lapse from a perfect standard will be accompanied by a proportionate vitiation of the secretions of the mouth. The question of general health is for the physician, not the dentist. But even with perfect health and perfect dental tissues caries may appear if organic débris be allowed to remain and decompose in contact with the teeth. The first thing, therefore, in every case is to ensure mechanical cleanliness by the use of tooth-brush and tooth-pick, which latter should be of quill or wood only. I direct that it be used at night to clear away remains of food from between the teeth, before they receive their final brushing. Where the teeth are crowded and are of delicate structure the use of floss silk passed between the teeth and rubbed to and fro supersedes the toothpick. Until lately I have been prescribing as a routine for healthy mouths a tooth powder containing two drachms of Castile soap, half an ounce of powdered orris, two drachms of borax, and two ounces of precipitated chalk. To this has been added a few drops of oil of cloves and of oil of lavender or attar of roses. It is, however, very rare indeed to meet an individual in whom perfect health is constant, and in whom one or other of the predisposing causes of caries does not exist. I have, therefore, latterly begun to urge my patients to use habitually a tooth powder composed of the solid ingredients named but containing instead of perfume, carbolic acid. I begin with a mixture, containing 1 in 40 of carbolic acid—that is, twelve drops to the ounce of powder—and I sometimes prescribe as much as 1 in 20. This, however, is too strong to be borne where the gums are tender. To disguise the flavour of the carbolic acid, I add eucalyptus oil, from ten to twenty drops to the ounce. I direct the mixture to be used freely—to be taken up on a wet tooth brush, and the mouth to be freely rinsed with water at intervals during the brushing. In fevers and other diseases in which the patient is either too feeble or too listless to clean his teeth for himself this should be done by an attendant. In all cases where great vitiation of the secretions is present, as in the dyscrasia of pregnancy, extra means should be adopted to prevent putrefaction and fermentation in the deposits which form upon the teeth. Pasteur has shown that perchloride of mercury is by far the most potent drug we possess for this purpose; and a solution of a strength of 1 in 5000 is antiseptically equivalent to an 2 per cent carbolic acid solution, which latter, although not more powerful than needed to prevent fermentation, is too strong to be used as a mouth wash. I find a pleasant mixture of perchloride can be made if one grain be dissolved in an ounce of eau de Cologne or tincture of lemons. A grain of chloride of ammonium must be added to each ounce to prevent the perchloride from decomposing. Of this mixture a teaspoonful is to be mixed with two-thirds of a wineglassful of water, and the mouth to be thoroughly rinsed with it several times a day. Before leaving this subject, I must point out that without due exercise in mastication teeth cannot easily be kept clean; and where the function is impeded by the presence of tender teeth these must be brought into a healthy state or extracted.

The third main predisposing cause of caries is crowding and irregularity of the teeth. This favours retention of particles of food and of other organic débris for long periods in contact with the teeth; it also greatly prevents the constant beneficial rubbing and polishing of which, in a well-formed jaw, every tooth during mastication gets a full share, as well as impeding access of the alkaline saliva to those very surfaces where acid-forming substances find their location. This cause of caries mostly arises from smallness and malformation of the maxillæ, a condition which is, no doubt, largely associated with the physical type presented by highly civilised man. Of the causes of deterioration of the apparatus of mastication, I have not mentioned one which, in my opinion, is not without importance—namely, sexual selection. The type of female beauty for many ages has included a small delicate jaw. I am afraid we cannot hope that, for the sake of the teeth of posterity, men will be advised to pick out big-jawed wives, but we can at least seriously impress hygienists with the fact that the human jaw, for its due development, needs adequate use, and that no dietary, however otherwise suitable its constituents, can be perfect which is composed of uniformally bland and soft substances calling for little or no mastication. In the meanwhile we have to deal with the crowded jaws which daily present themselves. The most universally beneficial measure to prevent caries in these cases, especially where the teeth are of imperfect formation, is the extraction of the six-year-old molars as soon as the second molars are well in place. The first permanent molars are, with rare exceptions, the worst made teeth of the set, and in the cases where room is urgently needed, it is seldom indeed that their permanent preservation is possible. I am firmly convinced that the removal of these teeth at the epoch named is more beneficial than that of any others in causing an equal and sufficient spreading apart of all the teeth and preventing the evils of crowding. The operation of filing and polishing the contiguous surfaces of incisors and canines as a most effectual means of cutting short the progress of incipient caries in crowded jaws is too well recognised to need comment.

The regulating of teeth by means of mechanical apparatus may be of service in overcoming the cause of caries under discussion, but in the use of apparatus we must be on our guard lest we excite the very mischief which we desire to prevent. Regulating plates should not be allowed to chafe the teeth; above all, they should never be allowed to remain in place for more than a few hours at a time; they should be removed at frequent intervals and thoroughly purified; whilst with equal frequency the teeth should be well brushed with an antiseptic tooth powder, and thoroughly cleansed from the coating of food débris which is invariably retained upon their surface by the plates.

ON SOME ORGANISMS IN INDIAN CHOLERA STOOLS.

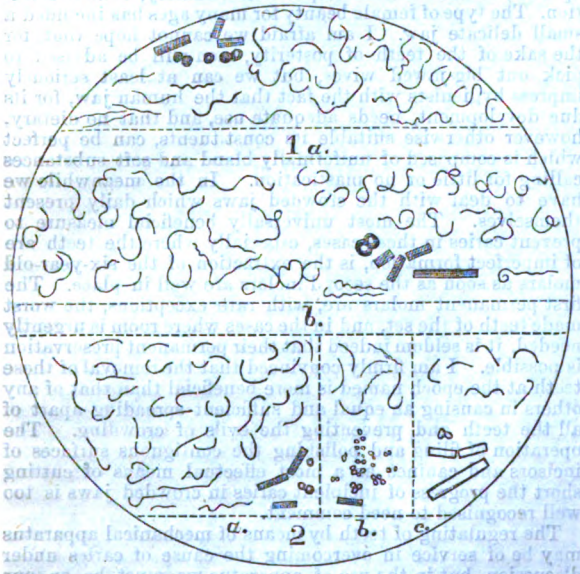
BY H. VANDYKE CARTER, M.D. LOND.,
BRIGADE SURGEON, H.M. BOMBAY ARMY.

UNDER ordinary circumstances I should have waited for the full report of the late German Cholera Commission before publishing the results of some inquiries of my own; but the appearance of a leading article by "E. K." (initials well known) in *Nature* of July 10th induces me now to state that in May last I communicated to the Medical and Physical Society of Bombay a provisional account, with preparations and drawings, of an organism I had found corresponding in aspect to Dr. Koch's cholera bacillus, as shortly described in the sixth Indian report of the said Commission. It is on the Society's records and upon the original drawing (see accompanying diagram) that the organism in question was compared by me to a vibrio rather than a bacillus; supposing that the delineations (as carefully done as possible) pertain to a single form, as they seemed to do. Latterly, however, not always meeting with the vibrio in cholera stools a few hours kept, and finding occasionally, though rarely, a similar organism in diarrhœal and dysenteric evacuations, I began to doubt the validity of my provisional identification, which has further been disallowed by an accepted authority in Calcutta whose valued opinion was sought. There being

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as yet little that is peculiar told us regarding its cultivation, chemical, vital, anatomical and pathological relations, distant observers have to rely for guidance chiefly upon the morphological characters of the newly described cholera bacillus; and, unfortunately, I have not been able in India to see an authentic specimen of this organism. It is, therefore, the more remarkable that "E. K.," who in Europe has enjoyed such advantage, not the less arrives at results not much differing (as I judge) from those attained both previously and independently in Western India. Here, at least, is a noteworthy concordance. But in his identification, "E K." ventures further when asserting that "particularly a vibrio rugula"[1] is the organism which Dr. Koch describes as a

Organisms in Alvine Dejecta (Indian Cholera).



The so-called Cholera Bacillus (?), Vibrio (?), stained with roseine.
Fig. 1.—From fresh rice-water-like stools of a case which recovered; patient a low-caste man and a foul feeder probably. *a*, Common forms seen. *b*, Less frequent forms, and resembling vibriones more. A few ordinary putrefactive bacteria are shown, which will serve for purposes of comparison. × 800 : $\frac{1}{12}$ in., oil immersion.
Fig. 2—From a case of cholera supervening on variola (late stage) which proved fatal; material also fresh. *a b c*, Forms seen upon successive days, after which the stools became thicker and deep-coloured. × 650 : $\frac{1}{10}$ in., water immersion.

'comma-shaped' bacillus;" and if he be right, it well-nigh inevitably follows that the real cholera germ (if such truly exist) has still to be found. Because, first, it is *a priori* irrational to suppose that an everywhere widely distributed organism like vibrio rugula can alone be the essential cause of Asiatic cholera; and next, it is most improbable that mere imagination could have dominated the judgment of Dr. Koch. Doubtless the inference intended in *Nature* is that the so-called cholera bacillus is a myth; and be this as it may, some further details of the great discovery, declared to be assured, are now more than ever needed, especially by deeply interested inquirers in India.

Bombay.

[1] Sp. Cohn.

NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.—At the meeting of this Association, which is to be held in Birmingham from the 17th to the 24th inst., the following special questions will be discussed in the Health Department, of which Dr. Norman Chevers is president:—The best method of dealing with town sewage, the products of house and street scavenging, and the products of combustion; the best means of securing those improvements in the dwellings of the poor which are essential to the welfare of the community; and how far the average death-rate of a population may be considered an efficient test of its sanitary condition. The hon. secretaries of this department are Mr. H. H. Collins and Dr. E. Seaton; and the hon. local secretaries, Messrs. G. A. Panton and R. M. Simon.

REMARKS ON THE

TREATMENT OF SYPHILIS BY HYPODERMIC INJECTIONS OF CORROSIVE SUBLIMATE.[1]

BY JOHN V. SHOEMAKER, A.M., M.D.,
LECTURER ON DERMATOLOGY AT JEFFERSON MEDICAL COLLEGE, AND INSTRUCTOR THEREON IN THE POST-GRADUATE COURSE OF THAT INSTITUTION; PHYSICIAN TO THE PHILADELPHIA HOSPITAL FOR DISEASES OF THE SKIN, ETC.

THE hypodermic injection of mercuric chloride for the treatment of syphilis has been received with great caution in the United States of America, notwithstanding that Dr. Lewin's book on the subject has been there translated and republished. I was one of the first to take up that treatment; and, encouraged by my success with it, read a paper on the subject before the meeting of the American Medical Association at St. Paul, Minnesota, in 1882. I analysed a number of cases treated in this manner by myself at the Philadelphia Hospital for Skin Diseases. I have since then practised it freely, and with even greater success than before. Syphiloderma of all descriptions were made to yield under this treatment, and no disadvantages of any consequence were experienced in its course. I have also tried the various additions and modifications of the original Lewin's mercuric bichloride injections. I have invariably given them up, preferring the method suggested by Lewin, in using a simple watery solution of corrosive sublimate. I have found, however, that the treatment could be carried very much further, and larger doses readily borne, and necessary for a thorough cure, than pointed out by him. I have invariably carried daily increased injections to the point where they produced systemic effect; and I have in many instances made, and found it necessary to make, injections of as much as half a grain (three centigrammes) per day. These strong injections were readily borne, providing they were sufficiently dilute, not less that half a drachm being employed for an injection containing half a grain (three centigrammes) of corrosive sublimate. When three large injections were reached daily, the systemic effect of mercury soon became apparent: as ptyalism, intestinal irritation, and occasional tremor, which, however, soon subsided on the cessation of the injections. Administration of potassium chlorate, and occasionally the exhibition of potassium iodide, although acting as an adjuvant in the treatment, did not serve to augment the systemic effect of the mercuric bichloride, but rather diminished its characteristic symptom. Stimulation by milk punch, and supporting treatment with ferrous iodide, were often found of great utility, but generally after twenty-four to thirty daily injections the syphilitic symptom had disappeared, and where the increasing dose had been persistently continued the relapse proved a rare exception indeed. I attribute the effect of this treatment to a formation of mercuric albuminate in the cellular tissue, which, insoluble to the liquids of the organism, gradually dissolved under the peptonising action found everywhere in the body, and thus produced a peptonised mercuric albuminate readily assimilable and eliminable in and through all parts of the body. I am led to this inference from the fact that otherwise toxic doses were innocent if injected under the skin; and if it were not for local irritation, I think even larger doses than I have mentioned could be borne without toxic effect. The local effects of the injection seem to bear out my views. Even large doses produce at most a swelling, which, though producing a somewhat erythematous condition of the skin, never suppurates or gives rise to deeper inflammation. I am free to say that in the thousands of injections I have so made I have never met with an abscess or serious inflammation, though the swelling of mercuric albuminate could be detected for several days. The only precaution I observe is to use a clean gold needle and to inject deep enough into the subcellular or connective tissue. Though the pain in these injections is always a disadvantage, if the solution is sufficiently diluted it will be lessened to a considerable degree, or augmented if more concentrated. No addition of any kind has in my hands lessened this, although I have with advantage ad-

[1] Read before the Section of Dermatology at the International Medical Congress at Copenhagen, August 12th, 1884.

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ministered a quarter of a grain (a centigramme and a half) of morphine sulphate into the arm hypodermically prior to the injection of the corrosive sublimate. I regard it as necessary, to bring syphilis into abeyance and to obviate an early relapse, to constantly increase the strength of the mercuric chloride until its physiological effects are induced, and to continue its use in less vigorous manner until all symptoms have disappeared, sustaining the patient during this period with ailment, stimulant, and medication. Conducted in this manner, I regard the treatment of syphilis by hypodermic injections of corrosive sublimate as more rapid, reliable, cleanly, and less dangerous than either internal exhibition of mercurials, or iodides, or the combination of the two, or the filthy inunction treatment, either with or without variations. In no case have I found it necessary to use more than twenty to thirty injections, though I have frequently continued the after-treatment for a month or two, with decided doses of iodide of potassium.

LOBAR PNEUMONIA.

BY C. W. SUCKLING, M.D., M.R.C.P.,
PHYSICIAN TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

DURING the past sixteen months I have had under my care, at the Birmingham Workhouse Infirmary, 100 cases of pneumonia. As this is one of the subjects inquired into by the Collective Investigation Committee, I think it my duty to publish the results of treatment and any facts especially noticeable in these cases.

Of the 100 cases, 73 were men and 27 women; 57 cases recovered and 43 died. The right lower lobe was affected in 40 cases, and the left in 33; the right upper lobe was affected in 17, and the left in 7. More than one lobe was affected in 3. The ages of the patients were as follows:—

Ages.	Cases.	Deaths.
Between 10 and 20 years	3	2
,, 20 ,, 30 ,,	13	1
,, 30 ,, 40 ,,	19	5
,, 40 ,, 50 ,,	17	5
,, 50 ,, 60 ,,	19	11
,, 60 ,, 70 ,,	18	11
,, 70 ,, 80 ,,	9	6
,, 80 ,, 90 ,,	2	2

It will be observed that the percentage of deaths increases with the age of the patient. The two deaths which occurred between the ages of ten and twenty years were cases of pneumonia of the upper lobe, one of which was complicated with acute Bright's disease, the pneumonia not being secondary to the kidney mischief, but both being due to the same cause—exposure to cold. In 24 cases the upper lobe was affected, and 10 of these cases were fatal; in 8 of these 10 fatal cases, there had been previous chronic bronchitis or apical mischief (phthisis). Uncomplicated apical pneumonia is in my experience no more fatal than ordinary pneumonia at the base; but where there has been previous lung mischief it is almost invariably fatal. Apical pneumonia was common in old age; 7 of the cases occurred in people of over fifty years. In 22 of the 100 cases previous lung mischief in the shape of bronchitis and emphysema existed. I find that where pneumonia supervenes in such cases it is very fatal. It will be observed that the majority (65) of my 100 cases occurred in patients over forty years of age, and there is no doubt that pneumonia in people over this age is greatly to be dreaded. It must also be remembered that the patients are derived from the lowest class of people—a class much addicted to alcoholism, and broken down by want of food and exposure, and therefore exceedingly bad subjects for an acute disease like pneumonia. There is a great contrast between these cases and those I have had as hospital patients; the latter as a rule do well, and we have little dread of pneumonia in a young and previously healthy subject.

Rapidity of onset, rusty expectoration, and critical defervescence were the three most constant symptoms in the above cases (in addition to the usual physical signs) Rusty-coloured expectoration occurred in thirty-five cases, and whenever this is present, I take it to be pathognomonic.

As regards temperature, I have only met with hyperpyrexia (a temperature of over 105° F.) in two cases, and both proved fatal. This may be accounted for by the ages of the patients, for I find that the older the patient the less the degree of pyrexia, and it is in young subjects that we meet with hyperpyrexia in pneumonia. Still, even in old people the temperature chart of pneumonia is characteristic, in that there is always a sudden rise and critical defervescence.

Cyanosis was observed in four cases only; all were over fifty years of age, all had suffered from bronchitis for years, and all proved fatal.

The pulse is the most valuable guide to prognosis in pneumonia. A pulse of over 120 in an adult is serious, and when over 130 the case is generally fatal. In twenty-two cases the pulse was noted to be irregular, and frequently intermittent, often becoming so as death approached. It is my custom to take pulse tracings in all severe cases, and I frequently find inequality in the base line, intermission, and irregularity in volume, often also hyperdicrotism. All such symptoms are to be regarded as very serious, and as a strong indication for the free use of stimulants. In fact, the great majority (I think I may say all) of cases of pneumonia die of heart failure.

Jaundice was observed in four cases, and the right lung was affected in all, the upper lobe in one, the lower in three. Herpes was observed in four cases. Diarrhœa occurred in five fatal cases; it was evidently not critical, for the temperature remained high; diarrhœa, unless critical, is a bad sign. Friction was heard over the inflamed lobe in ten cases. Hyperresonance (occasionally the cracked-pot sound) was frequently observed over the upper lobe when the lower was affected.

As to the cause of the attack, in one case only could I obtain any evidence of infection, and that was in the case of a woman who said, "I caught it from sleeping with my daughter, who has just had inflammation of the lungs." In many cases the disease was clearly attributable to exposure to cold; in several it came on after a bath. The majority of cases among patients previously living in the workhouse occurred during the winter months, when the weather was severe and easterly winds prevailed. It will be observed that nearly three times as many males as females were affected, the mortality being about the same in both.

In a disease like pneumonia, which is shortlived and in which there is such a great tendency to heart failure, a stimulant plan of treatment is in the majority of cases absolutely essential. I know that in children and young adults stimulants may be unnecessary. Aconite and tartar emetic may do good, but in the cases that I have had at the infirmary I dared not give them. In one or two cases where I have used these drugs, the patients being young and the fever high, dicrotism has become marked and delirium has supervened, necessitating the free use of stimulants. So that although it is by no means always necessary to begin with alcoholic stimulants, still I find that it is, as a rule, safest to put the patient on tonics and stimulant medicines—e.g., cinchona and ammonia. I am perfectly sure that I have saved several lives by free stimulation with alcohol; and were I to have pneumonia myself, I would prefer to be under the care of a physician who had no dislike to the use of alcohol in this disease. As to the treatment of hyperpyrexia, quinine is the best remedy, and perhaps the cold pack. I have used the cold bath once; but the effect on the pulse was so bad that I shall never use it again in pneumonia. To ease pain, morphia injections, hot poultices, or a few leeches suffice; I have several times seen good results from the use of the latter. Bloodletting in pneumonia, I believe, is rarely advisable, and in most cases is dangerous. In one case, where there was marked cyanosis, I bled to four or five ounces, with the result that the patient regained consciousness, but afterwards died. Perhaps if it had been done earlier it might have been more effectual. I have lately had four cases (occurring in the workhouse, and therefore seen on the day of the attack), in which the disease has been aborted by quinine in ten-grain doses. All these cases were characterised by rigor, rapid elevation of temperature to 104° or 105° F., and by the presence of fine crepitation. After the administration of a single ten-grain dose of quinine the temperature has immediately subsided, and the disease has not progressed, the fine crepitation disappearing in a day or two. For this knowledge I am indebted to Dr. Austin Flint, who says that pneumonia in its early stage may be aborted by quinine. In all cases seen early this mode of treatment ought to be tried. Where the lung will not resolve, I find the frequent application of iodine does good, or an occasional blister.

Birmingham.

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NOTES ON THE TREATMENT OF NIGHT SWEATS IN PHTHISIS.

By JOHN E. HOWE, M.B., M.R.C.S.,
LATE CLINICAL ASSISTANT AT THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

HAVING watched a number of phthisical patients during the last six months at the above hospital, I wish to state my experience of some of the drugs there used, and their power of alleviating this very common symptom—a symptom that it is very important to reduce as much as possible. These notes are from many cases, but especially seventeen cases on which daily reports were taken during their stay of many weeks in the hospital. These seventeen cases were under Dr. S. West, and I would here thank him for his kind assistance. The importance of nutrition in phthisis is admitted, and the fortnightly weighing-day is all-important for prognostic purposes, as without doubt night sweats favour wasting. Patients will have a better chance of improving their nutrition if this extra drain can be stopped; and surely night sweats and consequent damp clothes must add to the risks of fresh chills, besides making patients miserable and uncomfortable, and spoiling their night's rest. It is right, therefore, to prevent sweating if possible, although some physicians do not admit this, considering it useful in reducing the temperature; but that the hectic temperature is not due to the sweating is proved by the fact that the same character of temperature is maintained after the sweats have ceased under treatment, or even in some cases the temperature chart has markedly improved. It is well known what great power atropia has over night sweats, and it is the object of these notes to contrast with this drug some others used at Victoria-park Hospital—namely, strychnia, nitrate of pilocarpine, and oxide of zinc. Strychnia was first recommended by Dr. Lauder Brunton in the St. Bartholomew's Hospital Reports, 1879, from five to thirty minims of tincture of nux vomica having been given in four cases with success. At Victoria-park Hospital, from six to twelve minims of strychnia solution were prescribed as a night draught in many cases, and it succeeded admirably in most of them. The full dose of twelve minims was seldom necessary, but no ill effects or discomfort was noticed from so large a dose. Some of the patients slept very much better during the exhibition of the strychnia, to which gratifying result the increased comfort of the patient from absence of damp clothes may in some measure have conduced; but I think the drug had a good deal to do with the increased sleep, as this was not noticed in other cases in which the sweats were prevented by other drugs; in one case it markedly lessened the cough. Nitrate of pilocarpine was also given as a night draught, in doses varying from one-twentieth to one-eighth of a grain, one-twelfth of a grain being the most usual dose; in the majority of the large number of cases in which it was given the result was good, the patients being most grateful for the relief from the sweating. It seldom produced any of its physiological action, and, even if it did so, it was very slight sweating for half an hour after the draught, except in one case. One morning note only was as follows: "Sweated copiously for an hour after the draught;" but in this case, as in the others, there was no more sweating for the rest of the night. In a few cases in which the night sweats had commenced before the administration of the night draught, the sweating quickly terminated. Occasionally the action of the draught was not of long enough duration, for if given at 9 P.M. sweating would commence about 4 A.M. next morning. It is well in these cases to repeat the draught in the middle of the night. Oxide of zinc, in doses of from five to ten grains, was fairly successful in the few cases tried with it. In one case it was very successful indeed, as on discontinuing the drug the sweats recurred, to be again controlled by the same drug. It is necessary to state with regard to strychnia, and also pilocarpine, that their full action may not be developed the first night; also that the action of the drug lasts more than the one night, so that it is possible to discontinue the draught and yet no sweating occur for a few nights. In some cases even the habit of the sweat centre seemed permanently altered by the drug, and thus no more sweating occurred during the remainder of the patient's stay in the hospital. The result was not always so satisfactory, for in some cases the drug seemed to lose its effect, and the sweating previously prevented would slowly return, even during the continuance of the draught; but a change of drug was always successful in these cases. The three drugs, strychnia, atropia, and pilocarpine, only failed completely in one case—a man with phthisis, with his left pleural cavity nearly full of pus. Thus we see that strychnia and pilocarpine can influence night-sweats. But are they better than atropia? No, not better. Are they as good? Probably yes. They are nearly as sure, and they are free from the great drawback to atropia—viz., the dryness of the throat produced, which is very troublesome in some cases, and certainly appears to increase the cough. Some patients seem very subject to this dryness of the throat, and it is in these cases that it is so useful to have other drugs to fall back upon. It is wise to prescribe the atropia in a fluid form, as the pill may not be digested by the stomach. Thus in one case atropia pill ($\frac{1}{100}$ gr.) had no effect, whilst two minims of the atropia solution ($\frac{1}{100}$ gr.) was very successful. Also atropia and morphia had better not be combined, as their antagonism seems to prevent a good result; if the morphia is necessary, then prescribe another drug for the night sweats.

Knowle Vicarage, Warwickshire.

A Mirror for HOSPITAL PRACTICE.

BRITISH AND FOREIGN.

Nulla enim est alia pro certo cognoscendi via, nisi quæ in plurimis et maximis et dissentionum historias, tum aliorum tum propria, collectas habeas, et inter se comparare.—MORGAGNI, *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WEST LONDON HOSPITAL.

CASE OF TYPHOID FEVER WITH HIGH TEMPERATURE (105·8° F.) TREATED BY ICE PACKING; RECOVERY.

FOR the following notes we are indebted to Mr. Harold Hendley, house-surgeon.

Phœbe M——, aged eighteen, general servant, was admitted on May 22nd, at 5 P.M., complaining of having suffered for seven days from sickness, giddiness, and headache, but still able during that time to continue her work. She had slight dyspnœa, but no cough; lips parched, tongue moist and covered with a white creamy fur; skin hot and moist, face flushed, bowels open, passing frequent watery black stools; lungs and heart normal. The temperature on admission was 103·6° F.; at 7.30 P.M. the temperature rose to 104·6°; at 10 P.M. to 105·4°. She was then packed in ice for ten minutes. She expressed great relief. The temperature had fallen to 103·2°.

May 23rd.—Passed a fairly good night, delirious at times; at 9 P.M. the bowels had been opened seven times since admission; character of motion thin and yellowish. Temperature at 9.30 A.M. 104·2°; bowels opened five times; very restless towards evening. Temperature at 10.15 P.M. 105·2°. Again packed with ice for ten minutes. Greatly relieved. Temperature reduced to 102·2°.

24th.—Somewhat delirious during the night, and began to complain of aching pains all over the body, especially in the abdomen. Temperature at 9.20 A.M. 103·4°; at 6 P.M., 104°; at 10 P.M., 105·2°.

25th.—Abdomen very tender, especially in the right iliac region; four or five rose-coloured spots on the abdomen, disappearing on pressure. Temperature at 9 A.M. 104·4°; at 10 P.M., 105·2°.

26th.—Temperature at 9 A.M. 103·8°; at 10 P.M., 104·8°. Bowels open seven times.

27th.—Temperature at 9 A.M. 103°; at 10 P.M., 105·4°. Packed in ice for half an hour. Slight rigor. Temperature reduced to 103·2°.

31st.—Tongue still coated with white fur, but moist; lips parched; increased number of spots over the abdomen and thighs. The patient complained of a great deal of pain in the stomach, and hot fomentations with opium were applied. Temperature at 7.30 P.M. 102·2°.

On June 3rd and 4th a slight rise in temperature occurred,

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5th.—Patient very irritable. Spots fewer, but larger and more raised. Temperature 102·4°. Diarrhœa still continues.

6th.—Temperature at 9 A.M. 101°. Patient more comfortable. Bowels open six times.

With the exception of a slight rise on the 8th, the temperature remained about one degree below normal in the morning, and one degree above in the evening until the 18th, when a relapse took place.

14th.—Took bread-and-butter; on the 15th still two or three spots on abdomen and chest, complains of deafness, bowels open once, motion thick.

18th.—Temperature at 9.30 A.M. 97°; 9.35 P.M., 103·4°; pulse weak and rapid, great pain in lumbar region. An enema was given at 10 P.M., consisting of castor oil and soap and water. Twenty drops of sedative solution of opium were given by mouth. Pains relieved at 11 P.M.; temperature 101·2°.

19th.—Pulse somewhat stronger, still rapid; bowels open twice, motion dark and watery. Temperature at 9 A.M. 101°; 2.30 P.M., 104·2°; 7.30 P.M., 101°.

20th.—Patient much better, but had rise of temperature in the evening.

24th.—Temperature still high, spots all disappeared, bowels opened twice; no pain in abdomen. Patient began to mend rapidly, though the temperature did not reach normal till July 7th. She was discharged July 22nd, fairly strong, temperature normal.

Remarks.—In this case the patient experienced great relief from each ice packing, and each time it was performed expressed great comfort both during and after the application. It seems to be much more efficacious than sponging or the wet packing; it is quicker than the former, and less troublesome to both nurse and patient than the latter. In this instance a waterproof was passed next to the bed with a blanket between it and the patient. A large quantity of ice was then packed next to the skin along the trunk only, and the mackintosh and blanket folded over. The patient experienced no shock from the ice, but seemed to like the contact. At the end of the packing, the ice being removed, the blanket was drawn over the body, the moisture absorbed and the mackintosh and blanket both withdrawn. The relapse in the case is difficult to account for, but the fact that the temperature came down at once after the use of an enema might lead one to suspect that it might be caused by the retention of effete matter in the bowel.

LEITH HOSPITAL.

CASE OF RHEUMATIC FEVER WITH HYPERPYREXIA (109·2° F.) FOLLOWING ACUTE TONSILLITIS; ICE PACK; TEMPORARY RELIEF; DEATH; NECROPSY; REMARKS.

(Under the care of Dr. GARLAND.)

For the following notes we are indebted to Mr. Herbert C. Male, M.B., house-surgeon.

Margaret R——, a servant girl, aged twenty-four, was admitted about midday on May 23th, suffering from pain in the joints and pyrexia. She had been previously under treatment for acute tonsillitis, which had developed on May 13th, and for which quinine in three-grain doses had been prescribed. She had always been a healthy girl, but was of a nervous, excitable temperament, and had recently joined the Salvation Army. She recovered from the tonsillitis, but complained of pain in all her joints on the evening of May 24th, and was sent to the hospital on the following morning.

On admission she was flushed and feverish, complained of headache, pain in the knees, ankles, and hands, the ankles being considerably swollen; copious perspiration. Temperature 100·8°. She was placed between blankets, ordered a milk diet, and to be given fifteen grains of salicylate of soda with two grains of carbonate of ammonia in camphor-water every four hours. The affected joints were wrapped in cotton-wool. The evening temperature was 103°. She passed a very restless night, did not sleep at all, and complained much of thirst.

May 26th.—The pain in the joints much relieved. Temperature (8 A.M.) 102°. The patient was seen about noon by Dr. Garland and by Dr. Struthers, who had previously attended her. She was cheerful, but appeared to be very nervous. Respiration was noticed to be rather rapid, and she complained of some shortness of breath and of a sensation of "ringing in the ears." There was a faint systolic murmur in the mitral area. No evidence of pericarditis, and the pulmonary sounds were healthy. About 2 P.M. she complained of severe headache, but fell asleep shortly after, and slept till between 3 and 4 P.M., when she woke up suddenly in a great fright and said she had had a dreadful dream. She talked in a strange, excited manner, and attempted several times to leave her bed. About 5 P.M. the nurse thought the girl was "going off her head." She was restless and excited; answered questions correctly, but had a delusion she was going home. The pulse was rapid and the breathing accelerated. Temperature in axilla 106·2°; perspiring freely. She was given ten grains of quinine, and cold clothes were applied to the head, after which she was quiet and rested. At 6.45 P.M. she started up, talking in a loud, excited manner, imagining she saw things on the wall, and was with difficulty persuaded to lay down in the bed. Temperature 106.4°. Her head was ordered to be shaved, and her body sponged all over with cold water. About half an hour later she became wildly delirious, could not be reasoned with, and was so violent that she had to be strapped in bed. The thermometer rose to 106·6° in the axilla, but could not be properly retained, owing to her struggles. The clothes were now removed from the bed, and she was wrapped in sheets wrung out of iced water. She became much quieter, and soon lapsed into a semi-comatose condition. The sheets were changed frequently. At 8.15 P.M. the temperature had risen to 109° in the axilla. She was lying on her back with her mouth open, quite unconscious. Pulse rapid and feeble, respiration stertorous, pupils much contracted and insensible. One drachm of sulphuric ether was given hypodermically. 8.30 P.M.: Temperature in rectum 109·2°; pulse 140, barely perceptible; respiration irregular and gasping; death seemed imminent. Ice was packed over and round the body, in the axilla and hands, and half a drachm of ether injected. 9 P.M.: Temperature in rectum 106·6°; breathing freer. Still unconscious and insensible to stimuli. 9.15 P.M.: Temperature in rectum 103·6°; pulse 140, fuller; decided improvement in condition; pupils dilating and slightly sensible; feeble attempts to cough and occasional twitchings of hands. Half a drachm of ether injected. 9.30 P.M.: Temperature in rectum 100·6°; pulse 132; breathing much freer. Pinching the skin caused her to move slightly. She rolled her head from side to side, and tried to open her eyes. The cold pack was now removed. She was wiped dry, and placed on another bed between blankets. 10 P.M.: Temperature in rectum 98·4°; pulse 120, of fair volume; surface of body very cold. Hot bottles applied to sides and feet. Swallowed a little brandy-and-water with difficulty. 10·30 P.M.: Temperature in rectum 98°; pulse 112; respiration slower and less embarrassed. More sensible to external impressions. Pupils acting freely. No return of consciousness. Half-drachm of ether injected. 11.15 P.M.: Condition much the same. Twitching of muscles of mouth and attempts to expectorate. Moving about more in bed. 11.45 P.M.: She started as if suddenly awakened, uttering unearthly screams, expression indicating extreme terror. The slightest touch or approach of light produced general convulsive tremors and appeared to excite the greatest alarm. Temperature in rectum 101°; pulse could not be counted owing to spasms of hands when touched. Breathing laboured, long inspirations with peculiar hiccoughy catch at full inspiration. Saliva collected in mouth and spasmodic attempts of expulsion. Pupils dilated. Ice-bag applied to head, but had to be discontinued as it produced spasms. Ward was darkened, after which she was quieter.

27th.—12.15 A.M.: Temperature 102·4°; respiration 40. Lay quietly in bed, if left alone, with wild vacant stare, but screamed and shrank from anyone who approached or touched her. 1 A.M.: Temperature 104·8°; respiration 44, more laboured. A lighted candle produced violent convulsions and caused great agitation. Spasmodic contractions of muscles of mouth, with rolling of eyes and blinking; mouth firmly shut and attempts to spit saliva out of closed lips. Pupils widely dilated. The patient died somewhat suddenly at 1.20 A.M. with frothing at the mouth and symptoms of asphyxia. Temperature immediately after death 105·4°, and fifteen minutes after death 104·2°.

Necropsy, eighteen hours after death.—Post-mortem lividity very slight; rigor mortis present only in lower extremities. Dura mater congested and about two ounces of blood-stained serum escaped on its incision. Brain substance firm, vessels of surface distended; on section white matter presented a mottled injected appearance, the points

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vasculosa being more numerous than usual; the brain appeared otherwise normal. Heart soft and flabby; right auricle and pulmonary artery contained firm decolourised clots; valves healthy. Lungs congested. Spleen enlarged, very soft and friable, and tore on removal. Liver much enlarged, adherent to diaphragm; surface rough and some thickening of capsule in parts; section very soft and fatty. Kidneys much congested, otherwise normal. The bladder was empty.

Remarks by Mr. MALE.—This case is interesting in illustrating the relationship between tonsillitis and acute rheumatism, to which Dr. St. Clair Thomson recently drew attention in THE LANCET, May 24th, and in showing once more the efficiency of the cold pack treatment in reducing temperature. Like many of the cases published, the hyperpyrexia was preceded by an alleviation of the joint symptoms and by insomnia. The occurrence of hyperpyrexia within forty-eight hours of the commencement of the rheumatic fever is unusual, and the extreme reflex excitability, at the last approaching almost a hydrophobic condition, I have not found mentioned in other cases. Death apparently did not result from exhaustion, but from spasm of the muscles of respiration. Some observers have noticed an increase in the amount of urine passed previous to the rise of temperature. In this case no urine was passed for ten hours previous to death, and at the post-mortem examination the bladder was found empty. The question arises, Was the suppression of urine caused by the elevation of temperature, or was it a factor in its production? The fact that there was no return of consciousness after the reduction of the temperature, and the subsidence of other grave symptoms, show the necessity of having early recourse to the wet packing, and not waiting till such alterations have taken place in the brain from the excessive tissue change, as must so seriously interfere with its functions and materially lessen the patient's chances of recovery.

SOOREE CHARITABLE DISPENSERY.

A CASE OF CATHETER FEVER; DEATH.

(Under the care of Dr. G. C. ROY, Civil Surgeon.)

JOOGUL, aged about thirty-two, Hindoo, came to the dispensary on May 19th, with the following history of his case:—Eight years ago he had gonorrhœa, and he had passed water in small streams for the last five or six years. Until about a month ago he could urinate only in drops, and with great difficulty and straining. Micturition was frequent, some fifteen or sixteen times in twenty-four hours, and each act used to take him half an hour, and made his life miserable. His urine was said to be clear. In other respects he was healthy looking. Catheterism was attempted. There was a tight stricture in front of the membranous portion of the urethra, which barely permitted a No. 3 catheter (English) to pass. As there was some bleeding in the manipulation, no further attempt was made on that day, but the patient was dismissed with a dose of quinine and tincture of opium.

On the following day he attended the dispensary with fever, which had come on some time during the night. A saline diuretic mixture and tincture of Indian hemp gave relief, and the patient soon felt as well as ever. He could pass water in better streams, and he asked permission to go home and present himself after a few days. He remained well for two days, when he had a relapse of fever, but not without shivering. The fever was of a remittent type; but the patient being away from any medical advice, nothing was done for three days. On the fourth day he returned for treatment. His temperature was then about 103° in the morning; pulse 120; great thirst, burning of the body, and restlessness, and complete anorexia. The bowels were costive. There was no pain over the bladder or perineum, or any tenderness on rectal examination or thickening. In fact, very careful examination was made to detect any formation of pus. He complained of pain over the region of the right kidney, which was full and tender, without any distinct sense of fluctuation. His urine was turbid and milky, as if mixed with pus, and contained bits of soft tissues. A poultice was applied over the right loins, and a mixture of Indian hemp was given. This was changed afterwards to quinine, tincture of perchloride of iron, and tincture of henbane; brandy was also given. On the 1st of June the temperature became subnormal. The body was bedewed with cold clammy sweat. Costiveness gave place to diarrhœa. Thoracic rales indicated œdema of the lungs, and he sank on June 2nd, retaining consciousness to the last.

Reviews and Notices of Books.

The non-Bacillar Nature of Abrus Poison. By C. J. H. WARDEN and L. A. WADDELL. Calcutta. 1884.

THIS little volume embodies the results of an inquiry into the existence of the so-called "bacillus of jequirity seeds," with observations on the nature of abrus poison, its chemical properties and physiological action. The practical application of the knowledge thus far acquired to the treatment of cases of abrus poisoning is also indicated. The opportune presence of Dr. Koch and the German Cholera Commissioners at the Medical College Hospital, Calcutta, enabled the authors to conduct the bacterial part of the research with a thoroughness which they could not otherwise have hoped to attain. It is a little unfortunate for the authors that the main principle for which they contend has been anticipated in England by two other independent workers—namely, Klein and Benson.

In the first chapter the question of the presence in the seeds of jequirity of specific bacteria or their spores is discussed. The intensity of the abrus ophthalmia is said to depend on the strength of the infusion and the frequency of its application, and this fact is held to be inconsistent with bacterial infusion, and to be an argument in favour of a chemical action. The mere presence of bacteria at the site of inflammation is not regarded as remarkable, for the infusion used by Sattler was unsterilised, and the albuminous constitution of the infusion was specially favourable for the growth of micro-organisms. In the third chapter the essential lesions of abrus poisoning are contrasted with the alleged bacterial lesions described by M. Cornil. The sixth chapter deals with and disproves the alleged immunity against further attack which attends the injection of a single small dose.

The second part of the work is chiefly concerned with the chemical nature of abrus poison, the activity of which is held to depend on a substance of proteid characters, which is named abrin. The physico-chemical properties and composition of this active principle, its place amongst the proteids, and its relations with vegetable albumen are likewise treated of. It has also been found that the albumen of the roots and stems of abrus precatorius is poisonous. This discovery is of very great practical importance, and should serve to banish from the Indian Pharmacopœia the roots of this plant, which are recommended as a substitute for those of glycyrrhiza glabra as a demulcent. The poison is, however, only active when directly introduced into the circulation. Abrin is said to bear in many respects a strong analogy to snake poison. Like it, it may be taken by the mouth with impunity. Heat lessens the activity of both poisons, but affects abrin much more powerfully. The toxic symptoms of these two poisons also exhibit a certain degree of similarity—general depression, drowsiness, fall of temperature and hæmorrhagic lesions. The marked differences, especially the convulsive phenomena, are considered to be accounted for by the more complex constitution of snake virus. A chapter is devoted to an account of the physiological effects of abrin on the blood, circulatory system, body temperature, nervous and other systems.

The last part of the text has to do with the management of cases of abrus poisoning. It appeared from experiments on chickens that dialysed iron given hypodermically at the seat of the abrus injection prolonged life.

We have recorded a sufficient outline of this excellent work to point out its careful and painstaking nature. The alliances of abrin with venom globulin might tempt to a hasty generalisation.

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Thirty Years' Experience of a Medical Officer in the English Convict Service. By JOHN CAMPBELL, M.D., Staff Surgeon R.N. Pp. 180. London: Nelson and Sons. 1884.

THIS is a work deserving the attention of all who take an interest in the important but difficult question of the treatment of our criminal population. The author has given us the results of a long practical experience. After having served as medical officer in the navy for fourteen years—a training which must have been useful to him in his subsequent career—he was sent out as surgeon-superintendent of a convict ship to Tasmania, shortly before the abolition of the system of transportation to the Australian colonies. On his return he was appointed medical officer to Dartmoor Prison, from which he was transferred to the charge of the invalid hulks at Woolwich, and on the destruction of the *Defence* by fire in 1857 to the old prison at Lewes. In 1860, on the completion of the new invalid prison at Woking, he was sent there in charge of the invalid convicts. In 1875 a portion of the Woking Prison was set apart for the reception of lunatic criminals, as distinguished from criminal lunatics who are confined in the prison at Broadmoor; and Dr. Campbell remained in medical charge of the whole establishment till 1882, when he retired from the service. He therefore had long experience in the management of a most difficult class of prisoners—men who, from disease, were unequal to laborious employment, and whom it was necessary, owing to their physical condition, to exempt from punishments which would have been applicable to healthy prisoners. Dr. Campbell has not given any details of the health or of the death-rate of the prisoners at Woking, but he says: "As a proof of the healthfulness of the situation, it will suffice to state that there has been an entire exemption from epidemics; and with the exception of one case of typhoid fever, occurring in a prisoner who had been employed in cleaning a drain, all the complaints were of a catarrhal nature." The chapters on malingering and on the lunatic wing at Woking give a good idea of some of the difficulties experienced by medical officers of prisons, and of the responsibility involved in the efficient discharge of their duties. The chapter on the treatment of prisoners is interesting, and especially with reference to the effect of the separate system on their mental and bodily condition. In the preface, Dr. Campbell, with reference to the views of those who think that too much cannot be done for prisoners, justly remarks: "It is very desirable to bear in mind that in carrying out any system prompted by humanity everything approaching to mistaken sympathy with its objects should be avoided, as suggesting to their minds excuses for their misdeeds, and tempting them to look upon themselves as ill-used individuals. This is perhaps the most important matter on which I would insist."

OUR LIBRARY TABLE.

Experimental Chemistry for Junior Students. By J. EMERSON REYNOLDS, M.D., F.R.S., Vice-President of the Chemical Society of London, Professor of Chemistry in the University of Dublin. Part III.: Metals and Allied Bodies. London: Longmans. 1884.—Any student who works carefully through Professor Emerson Reynolds' three excellent little text-books, and accompanies his work with a little additional theoretical study, will gain a sound, intelligent, and practical knowledge of inorganic chemistry. Such a course is superior to all others, and affords the highest kind of scientific training. Unfortunately it is practically impossible for most students of medicine. It might be adopted, and doubtless is, in the advanced classes of public schools and colleges; but for the ordinary medical student, with his three months' summer course, it is out of the question. Professor Reynolds describes in the three volumes no less than 664 distinct experiments, all useful and all sufficiently explained, and the experiments are interspersed with much valuable information of a theoretical as well as of a practical kind.

The Law of Adulteration. By THOMAS HERBERT. London: Knight and Co.—The passing of the Sale of Food and Drugs Act, 1875, inaugurated a new era in connexion with the protection of the public against adulterated or mixed articles of food, &c.; and it may be regarded as the outcome of the revelations which resulted from the extensive inquiry which was carried on in THE LANCET, into the extent and character of the adulterations which were practised at that time. The improvements which have taken place are, in many respects, very marked. Evidence of competency is now required before an analyst's appointment receives official sanction; the duties of analysts are defined, and the various proceedings which are authorised to be taken as to adulterations have been fully set out. But since the Act was first passed legal decisions on obscure points have been given, and other difficulties have been found to arise. These have, to some extent, been met by the Amendment Act of 1879; but notwithstanding this, it is by no means easy to understand precisely how far legal decisions influence the action of both the authorities and the public. The present volume professes to clear up all these difficulties, and from the manner in which the task has been achieved we can hardly doubt that the writer has assumed a *nom de plume*, and that the work is to all intents and purposes an authoritative epitome of the state of the law of adulteration emanating from an official source. Every legal decision bearing on the subject is to be found recorded in it; copious extracts are given from all the important official reports and documents bearing on the Acts; and the information is so put together that, whether help in coping with adulteration is needed on the bench, in the laboratory, at a meeting of town councillors, in the shop, or in the private house, it will be found with the least possible difficulty, and in a form well suited to its intended purposes.

Archiv für Pathologische Anatomie und Physiologie und für Klinische Medicin. Herausgegeben von RUDOLF VIRCHOW. Band XCV., Heft 3. Berlin: G. Reimer. 1884.—This number contains the following articles: 1. On the Fate of Tissues implanted in the Organism, by Professor Zahn of Genf. 2. On a Case of Ulcus Rotundum Simplex Vaginæ, by the same. 3. Contribution to the Physiology and Pathology of the Blood, by the same. 4. Researches on the occurrence of Putrefactive Germs in the Blood of Healthy Animals, by the same. 5. On the Absorption, Formation, and Deposit of Fat in the Animal Body, by Dr. Munk of Berlin. 6. The Bacteria of Swine Plague, by Dr. Klein of London. 7. A further Historical Sketch on Cæsarean Section in the Talmud, by Dr. Rawitski of Czarnikow. 8. On the Chemical Composition of the Urine of Swine, by Dr. Salomon of Berlin. 9. On Trichinosis and on Actinomycosis in Swine, by R. Virchow.—Band XCVI., Heft 1, contains: 1. Research on the Cicatrisation of the Arterial Intima and Media after severance by Ligature, by Professor Zahn. 2. On a Case of Perforation of the Uterine Wall by a Placental Polypus, with consequent Retro-uterine Hæmatocele, by the same. 3. Note on the Physiological Relation of the Thyroid to the Spleen, by Dr. A. Tauber of Warsaw. 4. The Influence of Baths (Fresh Water and Carbonated) and of Muscular Action on the Circulation, and on the Treatment of Heart Disease by these three factors, by Dr. Jacob of Curdowa. 5. The Action of Phosphorus on the Fœtus, by J. M. Miura of Japan. 6. Microscopical Researches on some of the Vital Phenomena of the Blood, by Dr. Lavdowsky of St. Petersburg. 7. On Gartner's (Wolffian) Ducts in the Human Female, by C. Rieder of Basle. 8. On Thermoneurosis, by Dr. Scherschewsky of St. Petersburg. 8. Note on Actinomycosis, by Dr. Oscar Israel

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Opium Smoking and Opium Eating. By GEORGE SHEARER, M.D. 1883.—The nucleus of the present treatise formed the subject of an essay by the author on "The Medical Means of Counteracting the Effects of Opium Smoking in China, with Suggestions as to the best Method of Conducting Opium Refuges." This essay was awarded a prize of £50 in 1881. Besides enjoying the advantage of actual hospital work among the Chinese, the author has consulted almost every available work which has yet appeared on the subject. The little book is a thoroughly popular production written somewhat in the sensational style. We have, nevertheless, no wish to condemn the book. As good wine needs no bush, so we may say that the dreadful consequences of opium eating and smoking need no colouring. Dr. Shearer believes that if the practice be vulgarised it will die out. By which is meant that if we can get the habitués to see that their habit is disgraceful, mean, and cowardly, they will renounce the practice. Education of the moral sense offers itself as perhaps the most hopeful means of combating the vice, but its chances of successful operation are small in face of the miseries of the surroundings of the lower classes of Chinamen.

The Cinchona Barks. By FRIEDRICH A. FLÜCKIGER, Ph. D. London: J. and A. Churchill. 1884. — Dr. Flückiger is well known in the chemical world, and his researches on the cinchona barks have marked a new epoch in the history of these valuable medicinal agents. The present book is a translation from the original German text, with some additional notes by F. B. Power, Ph.D. Eight lithographic plates and one woodcut serve to convey pictorially some idea of the different varieties of the cinchonas and their botanical structure. These lithographs are excellent representations. A separate section is occupied with a list of the more recent publications relating to the cinchonas and cinchona barks. The work treats of the botanical origin of cinchonas; of the most important species; of remisia, the most closely connected allies of the cinchonas; of their habitat; of cinchona culture; of the modes of collecting the barks; their appearance and anatomical structure; the contents of their tissue; the location of the alkaloids; varieties of cinchona bark; so-called spurious cinchona barks; cinchona cuprea; commercial statistics; chemical constituents of the cinchona barks; amount of alkaloids; quantitative estimation of the same; their manufacture; history of the cinchona barks to the year 1737; and their history to the present time. It will be seen that the work is not only exhaustive, but thoroughly interesting. We may refer to the fact that Dr. Flückiger is the possessor of the Howard Medal.

The Guild of Good Life. By B. W. RICHARDSON, M.D., F.R.S—This small volume professes to be a narrative of domestic health and economy, and is published under the direction of the Committee of General Literature and Education appointed by the Society for Promoting Christian Knowledge. When it is remembered what a vast amount of experience Dr. Richardson has had in the writing of popular works, the readiness and skill with which he has produced the present volume of instruction and amusement will not excite surprise. Universal cleanliness is the main theme of the narrative, and it need not be said that where this desirable condition prevails, providence, thrift, and prosperity will not be wanting.

Hints on the Health of the Senses. By MACNAUGHTON JONES, M.D. London: Longmans, Green, and Co. 1884.—The author's chief desire in writing this little book is to offer to the public, as far as possible free from technical language and in the simplest form, some useful suggestions for the preservation of the delicate organs of special sense. The little work [illegible] the purpose for which it is intended.

Charities Register and Digest. With an introduction by C. S. LOCH. Second Edition. London: Longmans, Green, and Co. 1884.—This volume, which is published under the auspices of the Charity Organisation Society, is a classified register of charities in or available for the metropolis, and a digest of information respecting the legal, voluntary, and other means for the prevention and relief of distress, and the improvement of the condition of the poor. The scope of the Register is larger than that usually aimed at in such works. This is mainly due to the introduction of information with regard to the various provident agencies, a knowledge of which is of the first importance to the charitable; and also to the attempt which has been made to give prominence to those large charities of the working classes which are habitually overlooked, but which are administered with a familiar acquaintance with the general circumstances of the recipients, and have a potency for good which may greatly exceed the more distant, though equally genuine, charities of other classes. No reference is made to the City parochial charities, as these are, in all but five parishes, to be re-organised in accordance with an Act passed in the past year. The lists of charities for the blind, deaf and dumb, reformatory and industrial schools, boarding-out committees, institutions for idiots and imbeciles, and convalescent homes, have been made as complete as possible, including institutions which are not metropolitan. By all concerned in the relief of distress this book will be found invaluable as a means of reference.

ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD FOR IRELAND.

WE learn from this report, which is of a highly interesting character, that the average daily number of persons receiving relief in workhouses during the year was 49,236, being a decrease of 1333 as compared with the number so relieved in the preceding year; but there was an increase of 1549 in the average daily number of persons who received out-door relief during that period, the numbers being 60,384 and 58,835 respectively. During the year 55,076 persons were under treatment in the workhouses for various affections, including 6372 cases of fever or other contagious disease, with a mortality of 13,164. Whilst there has been an increase of 641 in the total number admitted sick to workhouses, there has been a decrease of 28,275 in the number admitted who were not sick, thus showing a net decrease of 27,634 in the total number admitted during the year. The number suffering from fever or other contagious diseases was less by 1300 than in the previous year, and the total number relieved in workhouses was less by 28,474. Last year 605,865 new cases were attended by dispensary medical officers, which included 186,938 visiting tickets, and 106,071 persons were vaccinated or revaccinated during the same period. Of the 12,405 deaths recorded in workhouses, 2661 were attributed to old age, 1005 to atrophy, 2027 to diseases of the lungs, 981 to consumption, and 583 to fever. There were only 11 deaths from small-pox, as contrasted with 76 in the previous year. During the past three years it is satisfactory to learn that there has been a considerable decrease in the number of fever cases attended by dispensary medical officers, and although last year the decrease was not so marked as in the two previous years, yet it amounted to 358. The total expenditure of poor-rates for all purposes—viz., poor relief, medical relief, burial grounds, registration of births, deaths, and marriages, sanitary measures, expenses under Superannuation Act, &c., was £1,326,963, being an increase in the total expenditure as compared with the preceding year of £70,660. The current sanitary expenditure for the year was £52,285, in comparison with £51,345 in the previous year.

KING'S COLLEGE HOSPITAL has received a donation of £100 from the Queen.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 6, 1884.

QUARANTINE measures have once more proved themselves powerless in preventing the extension of cholera, whether by land or by sea. That quarantine, if rigidly carried out, may under some circumstances be successful we have no wish to deny; but we do maintain that in its application to European and other civilised countries having commercial and other intercourse, it affords little or no chance of success, and that by reason both of its almost certain failure and of the restrictions and conditions under which it has to be maintained, its application does infinitely more harm than good. "A quarantine," wrote Mr. SIMON, in his eighth annual report, "which is ineffective, is a mere irrational derangement of commerce; and a quarantine, of the kind which ensures success, is more easily imagined than realised." Quarantine, to be effective, must exclude from entry into a country or a district all persons coming from the infected country or district, except after such a detention as will cover the period of incubation of the disease to be dealt with, and it must prevent all communication between inhabitants of the two localities concerned. This necessarily involves the stoppage of all commercial and trading relations between the localities, including the stoppage of supplies of food and other necessaries, and it also means a prohibition of all passenger traffic except after detention for quarantine purposes. The result is that large lazarets have to be established, and here the actually sick, those suffering from suspected sickness, and the healthy, are huddled together. The occurrence of a single case of actual cholera, or of suspected cholera, amongst the detained involves for all the repetition of the period of detention; and the conditions of aggregation and otherwise under which such detention is alone possible are found to favour the spread of disease rather than to check it. In short, the lazarets themselves tend to constitute centres of infection. Any amount of disguise and deceit is practised in mild cases of illness to avoid further detention, and so it happens that persons who would have done no harm had they been allowed to pass on from the first, have, after contracting such an affection as choleraic diarrhœa, succeeded in securing their freedom only to convey infection in their track. Indeed, the restrictions of quarantine are so burdensome and vexatious that the more rigidly they are carried out, the more are contraband practices, both as regards persons and goods, resorted to. Land quarantine, or the application of a sanitary cordon, failed for this reason when Toulon was first affected with cholera; it also failed when applied by Italy against France, the disease, notwithstanding all restrictions, making its way into the provinces bordering on the French frontier and then extending further into the kingdom; it has failed as regards individual towns and cities in Italy, for notwithstanding the employment of thousands of troops, cholera made its way easily out of Busca and Spezia. It has since spread from Alicante in Spain as far inland as Novelda. The anticipation of quarantine also suffices to frustrate its intended purpose, for the moment cholera is known to exist in a town the inhabitants, fearing that they will be hemmed in with the sick, are seized with panic, and fly away hither and thither by any route that is open. It was in this way that cholera spread from several centres in the south of France, and in a similar way it was carried a distance of many miles by the multitudes who fled from Spezia. Land quarantine, indeed, was, according to a resolution of the International Sanitary Conference held at Vienna in 1874, declared to be impossible of execution and useless in view of the numberless and ever-increasing methods of communication which everywhere exist, and it was hence rejected by the Conference, the Italian representative, amongst others, assenting to the rejection.

Quarantine by sea is more possible of execution, but to be successful the country resorting to it must make up its mind to all but complete isolation, for unless it does so its attempts at exclusion of persons and things from suspected places will almost certainly be met by other attempts, and these generally the more successful, to evade the restrictions imposed. An example of this has just occurred in the case of the importation of cholera from France into Spain. The first appearance of cholera in Spain was at Alicante, on its Mediterranean coast; and there seems but little doubt either that persons unable to take ship directly from France to Spain without undergoing a vexatious quarantine had first travelled to Algiers and had thence reshipped, or that the quarantine measures at Alicante have of themselves failed. And so it has come to pass that the two countries that have maintained the most rigid quarantine against France have both become seats of the cholera by importation along the lines of human traffic. It was because all this was foreseen that the Vienna Conference, whilst recommending the adoption of certain regulations for those countries which still insisted on maintaining quarantine, passed a resolution recommending, in its stead, the system of medical inspection which is maintained in this country.

Of all the advantages which the system of inspection has over quarantine none is so important as the state of preparedness which it begets. Countries and towns relying on quarantine make no provision against its failure, and hence, directly disease succeeds in evading the measures adopted panic ensues. The system of medical inspection involves the examination of all and the isolation of the sick, and hence measures of isolation are provided beforehand. So, also, the country generally, having discarded its trust in quarantine and sanitary cordons, seeks to do away with the conditions which would favour the extension of the disease should it make its way into their midst, and it thus secures not only a better means of defence against infection than could otherwise be attained, but at the same time substantial improvement in its general sanitary circumstances, with consequent saving of life, health, and means. It is as yet impossible to say whether cholera will this year succeed in making an entrance into this country or not, but it is most certain that by the adoption of the system of medical inspection and isolation, together with the measures of sanitary reform with which that system has been allied, we are better prepared to meet the disease than we ever should have been

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had we not abandoned resort to measures of quarantine, backed by the false sense of security which they engender.

WE must confess to a great deal of sympathy with the preference which Lord RAYLEIGH professes for the study of Classics as the basis of a general education. There is, of course, much to be said in favour of the utilitarian view which regards with regret the expenditure of a large amount of mental energy in the pursuit of knowledge on what is not in itself "useful," or perhaps we ought to say marketable. No one pretends to believe, for example, that the qualification of being able to make good Latin verses is of high commercial value. It must be conceded that the youth with even a smattering of science is better provided, so far as information—a totally different thing from education—is concerned, than the most learned classical scholar can be considered to be, for the active business of life. It is as true now as ever, though in a different sense, that Latin and Greek are for scholars and pedants, if we look only to the subject matter of the study pursued. At the same time, it is, for us at least, a serious practical question, whether the mind, or may we say the brain, nursed on classics, is not, after all, a better brain than the best that can be developed by exclusive forcing in the scientific laboratory. To speak frankly, we regard with dismay the growing tendency to discard the older methods of training.

We will give up at once and for ever the plea that classical learning may be turned to practical account; let it be counted as a drug in the market and unsaleable; yet, we contend, no better or more healthy mode of brain-training has been found than that which consists in compelling the youthful mind to such an exercise of its budding powers and faculties as is indispensable in the construing of works in the classical languages, and to express modern thought in the languages of ancient Greece and Rome. We will even go further than this, and dare to affirm that nothing in the whole range of educating work and processes is more directly conducive to the development of a brain strong and well furnished for the scientific study and practice of medicine than the intelligent and diligent study of Comparative Grammar and Logic. The argument employed in disparagement of the ordinary amount of training in classics may be used with equal fairness against any practicable school-training in science. No amount of dabbling in science—a form of mental discipline wholly inadmissible, as we believe, in the case of "clever" boys—will give that solidity of mind-structure, that depth and force and clearness of mind-vision, and that faculty of rapid and precise judgment in dealing with facts and drawing inferences, which are to be gained by fairly honest and earnest labour in the departments of scholarship just mentioned. Neither will we beg the question or try to evade the consequences of the view we take; but assert that, so far from agreeing with those who are striving to eliminate classical languages and classical work from the curriculum of a general and preparatory education, we believe they are pursuing a policy as opposed to that which experience and common sense combine to support, as one which would altogether supersede the natural rearing of chicks by a universal adoption of the artificial incubator. Let advocates of the "advanced" doctrine that knowledge is only useful if it be *itself* of use, pause before they destroy what cannot be restored, lest in abandoning the very principle of a sound education they deprive it of its backbone.

The study of modern tongues cannot, however useful in itself, replace genuine work in the classics. There was a constructive power in the old method which the new wholly lacks. The very fact that a language is spoken by contemporaries renders its acquisition valueless as a process of mental culture. The student of Science who has not been properly grounded in the classics, in mathematics, and in logic is at the mercy of caprice; his judgments are hasty, his processes of mental work are unformulated, his conceptions of law and reason are not definitive, and he is liable to be blown about by every wind of doctrine because he has no solidity, and therefore no stability, in himself. These may appear to be old-world notions, but we are prepared to maintain them on grounds physiological and psychological. In our own profession each year brings new and rapidly changing types of men and manners to the front. The expert scientist is a creature of to-day, and admirable in his place; but no class or development of mind and character which has yet been produced by recent combinations of forces, educational and constructive, will, for a moment, compare with that of the scholarly physician of the last generation but one. If it were only possible to keep the old stock and to graft upon it the excellences of the new, there would be a result not simply surpassing what has gone before, but ensuring a vastly improved and improving type of mental development in that which is to come. Let us maintain the sound classical basis, and afterwards raise upon it those more luminous and brilliant qualities to which the modern scientist so much aspires.

IT is gratifying to know that the financial success of the Health Exhibition has already been such as to relieve its promoters of all anxiety on that score. We can never fully realise the amount of trouble and anxiety which has been incurred in such a cause as this by men whose personal leisure is most scanty. Their enjoyment would be not in favouring a show of the coarser apparatus of sanitation, but in the pursuit of those profound and delicate investigations out of which the highest results for the race and the highest fame for the investigator are to be attained. It would have been grievous indeed if an undertaking in which so many of our foremost men of science and so many leading men in our own profession have taken part had been a huge failure, involving debt, and illustrating only the indifference of the public to that which so greatly concerns them—their health. The financial success of the Health Exhibition happily clears the way for the greater question of what we may call its scientific success. By this we mean not only the projection into the future of the interest in health questions on the part of the public which it has excited, but the elevation of such questions to a higher level of scientific respect. The public must be more than ever impressed with the importance of health questions, and it cannot show its sense of this importance better than by demanding that the profits remaining after all the expenses of the Exhibition have been defrayed

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shall, in part at least, be devoted to the support or the creation of such institutions as contemplate the most thorough investigation of the causes of epidemic disease, and the way in which they are propagated from person to person, from house to house, or from country to country. Critics can easily find fault with this Exhibition. They can say that if there were only visible in it something having reference to health it would really be very interesting; that it is only a great show, meant to draw the public and calculated to advertise the wares of enterprising tradesmen; and it must be admitted that the scale of the Exhibition, the crowds by which it is filled, and the entertainments by which they are attracted, give a little plausibility to such criticism. But their objections will be effectually refuted if one result of this show should be the creation of a fund for the establishment of such scientific investigations as are worthy of the country that rules India, and to which JENNER and PARKES belonged. Such investigations are already honoured by the executive of the Exhibition. The instruments and the methods of PASTEUR are fully exhibited in a prominent place, as we have already explained; and there is in a somewhat inaccessible elevation of the building a Biological Museum under the fitting auspices of Mr. WATSON CHEYNE, in which work of the right kind is being done. It is impossible, however, to think without some shame of the much greater honour that is set on such work in Germany and in France than in England, which is so much in advance of other countries as regards public and practical sanitation. It is monstrous to think that in measures for solving the great problem of cholera, for which we have such a special responsibility, we have allowed Germany to excel or to anticipate us. France has made PASTEUR a Senator for his efforts to solve the mystery of epidemic and epizootic disease, and, like Germany, gives public support to bacteriological laboratories and museums. We cannot doubt that one result of the Health Exhibition will be to quicken public intelligence and interest in this question. The most highly civilised nations of Europe, with their huge armies, are painfully at the mercy of bacteria, many of which are so minute that, as Dr. DALLINGER has just told the British Association, fifty millions of them, if laid in order, would only fill the one-hundredth part of a cubic inch. It is these agents that we have to consider; their natural history, their relation to fermentation and to disease; how they can be fostered and how destroyed—in air, water, soil, or food; how they can be rendered innocuous or converted into beneficial vaccine agents. No use of the surplus funds of the Health Exhibition, no result of the Exhibition itself, could be more satisfactory than this. The authorities of the Parkes Museum, who have done so much to promote the success of the Health Exhibition, cannot make a better use of their influence than to make such a representation, and it would be no unfitting reward to them to constitute them the trustees of an endowment for the investigation of all questions bearing on health, from the disposal of sewage to the study of those organisms which, to all seeming, cause those mighty diseases which depress and decimate nations. Another purpose to which part of the surplus funds might very happily be applied is the relief of the pecuniary embarrassment of the London Hospitals. As a means for restoring the health of the people, who have so greatly contributed to the success of the Exhibition, the hospitals are unrivalled. We trust that the Prince of WALES and his colleagues will take both the objects we have mentioned into their most favourable consideration.

THERE are few, if any, surgical appliances which are more universally employed than the many forms of drainage-tubes. CHASSAIGNAC'S original wire tubes have entirely passed away, but their red rubber substitutes or the decalcified birds' bones are to be found in nearly every surgeon's repertoire. However much practitioners differ upon the great question of the dressing of wounds, they seem all to be of one mind as to the value of drainage, and not a few are fond of attributing all the success of Sir JOSEPH LISTER'S scientific and admirable wound treatment to his care in providing for proper drainage. The extreme frequency with which tubes are placed in wounds and sinuses tends in some measure to obscure the special purposes for which they are adapted, and it may be useful, therefore, briefly to recall what it is drainage-tubes can do, and why and when they are useful, as it will enable us to guard against their misuse, which is nearly as common as their employment.

It is well known that one of the chief phenomena in the healing of wounds is the pouring out of serum; this commences as soon as all hæmorrhage is arrested, and continues for from twenty-four to forty-eight hours. We need not stay to consider the purpose or the mechanism of this flow, but it is at once obvious that it is a twofold source of danger in those cases where the surgeon is attempting to secure the primary union of the wound. It may accumulate, separate the surfaces to be united, excite "tension" and suppuration, or it may form a fluid favourable to the cultivation of septic organisms, and so lead to local or general blood-poisoning. The purpose of drainage under these circumstances is evident, and with moderate care it is most easily secured. Tubes of sufficient size should be so placed in the wound as to facilitate the escape of the effused serum, and any part where there is a tendency for it to accumulate or "bag" should be specially provided for.

But now arises a question to which but very little general attention has been given: When and how should these tubes be withdrawn? The correct answer clearly is that as soon as the serous effusion has subsided the function of drainage-tubes is at an end, and they should then be completely withdrawn. We believe we are right when we state that a very common practice is to remove the tubes gradually, shortening them day by day; and then the surgeon finds that, while the rest of the wound heals by first intention, the track of each drainage-tube heals by granulation, or forms a sinus which is more difficult to close up than all the rest of a large wound. There is no difficulty in determining when a drainage-tube has ceased to be of use in a recent wound, for it will appear dry, and dryness of a drain is a certain sign that it is of no further use. To shorten it gradually, or to leave it in the wound at all, is but to manufacture a sinus.

This, however, is but one use of drainage-tubes. They find frequent and most valuable employment in quite ot

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circumstances, and the different conditions demand other management. For example, in a sinus with a pouched, tortuous, or irregular track, discharge is apt to collect behind some temporary barrier and prevent altogether the growth of granulations that would otherwise take place. If a drainage-tube is introduced into the bottom of that sinus, it guards against this and secures the exit of the discharge from all parts under the influence of gravity, or of the elastic pressure of the surrounding tissues. The surgeon's aim in such a case is to secure the gradual growth of granulations and cicatrisation of the wound from the bottom, and to prevent closure of the wound superficially, or at any intermediate place. A drainage-tube is of use therefore to provide a means of exit of discharge from the deepest part of the sinus, and to allow of the unhindered growth of granulations there, while at the same time it prevents the adhesion of the walls, or closure of the sinus at any intermediate place. It should therefore project almost to the bottom of the sinus, and as the granulations sprout up at the bottom it will require to be shortened. When used in such a case, it would be folly to remove the tube in one piece; but daily, or at longer intervals, it should be shortened to an extent commensurate with the closure of the sinus, until the wound is superficial and the tube can be dispensed with entirely. The skill and experience of the surgeon are well tested by this process of shortening the tube; for if not done fast enough the healing is delayed; while if done too fast, the whole purpose for which the tube is used may be defeated, and the surgeon find, to his dismay, that although he has gradually shortened his tube to *nil*, the sinus is as long as before. The amount and character of the discharge, and the appearance of the granulations lining the sinus, afford some indication of the rapidity with which healing may be assumed to be taking place, and the careful use of the probe will of course render valuable assistance. There are many practical details in the use of drainage-tubes which can only be learnt by practice and careful observation; but we have stated, we believe, the principles which should govern their use in all cases. Where, as in recent wounds, a great and temporary flood of fluid has to be carried out, drainage is only a temporary requisite, and as soon as the flood of serum is stayed the tube should be wholly removed. Where, on the other hand, the tube is used to keep open a sinuous track with flaccid walls, liable to collapse or be compressed, and so occasion retention of discharge in the deeper parts, the shortening of the tube must keep pace with the healing of the sinus. When tubes are used in abscesses, they first of all form an exit for a considerable collection of pus, but so soon as the cavity is empty, and its walls have collapsed, its condition approaches that of a sinus, and the tube must be dealt with accordingly.

Ridicule has in some quarters been thrown upon the very common use made of drainage-tubes, and it has been asked whether fluid will flow through a tube in opposition to the force of gravity. Without undertaking to defend all the uses of tubes, it is only fair to point out that a tube may be of signal service in draining a cavity and sinus apparently in opposition to the force of gravity. Nor is the reason far to seek. The rigidity of the tube being sufficient to maintain an open path for the pus or other fluid to escape, the elastic pressure of the surrounding tissues or the growth of granulations from the bottom of the cavity presses out the fluid. Without the tube, the walls of the sinus or aperture collapse or are compressed together, and additional resistance is afforded to the exit of the secretion of the wound. Absorbable drainage-tubes have not yet been largely used in this country, and their value appears to be limited to those cases in which the first dressing of a wound is not removed until cicatrisation is complete.

IN dealing with the subject of Metaplasia, at the Copenhagen Congress, Professor VIRCHOW must have awakened memories amongst his older hearers of the great service he rendered to science in the enunciation of his cellular pathology more than a generation ago. For although in detail the application of the doctrines he then formulated has with the lapse of time and the advance of knowledge been materially modified, the central facts of cell growth and cell nutrition still largely dominate pathology. In the lucid sketch which prefaced the main subject of his address, Professor VIRCHOW showed how the doctrine of humoral pathology and the large share assigned to an assumed plastic force operating on a blastema from the blood, a doctrine which was fully advanced by HUNTER, and to some extent maintained by ROKITANSKY, came to be modified by the cell theory of SCHWANN, and how the weak point in SCHWANN'S theory, that cells have a *de novo* origin, was overturned by VIRCHOW himself in his enunciation of the law "Omnis cellula e cellulâ." He pointed out that the formative process and the nutritive were not identical, as was assumed in the older view; but that the effect of nutrition was the preservation of cell life, that of formation the multiplication of cells, in which the original cell loses its individuality, and, as such, ceases to exist. The cell theory of nutrition implies the taking up by the cell of material needed for its sustenance, and the casting off by it of effete matter. In other words, it is cell metabolism. But there is also the plastic force, which on HUNTER'S view resided in the structureless lymph or blastema exuded from the blood, but which VIRCHOW transferred to the cell itself, a power exemplified in all processes of growth, and especially in the exaggerated condition of this, to which he gave the name of hyperplasia.

The subject of metaplasia is intimately connected with the processes of normal cell life. It implies a conversion in the properties of tissues, an apparent new production, but yet not affecting the permanence of the cells which are the seat of this conversion. This process is one which has many examples in tissue life, both under normal and morbid conditions. A striking instance is afforded in the process of ossification, where the osseous tissue is formed, not by direct conversion of embryonic cells, but by the metaplasia of a tissue which occupies an intermediate position between the embryonic tissue and the fully formed bone. Whether the ossification take place from cartilage or from membrane, the essential thing is a change in property and function of cells; and the same applies also to the formation of marrow, which goes to make up the whole bone as an organ. The production of marrow may occur in a bone by the latter yielding up its lime salts and the osseous becoming changed into the medullary corpuscles, with softening of the matrix. Thereby a bone may pass into the condition of osteoporosis, or by a

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further change, into that of osteo-malacia. Another striking instance of metaplasia is to be seen in the frequent conversion of adipose tissue into mucous tissue—a change which may well be termed a *re*-version, since in fœtal life the fatty tissue is represented largely by mucous tissue. Such a change, seen in the fat of the spinal canal, epicardium, renal hilus, and elsewhere, is not a mere atrophy of the fat, but a real metaplasia, a change in constitution of the fat cells. It can be seen largely in many myxomata and lipomata that exhibit more or less of the gelatinous myxomatous change. COHNHEIM'S doctrine, which relegates all tumour growth to a persistence *in loco* of embryonic elements, retaining the power to develop at any period of life into the tissue for which they were primarily intended, is, in spite of its attractiveness as a generalisation, in VIRCHOW'S view, inadequate for the explanation of many forms of tumour that must take their origin in changes occurring late in life. The idea of metaplasia may be pushed still further, so as to embrace the question whether tissues of one type are capable of conversion into those of another. This is a question to which those who hold to the embryological view of tumour formation find it difficult to assent. They see that the embryo is laid down on definite lines, and that the mesoblastic cells retain their potencies *ab initio*, and can never be transformed into the cells or derivates from the other blastodermic layers. Hence, the sharp distinction between tumours of epithelial type and connective-tissue type; and the difficulties that are sometimes encountered in explaining the origin of a tumour composed of the one type of cells in the midst of tissue of the other type. By accepting the doctrine of metaplasia this Gordian knot would be severed; and Professor VIRCHOW, who throughout—e.g., in reference to cancer—has believed that epithelial formations may originate in connective tissue, does not hesitate to do this, nor to suggest furthermore a conversion of epithelial into connective elements. By a happy antithesis he referred in this connexion to the boundless metaplastic powers which many have assigned to the wandering leucocyte, some going so far as to assert that such cells take a part in the production of every new formation, and capable of conversion into any type of tissue.

The question, it must be confessed, is one which has far-reaching limits in pathology. Indeed, if metaplasia be admitted as possible, and the conversion of one form of tissue into a quite dissimilar form be accepted, much of the foundation of present day oncology will be undermined. At the same time the acceptance of VIRCHOW'S views would do much to explain many an instance apparently anomalous and out of harmony with what has been assumed to be the natural order of things. It may prove that we are too prone to regard the processes of nature as bounded by the rigid limits which we have created for them in our own minds; for it is as true in pathology as in other things, that we are more disposed to accept facts in harmony with our preconceived ideas than to subordinate our ideas to facts. Professor VIRCHOW in this address, thought by some to be dealing with a worn-out subject, shows us the dangers that beset us in thus limiting the operations of nature; and has supplied material for reflection and examination which may do much to revive that interest in cell life that is in danger of being displaced by the more attractive subjects which now engross the attention of the pathological world.

IN selecting as the subject of the Presidential Address in Biology, at the meeting of the British Association, the Phenomena of Pelagic and Deep-sea Life, Professor H. N. MOSELEY has, we think, exercised a wise discretion. An important section of the vast materials obtained during the voyage of the *Challenger* has been entrusted to him for identification, arrangement, and examination; and no one is better qualified, by the prolonged attention he has bestowed upon the problems opened up by this voyage, to express an opinion upon the results that have been obtained by it, or to give a general review of the rapid development of our knowledge in regard to ocean life. It is not many years ago that naturalists held animal life in the sea to be restricted to a littoral zone, at the outside from fifty to a hundred fathoms deep. Beyond that depth, it was held, there was total darkness and complete stagnation of water, whilst the pressure became enormous — conditions rendering life, or at least the existence of any of the higher forms of life, wholly impossible. The several expeditions, however, that have been fitted out by our own and foreign Governments have shown that the profound depths of the great oceans are not incompatible with the life of fishes, of holothurians, bright-coloured starfishes, and numerous mollusca, and that, induced probably by conditions of temperature, currents of water sweep along the bed of the sea, cold indeed, but still containing sufficient oxygen to enable aeration of the blood to be effected, and to maintain the various operations of life. From Mr. BUCHANAN'S results it appears that, contrary to what has hitherto been accepted, the presence of free carbonic acid gas in sea water is an exception. As in the blood, what carbon dioxide is present occurs chiefly as a bicarbonate, in general more or less incompletely saturated, and it is owing to this that, as Mr. JOHN MURRAY has shown, after certain depths have been reached pteropod shells are dissolved, and disappear from the sea bottom, and at certain further depths globigerina shells suffer the same fate. The amount of carbonic acid normally present throughout the ocean is not sufficient to be inimical to life, though here and there there are probably large bodies of water highly charged with carbonic acid, owing to the presence of active volcanoes in the ocean bed. In regard to the effects of pressure, M. RENARD has shown that yeast, after being exposed to a pressure of a thousand atmospheres, equal to a depth of 6500 fathoms of sea water, for an hour, when mixed with a solution of sugar, gave no signs of fermentation till about an hour had elapsed, and a mixture of yeast and sugar solution did not ferment at all while actually under a pressure of 600 atmospheres, equal to a depth of about 3900 fathoms.

"Algæ, seeds of phanerogamic plants, infusoria, and even mollusca and leeches, were found to be thrown into a sort of state of sleep or latency by exposure to similar pressures, recovering from this condition after a shorter or longer period of return to normal conditions. A fish without a swimming bladder, or one with the bladder emptied of air, may be submitted to a pressure of 100 atmospheres, equivalent to a depth of 650 fathoms, without injurious effect. At 200 atmospheres, equivalent to a depth of 1300 fathoms, it becomes torpid, but soon revives when the

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pressure is removed. At 309 atmospheres, equivalent to a depth of about 2000 fathoms, the fish dies."

These experiments, Professor MOSELEY remarks, are of the highest interest, but of course they labour under the disadvantage that they can only be made on comparatively small quantities of water, so that the oxygen is quickly exhausted, and the fish has no time allowed it to become acclimatised.

"A question of the utmost moment, and one that has received a good deal of attention, is that as to the source of food of the deep-sea animals. Certainly, a large proportion of this food is derived from the life on the ocean surface. The débris of pelagic animals sinks slowly downwards, forming on its passage a sparsely scattered supply of food for any animals possibly living at intermediate depths, but becoming concentrated as it were on the bottom. The pelagic animals depend for their ultimate source of food, no doubt, largely on the various pelagic plants, the range of which in depth is limited by the penetration of sea-water by the sunlight, and probably to an important extent is dependent on the symbiotic combinations of radiolarians with zooxanthella. But a large part of their food supply is also constituted by animal and vegetable débris derived from the coasts, either directly from the littoral zone or by rivers and the action of the tides from terrestrial life..... In the deep sea the ordinary cycle of chemical changes of matter produced by life is incomplete, there being no plants to work up the decomposition products. These therefore, in the absence of any rapid change of the deep-sea waters, must accumulate there, and can only be turned to account when they reach the surface waters on the littoral regions. Many interesting results may be expected to be obtained when the histology of animals from great depths comes to be worked out, and especially that of the special sense organs. At present very little has been attempted in this direction, principally, no doubt, because deep-sea specimens are too precious to be used for the purpose."

Professor MOSELEY, however, describes the remarkable eyes of Ipnops Murrayii, which are curiously flattened out, and occupy the whole upper surface of the mouth.

We have no space to follow the Professor through his interesting speculation on the mode of development of the deep-sea from the littoral fauna, nor of the origin of terrestrial animals from the littoral fauna, of which, mainly on developmental grounds, he entertains no doubt; but we recommend the perusal of the address to our readers as presenting a very valuable *résumé* of a comparatively newly opened field of research from the hand of a master.

DR. BEYER recently read a paper before the Naval Medical Society of Washington, U.S., on the action of carbolic acid, atropia, and convallaria, as experimentally studied, on the heart of the terrapin and frog. With regard to carbolic acid opinions are still at variance as to whether the first action is stimulation of the heart and bloodvessels, thus increasing the blood-pressure, or whether its depressing and poisonous effects are produced at once. HOPPE-SEYLER obtained a rise in arterial pressure just before the convulsions came on, and also a rise in venous pressure, which was even more decided. SALKOWSKY noticed an increase in the rapidity of the blood flow in the capillaries of the frog's web, followed by a slowing of the flow. LABBÉ also observed an increase in the strength of the systole in the early stages of the poisoning, and a contraction of the vessels. On the other hand, RIEDIGER referred to a slowing of the circulation in the web of frogs under the influence of carbolic acid; and GIES found that the lowering in the blood-pressure and the decrease in the pulse-rate occurred almost simultaneously with the introduction of carbolic acid into the circulation, and that after a time the normal pressure and pulse-rate returned. It is well known, also, that the circulation survives the respiration in poisoning by carbolic acid. BEYER has concluded, first, that carbolic acid in small as well as large doses acts as a depressant on the heart from first to last, reducing its rate, its work done, and the blood-pressure; second, that the heart, as long as it is supplied with good oxygenated blood, will, up to a certain degree, show what almost amounts to an immunity from the poisonous effects of the drug; third, that any effects produced by carbolic acid other than depressant are due to other causes, probably to primary stimulation of the respiratory centre in the medulla oblongata. The antagonism existing between carbolic acid and atropia is shown, first, by the fact that after the heart has been carbolised, atropia increases its rate and also its work; second, by the more rapid recovery which takes place after carbolisation under atropinised blood than under normal blood. BEYER believes with H C. WOOD that atropia must have a very powerful stimulant action upon the intra-cardiac accelerator centres, because after the heart has been completely paralysed by carbolic acid and allowed to recover under atropia, the rate in some of the experiments showed an increase of from 31 to 42 beats per minute. As regards the experiments on the isolated heart of the tortoise and frog with convallaria, the probable conclusions to be drawn from them may be thus stated: It increases the rate and slightly also the work done; raises the intracardiac and aortic pressure; arrests both auricles and ventricle in systole when medium doses are used. Large doses arrest the heart at once. It probably acts directly on the muscular tissues of the heart, and has a decided cumulative action, acting more slowly than digitalis, and being more persistent in its influence. So far as the results of BEYER'S experiments allowed him to judge, convallaria is contra-indicated in advanced cases of heart disease in which the muscular structure has undergone alterations. Convallamarin should be used in preference to any other preparation; not more than one full medicinal dose should be given daily on account of the cumulative action of the drug. It will be perceived that in many of his conclusions BEYER differs from some observers who have preceded him in this particular field of research. The experimental studies were carried out at the Johns Hopkins University, under the supervision of Professor NEWELL MARTIN, and evidently at considerable cost of ingenuity and time.

WE are glad to observe that the Local Government Board maintain their objection to the reduction in the salary of Dr. Angus Mackintosh, which the Rural Sanitary Authority of Chesterfield resolved to carry out, and that they have informed the authority that unless the original salary is paid, repayment of one-half will not be allowed out of the Parliamentary grant.

WE understand that it is the intention of the Local Government Board to institute an inquiry into the cause of the extensive prevalence of diphtheria at Upton Pyne, Devonshire.

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Annotations.

"Ne quid nimis."

CHOLERA IN ITALY: "LET ILL ALONE."

STRANGE and pitiful reports are in circulation respecting the epidemic of cholera in Italy. The ravages of the disease have been considerable, but the terror which they have inspired surpasses all reasonable limits. Its most astonishing evidence is the ignorant panic-fear with which the poorer classes regard the simplest realities of medical treatment. At Naples the schools were being disinfected. A cry was raised that the children, healthy children, were to be taken to the cholera hospital. Frantic mothers, without the least occasion, stormed the schools, assaulted and nearly killed the officials, and rescued their children, whom no danger threatened. At Busca the inhabitants refused medical aid and attacked the doctors, thinking that the latter were commissioned to poison them. It would be difficult to say what reason these poor people might give for their vehement opposition to the means devised for their cure. There does not seem to be here any question of the rigour of quarantine. Cholera is an intractable and often a very rapidly fatal disease. Cases of its most malignant form have appeared in Italy. Possibly, its own disastrous course and end have been attributed in such cases to remedies which have been used unsuccessfully, even though skillfully, to arrest it. If so, we have another instance of the frequently fallacious *post hoc propter hoc* view of events. A fair degree of inquiry, a little trouble taken in unravelling causes, with some belief in the good as well as the bad in mankind, are needed to bring the Italian populace and all others to just conclusions in such cases. The manly and sensible conduct of King Humbert and of some of the clergy in visiting and helping the sick is a good omen, and may be expected to beget in the people generally a kindred spirit of cool deliberation.

OMNE VIVUM EX VIVO.

ONE of the lectures at the meeting of the British Association at Montreal which attracted a large audience was that delivered by the Rev. Dr. Dallinger, who took for his subject the Lowliest and Smallest Forms of Life, as revealed by the microscope. The lecturer, however, did not content himself with a consideration of the structure and functions of the lowest micro-organisms, but made his address the occasion for a review of the question of spontaneous generation. The lowliest organisms lie on the very verge and margin of the vast area of what we know as living. They possess the essential properties of life, but in their most initial state. And their numberless billions springing every moment into existence wherever putrescence appeared, led to the question, How do they originate? Do they spring up *de novo* from the highest point on the area of the not-living which they touch? Are they, in short, the direct product of some yet unrecognised force in nature, changing the dead, the unorganised, the not-living into definite forms of life? Having thus stated the problem, Dr. Dallinger again reviewed the experiments of Tyndall, Bastian, and others. As is well known, Bastian regards vital phenomena as inherent properties of the material called protoplasm, just as magnetism is the appanage of a magnet; so that if a chemist were able exactly to imitate protoplasm by combining the various ingredients in due proportion, and under necessary conditions, the resulting mass would exhibit all the essential phemonena of life. Carried to its logical conclusion, the argument of the supporters of archebiosis amounts to this: That life can be created out of inanimate forces. The champion of spontaneous generation would say: "I can manufacture uric acid out of less complex materials; the properties of substances depend on their molecular structure and condition. Why should I not be able to make protoplasm?" He recognises no hard-and-fast line between the living and the not-living, the organic and the inorganic. The corrosive action of hydric chloride, the explosiveness of gunpowder, are merely functions of the substances bearing these names; life is a function of the substance called protoplasm. "You can manufacture gunpowder, why not protoplasm?" These are the thoughts which agitate the minds of men like Bastian and others. However, it is not by thought, but by actual experience or experiment, that such important questions are to be solved, and the majority of scientists have decided that when experiments are carried out with requisite skill, as appears to have been done by Tyndall, no life appears in sterilised flasks containing dead matter. The law is as ever: only the living can give rise to the living.

THERMIC DYSPNŒA.

THE mode of action of heat in increasing the frequency of respiration has received different explanations at the hands of various authors. Ackermann, Goldstein, and others have explained the respiratory acceleration as due to warming of the central nervous system. M. Sihler has supported the doctrine of a reflex action, the afferent surface being the peripheral cutaneous nerves. M. Ch. Richet has recently communicated the principal conclusions at which he has arrived to the Académie des Sciences. When a dog has been tetanised by repeated strong electrical shocks, the temperature of the animal is elevated and the rate of respiration is increased. As soon as the temperature has passed beyond 40·5°C. (104·9° F.), the respiratory rhythm is accelerated to 200, 300, or even 340 respirations per minute. From this experiment Richet concludes that thermic dyspnœa may be of central origin and due to the heating of the blood and nervous system. But Richet also believes in a reflex thermic dyspnœa, as he appears to prove by placing dogs in a warm stove, the temperature of the internal viscera remaining normal when the atmosphere of the stove is 38°, the respiratory rhythm being raised to 300 or more per minute. This reflex thermic dyspnœa is not observed in man, in whom the skin is more fitted for transpiration. Richet has found that a muzzled dog soon became feverish when placed in a warm stove—e.g., the stove at 39°, the temperature of the dog became 42° in an hour. Even tracheotomy and the use of a cannula in a muzzled dog did not prevent the onset of a marked pyrexia, and the animal died asphyxiated; hence normal respiratory movements are insufficient to support life when a dog is placed in a hot medium. Chloral in an anæsthetic dose, abolishing all the reflexes, does away also with reflex thermic dyspnœa; the chloralised dog placed in the hot chamber, being unable to breathe faster, becomes overheated and dies. Morphia, even in large doses, does not prevent the respiratory acceleration. In order that the inspirations may be increased in frequency, it is necessary that the trachea be largely opened, so that there is no resistance to free inspiration and expiration, whereby the tension of carbonic acid in the lungs may be reduced. If the surcharge of carbon dioxide be too great, respiration becomes deep and slow. Then there is an asphyxial dyspnœa characterised by slow and deep inspirations, whilst the thermic dyspnœa is marked by rapid and superficial inspirations. Though chloral gets rid of the reflex thermic respiratory acceleration, it is powerless over the thermic dyspnœa of central origin. No reflex excitation seems to be able to prevent the occurrence of the central form of dyspnœa, whilst the reflex form appears to be under the control of the will, and of all peripheral stimulations—e.g., cold water affusion. The central form is said to persist, even after the temperature has returned to the normal; the

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respiratory centre in the medulla not having lost its newly acquired rhythm, though cold water applications are then able to restore the natural rhythm.

STRANGE VIEWS OF A CORONER ON UNNECESSARY INQUESTS.

WE hope that the attention of the Registrar-General has been called to the peculiar views of Mr. Carter, Coroner for East Surrey, on the course to be pursued when children die without medical attendance. The subject of the inquest was a child aged two months, which had wasted away to a shadow. The coroner spoke in terms of blame to his officer, and asked what occasion was there for holding an inquest. The officer, Mr. Wells, replied that the deceased had not been medically treated, and the registrar for the district refused under the circumstances to register the death. The coroner remarked that it was a great shame the county should be put to such an expense in holding unnecessary inquests. If the registrar refused to register such deaths, it was the duty of the officer to report the same to the presiding magistrate at the nearest police-court in the district, and he would make an order compelling the registration. The officer replied that he could not compel the registrar to do that which he refused to do, and the matter dropped, a verdict of death from natural causes being returned. The coroner in this case seems grievously in the wrong. Can there be a more fit or useful case for an inquiry than one where a child is allowed to waste to a shadow without medical attention being called to it? Secondly, what is the coroner's ground for saying that when the registrar refuses, as in this case he most properly refused, to register a death, the duty of the officer was to apply to a police magistrate? We are astounded at such a doctrine, and at the attempt to throw on police magistrates, who have enough to do, one of the most obvious and urgent duties of coroners.

PUERPERAL SEPTICÆMIA.

THE previous workers in this field have been both numerous and celebrated, yet the question of the nature of the virulent agent of puerperal septicæmia has not been definitely settled. M. Arloing, whose name is well known in connexion with bacterial studies, has recently communicated a valuable paper to the Société des Sciences Médicales de Lyon, of which we propose to give a *résumé*. M. Arloing's attention was first given to the microscopical nature of the lochia, blood, and peritoneal serosity of women. Besides the epithelial elements and pus-globules in the lochia, punctiform micro-organisms were discovered, either isolated, arranged in pairs, or in short chains. Similar micrococci were seen in the false membranes and pus of the peritoneum in fatal cases. The blood contained a few similar organisms, but much more minute and difficult of investigation. Inoculations were performed with the purulent fluids into the peritoneum of rabbits, white rats, guinea-pigs, dogs, fowls, and ducks, but only the first-named animals succumbed. Rabbits have also died when the inoculation was made into the veins. Artificial cultivations of the puerperal virus have been made in a beef bouillon at a temperature of 35° C. in the open air, at normal pressure, as well as in an atmosphere of carbonic acid and *in vacuo*. Rabbits inoculated with cultures which had been raised to a temperature of 43° C. lived a much longer time than usual, and in some cases recovery even followed; where this was the case the animals were found to be protected against fresh inoculations. The following statements are worthy of consideration. If the rabbits were inoculated with very active virus cultivated *in vacuo*, they died with all the signs of septicæmia, but without suppuration. If the animals were full grown, and inoculated with the same agent cultivated in air, the disease progressed more slowly, and the lesions of fibrinous peritonitis were produced. Finally, if the virus were weakened by culture in an unfavourable medium, the disease evolved still more slowly, and suppurative inflammation of the serosæ took place. In all cases the same microbe was to be detected. The main conclusions arrived at were two in number: first, that the different forms of puerperal septicæmia are all due to the action of one living poison; secondly, that this micro-organism is unique, but has not been proved to be special to the puerperal state. It must be remembered that the puerperal period realises the conditions favourable to the introduction and evolution of the micrococcus in the human organism.

THE DRESS OF WOMEN AND CHILDREN.

DRESS is a thing more variable than the changes of season, which it is supposed to follow, and opinions upon it are infinitely more varied than its forms. With reference to this subject, taste has long existed as a mere sense not much affected on the whole by mental processes. Of late a change has come about; it has multiplied and strengthened its connexions with the intellect, and is giving forth judgments and laws of clothing founded on the teachings of physiology. An effort in this direction is embodied in a paper by Mr. Francis Vacher on the rational dress of women and children. It contains some serviceable hints as to the clothing of infants, particularly where it aims at shortening the inordinate length of skirt in which their lower limbs are usually entangled. The use of woollen underclothing at this and all ages is another point which receives a just recommendation. The author certainly enters on debatable ground when he insists that children at a later age should be warmly clad from neck to toes, with no part of the body exposed save the head and hands. He seems in this part of his paper to violate his own principle by carrying into active childhood the swaddling system which he condemned in infancy. There can be no valid objection to letting even young children go about with bare knees and forearms, as one commonly finds they do, provided that they have been accustomed to this degree of exposure from infancy, and have the rest of the body comfortably covered. With regard to the special dress of womanhood, Mr. Vacher has fairly earned the thanks of thoughtful members of the female sex by daring to substitute for the conventional corset a closely fitting under-jacket. The corset, with its stiffness and its "shapeliness," however it may be modified, is an untruth against nature, which can only be remedied by being done away with. An essential point is the distribution of the weight of clothes. Every physical necessity requires that this pressure should fall upon the arch of the shoulder or pelvic bones, and not, as we now find, upon a dress-girdle more or less tightly drawn round the middle of the body.

SMALL-POX AT THE CAPE.

ACCORDING to the *Port Elizabeth Telegraph*, the medical commission appointed to visit the lazaretto of the combined Mining Boards of Dutoitspan and Bultfontein has submitted its report to the Board of Health. The report states that twenty-nine bodies were found outside the building, eleven of them having been dead for three days, on all of which the characteristic small-pox eruption was apparent. The lazaretto consists of three separate wards. To the convalescent ward, the floor of which was as nature made it, there was no door, and the patients lay on the ground without mattresses, and with only one blanket each to cover them. In the other two wards the patients were much overcrowded, the floors were in a filthy condition, there was no chimney to allow the smoke to escape, and the sleeping arrangements were similar to those prevailing in the con-

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valescent ward. No other food but flesh, bread, or porridge was given, and those patients who were unable to fetch the food from the doors, where it was deposited by the attendants, were compelled to do without. No medicine was, it is stated in the report, given. Two natives acted as nurses; the night-nurse, having during the night preceding the visit of the commission got drunk, left the doors open, and allowed several delirious patients to escape. In answer to an inquiry, it was stated that "the doctor never entered the wards, only looked in at the doors; his work was 'to skin the man'—i.e., to make post-mortem examinations." There was no fumigation or disinfection of clothes, and the thirty-seven convalescents discharged were actually allowed to depart in the very garments they had worn during their illness. There is no latrine system, consequently the excreta of those who were able to go outside was deposited within seven paces of the wards, and remained uncovered; those who were unable to walk or crawl outside had to, and actually did, relieve nature where they lay. In reply to the report of the medical commission, Dr. Wolff argues that, with the means at his disposal, he did all that could be done for the unfortunate patients, and denies that there was neglect or wrong treatment. To reconcile these statements is difficult.

SUICIDE IN THE LIVERPOOL WORKHOUSE ASYLUM.

A CASE of suicide has occurred in the Liverpool Workhouse Asylum. The unhappy man was a German captain, thirty-five years of age, who had attempted suicide before his admission by cutting his arms. At the inquest it was ascertained that he was generally a sober man, but that since his derangement he had taken to drink rum in large quantities. The workhouse attendant's evidence, reported in the *Liverpool Courier*, is as follows. He deposed that he received the deceased on Thursday night last. He was then told by the German vice-consul, who accompanied the deceased, that the latter had attempted to commit suicide by cutting his wrists. From what the vice-consul said, witness placed the patient in a room by himself. The man had some tea shortly after his admission, and at 10 o'clock the same night witness visited him, when he said he was all right. About eleven o'clock the next morning a doctor saw the deceased, who remained quiet until Saturday morning, when he became restless and wanted to go home. The doctor again visited him at 11 o'clock on Saturday morning; and as he a little later was very noisy and violent, witness reported it to the doctor, who ordered him to be secured in a padded room, which order was at once carried out. Witness as usual took him his tea at half-past four, but deceased would not eat anything, and only drank some tea. He saw the man again at 6 o'clock, and also at 10 o'clock, this being the last time when he saw him alive. At 5 o'clock on Sunday morning witness saw the deceased, dead. He had taken the bandages off his arms, tied them together, and then strangled himself. Richard Davies, an old man, who said he was the night attendant at the workhouse asylum, stated that he heard the deceased walking about in the padded room up to 12 o'clock on Saturday night, and as all then became quiet he concluded that the man had gone to sleep. At half-past four on the Sunday morning witness looked through the glass in the door of deceased's room, and saw a leg and a foot behind it. Upon opening the door he spoke to the deceased, but obtained no reply. On looking up he noticed the deceased's bandage over the corner of the door, and having cut the bandage he found the other end of it tied round the man's neck, who was in a sitting posture and quite dead. At the inquest the deputy coroner reflected on the medical treatment, and thought that more might have been done for the patient. The jury adopted this view, and expressed the opinion that there had been gross neglect on the part of the officials and of the doctors. The guardians have since had this verdict under their consideration, and have acquitted the medical men and other officials, and expressed the opinion that everything possible had been done. The occurrence of a suicide in a public institution is certainly unfortunate. It is the more open to criticism when, as in this case, the officials have been distinctly forewarned by a serious previous attempt. We certainly think that more effective vigilance should have been exercised by the attendants, and that on the night of admission the medical officer should have been summoned to see the case. It is monstrous, too, that an old man should be night attendant for such cases. We cannot share the opinion that the coroner seems to have expressed, that blisters and other medicines would have much availed to prevent the sad accident.

LONDON WATER-SUPPLY.

DURING 1883 Messrs. Crookes, Odling, and Tidy examined at the expense of the water companies 2224 samples of water collected by them from the mains and reservoirs of the seven London companies taking their supply from the Thames and the Lea. The proportion of samples free from recognisable ammonia amounted to 82·7 per cent. of the whole, the percentage in 1882 being 70·9, and in 1881 60·6. There has been also a successive gradual yearly diminution in the proportion of organic matter present in the Thames-derived water supplied to the metropolis, and this diminution is attributed by the examiners to the continuously increased efforts made by the water companies to improve their filtration and subsidence processes and arrangements. The quantity of nitrogen found ranged from about 0·150 to 0·225 of a grain per gallon, the quantity being on the average somewhat lower in the summer and autumn than in the winter and spring quarters. The quantity of chlorine amounted throughout the year to either close upon, or a little over, one grain per gallon, corresponding to about one and three quarters of a grain per gallon of common salt. As the examiners remark, it is satisfactory to note that at periods of summer heat and drought the natural agencies at work to keep down the proportion of organic matter existing in the water of the river are in their maximum of activity. It results in this way that the water-supply of London is at its best at those seasons of the year when any failure in the quality of the supply might be considered likely to be of exceptionally serious import.

PENNY DINNERS FOR SCHOOL-CHILDREN.

THE penny dinner movement is extending. Prosperous accounts are given of its establishment in Gateshead by the Rev. Mr. Ede. His statements make it clear that there is need for some such provision for ten to twenty per cent. of the Board School children whose parents cannot or will not themselves feed them regularly. Payment is, on the whole, punctual, and the scale on which the system is worked allows of a surplus sufficient to pay for cooking expenses after the first outlay on the purchase of apparatus, a very moderate sum, has been met. It is found that there need be no stint in order that every child may enjoy a dinner and have enough. In very necessitous and selected cases where even the penny cannot as a rule be paid, charity is resorted to. Under the circumstances this appears but natural, seeing that education is compulsory, and that unless food be sufficient its benefit must often be overbalanced by injury to health. The dietary, so far as it goes, leaves little to be desired, price being considered. It is framed in recognition of the value which fats and amyloids possess as foods,

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especially in childhood. The share of meat proteids in nutrition is not, however, forgotten. Ox-head soup with bread and various substantial flour puddings may be quoted as examples. Many simple dishes could probably be contrived on the same plan as these. No doubt variety will come with experience. The success of this thrifty experiment in cookery is a matter for general congratulation, and shows how much can be done by the skilful combination of common-sense with a good purpose and very scanty means. The hint may be worth the attention of many of all ages and occupations who have now to pay well in order to fare badly.

CHOLERA MIXTURES OF THE GENERAL BOARD OF HEALTH.

SEVERAL inquiries have reached us as to the ingredients of a mixture which the General Board of Health recommended on Oct. 5th, 1848, as efficacious in dealing with the premonitory diarrhœa of cholera, and as generally applicable to looseness of the bowels during the prevalence of cholera. Two alternative mixtures were embodied in the circular which the Board issued at that date. One prescription recommended was "seventy grains of opiate confection, mixed with two tablespoonfuls of peppermint water, or with a little weak brandy-and-water, and repeated every three or four hours, or oftener, if the attack is severe, until the looseness of the bowels is stopped;" the other, "an ounce of the compound chalk mixture, with ten or fifteen grains of the aromatic confection, and from five to ten drops of laudanum, repeated in the same manner;" and it is added that "from half a drachm to a drachm of tincture of catechu may be added to this last if the attack is severe." It was further recommended that half these quantities should be given to young persons under fifteen, and still smaller doses to infants. But, perhaps, the safest portion of the recommendation issued by the General Board of Health was that in all cases, where this is practicable, even in the earliest stages of the disorder, recourse should be had to medical advice on the spot.

ALCOHOLIC DISEASE IN CHILDREN.

ONE of the most painfully interesting communications at the recent meeting of the British Medical Association was by Dr. T. M. Madden, Physician to the Hospital for Sick Children, Dublin, on Alcoholism in Childhood and Youth. Dr. Madden testified that many such cases came under his view. He gave particulars of a case of marked delirium tremens in a boy aged eight. His mother was a drunkard, and he, at the age of six, on discovering a secreted bottle of whisky, showed the hereditary tendency to follow her example. Before admission into the hospital with delirium tremens he had obtained access to a bottle of port wine and almost emptied it. He nearly died from coma, and, delirium tremens supervening, he was taken to the hospital. Boils followed, and he remained weak in mind and body for nearly a month. He was then sent to a reformatory, and recovered. A second case of juvenile alcoholism in a newsboy, aged eight, was the son of a drunken mother. He was sent for his mother's whisky, and was rewarded with a sip. Dr. Barlow of London followed with some powerful facts as to infantile alcoholism, gathered from his experience in the Children's Hospital, Ormond-street. He had seen the evil effects of small doses of gin given to babies at the breast for flatulence. He had also found it customary to give quite young children among the poorer classes a daily quantity of beer. He had seen two or three cases of well-marked typical cirrhosis, with a little ascites, from this cause. He detailed one very striking case —the child of an apparently healthy mother, able to suckle it, and in fair circumstances. From six months old the child was given a tablespoonful of beer twice daily, and from nine months old a teaspoonful of gin in as much water daily. The child died, and was found to have one of the most typically hob-nailed livers Dr. Barlow had seen. Dr. Barlow properly added that he had seen hob-nailed liver in children where it was not possible to have alcohol. Dr. B. O'Connor bore similar testimony. These are appalling facts, which give great force to the warning of Dr. Madden and Dr. Barlow as to the responsibility of prescribing alcohol to children.

THE LATE DR. BALFOUR OF BOMBAY.

SOME weeks ago it was our painful duty to chronicle the sudden death of this medical practitioner, which took place in Bombay. We have recently been favoured by Dr. R. Blaney of that city, who attended the case, with some particulars regarding the illness, from which we glean that Dr. Balfour had been ailing for some time past, and that, to use the words of our correspondent, "he seemed to have been suffering from symptoms of incipient general paralysis for some little time before his death." We also learn that, under the advice of another medical friend, he had been taking strychnine, and on the day on which the fatal apoplectic seizure supervened Dr. Balfour was very unwell, and confined to his bedroom. He never rallied from the attack. Dr. Blaney, having been called in at 1 A.M., stayed with his patient until he died, three hours after the arrival of the former. "The little I was able to do for him," he tells us, "was of no avail, as he was beyond human aid. His death was very sudden, and was a great shock to all his friends here."

CONFERENCE ON CHOLERA.

THE Epidemiological Society recently held a conference on Cholera at the International Health Exhibition. As was to be anticipated, the controversy elicited the most opposite opinions. Sir Joseph Fayrer and Dr. Lawson argued strongly in favour of the non-contagiousness of the disease, whilst Brigade-Surgeon Scriven brought all his force to bear against this view. Dr. Scriven was, however, no supporter of quarantine. Medical inspection, surveillance, disinfection of ships, and burning of infected clothing were the chief preventive measures advocated by him. Taking the whole mass of scientific men, Dr. Scriven thought "the anti-contagionists would be found to be a very small proportion; but in England and in India, if they were a small minority, they were a very influential and very active minority—active, not in the suppression of cholera, but in the propagation of their own views." Another opinion for which he contended was that sporadic cholera was of exactly the same nature as epidemic cholera, just as sporadic small-pox resembled the epidemic disease. *Nulla falsa doctrina est quæ non permisceat aliquid veritatis.*

CULPABLE CARELESSNESS.

AT Melbourne, on July 4th, a coroner's jury returned a verdict of manslaughter against Dr. Günst, jun., a homœopathic practitioner of that city, as the result of an inquiry into the death of a young woman whom he had professionally attended. The patient complained of pain in the ear, deafness and sleeplessness. For this latter Dr. Günst wrote a prescription ordering ten grains of hydrochlorate of morphia and five grains of quinine to be mixed in a powder and "to be used as directed." The chemist to whom the prescription was taken concluded from the strength of the dose of morphia and the fact that the powder was to be *used* as directed instead of to be *taken* as directed, that it was intended for external application. This, however, was not the case. The unfortunate young woman swallowed the entire powder, and death resulted in an hour. The explanation given

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by Dr. Günst was that he intended to write a homœopathic prescription, and that he omitted to put in signs recognised in homœopathy which would totally alter the character of the powder. He omitted to place before the quantities of the drugs signs indicating one-twentieth, and the effect of this neglect was that the patient got twenty times as much morphia as he intended; in other words, the ten-grains placed opposite the morphia was designed to apply to a preparation containing one part of morphia to nineteen parts of sugar of milk. The jury returned a verdict to the effect that deceased had come to her death by taking an overdose of morphia prescribed by Dr. Charles Werner Günst, jun., against whom, as previously stated, they found a verdict of manslaughter. The luckless homœopath was committed for trial, being, however, admitted to bail.

THE BRAIN AND PHOSPHORIC ACID.

THE peculiar associations suggested to exist between mental action and the use of phosphorus have been a favourite theme with many physiological chemists. Recently M. Charcot communicated a work by M. Mairet to the Académie des Sciences. The latter gentleman believes that phosphoric acid is intimately associated with the nutrition and action of the brain. In working, the cerebrum is said to absorb sodic and potassic phosphates, and to give out phosphoric acid combined with an earthy base. Intellectual work is believed to retard the general nutrition. Mental exercise modifies the elimination of phosphoric acid by the urine; it diminishes the proportion of acid in combination with alkalies, and increases the earthy phosphates.

CASE OF REPORTED CHOLERA AT KILMACTHOMAS.

DR. BRODIE states, in a recent report to the Local Government Board for Ireland, that the death of the stowaway lately admitted into Kilmacthomas Union was not, in his opinion, an example of Asiatic cholera. On the other hand, Dr. Martin, of Portlaw, who has had large experience in the epidemics of 1832, 1834, and 1849, asserts most positively that Kennedy died from the disease in question. It is probable that Dr. Martin will shortly publish the particulars of the case.

AN IRISH VETERINARY COLLEGE.

DR. LYONS, M.P. for Dublin, who has taken considerable interest in the formation of a Veterinary College for Ireland, has again drawn attention to the subject. It appears that the Irish Executive wish to subordinate the proposed institution to the English College, while the most earnest promoters of the Irish College consider it an essential point that it should be independent and capable of conferring a diploma of its own.

CURE FOR SCIATICA.

A REMEDIAL agency not commonly resorted to has been recently brought under notice by M. Debove for the relief of neuralgic sciatica. This physician seems to have met with considerable success in the treatment of sciatica by freezing the skin. Richardson's ether spray not proving satisfactory, M. Debove employed the chloride of methyl, which may give rise to a degree of cold represented by −23° C. This agent has the advantage of not being expensive. A jet of the fluid is made to play on the skin along the whole length of the limb corresponding to the course of the sciatic nerve and its main branches. The good effects are said to be instantaneous. The operation is also claimed to be but little painful; the smarting is not so great as that caused by the hot iron. Vesication has followed the employment of this remedy, but never any sloughing. The extension of this measure to other neuralgiæ is advocated.

HOSPITAL SATURDAY.

IT is gratifying to see many indications of earnestness in the promoters of the Hospital Saturday Fund, and especially so to notice that the main and most important branch of the Fund—the weekly small contributions of working men—are receiving more attention. Not till the working classes realise how easy it is for them to give such contributions, and how much they owe to the hospitals, will the Fund be worthy of them or of the cause.

BRITISH residents and visitors at Geneva have addressed a requisition to the British Consul that a meeting may be called to protest against the statements made by certain newspaper correspondents as to the sanitary state of the city and the existence of Asiatic cholera therein.

DR. CHARLES, of the Bengal Army, has medical charge of the Afghan Frontier Commission.

SUTTON, in Cheshire, is suffering from what appears to be a severe outbreak of typhoid fever.

THE INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

(*From our own Correspondent.*)

(Concluded from p. 384)

ON Thursday, the 14th ult., in the Section of Surgery, Professor Macewen read a paper on Osteotomy for Genu Valgum. Professor Ogston said that he had given up performing this operation in the way he himself had originally recommended, and now used Macewen's method. Professor Chiene stated that it was now adopted by nearly all surgeons, and congratulated Professor Macewen upon being the inventor of this valuable method of operating. On the same day the discussion on Antiseptic Treatment was opened by Professor Esmarch (Kiel), who recommended his "Danerverband," the advantage of which is that besides being aseptic it keeps the wound perfectly quiet. Professor Esmarch pointed out that it was necessary, before dressing the wound, to carefully stop the bleeding, to provide for free drainage of matter, to be cautious in the use of the antiseptic, to employ good absorbent dressings, and to keep the wounded part quiet. Professor von Mosetig Moorhof (Vienna) recommended iodoform strongly as an excellent dressing for all kinds of wounds. He had never seen any fatal case of poisoning, but would utter a warning against using other antiseptic means, especially carbolic acid. Dr. Schede (Hamburg) spoke highly of the treatment of wounds by sublimate, his experience being based upon a very large number of cases. He had first used carbolic acid, which for some time yielded good results, but as, later on, various circumstances, such as bad drainage, the neighbourhood of the dissecting room, &c., had proved unfavourable, he had been forced to abandon the antiseptic treatment with carbolic acid. He had then tried iodoform, but had had sad experience of its dangerous nature from the occurrence of erysipelas. Dr. Schede was astonished to hear that von Mosetig Moorhof had not as yet seen any fatal cases of poisoning, as that was quite contrary to other surgeons' experience. Since he had used sublimate he had met with great success. Dr. Mikulicz (Cracow) recommended iodoform gauze (30 to 50 per cent.) for wounds in cavities lined with mucous membrane. He did not powder the wounded surface with iodoform, but simply filled the whole cavity with iodoform gauze, never omitting the usual antiseptic precautions, and left the gauze *in situ* for from

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six to ten days. The advantage of this dressing was that the gauze kept the wound quite antiseptic; even if saliva, urine, &c., passed through it, it produced no irritation whatever, and the discharge was slight and without fetor. He had only seen cases of poisoning where there were larger absorbent surfaces, but none of these had proved fatal. The discussion was continued by Professors Trélat (Paris), Neudörfer (Vienna), Buchanan (Edinburgh), the last recommending pure Listerism, and Kœberlé (Strasbourg), who spoke against all antiseptic treatment, considering that the principal point was cleanliness. Finally, the President, Professor Plum (Copenhagen), gave a summary of the development of the antiseptic treatment in Denmark, which was one of the countries where the Listerian treatment had first been adopted; lately the German modification had been much used. The President pointed out the great benefits Lister had conferred upon surgical science and upon mankind. The large assembly rose to testify their sympathy.

In the Hygienic Section, Dr. Dutrieux (Alexandria) read a paper on the Cause of Cholera in Damietta, a theme which gave rise to a lively discussion.

On the evening of the same day the municipality of Copenhagen gave a dinner in honour of the Medical Congress, at which fourteen hundred persons were present. As the town contains no hall sufficiently large to dine so many persons at once, a beautiful wooden building was erected for the occasion. Decorated with bunting, flowers, and evergreens, and situated between the charming "Lange Lime" and the blue waters of the Sound, the dining hall seemed worthy even of the distinguished guests it was to contain within its walls. The side towards the sea was almost entirely constructed of glass, so that the guests had a splendid view of the harbour, covered with ships from all nations, all decorated with flags in honour of the occasion. During the dinner large steamers passed within a few yards of the building with enthusiastic crowds on board, waving their welcome to the foreign guests. After dinner the party was conveyed in three steamers to the well-known gardens of Tivoli. This short voyage might be almost called a triumphal procession, the shores, the boats, the very riggings of the ships being alive with an excited and applauding multitude. Tivoli itself was brilliantly illuminated, and the evening terminated by a gorgeous display of fireworks.

On Friday, the 15th, Professor Virchow read his paper on Metaplasia. The Professor commenced by giving a summary of the different hypotheses of the several life processes during the first half of the present century; until about thirty years ago he offered the proposition *Omnis cellula e cellulâ* as the basis of a new theory. He then described the different forms of cellular processes which this new theory had by degrees taught us to distinguish, and amongst these he dwelt particularly upon metaplasia. By metaplasia Virchow understands the vital process which tends to organic change of the cells by producing new forms of tissue. The essential feature of this process is that the cells remain while the character of the tissue changes. Metaplasia is the basis of important pathological processes, without being itself pathological in nature; on the contrary, it is entirely a physiological process. In ossification we have a good example of metaplasia. Ossification never takes place in the original cells of the fœtus, but these first form a transition tissue, and, from this, by metaplasia, the bone tissue is constructed. Another example is the marrow, which to a great extent is formed by metaplasia of the bone cells. Next to the bone tissue comes fat as most subject to metaplasia. Most frequently it is converted into mucous tissue. Thus one may see the whole layer outside the meninges spinalis transformed into a gelatinous mass, which process is often called colloid degeneration. The same change can occur in lipomatous tumours, either partially or totally, the result being that they take the character of myxomata. As another example of metaplasia as the basis of a pathological change, Virchow named the enchondromata, which are developed from small pieces of cartilage that become loosened during ossification. Whilst Cohnheim thought that these and similar tumours always had their origin in fœtal formations, Virchow considered them as a rule to arise at a later period. Lastly, he dwelt upon the possibility of cells belonging to different classes of tissue changing by metaplasia into each other.

In the Surgery Section, on the same day Mr. Thornton (London) read a paper on Nephrotomy and Nephrectomy. Mr. H. Morris (London) and Mr. Bryant took part in the discussion which followed, the latter considering that Mr. Thornton had performed nephrectomy in cases where nephrotomy would have proved satisfactory.

In the evening, the King, as patron of the Congress, entertained the members at the palace of Christiansborg, the whole of which was thrown open to the guests. The King, Queen, and other members of the Royal Family conversed with the more distinguished guests, and in every way showed their interest in the progress of science. A supper was served in the great dining-hall and the adjoining rooms, all being one blaze of light.

On Saturday, the 16th, in the united sections of Diseases of Children and State Medicine, Professor Malling Hansen (Copenhagen), Director of the Royal Deaf and Dumb Institution, read a very interesting paper on the Normal Increase of Weight during Later Childhood. The paper was illustrated by tables. He showed how in many countries careful investigations had been made on the influence of nourishment on the growth and development of the human body. The value of these investigations was lessened by the facts that, as a rule, the children subjected to the inquiry were too few in number, and were only weighed during a short period. To prove the untrustworthiness of individual weighings, the speaker quoted the investigations made in Germany upon children who, during the summer, were at the so-called holiday colonies. Professor Hansen adopted the following method:—The 130 children of the Deaf and Dumb Institution are from nine to sixteen years of age; they were divided into eight classes according to their age, and each class was weighed separately every day on a centesimal weight, besides each individual was weighed once a month, and the result of these single weighings was used to correct that of the class in case any child should have been ill or absent. In this way the boys were all weighed every day at 6 o'clock in the morning and at 9 in the evening; the girls were only weighed once a day, at 2 P.M. Some of the most interesting results obtained were the following:—A child might weigh from 1 lb. to 2 lb. heavier at night than in the morning, and be upwards of 1½ lb. lighter in the morning than it was the evening before. From one evening to the next a child might increase 1 lb. or decrease ¾ lb. These results, which concern normal children, proved how unreliable the results must be when the intervals between each weighing are longer than twenty-four hours. Exercise, bathing, &c., did not seem to have much influence upon the weight; whilst, as regards eating, there was always an increase after a full meal. The speaker then proceeded to say, that during the year there seemed to be three periods in which a child's increase in weight varied: first, a period of decrease from the middle of May in each year to the middle of July; a period of increase of great importance from the middle of July to the middle of November; and then a period during which the child increased slightly but often remained stationary and might even lose in weight, from the middle of November to the middle of May. Altogether a child's increase in weight is limited to from one-fourth to one-fifth of the year, the rest of the time showing either loss of weight or compensation for loss. Besides the fixed periods of decrease there were often, even during the increase periods, sudden stoppages, lasting from six to fourteen days; after such a period the increase was sometimes greater than usual, but the stoppage was never thoroughly compensated for by the following increase. The frequency of this increase and decrease seemed to depend upon changes in the temperature, increase in temperature being accompanied by increase in weight and *vice versâ*, decrease of weight following rapid decrease of temperature often being considerable and of long duration. A great difference in the appetite was noticeable in the various months and even weeks, but with great regularity, the appetite being greatest in March and least in January. The boys ate one-fifth more than the girls, although the latter often increased more in weight. From the daily weights taken at the Royal Danish Deaf and Dumb Institution, it was shown that diet arranged after the latest scientific ideas was a failure. Professor Hansen concluded by saying that these mass weights taken in a number of institutions in all countries would be one of the best means of finding the nutritive value of various foods during a longer period. This paper, which was listened to with great interest, was much applauded, and gave rise to various remarks. The honorary presidents, Professors Rauchfuss (St. Petersburg) and Jacobs (New York) laid great stress upon the novelty and importance of these investigations, but they remarked that there was danger in considering that increase in weight

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and fat and increase in health and strength were synonymous. To this Professor Hansen replied that it was hardly probable that a child could increase in health and strength without increasing in weight, and at the same time a child which continued to lose in weight must also lose in strength.

Professor Panum at the general meeting read a paper on Investigations of Food Rations for Men in a State of Health and of Disease, especially in hospitals, infirmaries, and prisons of different countries. He said that the investigations which had been made in the chemical composition of food were not widely enough known. It was not often that physicians were met with who had sufficient knowledge on this subject. He even feared that medical men who sanctioned diets for hospitals and like institutions often had not made the necessary investigations into the composition of the various aliments. This knowledge had been recognised as one of the principal branches of medicine, yet diets for the sick were too often based on old-world opinions. There were many points still disputed, but the principal facts were settled. No one would dispute the fact of the existence of nitrogen and carbon in food, and that it must contain both in larger quantities than leave the body in order to make up for those parts lost in the preparation. The speaker then drew attention to the investigations which had been made on the increase or decrease of the body in consequence of the supply of a sufficient or insufficient quantity of nourishment. He showed that the quantity of nitrogen given off in the urine was the same—supposing the quantity of albumen taken to be the same—whether the body was at rest or not. On the other hand, the quantity of carbon given off was larger when a greater amount of labour was performed; consequently the needed quantity of carbon would be greater when the body was active than when passive. These facts were settled. In reference to them estimates had been made of the amount of nourishment necessary for men, women, and children under different circumstances. It might be said that the hospital doctor did not need them, as the patient's condition would show whether the nourishment received was sufficient; but that was not the case. In these respects it was impossible always to attend to the patient's complaints, as these might arise from the plainness and sameness of the food. The dietary rules in various hospitals were so different that it was difficult to make any comparisons as to their results. However, Professor Panum had made a series of investigations in several hospitals where the dietary rules were somewhat similar. He had discovered in some hospitals that the amount of nourishment received was less than was necessary, but this was accounted for by the amount of food received from outside the hospital. He proposed that a system of investigation should be organised, the principal points of which had already been given in the programme of the Congress. Professor His, the president, thanked the speaker.

Professor Panum then took the chair, and the discussion as to the next place of meeting was commenced. Professor His read the following report. The meeting place for the next Congress had been considered by a committee consisting of the Congress Committee proper and the honorary members. The president had been in communication with Lyons, St. Petersburg, Rome, and various towns in Germany. As far as Lyons was concerned, it was almost out of the question to talk of meeting in France again before having been in Germany. The proposal to meet in St. Petersburg had presented so many difficulties that it had to be given up. A letter had been received from Rome saying that the Congress would be welcome in that town, but Professor Tommasi Crudeli had declared it impossible to meet there in August, which was the only convenient month for the European universities. Many circumstances were favourable to Germany as the next place of meeting, and Professor Virchow had promised the Congress a most hearty welcome. The choice, indeed, would have fallen on Berlin if a most hearty invitation had not been received from Washington, and the majority in the committee had finally decided in favour of that town.

Professor Billings returned thanks for the honour shown his country; Professor Rossander (Stockholm) returned thanks for the hospitality shown to himself and countrymen; and Sir Risdon Bennett for England.

Professor Virchow thanked the king and royal family for their patronage. Professor Panum then, in a few farewell words, closed the meeting.

The Etablissement National was the scene of the farewell entertainment, which was attended by about 2000 persons, including the members of the Congress and their ladies. The entertainment broke up about 1.30 A.M., the company separating with evident regret that a week never to be forgotten had so soon come to an end; and, in fact, the great hospitality of the Danish medical profession, the enthusiastic sympathy of the whole population, combined with fine weather in this beautiful country, had made this Congress one of the most interesting in the whole series.

THE FIFTH INTERNATIONAL CONGRESS OF HYGIENE.

(From our own Correspondent.)

CHOLERA AND QUARANTINES.

THE cholera epidemic has been the cause of some soreness among the members of the Congress. It can scarcely be said that it has been debated as an abstract question. It seemed rather as if there were certain nations and men who had been impeached, and were therefore called upon to make good their case against all. Undoubtedly there is a political reason which prompts certain Frenchmen to infer that but for English interference in Egypt the cholera would not have been imported into Europe. Of course, it is objected to this that we are equally interested, commercially, if not politically, in seeking to prove that quarantines are of no use. But an international congress of scientific men should not allow itself to be influenced by rival commercial and political interests. It should only seek to unravel the truth, whatever the consequences may be. Perhaps, however, the animosity was increased by the manner in which the case was presented. Dr. Dutrieux Bey of Alexandria, who, by the way, is not an Egyptian, but a Belgian doctor, thought to make his position as the opponent of quarantines all the stronger by attempting to prove that cholera broke out spontaneously, and was not imported. This was a most unfortunate manœuvre, for it put the real question at issue into the background, and deprived Dr. Dutrieux Bey of all support. The members were afraid to vote against quarantines, as they might be thus supposed to deny the Asiatic and transmissible character of cholera. In spite of the obvious danger of creating this confusion, Dr. Dutrieux Bey commenced his speech by explaining that he had personally examined the valley of the Nile, and there found many cases of cholera (notably on April 4th), showing that this disease had prevailed to a considerable extent before its presence was generally admitted. The sanitary condition of the Nile provinces had so deteriorated that he thought cholera had become indigenous to the soil. According to Collin and numerous authorities, the plague had a preliminary stage of a mild and endemic description; then, after sundry premonitory symptoms, showing the gradual development of receptivity, it broke out in its violent and epidemical form. The same might be said of cholera. Examining the death returns and the hospital papers of Toulon, he had found one death from cholera on January 17th, and at Marseilles there had been cases of cholera ten days before the arrival of the suspected ship. The distinction established between Asiatic cholera and cholera nostras was but an arbitrary and artificial device. The importation of cholera had become a dogma, and, like dogmas, was blindly and obstinately defended. But cholera was not particularly contagious; it was less contagious than diarrhœa. As in all ports there were always arrivals from doubtful districts, it was easy enough to find a culprit; but to prove the importation it did not suffice to show that a death had occurred; it was necessary to demonstrate that previously the country was absolutely free. Unfortunately, we always watched the entrance-door instead of looking inside. Thus, while Europe was busy establishing quarantines on the Suez Canal, nothing was done to remedy the internal condition of Egypt, and the result was an epidemic which swept away about 100,000 out of a population of less than 5,000,000. However limited the possibility of transmission, measures must be taken. But could it be said that quarantines were really useful? In 1852 cholera began at Cologne without any trace of importation. In Russia cholera was said to have been imported by a land route in 1832 and 1848, while it was supposed to have come by sea in 1865, and broke out spontaneously at other periods. As a

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matter of fact, cholera was endemic in Russia. Dr. Dutrieux Bey then quoted a number of instances where ships had brought cholera patients and yet no epidemic ensued, nor had the railways in India facilitated the spread of the disease. Quarantines were useless, as they were only established after the germs had been introduced, and should be replaced by sanitary inspection and rigorous disinfection. This was the policy that had been successfully carried out by Norway, Sweden, and Denmark. But for the fear of quarantine, captains of ships would not conceal cases of illness, and the public authorities would not be tempted by a false sense of security to neglect the real methods of fighting epidemics.

Dr. Proust, in reply, urged that the International Epidemical Conference, held at Vienna in 1874, was unanimous on the necessity of maintaining quarantines against Asia, and was only divided in opinion as to the possibility of establishing quarantines between the different countries of Europe. At great length he proceeded to prove that undoubtedly cholera had been imported, notably after pilgrimages to Mecca. Quoting the report of M. Mayé, who had been sent by the French Government to Egypt, Dr. Proust remarked that the sanitary condition of Damietta was not more unfavourable than usual when the cholera broke out. Even Dr. Hunter could not recognise the spontaneity of the outbreak; though, to please his Government, he was forced to say it was "a resuscitation." He then accused Dr. Dutrieux Bey of not having spent sufficient time at the hospitals studying the papers, and maintained that, far from Toulon and Marseilles being prepared for the cholera, it so happened that the health of these towns was exceptionally good at the moment of the outbreak, and there was a remarkable absence of diarrhœa or cholera nostras.

Dr. Dutrieux Bey at once replied that he denied the competence of M. Mayé, who had only spent a few hours at Massourah, and had not visited the Delta. Why did they not reveal the names of those convenient stokers who brought the cholera? And who was there who could satisfactorily explain the difference between Asiatic cholera and cholera nostras? The Vienna Conference had failed to show the efficacy of quarantines, nor could it venture to say that cholera was not endemic in Russia, or to put aside the objection that the Caspian Sea was a Russian lake which Europe could neither watch nor control. Why, then, when cholera might cross unchecked the broad frontier line of Russia, was so violent an attack made upon the Suez Canal?

Dr. Brouardel thought there were some points of common agreement. He was quite willing to suppress the term cholera nostras; but a cholera does exist which does not spread; it lives and dies in one place. Another form of cholera is transmissible. So long as cholera was limited to its birthplace nothing much was said about it; but if, on June 21st, the alarm was given, it was not because there were cases of cholera at Toulon, but because the cholera had spread from village to village in the south of France. The post-mortem examinations which Dr. Brouardel had made last year at the Paris morgue revealed no less than six cases of cholera. Yet this was of little importance, and the thirteen deaths at Toulon in one day would have been treated in the same light but for the fact that it then became clear the disease was of the second and transmissible type. It appears, however, that the Mayor of Toulon explained to Dr. Brouardel that there were in reality only four deaths from cholera on that memorable day, the mayor having falsely registered all deaths from diarrhœa as cholera, so as to terrorise the population and clear the town. No doctor at Toulon accused the *Sarthe* of importing the disease, and if quarantines were badly managed, they might be improved instead of abolished.

Dr. Zoëros Bey, the representative of the Ottoman Government, then spoke with much animation in favour of quarantines. The Crimean epidemic had been imported. In 1865 another epidemic was introduced by a ship belonging to the State, and resulted in the death of about 30,000 of the Sultan's subjects. On the other hand, in 1860 an individual having brought the cholera to a small village on the Bosphorus, a cordon was established round the village and the epidemic did not spread. Later on several cases occurred in a hospital through the use of a room where cholera patients had been treated during the previous epidemic; by placing the patients under canvas and isolating them no further harm occurred.

Dr. Proust now spoke once more. Together with his fellow delegates from the French Government, he had questioned thirty-five doctors at Toulon and more than 200 at Marseilles; why should the opinion of one doctor from Egypt be accepted against them? Was this one solitary voice to upset the system Europe had instituted to protect itself against epidemics?

These remarks elicited a reply from Dr. Dutrieux Bey, and he insisted that no importation had been proved before the existence of receptivity. As for the evidence of the doctors mentioned by Dr. Proust, he wished to know on what basis inquiries should be conducted—verbal assertions or death-certificates?

Dr. Rochard spoke once or twice on the French side.

Finally Dr. Crocq of Brussels sought to discuss the matter in a calmer tone. "Is cholera transmissible? Yes, it is; but," he added, "receptivity is not yet sufficiently well known to base a system on it. Cholera, though contagious, miscarries in certain cases. In some towns it kills ten persons, in others thousands. Sometimes there are but one or two cases, sometimes 10 per cent. of the population is swept away. This difference has not been sufficiently studied. But as the disease is transmissible, we must adopt quarantines. At the same time, we shall avoid exaggerations. The best things perish by exaggeration. Land quarantines are impossible. They may spread the contagion, but can never prevent it. In certain circumstances they might, however, be applied. Notably in the steppes of Russia, where surveillance is easy and in those cases useful." The same might be said of certain parts of Asia or Africa; places, for instance, where there is but one road. This proved that he was in favour of quarantines in seaports, but on condition that they were applied reasonably, and not in a vexatious manner. The germ being principally transmitted by intestinal evacuations and in soiled linen, it was not so difficult to stamp out the cause of epidemics.

The section numbered fifty-one members, and the greater part rose to vote against Dr. Dutrieux Bey, while the one solitary Englishman present voted for him. He, however, explained that his vote was given as a protest against quarantines, and not as endorsing Dr. Dutrieux Bey's views on the etiology of cholera. Dr. Dutrieux Bey was not, however, to be beaten. Every ensuing morning he sought to reintroduce the question; and, as in the interval Dr. Corfield, Dr. Sweeting, and other medical men arrived from London, there was every reason to anticipate that a better fight could be made. The majority, however, clamoured that they had had enough of the question; and, as Dr. Raymondaud was to read a paper on the Organisation of a Universal Society against Epidemics, it was decided that the question of quarantines should be taken up again in discussing Dr. Raymondaud's proposals. This paper was, however, not read till the end of the last sitting but one. The principal suggestion was the union of all sanitary societies and authorities to raise funds and form a limited liability company for the drainage of the Ganges valley, and thus attack the cholera at its basis.

The following morning the section gathered in force. Dr. Dutrieux Bey opened the debate by reading a short paper. The Congress had decided that quarantines ought to be improved, but had not said how such improvement should be attempted. In theory, quarantines were to be applied at the first case of Asiatic cholera and maintained till after the last case. In practice, however, this was rarely, if ever, done. It is impossible to ascertain the first or the last case, and quarantines are established too late and abolished too soon to be of any real service. Also the regulations and restrictions are constantly defied. Consequently, Dr. Dutrieux Bey moved:—First, that in fixing the duration of quarantines the time allotted should be based on the time required to submit the ship to a rigorous sanitary and medical inspection and disinfection; and further, to prevent any misunderstanding, it would be advisable to substitute the words "sanitary control" for the word "quarantine." Secondly, that it is desirable to modify as promptly as possible the quarantines actually established in the Mediterranean ports so that their duration may be limited to the time necessary to carry out a thorough medical and sanitary inspection and disinfection.

The moment this resolution had been read out, Dr. Zoëros Bey excitedly protested that the Ottoman Government would never adopt such a measure, as Constantinople had been saved year after year by quarantines. Amid much clamouring, Dr. Corfield commenced a carefully prepared speech, by remarking that formerly all Englishmen were in favour of quarantines, but that now opinion was as unanimous in the contrary direction. At this point, Dr.

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Rochard rose and, together with other French doctors, loudly objected to Dr. Corfield's being heard. The question had been decided, and they would not allow it to be revived. An Englishman then protested that the previous vote was complicated with the question of the character of cholera; that a vote on the simple question of quarantines had not been taken, and that, as England was the country which was most attacked, it was only fair to hear the distinguished professor of hygiene, who had prepared a defence of the English policy. Dr. Rochard, however, protested that there was no desire to attack any nation; the name of England had never been mentioned, so Dr. Corfield need not trouble himself to defend his country. This, of course, was a mere play of words; for, though the name of England had not been mentioned, there could be no doubt that we are accused of interfering with quarantines in the Red Sea, and of allowing commercial interests to take precedence over the interests of the health of Europe. Nevertheless, Dr. Corfield was not heard, and the only concession made was to allow Dr. Dutrieux Bey's resolution to be put to the vote without any discussion. In spite of this disadvantage, twelve members stood up for the resolution, and only twenty to twenty-four against it. There must have been more than fifteen abstentions. This result caused much surprise, and was considered a moral triumph for the minority. Of the twelve voters against quarantines, three were English, and the remainder for the most part Dutch and Swiss.

The Hague, August 28th, 1884.

THE BRITISH DENTAL ASSOCIATION AT EDINBURGH.

THE British Dental Association, which occupies the same position with regard to the dental profession as the larger and more widely known British Medical Association does to the medical, has just been holding its fourth annual general meeting at Edinburgh, under the presidentship of Dr. John Smith, LL.D., a well-known practitioner of that city. The proceedings commenced on Thursday, the 28th ult., when the local "Scottish" branch held its annual meeting. This was followed by a reception of the members of the Association by the president and the Lord Provost of Edinburgh (Sir George Harrison) at the Royal College of Surgeons, of which Dr. Smith is also president. A very interesting collection of models, pathological specimens, and novelties in dental apparatus was arranged for inspection, and several members gave practical demonstrations of different methods of filling teeth, &c. In the evening there was a conversazione at the Forestry Exhibition, at which the Lord Provost again did the honours.

The serious business of the meeting began at half-past nine on Friday morning and occupied the entire day. At the business meeting Mr. F. Canton, the hon. secretary, reported that there had been a decided increase in the numerical strength of the Association during the past year, though not quite as great as might have been expected, about fifty new members having joined. It now included five branches, three in England and two in Scotland, whilst a fourth English branch was then in process of formation. In other respects the present condition and prospects of the Association might be regarded as satisfactory. It was decided to hold the next annual meeting at Cambridge, and that it should be extended over three days, on account of the increased amount of business which had to be disposed of. Mr. R. White of Norwich was nominated as president-elect.

A short address from Mr. John Tomes, F.R.S., the Chairman of the Representative Board, who was unable to be present owing to ill-health, was read by Mr. J. S. Turner, the vice-president. It explained the causes which had led to the partial failure of the prohibitory clauses of the Dentists Act, which had given rise to a certain amount of dissatisfaction amongst the members of the Association, a cry having been raised that the Representative Board was neglecting its duty in not prosecuting the numerous quacks who were defying the provisions of the Act all over the country. Mr. Tomes pointed out that the dental was scarcely worse off in this respect than the medical profession, the Legislature having always steadily refused to make the act of medical practice by unqualified and unregistered persons penal. No fault had been found with the educational clauses of the Act, and from the gradual operation of these a steady improvement in the state of the profession might confidently be expected. If full force were given to these, they might lightly regard the mere prohibitory sections of the Act.

The valedictory address of the retiring President, Mr. C. Spence Bate, F.R.S., of Plymouth, was read by the hon. secretary, Mr. Bate having gone to Canada to attend the meeting of the British Association. He called attention to the many important questions still remaining unsolved in the department of dental surgery, and pointed out that the solution of some of these was of great importance for the purpose of affording a sure basis for sound curative treatment. Much might be done by the persevering efforts of enthusiastic individuals, but unfortunately individuals were very prone to approach questions of this kind with a strong personal bias. Thus, the cause of decay of the teeth had been studied by many, and the futility of individual research was well exemplified by the result that almost every inquirer had founded a new theory which was identified with the idea preconceived by himself before ever he commenced to study the subject. Mr. Bate advocated the appointment of small committees for this purpose, and recommended also the extension of the system of collective investigation to dental diseases, pointing out that with regard to many pathological changes in the mouth a carefully considered report of a series of cases would be of far greater value than the present system of recording remarkable examples, which could only demonstrate the possibilities of abnormal conditions, and did but little to advance real knowledge.

Dr. John Smith then took the chair, and delivered his inaugural address. Those present were, he remarked, called together as the representative and supervising assembly, and to a certain extent as the administrative convocation for the dental profession throughout Great Britain. It might be argued that as there existed a Dentists Act enunciating the law which regulated dental practice, that long before the Association existed there was at least one great dental school, and one great surgical corporation conferring on the students of that school a high distinctive qualification; that at the present day there were many additional complete and reliable schools of dentistry, and a full and recognised dental qualification was conferred in each of the three divisions of the kingdom; that over all these there was a court of supervision provided in the General Medical Council, and a safeguard and guarantee against illegal practice and pretenders in the Dentists' Register—that, in the face of such a state of matters, little seemed left for an association such as theirs to do. The answer was that by the various schemes referred to, the machinery for education, examination, and qualification had been provided; but some effective power was required to render this machinery available, and to ensure the work it was intended to perform being done, and done thoroughly; and, besides this, that an opportunity should be afforded for the collective voice of the profession being heard on all important questions. And whilst the Association thus acted as a valuable and powerful element of control, it also served to establish and maintain friendly feeling as well as scientific intercourse amongst its members. Dr. Smith then dwelt upon the importance of the executive carrying out its functions with the utmost care and deliberation, and followed Mr. Tomes in deprecating hasty and inconsiderate expressions of opinion on the part of individual members. He concluded with an eloquent peroration, in which he welcomed his audience to the "stately Edinburgh throned on crags," and described its beauties.

Papers were next read by Mr. Robert Reid of Edinburgh, on the Application of Dental Science in the Detection of Crime; on the Prevention of Caries, by Mr. Henry Sewill of London (see page 402); on the Treatment of Fractures of the Inferior Maxilla, by Mr. Walter Campbell of Dundee; on Abscess of the Antrum, by Mr. G. W. Watson of Edinburgh; on Educational Centres, by Dr. Walker of London; and on the Prevention of Irregularity, by Mr. J. R. Brownlie of Glasgow. Some of these papers gave rise to a considerable amount of discussion.

In the evening about a hundred and fifty members and visitors dined together at the Waterloo Hotel. Amongst the visitors present, several of whom had also attended the afternoon meeting, were the Lord Provost and two of his brother magistrates; Dr. George Balfour, President, and Dr. Peddie, ex-President, of the College of Physicians of Edinburgh;

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Dr. Littlejohn; Professors Maclagan and Annandale; Drs. Fergus, Keiller, and David Wilson; Mr. Imlach, and others.

On Saturday there was an excursion up the Firth of Forth, in a steamer specially chartered for the purpose, to view the preparations for the Forth bridge now in process of construction, and a very successful meeting was thus brought to a close.

HEALTH OF THE ARMY.

No. II.

THE average strength of the white troops serving in Ceylon in 1882 was 990, among whom the admissions into hospital were in the ratio of 1197, the deaths of 8·08, the invalids sent home 56·56, and the mean sick 62·98 per 1000. These are all considerably lower than in 1881, but, with the exception of the deaths, above the average of the last few years. The death-rate has been very low, amounting only to half the average, the reduction being in the classes of fevers, tubercular diseases, and general injuries. There was only one admission and one death from enteric fever.

In China and the Straits Settlements the admissions from a strength of 1663 men amounted to 953, the deaths to 6·01, the invaliding to 52·31, and the mean sick to 50·37 per 1000. The admissions and deaths were much below the average, but the invaliding and mean sick above it, though lower than in 1881. Fevers and diseases of the digestive system gave rise to the largest numbers of admissions. There were only three cases of enteric fever, two at Hong-Kong, and one, which proved fatal, at Penang. No case of cholera occurred during the year.

In India the average strength of European troops was 57,344, from whom the admissions into hospital were 1437, the deaths (including those of invalids) 12·82, the invalids sent home 34·14, and the constantly sick 66·38 per 1000. These ratios, with the exception of the mean sick, were considerably lower than in 1881, and were also under the average of the last ten years.

The sickness, mortality, and mean sick in Bengal were higher than in the other two presidencies; the ratio of admissions into hospital was 1555, of deaths 13·93, and of constantly sick 69·83 per 1000. Compared with the average of preceding years these results are very favourable as regards the death-rate, but higher as regards admissions and mean sick. Paroxysmal fevers were, as usual, the chief cause of sickness, having furnished upwards of one-third of all the cases. The highest death-rate was from diseases of the digestive system, but it was very little above that from enteric fever. The latter gave rise to 7·4 admissions and 2·83 deaths per 1000 of the strength. The stations at which it was most prevalent and fatal were Sitapur, Cawnpore, and Lucknow. At the first of these the admissions were 53·40 and the deaths 18·98 per 1000 of the strength, at Cawnpore they were 18·56 and 11·34, and at Lucknow 13·84 and 5·81. At Sitapur the disease occurred in a wing of the Lincolnshire Regiment, which arrived at the station from Gibraltar on the 13th of February, no case of enteric fever having occurred in it up to that date. On the 23rd a man was admitted with simple continued fever which afterwards proved to be enteric. The disease continued to prevail till June 9th, 43 cases having occurred during that time. A case of this disease had occurred at the station in the end of January in the corps which was relieved by the Lincolnshire Regiment. It is noteworthy that in the other wing, which came out at the same time from Gibraltar, but which was sent to Benares, no case of enteric fever occurred till July, when two men were admitted, and in August two more, after which it ceased. At Cawnpore the admissions amounted to 18·56 per 1000 and the deaths to 11·34; and all occurred, not in a newly arrived corps, but in one which had been two years and four months in the country, and might therefore be supposed to be in a great degree acclimatised. The disease prevailed in it from the end of February till the end of June. The officers, women, and children, and the Royal Artillery at the same station escaped it entirely. No details are given of the outbreak at Lucknow. Cholera did not prevail to any extent generally throughout the command, the admissions having been only 2·0 and the deaths 1·24 per 1000. At Fyzabad and Benares, however, it occurred as an epidemic; at the former place the admissions were 35·85 and the deaths 24·72 per 1000 of the strength, and at the latter 27·71 and 15·11 respectively. The disease occurred chiefly in the third quarter of the year. No details are given in the report respecting these epidemics except that at Benares "the men were promptly encamped out with satisfactory results," while at Fyzabad "after some temporising, the barracks and hospital were vacated, and the outbreak ended, but whether naturally by exhaustion of the period of its lifetime, or by the good effect of removal from infected buildings, is not apparent."

The strength of the troops in the Madras command was 10,817; the admissions into hospital were 1069, the deaths, inclusive of those of invalids, 11·00, and the mean sick 59·39 per 1000; the latter was slightly above, but the other two ratios were considerably under, the average of the last ten years. Diseases of the digestive system were the most prevalent and fatal in the command, and next to them fevers. Enteric fever was the cause of 4·3 admissions and 2·13 deaths per 1000. Bangalore was the station which furnished the greatest number of cases, the admissions having been 11·30 and the deaths 4·16 per 1000 of the strength stationed there. "No insanitary condition in or about the barracks likely to influence the causation of this disease could be discovered, but it is remarked that the impure nature of the drainage flowing into the Ulsoor Tank, and other sources of pollution, must always render the water-supply open to suspicion." Although cholera was very prevalent among the civil population, there were only 15 cases and 9 deaths among the troops, being in the ratio of 1·4 and 0·83 per 1000; 11 of these and 4 deaths occurred on the march, 7 with 4 deaths between Kamptee and Bangalore, and the others among troops in the boats on the river after leaving Tonghoo *en route* for Bangalore. One death from snake-bite occurred at Secunderabad; the man lived about thirty-two hours after the receipt of the injury.

In Bombay, from a force of 10,197 non commissioned officers and men, the admissions were 1406, the deaths 10·79, and the mean sick 61·47 per 1000; the two former being much under and the latter above the average of preceding years. The most prevailing cause of sickness was paroxysmal fevers, which gave rise to more than one-third of the admissions. Enteric fever was the most fatal disease, there were 43 cases and 18 deaths, being in the ratio of 4·2 and 1·77 per 1000. At Nusseerabad 13 cases and 8 deaths occurred in a force of 668 men; at Colaba there were 9 cases, of which 4 proved fatal, but 8 of these were landed from H.M.S. *Euphrates*, the disease having been contracted at Alexandria. Cholera furnished only 10 cases and 7 deaths, and of these 6 cases and 5 deaths were at Nusseerabad in the third quarter of the year.

The relative health of the different arms of the service for the year 1882 is shown in the following summary for the whole force in India.

Per 1000 of mean strength.	Admitted.	Died.	Invalided.	Constantly sick.
Cavalry ...	1419 ...	10·87 ...	49·43 ...	68·27
Artillery ...	1510 ...	12·50 ...	48·94 ...	68·33
Infantry ...	1435 ...	12·12 ...	31·39 ...	65·85

The artillery therefore show the highest rate of sickness and mortality and the cavalry the lowest, but the infantry had the lowest proportion constantly in hospital.

The most interesting chapter in the report is that which relates to the health of the troops serving in Egypt from July 17th to the end of the year. The admissions into hospital during that period were in the annual ratio of 2322, the deaths from all causes of 88·90, and the invalids of 521 per 1000. The history of the period is divided into two, the first portion relating to the Expeditionary Force from July 17th to October 9th, and the second to the Army of Occupation from October 10th to December 31st. The annual ratio of mortality of the former was 76·57, and of the latter 100·69 per 1000. The history of the Expeditionary Force was given by Sir J. Hanbury, the Principal Medical Officer, and Dr. Marston, the Sanitary Officer of the Army, in the report for 1881 (see THE LANCET, November 24th, 1883). The principal causes of mortality in the Army of Occupation were enteric fever and dysentery. The prevalence and fatal character of the fever were due to a combination of causes. The soldiers were mostly young men, they suffered from heat, hard work, fatigue, indifferent food, and foul water, and all the conditions necessary for the development of epidemic disease were present in Egypt generally, and Cairo in particular. "Every available

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barrack and public building in Cairo, and in Egypt generally, was in so foul a state as to be uninhabitable by Europeans, and it was impossible to find any camping ground affording sufficient space, with water supply available, that was not, for military considerations, too far distant from Cairo itself." In the report the question is discussed how far in a campaign "preventable diseases can be prevented," and it is clearly shown that the conditions under which war is waged render this practicable only to a very limited extent. This section of the report deserves careful study, as showing the difficulties with which the medical department have to contend in their endeavours to preserve the health of the troops. There is an interesting account, taken from the *Archives de Médecine et de Pharmacie Militaires*, 1883, of the prevalence of enteric fever in the French Army of occupation of Tunis, North Africa, which shows them to have suffered to even a greater extent than our troops in Egypt, the admissions having been in the ratio of 210 and the deaths of 51·95 per 1000; while in Egypt the ratios were 93 and 35·98. In connexion with the death-rate in Egypt, it may be stated that of 171 cases of sunstroke and heat exhaustion, caused by the newly landed troops having to march in the desert in the midday sun, only 3 died, a result highly creditable to the medical officers.

In the appendix to the volume a very interesting medical report of the Eastern Soudan Expeditionary Force is given by Brigade-Surgeon McDowell, who was Principal Medical Officer. Full details are given of all the arrangements, which appear to have been very judicious and well carried out. The campaign lasted from Feb. 15th to April 6th, a period of fifty-one days. The average strength of the force was 4018; the admissions into hospital were 512, and the deaths, all in action, were 126; being in the ratio of 127·4 and 31·36 per 1000 of the force. If these numbers are reduced to an annual ratio they give 912 admissions and 224·4 deaths per 1000. Nearly half of the admissions were from wounds and injuries. An interesting table is given of the seat of the wounds and also of the projectile or weapon by which they were inflicted. Two-fifths of those killed in action were wounded in the chest, one-fifth in the head, and nearly one-fifth in the abdomen; while of those admitted into hospital one-third were on account of wounds of the upper and nearly one-third of the lower extremities.

There is also in the appendix a report on the cholera epidemic in Egypt during 1883, by Surgeon-General Irvine, the Principal Medical Officer of the troops. The first cases of the disease were reported at Damietta on June 22nd; it then appeared at Mansourah, and, in spite of cordons, spread over the country, and on July 15th cases were reported in Cairo. On the 21st the first case among the troops occurred at Suez, and on the 23rd it broke out among those at Cairo. Notwithstanding every precaution being adopted by evacuating the barracks, encamping the troops, and moving the camps when requisite, the disease spread among them; and before the termination of the epidemic 194 cases and 142 deaths were reported, "being in the ratio of 2·9 and 2·1 per cent. of the strength." The disease was of a very virulent type, 73 per cent. of the cases having proved fatal. Contrary to the general experience in cholera epidemics, the attendants on the sick suffered in a much greater degree than the rest of the troops, and this was also the case with patients in hospital compared with the healthy men. No information is given in the report as to any special precautions being taken to protect the attendants on the sick, a point to which much importance is attached in the instructions recently issued by the Royal College of Physicians. A table is given of the cases and deaths among temperate, intemperate, and men of irregular habits; but as the numbers living of each class are not stated, it is of comparatively little value; the proportion of deaths to cases was almost identical in the three groups. The ages and length of service of the men attacked and of those who died are also given, but the information is defective in the same respect of the numbers living being omitted. The proportion of deaths to cases was higher among the old than the young soldiers.

During 1882 the number of recruits examined medically was 45,423; of these, 19,294 were rejected as unfit, being in the ratio of 425 per 1000 inspected. In the preceding year the ratio was 432. From this, however, should be deducted a number of men rejected as being "under height" and "apparent age not in accordance with General Orders," as such cases ought not to have been brought before the medical officers by the recruiting parties. Exclusive of these, the proportion of rejections would amount to 379 per 1000, or exactly the same as in the preceding year. Upwards of one-third of all the rejections was for being "under chest measurement." Next to this the most frequent cause of rejection was "defective vision," the proportion being 35 per 1000 examined. Muscular tennity and debility was the reason assigned for rejection in 27, and disease of the heart in 21 per 1000. Of recruits inspected by army medical officers, 435 per 1000 were rejected as unfit, while the proportion among those inspected by civil medical practitioners was only 140; but of the men passed by the latter, 224 per 1000, or nearly one-fourth, were subsequently rejected on joining at head-quarters. England and Wales furnished 737 per 1000 of the recruits, Scotland 106, Ireland 145, and the colonies and foreign countries 12. Omitting the last on account of the small numbers, the proportion of rejections was highest among the Irish and lowest among the Scotch, the difference amounting to 50 per 1000. Taken by arms of the service, the rejections were highest in infantry regiments and lowest in the Foot Guards, the proportions being 445 and 279 per 1000. The return of the ages of the recruits shows a marked decrease of those under nineteen, a marked increase at the age of nineteen to twenty, and a slight decrease of those of twenty and upwards. We fear, however, that but little reliance can be placed upon these results, as there are no means of ascertaining the correct age of the men, and their statements are not in the least to be relied on. It seems very probable that the difference in the younger ages was simply the result of a mis-statement on the part of the younger recruits, for the purpose of bringing themselves within the age at which they would be eligible for enlistment. As regards the height of the recruits, there has been a marked decrease in those between 5 ft. 4 in. and 5 ft. 6 in., and an increase in the numbers at all heights above that. There has also been an increase in the proportion of recruits at the higher weights, and chiefly of those from 130 to 140 lb. A new table has been introduced, giving the chest measurement of the recruits at different ages; it shows that in 10,000 there were 3720 from 34 to 35 inches, 2613 above 35 inches, 2366 from 33 to 34 inches, and 1301 under 33 inches; there are no data for a comparison of these numbers with previous periods. The returns of the state of education of the recruits show a decrease in the proportion unable to read and write of 24 per 1000. Of the recruits examined, 928 per 1000 had marks of vaccination, 24·9 of small-pox, and 47·1 of neither. This shows a decrease of 10·2 per 1000 on the numbers bearing marks of small-pox, but the proportion having no marks remains unchanged. The value of vaccination is borne out by the results as regards small-pox in the army during the year. There were only 14 cases and 1 death among the soldiers serving at home, 44 cases and 4 deaths in India, and 2 cases with no death in the colonies. Among the women at home and abroad 14 cases occurred and no death, and among the children 11 cases and 1 death.

In addition to the papers already noticed relating to the Egyptian expedition, the appendix contains others of considerable interest. Of these we may specially note the report by Professor De Chaumont on the Hygienic Exhibition at Berlin in 1883. He was sent to Berlin with instructions "to report upon any exhibits that might be usefully adopted in our service so far as medical and hygienic appliances went." The result of a careful examination led him to the conclusion that there was "comparatively little that is new, or that could be usefully adopted in our service." He has given a brief account of these exhibits under the headings of (1) the arrangements for conveying sick and wounded in time of war; (2) certain surgical appliances; (3) plans of hospitals and barracks; (4) exhibits of hygienic apparatus; (5) miscellaneous. Under the first of these he describes especially a new spring military stretcher by C. Epner, Berlin, which appears to possess considerable advantages. In the second group he calls attention to "Esmarch's turf or peat dressings, which seem to be very successful; they are absorbent and antiseptic, and may be left for a long time"; and also to Dr. Walcher's wood-wool, which appears to answer well. Among hygienic appliances a drying apparatus by Oscar Schimmel and Co. of Chemnitz appeared to deserve particular notice, as accomplishing its object very efficiently, and being free from most of the objections which appertain to drying apparatus in general. Dr. De Chaumont thinks that a Schimmel's apparatus in each barrack for the purpose of drying the men's clothes when they come in wet would have an important influence in the prevention of serious disease.

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Among other papers of interest in the appendix we would refer our readers to a case of death from snake-bite; a case of poisoning by iodoform, not fatal; an outbreak of fever on board of the War Department ship *Stanley* in the Mediterranean; and of enteric fever among the troops at Athlone.

The usual list of operations performed at Netley is given, with notes by Surgeon-Major Tobin, the Assistant Professor of Military Surgery. They were 45 in number, of which 2 terminated fatally—one after amputation of the leg at the junction of the lower and middle third of the femur, and the other after excision of the hip-joint. Both men had been wounded at Kassassin.

We cannot close our notice of this volume without expressing our regret at the absence again of the "report of the progress of hygiene for the year," begun in 1860 by the lamented Professor Parkes, and continued till last year by his successor, Dr. De Chaumont. We also miss any contribution from the medical division of Netley Hospital. It is to be regretted that the splendid opportunities of this large hospital are not turned to better account in the interests of the profession, and especially of the medical officers of the army.

DISINFECTANTS AT THE HEALTH EXHIBITION.

IN the East Annexe, close to Messrs. Doulton's pavilion, many of the disinfectants at present in vogue are collected. About twenty manufacturers exhibit; but there is, on the whole, but little novelty calling for notice. The coal-tar compounds, thymol and a few other aromatics, permanganates, and sulphurous acid, nearly exhaust the list. A few bear fancy titles, such as "sanitas," "Jeyes' perfect purifier," "affinitan," and "antimicrobe." The first of these is the well-known and very interesting invention of Mr. Kingzett. Its most active agent is peroxide of hydrogen, generated by the oxidation of turpentine, and present in very considerable quantity. There can be no doubt of the real value of sanitas. It is non-poisonous, agreeable in odour, capable of being used in many forms, and above all is an active, if not very powerful deodoriser. It has attained and deserves great domestic popularity, but we cannot regard it as a sufficiently powerful agent for dealing with zymotic disease. Much the same may be said of thymol, the eucalyptus preparations, and Mr. Wheeler's pixene, which last is an elegant pine-tar antiseptic.

Several manufacturers exhibit carbolic acid and its preparations; but the place of honour must certainly be assigned to Messrs. F. C. Calvert and Co., by whom this most important and valuable compound was first introduced to commerce. It still takes a very high place as an antiseptic, although its disagreeable smell and weak deodorising power are serious drawbacks to its general use. Messrs. D. and W. Gibbs, Messrs. M'Dougall Brothers, and Messrs. Mackey, Mackey, and Co. also exhibit carbolic preparations, and the last-named firm many vegetable and mineral disinfectants in addition.

In a case near the southern end of the gallery, Messrs. Boake and Co., of Stratford, show the new and important disinfectants of Professor Tuson, the scientific peculiarities of which are fully described in a handbill. The liquid is essentially a solution of chloride of zinc, saturated with sulphurous acid. It is unnecessary to speak of the sanitary value of these two agents. Each occupies a front rank in the list both of antiseptics and deodorisers; each supplies what the other lacks. The liquid properly diluted for use has no injurious action on metals or textile fabrics, and but little smell, so that while it destroys foul smells, such as that of sulphuretted hydrogen, it leaves none behind it. The solid has still more scientific interest. It is essentially a mixture of sulphite of lime, sulphate of alumina, and sulphate of zinc. When exposed to the air, it slowly absorbs moisture and evolves sulphurous acid according to the following equation:—

$$Al_2(SO_4)_3 + 3\,CaSO_3 = 3SO_2 + 3\,CaSO_4 + Al_2O_3.$$

When water is added to the powder, sulphurous acid is evolved with greater rapidity, while the sulphate of zinc increases the antiseptic power of the mixture. We can testify that both the solid and liquid are safe and harmless in a sick room, when used with ordinary care, and are also really trustworthy disinfectants.

As carbolic acid was introduced by Messrs. Calvert, so undoubtedly was alkaline permanganate by Mr. Condy. Condy's fluid is too well known to require description. Opinions still differ as to its trustworthiness as a disinfectant, but all must agree that it possesses much real value, and has been a boon in thousands of households. Several of the disinfectants exhibited under fancy names appear to contain the same compound. More novel and decidedly useful is the sulphur disinfectant of Mr. Overbury, of Alcester, which is simply a cake of sulphur with wood shavings embedded in it. Everyone knows that it is not easy to make sulphur burn quietly to the end, and in this case the wood acts as a wick, easily lighted and causing steady combustion. For ordinary house fumigation, one pound of sulphur should be burned to each 1000 cubic feet of space.

Several contrivances for the automatic disinfection of watercloset-pans are shown in action in the same annexe, and one or two may be briefly noticed. The London Patent Automatic Disinfection Company exhibit an apparatus by which a small and definite quantity of any suitable disinfectant is made to flow into the pan with the water, the reservoir requiring renewal but seldom. Even more ingenious is the Austin porous disinfector, which consists of an ordinary porous case filled with some powerful disinfectant, and suspended in the small tank or water-waste preventer, which supplies the closet. It is said that a single charge will last for more than a year, but care must of course be taken in the choice of a suitable disinfectant.

THE PROGRESS OF CHOLERA.

THE two most important events of the week are the steady spread of cholera in Italy and the extension of the disease into Spain. Northern Italy is now suffering from a considerable epidemic, and the disease having attacked some of the more populous towns where the sanitary arrangements are none of the best, it becomes difficult to form an opinion as to the course which the epidemic may assume. The large number of attacks in Spezia, a daily mortality there already reaching some sixteen or twenty, and the flight of the inhabitants to other towns and even to the mountains, form the most serious elements in connexion with the outbreak. The city of Naples is now also unquestionably infected, and the total attacks in the country generally have reached as high as one hundred and twenty-two, with over seventy deaths a day. Unfortunately the principal reliance still is in troops who form sanitary cordons, and in fumigations; whereas if the money spent on these measures were even now devoted to sanitary cleansings some substantial good might result. The infection of Spain has apparently been brought about by sea, and it is supposed that persons from Cette have made their way thence by a circuitous route to Alicante, carrying infection with them. The disease is fortunately not at present of a virulent type, but the inhabitants of Alicante could not be prevented from fleeing inland, and at Novelda, in the same province, deaths have already occurred. The outbreak at Toulon and Marseilles is steadily diminishing, and such fresh cases as occur in the neighbourhood of those two cities, as also at Perpignan and in its vicinity, are less numerous and less severe than they were.

We learn from Cardiff that two members of the crew of the Italian steamer *Abyssinia*, which arrived off that port on the 29th ult., were found to be suffering from symptoms which had followed suspicious diarrhœa, vomiting, &c. They were removed to the hospital on the Flatholm Island. A third man suffered from somewhat similar symptoms later on. One of the men gradually sank and died on the 3rd inst., the body being buried at sea. No farther sickness has occurred, and all precautions have been taken.

The Academy of Medicine at Paris adopted, on the 2nd inst., a resolution in favour of holding an administrative

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inquiry into the conditions in which cholera made its appearance, the progress of the epidemic, its mode of propagation, intensity, and duration. It also affirmed the desirability of establishing an International Board of Health, as also municipal boards, on the model of that of Brussels, in the large towns. A note was read from M. Bourquet, of Aix, showing that cholera was not imported into that town by refugees from Toulon or Marseilles.

QUARANTINE AND INFECTED PORTS.

THE following notifications appear in the *London Gazette* of Aug. 29th and Sept. 2nd.

Five days' quarantine has been proclaimed at Bahia on arrivals from Europe.

Arrivals from Italy are subjected in Austro-Hungarian ports to ten days' quarantine if free from sickness, or to twenty days or more in contrary cases.

Arrivals at Algiers from all French and foreign ports in the Mediterranean, comprising Gibraltar and Tangiers, except Algeria and Tunis, will be subject to a quarantine of seven full days. Vessels having been seven days at sea without putting into port will be subject, on their arrival at Algeria, to a simple quarantine of observation of one day to three days.

Vessels arriving at Spanish ports direct from Newfoundland (their original starting-point not being France) are subject, if with clean bills of health, to three days' observation in the port of discharge.

At St. Thomas arrivals from North Africa have to undergo quarantine, as also have ships arriving from English and French Windward Islands which have direct or indirect communication by steamers with Europe.

The period of duration for quarantine for vessels leaving the Italian peninsula for the islands of Sicily, Sardinia, and other adjacent islands has been raised to twenty-one days.

Arrivals in Roumania from French Mediterranean or Italian ports have to perform quarantine at Soulina or Kustenje.

At Constantinople the ten days' quarantine on arrivals from the Black Sea has not been enforced. At Kavak passenger vessels undergo five days' quarantine.

Quarantine is applied to vessels arriving at the islands of Sicily and Sardinia from the French ports in the Mediterranean, Algeria, and the Regency of Tunis.

At Dunkirk all vessels from Italian ports undergo twenty-four hours' observation.

Vessels from Spezia are subject in other ports of Italy to a preventive observation of ten days.

At Odessa all vessels from Italy are to undergo fourteen days' quarantine, irrespective of that which may have been performed at other ports *en route*.

All vessels arriving in Norway from Belgium, Holland, and German North Sea ports must undergo medical examination before being allowed to communicate with the shore.

The quarantine regulations applying to Sicily and Sardinia apply also to the island of Elba.

At the Hague all the French ports in the Mediterranean, as well as the Italian ports extending from the French frontier as far as and including Civita Vecchia, have been declared to be infected with cholera.

At New Orleans the period of quarantine will, from and after Sept. 15th, be reduced from forty to ten days.

Vessels proceeding from cholera-infected ports and arriving at Monte Video and Buenos Ayres, after being less than forty days at sea, will be absolutely excluded from these ports as long as cholera shall continue to show itself at the place of departure.

All persons arriving in Russia from France and Italy must be provided with certificates from Russian consular officers, that they have not been at any of the infected localities within three weeks of their departure for Russia.

DISUSED BURIAL-GROUNDS.—The disused burial-ground surrounding the parish church in Upper-street, Islington, is to be converted into a public recreation ground, at an estimated cost of £1100, half of which will be defrayed by the Metropolitan Board of Works, and the other moiety by the vestry of Islington. The space, an acre and a half, is to be well turfed and provided with a few flower beds.

REPORT OF THE ROYAL COMMISSION ON PRISONS IN IRELAND.

IN our issue of August 23rd we briefly alluded to the above, but the text requires more than a passing notice, as it involves charges in the administration of a comprehensive character. Passing over the first part of the report, as not directly affecting the medical treatment of prisoners, we come to the 56th paragraph, where the status of gaol surgeons is laid down. We notice that the commissioners have apparently failed to realise that at present there are actually three classes of medical officers—viz., (1) those appointed before 1877, who are surgeons to their respective county infirmaries; (2) those who were likewise appointed previous to the passing of the Prisons Act, but are not infirmary surgeons; (3) those appointed by the Lord Lieutenant since the passing of the Act. The tenure of office of the first two classes was explicitly laid down in the 27th section of the Prisons Act, and it will be within the remembrance of our readers that the ill-advised action of the chairman of the General Prisons Board in issuing a circular on May 3rd, 1879, stating that their tenure of office ceased to exist after the passing of the Prisons Act, occasioned a rupture with the several medical officers, necessitating on their part joint action, and even requiring them to threaten legal proceedings in case their status should be questioned. We regret therefore to find that this point has been not fully taken into consideration, as evidenced by the few introductory words of the 56th paragraph. After paying a well-deserved compliment to their general character, the paragraph states that the commissioners report that there is considerable friction between the medical officers and "the board." If by "the board" the commissioners allude to the chairman, we unhesitatingly accept the dictum; but between the medical officers and the vice-chairman and Mr. O'Brien (the third member) there has not been any friction; and we go further, and state that at no time was there the slightest friction between the late chairman, Sir W. Crofton, or the present hon. member, Sir J. Lentaigne. When a body of men holding the social and professional status in their respective counties, such as the existing medical officers of prisons, are coolly informed that their offices are vacant, when subsequently to this they are treated with persistent discourtesy, when their suggestions are ignored, and their duties as defined by Act of Parliament altered to suit the caprice of one person, a certain amount of friction must ensue. As we stated in an article (Dec. 8th) on the Royal Commission: "The board failed to conciliate their medical officers"; and further on, "their failure to effect this may rest to a great extent on the *personnel* of the board." The report of the commission throws new light on this "friction," for, as we read at paragraph 29, "it is in evidence that there has been for some time an entire suspension of communication, except in writing, between the chairman of the board and the inspector of his district." The inspector alluded to is remarkable for his efficiency and courtesy.

Paragraph 52 deals with the "friction" with Mr. Mac G. Eager, the governor of Limerick prison, in which case the Lord Lieutenant had actually to reverse the mandate of the board. We are aware of instances in which the chairman when inspector-general of prisons had very considerable "friction" with gaol boards of superintendence, and it is even now generally considered that there has been "friction" between the chairman and another member of the board. In paragraph 29 the report states "that upon the evidence before us it may well be questioned whether some of the principal authorities of the Irish Prison Service manifest towards one another that spirit of cordial co-operation which always contributes so much to the successful working of a public department." This indicates where the commissioners were of opinion the friction lay, and we regret that they did not apportion their blame in an honest and straightforward manner.

In February, 1883, the honorary secretary of the Association of Gaol Surgeons in Ireland forwarded, at the request of Sir R. Cross, an exhaustive statement to the commission, dealing with many points in connexion with the subject, amongst others, the daily visits to prisoners on extra diet ordered by the chairman, the rule requiring their attendance before twelve o'clock, the refusal of the board to supply them with the ordinary instruments necessary for

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their duty, the unnecessary number of books to be kept, the non-payment of substitutes in case of illness or absence on public duty, the necessity for the appointment of hospital warders, and the objection to warders' families living in the prison. We are glad to see that in paragraphs 58, 60, 61, 62, 64, 65, and 72 the justice of these complaints has been acknowledged and their recommendations adopted. All these points we indicated in our issue of November 17th, 1883. We cannot leave this part of the report without drawing attention to a portion of paragraph 59, in which the board are convicted of a deliberate attempt to falsify a report. The circumstances are shortly as follows:—A medical officer was called on to attend a member of a warder's family who resided in the town. This duty he objected to perform, as not being laid down in his instructions or implied by usage. A correspondence with the board ensued, and in their minute of August 23rd, 1880, they state, "That the Prisons Board '*require*' the medical officer to attend the families of warders, provided they live within one half mile of the prison; and the medical officer neglecting to do so acts thus at his peril, and it is the duty of the governor to report such omission of duty." The discharge of this duty by medical officers of prisons "was one of the reasons put forth by the late departmental committee entitling medical officers of prisons to an increase of salary." Paragraph 59 states: "We do not find that the performance of this duty was stipulated for when the salaries of the medical officers were last fixed, although it was so stated to them by the General Prisons Board." It is inconceivable how any board could make such a mis-statement, or, having made it, be allowed to retain their places.

The report deals very particularly with the control and inspection of the various convict establishments in Ireland, and in paragraph 119 with the intermediate prison at Lusk. We think they are wise in recommending its discontinuance; they find that it is both useless and expensive. It may be that the distinctive character of Lusk—namely, the careful selection of its inmates—has been carried out too minutely. There were only twenty-four convicts there at the time the commissioners inspected it, and the cost of maintenance and staff combined reached the exorbitant sum of £36 per head. This is out of all proportion to any result obtainable.

We are glad to find that the report recommends the personal inspection of all convict establishments by the members of the board instead of the inspectors.

The diminution of the number of prisons in Ireland is also recommended, and we agree with the commissioners that the grouping together, as in England, of large numbers of prisoners is conducive to greater economy and efficiency, both in maintenance and treatment. Under the present system each prison has only a relatively small number of prisoners; as a consequence a large proportion are employed as warders, cooks, cleaners, &c., which interferes with the task labour, trades, and education carried on. By consolidating the prison administration greater economy can be practised, better educational and labour results obtained, and a healthier *morale* initiated.

Space prevents our going into the report at greater length; it is in many respects a valuable addition to our knowledge of prison affairs in Ireland, and is the result of the protracted labour of an essentially able commission. They recommend changes in the board which we advocated last year, and which anyone cognisant with prison affairs in Ireland was satisfied must eventually be decided on.

We congratulate our medical *confrères* especially, as to them is largely due the beneficial changes in contemplation. Drs. Robert MacDonnell and Sigerson devoted much and valuable time to the question, and the interests of the medical officers were safe in their hands. The proceedings of the commission were conducted with thoroughness and tact, and we hope the result to the general administration and the medical officers will be the establishment of harmony and general co-operation the absence of which the report so much deplores.

WESTMINSTER HOSPITAL.—The Committee of Management of this hospital have decided upon a scheme to extend the accommodation for out-patients, the resident medical staff, and the nurses. The plan includes the erection of a new medical school apart from the hospital building. The estimated cost of the improvements is £18,000, £5000 of which has already been subscribed.

FRENCH HEALTH RESORTS.

(From our Paris Correspondent.)

ROYAT; MONT DORE.

THE waters of Royat, a pretty little town situated in a valley about half a mile from Clermont-Ferrand, are chloro-alkaline, lithic, and ferro-arsenical, which, according to the different sources they are taken from, are considered useful in a variety of affections, such as those comprised under the term arthritism (gout, rheumatism, eczema, &c.), and in chloro-anæmic and nervous ailments. They have also been found highly useful in uterine diseases, the successful treatment of which has obtained for Royat the title of the French Ems. Affections of the throat and lungs are also much benefited by these waters. They are gaseous, containing certain proportions of free carbonic acid, and of varied temperature. They are employed internally and externally. Their action in the economy is similar to that of the pure alkaline waters, without having any of the inconveniences of the latter, owing to their containing a large proportion of chloride salts and to the presence of iron and arsenic. The "Source César" is the most popular, and is more freely drunk with wine at the table than the water from the other springs. It is slightly stimulant and tonic, owing to the carbonic acid with which it is saturated. Taken in health, it has the effect of stimulating the mucous membrane of the stomach, develops the appetite, and considerably increases the urinary secretion. Taken at meals and mixed with wine, it facilitates digestion and relieves nausea when present. Its use is particularly recommended to persons of sedentary habits, and to those having much mental labour to perform; also to constitutions weakened by hard physical work, disease, &c. The bathing and hydrotherapic arrangements are most complete, there being a large swimming bath containing running water naturally tepid at 31° to 32° C., and suitable for patients of all ages. Dr. Boucomont, one of the principal physicians and inspector of the waters at Royat, showed me an apparatus of his own invention, by which a patient who cannot stand the shock of a cold douche has only his feet douched, without wetting the upper parts of his body. He has found this very useful in nervous patients, particularly those of the female sex, and in all cases of congestion of any of the viscera, even of the brain, which may be benefited by derivation towards the lower extremities. It struck me that such a mode of applying the douche would be useful in insomnia, but Dr. Boucomont said he had not yet tried it in such cases. But, besides invalids, tourists will find here sufficient opportunity to satisfy their scientific curiosity, whether it be in natural history, archæology, mineralogy, or numismatics. The same may be said, indeed, of the whole of Auvergne, which is laid out in charming landscapes, picturesque scenery, and a soil most varied in character. The range of volcanic mountains of this beautiful province, its druidical remains, its Byzantine churches, its mediæval castles, its pine woods, its cascades, and its torrents, all contribute to captivate the attention of the tourist. Royat is evidently a rising place, and deserves to be better known; but it is impossible for me, within the limits of a letter, to do more than scant justice to a health resort that possesses so many advantages over similar places in this or any other country. Anyone interested in this watering place cannot do better than read a description of it in a little work by Dr. Boucomont, entitled "Les Eaux Minérales d'Auvergne," which of course contains information only from a medical point of view. The season begins about the middle of June and ends about the middle of September, the cure lasting about three weeks. The treatment should be continued for some time on the return home of the patients by drinking the bottled waters. Those from the César and St. Victor springs should be preferred for this purpose, as they are of a lower temperature, and are on that account, and from their containing a large proportion of free carbonic acid, better kept in a state of preservation than the water of the other springs, of which there are two: "La Grande Source," or what used to be called the "Source Eugénie," and the "St. Mart." They are particularly adapted to gouty and rheumatic subjects in the chronic or asthenic forms, who, being unable to visit the spa itself, are obliged to drink such waters for an indefinite period. They are also found particularly useful in the cutaneous manifestations connected with these diatheses.

On leaving Royat, I proceeded to Mont Dore, which is

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situated about the middle of a valley surrounded by high mountains—the Capuchin, the Angle, and the Pic de Sancy, the last (the highest) being 6186 feet above the level of the sea. A vegetation of the deepest green covers the two sides of the valley, and the shades are lovely. Two cascades, the Dore and the Dogne, unite to form the Dordogne, whose limpid waters overflow the meadows at the foot of the valley. Mont Dore, which is in the department of the Puy-de-Dôme, is thirty miles to the west of Clermont, and is reached partly by railway and partly by an engineering road in diligences and carriages, winding up and across a charming country, which for beauty and grandeur may be compared to Switzerland. Its altitude is about 1050 metres, or about 3445 feet, above the level of the sea. Its climate is rather mild, the thermometer seldom rising above 86° F. in the two hottest months of the year (July and August), and rarely falling below 40° F. It is, after Barèges, the highest watering-place in France, and therefore favourable to debilitated subjects, and to those who cannot resist the heat of the plains. Notwithstanding what has been said and written to the contrary, I should consider it quite unsuited for phthisical patients in any stage of the disease, owing to the great fall of the temperature in the evenings, which are damp; yet invalids are to be found there in large numbers. Mont Dore is certainly one of the most ancient, if not the most important, thermal stations of France, having been known as such almost since the commencement of the Christian era; it was also much frequented by the Gauls and Romans, who had constructed there a vast establishment, as shown by fragments of columns and the ruins of a swimming bath, which may be seen at the present day. The waters of Mont Dore, which are the least mineralised of all the waters of Auvergne, have been classed among the alkaline bicarbonates. They contain chloride of sodium and sulphate of soda, with mere traces of iron and alumina. They also contain a small quantity of arsenic (about a milligramme to the litre), the presence of which latter would seem to justify their employment in pulmonary phthisis. The waters from the various springs, of which there are no less than seven, are hot, their temperature rising as high as 109° F. They all contain the same ingredients, varying only in quantity according to the different springs. Mont Dore is celebrated for its various kinds of baths, and its rooms for spray and inhalation. Herein the patients breathe the mineral waters reduced to steam; but I question the propriety of applying this treatment to phthisical patients, not only on account of its weakening powers, but of the known tendency of such treatment to produce congestion of the lungs, and thus determine spitting of blood. If Koch's theory as to the propagation of pulmonary tuberculosis by bacilli emanating from the lungs of phthisical patients be correct, there is here offered a favourable field for their dissemination through the atmosphere of these rooms (eight in number), which are small, communicating with steam boilers, and in which there are ten or twelve patients at a time divested of their ordinary clothes and dressed in a flannel costume made for the purpose. Here they breathe the same vapour with which the room is filled, and here they remain from fifteen to forty-five minutes, or as long as they can conveniently bear it. Moreover, the patients must run the risk of catching cold on leaving the "sudatorium," as it has been appropriately termed, although every precaution is taken against their doing so. According to the physicians practising at Mont Dore, the waters of this spa have been found most useful in all affections of the respiratory organs, including asthma and pulmonary phthisis, also in chronic rheumatism, gout, and congestion of the liver. Nasal catarrh with ozæna, of whatever origin, is successfully treated by the use of these waters, administered internally, but more especially by local irrigation with them. The latter is effected by the use of an indiarubber tube, but the operation must be performed with caution, and under the surveillance of a medical man, as headaches and even syncope have been induced by the water penetrating the frontal sinuses. Like all watering-places in France, Mont Dore is provided with the inevitable casino, which is composed of a theatre, ball-room, reading-room, rooms for billiards and other games, and for refreshments. It is not much frequented by foreigners, and this may account for the hotel accommodation not being equal to that obtained in the other stations, where the comfort of visitors, particularly English and American, is more studied. The season begins about the middle of June, and ends about the same time in September; but July and August are the months most favourable for following the course of treatment enjoined at Mont Dore. The waters should not be used for more than a fortnight on account of their exciting properties, and the local physicians should always be consulted in the matter. I may, however, observe that the waters are contra-indicated in persons of a languid circulation, and such as have a tendency to hæmorrhage.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Peterborough (Rural).—This district had in 1883 a death-rate of 17·3 and a birth-rate of 30·5 per 1000 living. Diphtheria was somewhat prevalent in the district, and, as so often happens, it exhibited a certain obscure relationship with scarlet fever. Speaking generally of the class of infectious diseases due to filth causes, Dr. Paley observes that the district has been comparatively free from them, a result which he attributes to the efficient removal of all sorts of filth accumulations from the vicinity of the dwellings of rich and poor alike.

Hendon (Urban).—Dr. Cameron gives a lengthened account of the continued prevalence of diphtheria and scarlet fever, which were so marked during the first nine months of 1883, and to which we at the time adverted, especially in connexion with Mr. Power's report on an earlier stage of the outbreak. On the whole, the general health of the district was much better at the end of 1883 than at the end of the previous year, and a hope is expressed in the report that the experiences of 1883 will prove to be exceptional in the history of the district. Seldom have recurrences of diphtheria proved so persistent, and this notwithstanding efforts made to prevent the diffusion of the disease by means of intercommunication. Estimating the population at 11,370, the death-rate was, considering the circumstances, remarkably low—namely, 15·7 per 1000. Hendon at last stands a chance of being efficiently sewered; the scheme has been submitted to and approved by the Local Government Board, and the work is, we trust, now in progress.

Rotherham (Urban).—This borough, with an estimated population of 35,650, had in 1883 a death-rate of 20·5 per 1000, this rate exhibiting a decrease not only on that of the previous year, but also on the annual average for the preceding ten years. Zymotic diseases were also less prevalent than formerly; but this is certainly not due to the completeness of the provision for arresting the progress of those affections which can properly be called infectious, for the borough is still unprovided with either an infectious hospital or a mortuary. Smoke is still a cause of much trouble to the town, it being deluged with carbon and deleterious gases, resulting from the wasteful methods of combustion which are in vogue. Substantial additions have been made to the work of sewering the borough, and a number of street improvements have been effected. But efficient sanitary regulation in connexion with bye-laws and the cattle market still calls for the attention of the authority.

South Shields (Urban).—South Shields, with a population of some 62,000, may be congratulated on having achieved a substantial reduction in its annual mortality. The rate per 1000 for 1883 stood at 20·9, but taking the means of triennial periods, Dr. Munro claims to show clearly the sanitary progress which has been effected. For the three years 1872–74 the rate was 25·8; that for the years 1875–7 was 22·7; that for 1878–80 was 22·6; and during the past three years the mean has stood at 19·7. This, too, is accompanied by a fall in the rate of infant mortality, the deaths under one year now standing at 13·9 per 100 registered births, as opposed to 14·9 in the fifty large towns. So also the rate for the so-called zymotic diseases was 2·27 per 1000, whereas in the fifty towns it was 2·46. The most important incident in the sanitary history of the year was the opening of the new borough infectious hospital, an establishment well adapted to the needs of the district, and subject to an excellent system of administrative regulations. During the year fifty-one patients came into the building, twenty-three of these being cases of scarlet fever, twelve of small-pox, seven of

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typhoid, three of typhus, &c. Taking all the cases together the mortality was only at the rate of 1 in 17. The new facilities which the hospital affords of safely receiving at one and the same time cases of the different infectious fevers, and the comforts and prospects of recovery which it provides, are certain to make it a real sanitary success. Dr. Munro feels very strongly that one of the most potent instruments he can use in securing improved sanitation is to teach the people how to help themselves in the matters that concern health, and he has commenced work in this direction by organising a working class for women at which elementary lessons in physiology, nursing, the maintenance of healthy homes, and the management of infectious diseases have been given. The effort is certain to be successful if it is sustained, and it is to be hoped that it will receive support in the district. In the meantime, the current sanitary work not only goes on but steadily increases.

Sunderland (*Urban*).—This borough had in 1883 an estimated population of 121,117, the density per acre being 41·5. The births were at the rate of 41·7 and the deaths at 24·4 per 1000 living. But during the third quarter of the year the Victoria Hall catastrophe occurred, by which 178 little children lost their lives, and if these deaths are deducted the rate is reduced to 21·3. The relative mortality of infants under one year was at the rate of 137·8 per 1000 registered births, the lowest rate without exception in the twenty-eight large towns of the kingdom. The deaths from the diseases included by the Registrar-General under the term of principal zymotic were lower than in any of the preceding ten years—namely, 2·55 per 1000 inhabitants, and this notwithstanding a severe prevalence of typhus in the early part of the year and of the continued presence of small-pox in the third and fourth quarters. In all, small-pox caused 52 deaths and typhus 41. We have before commented on these two epidemics in connexion with the means of isolation that are available in the borough—namely, an old private residence utterly unfitted for the present purposes, and the infectious buildings at the workhouse. Against both these buildings, it is admitted, there exists great prejudice in the mind of the public, and deservedly so, for it is risky to go into the one lest the sufferer should contract a second disease, and it is degrading from a social point of view to go into the other. The number actually isolated was higher than in any previous year, 113 being removed to the borough House of Recovery and 180 to the Union Hospital. Amongst those thus removed 216 were small-pox patients. Compulsory measures of removal were not resorted to, and this because, as Mr. Harris admits, he would otherwise have made people paupers against their wish. How far this is reconcilable with the statement which immediately follows, to the effect that "very strong persuasive pressure was put on patients to avail themselves of hospital shelter," it is not for us to explain; but most people know that the power that can be obtained over persons lying helpless in sickness is one that also carries with it a considerable responsibility as to the rights and interests of the individual on whom it is brought to bear. Mr. Harris, however, certainly had the best interests of his borough at heart, and it is to be hoped that the episodes of the past twelve months will result in Sunderland being provided with a proper hospital to which patients can be sent in the interests of the health of their fellow citizens, without their being subjected to such risk or social degradation as cannot reasonably be demanded of them.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 30th ult., 5618 births and [illegible] deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which had been 24·1 and 25·4 in the two preceding weeks, declined last week to 25·3. During the first nine weeks of the current quarter the death-rate in these towns averaged 23·4 per 1000, against 20·7 and 20·0 in the corresponding periods of 1883 and 1882. The lowest rates last week in these towns were 19·6 in Birkenhead, 19·7 in Derby, 19·9 in Bristol, and 20·0 in London. The rates ranged upwards in the other towns to 34·1 in Manchester, 35·4 in Blackburn, 37·5 in Halifax, and 37·8 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 911, 1106, and 1214 in the three preceding weeks, declined last week to 1203, [illegible] diarrhœa, 70 from scarlet fever, 69 from whooping-cough, 64 from measles, 52 from "fever" (principally enteric), 23 from diphtheria, and 15 from small-pox. These diseases caused the lowest death-rates in Derby, Bristol, and Plymouth, and the highest in Wolverhampton, Blackburn, and Preston. The highest rates of mortality from diarrhœa were recorded in Hull, Wolverhampton, and Preston; from measles in Halifax and Bolton; from scarlet fever in Leeds and Cardiff; and from whooping-cough in Sunderland. The 23 deaths from diphtheria in the twenty-eight towns included 16 in London and 2 in Portsmouth. Small-pox caused [illegible] deaths in London, 1 in Liverpool, 1 in Sheffield, and 1 in Sunderland. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which in the seven preceding weeks had declined from 1368 to 587, further fell to 539 on Saturday last; the new cases admitted were 63, against 110, 64, and 53 in the three previous weeks. The Highgate Small-pox Hospital contained 20 patients on Saturday last, 4 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which in the four preceding weeks had declined from 196 to 157, rose last week to 181, and were 12 above the average. The causes of 103, or 2·4 per cent., of the 4245 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Birmingham, Norwich, Newcastle-upon-Tyne, and in three smaller towns. The largest proportions of uncertified deaths were recorded in Preston, Salford, Bolton, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which in the two preceding weeks had been 20·7 and 20·8 per 1000, declined to 20·8 in the week ending the 30th ult., when it was 4·5 below the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 15·0 in Perth and 15·1 in Aberdeen, to 22·8 in Dundee and 24·9 in Glasgow. The 503 deaths in the Scotch towns included 68 which were referred to diarrhœal diseases, 27 to whooping-cough, 6 to scarlet fever, 8 to diphtheria, 6 to measles, 4 to "fever," and not one to small-pox; in all, 121 deaths resulted from these principal zymotic diseases, against 109 and 111 in the two preceding weeks. These 121 deaths were equal to an annual rate of 5·0 per 1000, which was 2·6 below the average rate from the same diseases last week in the twenty-eight English towns. The deaths referred to diarrhœa, which in the two previous weeks had been 51 and 74, declined last week to 68, but were double the number in the corresponding week of last year; 36 occurred in Glasgow and 10 in Dundee. The 27 fatal cases of whooping-cough showed a further slight decline from recent weekly numbers, and included 11 in Glasgow, 5 in Edinburgh, and 5 in Aberdeen. Of the 8 deaths from scarlet fever, which were 6 less than the number in the previous week, 7 occurred in Glasgow. The 8 fatal cases of diphtheria also showed a decline, and included 5 in Glasgow and 2 in Edinburgh. The 6 deaths referred to measles corresponded with the number in the preceding week, and of the 4 fatal cases of "fever" 3 occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns showed but slightly from those returned in recent weeks, and corresponded with the number in the same week of last year. The causes of 83, or more than 16 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been in the three previous weeks from 22·4 to 30·3 per 1000, declined to 29·9 in the week ending the 30th ult. During the first nine weeks of the current quarter the death-rate in the city averaged 23·8 per 1000, the rate during the same period being 22·4 in London and 16·7 in Edinburgh. The 227 deaths in Dublin last week were within 3 of the high number in the preceding week, and included 65 which were referred to the principal zymotic diseases, against numbers steadily increasing from 16 to 45 in the five preceding weeks. Of these, 48 resulted from diarrhœal diseases, 9 from scarlet fever, 4 from whooping-cough, 3 from "fever," 1 from diphtheria, and not one either from small-pox or measles. The 65 deaths were equal to an annual rate of 9·7 per 1000, a rate from the same diseases not exceeding 4·4 in London

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3·6 in Edinburgh. The fatal cases of diarrhœa, which had been 8, 22, and 25 in the three previous weeks, further rose to 48 last week. The 9 deaths from scarlet fever showed a decline of 4 from the high number in the preceding week. The fatal cases of whooping-cough showed a slight further increase upon recent weekly numbers, while those of "fever" corresponded with the number in the previous week. Four inquest cases and four deaths from violence were registered in the city during last week, and 34 deaths occurred in public institutions. The deaths of infants showed a further increase upon those returned in recent weeks, while those of elderly persons showed a decline. The causes of 39, or nearly 17 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General Francis Holton, M.B., retires on temporary half-pay; Surgeon-Major Joseph Bourke, late Medical Department, has been permitted to commute his retired pay.

ADMIRALTY.—Fleet Surgeon William Shute Fisher, B.A., M.B., has been placed on the retired list, with permission to assume the rank and title of Retired Deputy Inspector-General of Hospitals and Fleets; Staff Surgeon John Buckley has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet.

The following appointments have been made:—Surgeons George W. Low, Charles W. Hamilton, and Henry Harries, to the *Alexandria;* Surgeon Albert P. Wells to be Surgeon and Agent at Douglas, Isle of Man; Surgeon J. Chaque, to be Surgeon and Agent at Castletown, Isle of Man; Staff Surgeon Hugh H. Hannay, to the *Britannia;* Staff Surgeon Heaver Sugden, to the *Hector;* Surgeon Edward Ferguson, to the *Rapid;* Surgeon John Ottley, to the *Vernon;* and Surgeon William H. O'Meara, to the *Repulse.*

Correspondence.

"Audi alteram partem."

TREATMENT OF ASIATIC CHOLERA.

To the Editor of THE LANCET.

SIR,—Notwithstanding the rapid and effective strides which sanitary science has made and is making, and the manner in which it is being applied to stay the progress of the common enemy cholera, it appears to me that the medicinal treatment of this disease, whether prophylactic or curative, is uncertain, and that the writers upon the subject in the medical press touch upon the subject in a delicate manner. If a number of professional men were asked what their treatment would be, their replies, I think, would vary in form, and would be contradictory. We have to deal with (1) a zymotic disease; (2) a disease where everything is rejected by vomiting, and (3) a disease in which rapid collapse takes place.

Treatment.—Put the patient to bed. Inject hypodermically a solution of carbolic acid (half a grain of crystallised carbolic acid in twenty drops of water) with a solution of hydrochlorate of morphia, which may be repeated at intervals, as necessary. Let him have a hot-air bath made with a lamp and cradle over the bed, or hot bricks wrapped in flannel, and applied to the soles of the feet and armpits. Let him sip freely and frequently of sulphurous acid lemonade with glycerine, of which the following is the formula: Sulphurous acid, one ounce; glycerine, three ounces; tincture of lemon, four drachms; syrup to eight ounces. Half an ounce mixed in a tumbler of water makes "sulphurous acid lemonade."

Diet.—Let his diet be composed solely of white of egg well beaten up, and mixed with an equal quantity of water, and given cool in small quantities frequently.

External treatment.—The patient to be sponged occasionally with hot solution of carbolic acid (as in small-pox, to protect the patient as well as the nurse). All soiled linen coming from the patient to be put into a like solution.

During an epidemic of cholera something important also may be done in the prophylactic way, by the administration of such medicines as will, we know, act as bactericidal anti-zymotics. An ingenious plan was adopted during a former epidemic by my friend, Dr. Jas. Arthur Power, by means of which all our households took anti-zymotic medicine inadvertently; the plan was the mixture of powdered hyposulphite of soda with ordinary table salt, in the proportion of a small teaspoonful to an ordinary salt-cellarful; thus a good anti-zymotic was administered daily in a tasteless form. A pill containing half a drop of creasote taken with meals is an excellent anti-zymotic remedy. All drinking water should be boiled and filtered and allowed to cool.

I am, Sir, your obedient servant,

Sydenham, August, 1884. F. EACHUS WILKINSON, M.D.

THE "METAPHYSICS" OF COMTE.

To the Editor of THE LANCET.

SIR,—Knowing something of the writings of Auguste Comte, and being well acquainted with the distinguished group of men who are the propagandists of his doctrines in this country, I am completely at a loss to understand what Dr. Moxon means by his allusion to the "most rubbishy metaphysics of Comte." It would, indeed, be hardly possible to devise a more incongruous phrase, for that great thinker claimed before all things to be the prophet and apostle of positive science; and if there be one feature of his system more distinctive than another, it is its complete divergence from, and antagonism to, metaphysical speculation. "The big, merciless hand," which Dr. Moxon deprecates as an attribute of our profession, may be wielded by the critic to malign the great as well as to crush the small, but the least we can look for is the exercise of some discretion in its use. It is the fate of Comte's philosophy to meet with assiduous misrepresentation; but no one who had ever read a line of Littré, of John Stuart Mill, of Buckle, or of G. H. Lewes, could fall into the ludicrous error of taunting it with being metaphysical. Indeed, it is not necessary to go beyond your own pages for the complete refutation of such an idea, which will be found well expressed in Dr. Walshe's able and scholarly papers on "Physiology *v.* Metaphysics in Relation to Mind," published in THE LANCET of this year.

I remain, Sir, your obedient servant,

Sussex-gardens, Hyde-park, Sept. 1st, 1884. T. FITZPATRICK.

VACCINE.

To the Editor of THE LANCET.

SIR,—I observe in your annotation of July 5th on "Vaccination in the Metropolis," you remark that arm-to-arm vaccination is "far more protective" than any other. I would respectfully ask if statistics are available to confirm this statement, for it has always seemed to me that a successful vaccination exhibiting the Jennerian vesicles is all that can be desired, let the source of the virus be human or bovine, tube, point or crust. If your position is the correct one, we have the curious spectacle of a human vaccinifer furnishing the ideal vaccine, without himself or herself having the best protection. In Canada the human crust is much used.

I am, Sir, yours truly,

Montreal, August 4th, 1884. T. D. REED, M.D.

*** Our words were, "arm-to-arm vaccination is far more protective than the use of stored lymph, whether it be human or animal." The reason for this statement is that vaccination with stored lymph "takes" with much less certainty, and often produces much smaller vesicles than vaccination done directly from arm to arm. See also the report of the medical officer to the Local Government Board for the year 1882, article, "The Animal Vaccine Establishment."—ED. L.

HOSPITALS FOR INFECTIOUS DISEASES.

To the Editor of THE LANCET.

SIR,—On my return from the seaside I saw the article on this subject by Dr. Wilson in your journal, in which he refers to a paper of mine read at the Society of Medical Officers of Health, and published (in part) in a medical contemporary. As the whole of the part referring to the "spot maps" I have made was left out in that abstract,

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the evidence on which my statements were based is necessarily incomplete; otherwise I think Dr. Wilson would have come to another conclusion. He also observes that I said that the line of direction of alleged infection was against the wind. This is an error, as I said it should have been E.N.E. instead of S.E. and E.S.E., but that the wind probably veered a little without being noticed, as I note the direction only once a day.

I am, Sir, yours faithfully,

JOHN W. TRIPE, M.D.,

August 30th, 1884. Medical Officer of Health for Hackney.

NEWCASTLE-ON-TYNE.

(From our own Corresponden.t)

PROPOSED TESTIMONIAL TO THE MAYOR OF NEWCASTLE-ON-TYNE.

THERE was an important gathering of citizens in our Council Chamber on Friday last for the purpose of furthering the movement to present the mayor, Mr. H. W. Newton, surgeon, with a testimonial in recognition of his services in connexion with the recent Royal visit to Newcastle. The chair was taken by Mr. T. L. Gregson (our deputy mayor), an old and respected member of our profession, who made a graceful speech, in which he observed that he thought it would be discreditable if, after the admirable manner in which Newcastle had vindicated its loyalty, they did not recognise in a fitting manner the way in which the mayor had so successfully carried out all the proceedings in connexion with the recent Royal visit. He had seen himself several Royal receptions, but none in which hearty loyalty was so thoroughly accompanied by good order, excellent feeling, and sobriety as that of Newcastle. No doubt much of the work in connexion with the event had to be done by other people, but the crowning success was due to the exertions of the mayor in uniting all into the one effort of making the occasion of the visit a success. On the conclusion of the address a subscription list was opened, and about two hundred guineas were received. It is felt here, in the profession and outside of it, that our worthy mayor well deserves this recognition of his kind and intelligent attention to the wants and comforts of all classes of our citizens on the occasion.

THE DEATH FROM ENGLISH CHOLERA AT ALNWICK.

The Board of Health at Alnwick have had a special meeting in reference to the fatal case commented upon in your issue of last week. Some members have taken the coroner to task for sending a copy of the depositions to the Local Government Board; some are also severe on the medical officer of health for giving his evidence; but, so far, THE LANCET has escaped. One of the members stated that he had been informed that the man previous to his death had eaten fourteen fresh herrings and drunk two quarts of beer with a quantity of cabbage-water for a wager; be this as it may, the Local Government Board have taken the matter up, and have written to say that they have instructed their inspector, Dr. Spear, to visit the district at an early date and to inquire into its general condition.

SUNDERLAND INFIRMARY.

The past year, it appears, has witnessed the largest number of in-patients the institution has ever received, no less than 1482 having been treated. The average number of patients resident in the house daily has advanced from 104·1 in 1882–83 to 119·4 in 1883–84. The death-rate has been reduced from 3·8 per cent., as against 4·3 per cent. in the preceding year; and 70 per cent. of the patients have been cured. There were 231 patients in the children's wards during the year, and it is satisfactory to note that these wards are affording so much relief to the little sufferers of the town and neighbourhood. A very important point deserves full notice in connexion with Sunderland Infirmary; it is that the workmen's subscriptions from the various collieries &c. in the neighbourhood form the most important item in the income of the institution. The expenditure connected with the building, fitting up, and furnishing of the new wing of this very fine infirmary amounts to nearly £11,000, on which there is a debt, but not a very heavy one.

Newcastle-on-Tyne, Sept. 1st, 1884.

CANADA.

(From a Correspondent.)

THE COUNCIL OF THE COLLEGE OF PHYSICIANS AND SURGEONS, ONTARIO.

IT is confidently expected that this body is about to take some definite steps in the direction of securing power from the Legislature to deal in a severe and peremptory manner with a class of men who, after having obtained a medical diploma, prostitute themselves and their profession by engaging in a disreputable kind of practice, or by actually hiring themselves out to some daring adventurer who seeks to drive a good business by every possible form of advertising. To reason with such persons is utterly useless, as they have cast to the winds every rule of ethics which might be supposed to have any hold upon the members of the healing art. It is really to be hoped that the coming session of the Legislature will confer upon the College the power to remove from the Register the names of all who may engage in any such nefarious kind of practice.

CHOLERA PRECAUTIONS.

Although there is not much excitement regarding the prospects of a visit from this dreaded disease, very useful measures are being enacted. The larger cities are stirred up to a careful inspection of their sanitary condition. Dwellings and out-houses are being examined, all filth removed, and the streets and sewers well cleansed. In the maritime provinces, a quarantine has been ordered for all vessels from Marseilles and other suspected ports. The Ontario Board of Health is doing useful work by scattering information among the people, and inducing the smaller towns to put their houses in order.

A NEW MEDICAL SCHOOL.

It is now a certainty that there is to be a medical college in Winnipeg. Of course the North-western part of the Dominion is very vast as far as territory is concerned; but the number of practising physicians in it is not very great. The opportunities for clinical teaching in Winnipeg cannot be as good as in some of the more easterly and larger cities. Manitoba, however, is increasing rapidly in population, and there may be a useful and bright future before the young college. It is to be in affiliation with the University of Manitoba, which has instituted a very creditably high standard for the entrance examination.

HIGH-PRESSURE IN SCHOOLS.

At the Ontario Teachers' Association meeting the other day, Principal Grant, of Kingston, made a strong appeal against the system of too extensive a curriculum of study for young children. He took the ground that to ask too much from a child was to fail in getting any good work done. The mind, crowded with too many subjects, had not the time necessary for accurate study; while the habit of doing loose, imperfect work had a bad effect on the young mind, and was not education at all.

THE BRITISH ASSOCIATION.

It is certainly a noteworthy event to see this distinguished Association assembling in a city three thousand miles distant from York, where it held its first meeting in 1831. Mr. Phillips, a secretary of the Yorkshire Philosophical Society, acting on a suggestion in a letter to him from Sir David Brewster, issued invitations to the leading science men of Britain, and out of the meeting thus summoned has grown the present Association. Canada was but little thought of then, and was perhaps regarded as a wild woodland, the fitting home of the Red Indian. Many of the members of the Association intend to give the country a general visit, while quite a number have taken tickets for the Rocky Mountains and other points in the "far West."

August 15th, 1884.

THE RED CROSS ASSOCIATION.—The members of this Association, to the number of about 100, assembled at Geneva, on Monday last, this being its third international convention. The president is M. Moynier; the three hon. presidents are Professor Lehmore, Professor von Langenbeck, and Count Sérurier; and Mr. John Farley is deputy chairman. The session will last a week.

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ITALY.

(From our own Correspondent.)

"EVERY inch a king!" Such is the English equivalent for the words of gratitude, admiration, and pride with which Italy, from Turin to Brindisi, from Venice to Palermo, follows the tour of Humbert II. through the cholera-stricken communes. Two years ago, during the disastrous floods in the Venetian territory; last year, after the calamitous earthquake in the island of Ischia; this year, in the choleraic centres of Piedmont—the King has endeared himself to his subjects by his faithful reproduction of that heroic self-abnegation and paternal solicitude on their behalf which they love to associate with his sire, the "*Re galantuomo.*" Modestly attired in a low round hat, with walking-stick in hand, accompanied by the Prime Minister Depretis, by his adjutant, and by the local physicians, he has been visiting every hospital where the cholera patients are housed, going from bed to bed, inquiring into each individual case, taking note of the treatment and its results, addressing genial words of encouragement to the more despondent sufferers, and leaving substantial donations to each institution on his departure. Praiseworthy as such conduct would be in a country like ours, it is trebly so in Italy, where ignorance, superstition, and centuries of insanitary prejudice have added tenfold to the miseries and the dangers of the cholera epidemic. The suspicion of the patients and their friends that the physicians and priests are in league to poison them, or "choke them off anyhow," is but one of the many difficulties of the situation. In Piedmont, the least uncivilised of the Italian provinces, the district medical officers have come upon cabins, wigwams they may be called, where in one room lie huddled together father, mother, and half a dozen children of all ages, some of them moribund; some in the incipient stage of disease; some candidates for other maladies besides cholera, most of them stark naked, and all of them without fresh air, pure water, or wholesome food. Yet, even in these conditions, the medical officers find it next to impossible to remove and isolate the cholera patients. Where these have been torn from their surroundings and placed in some temporary *ricovero*, they have actually crawled back to their hovels, and nothing but military sentryship has sufficed to keep them in their new quarters when again brought back to them. Thanks to the King's visits, this morbid distrust of the medical man and his prescriptions is on the wane, and already in Busca and Cuneo, and their neighbourhoods, the epidemic is in full retreat.

Fortified by the Royal example, public men are redoubling their zeal in enlightening the popular mind as to the causes, the course, and the cure of cholera. A strikingly dramatic scene was witnessed the other morning at Peregallo in Lombardy. It was Sunday, and the people had assembled in crowds to hear the special prayers prescribed by the archbishop to appease the anger of the Almighty and to stay the scourge of cholera. The hour had been changed from the usual one of 10 A.M. to 5 A.M., in order to secure fresher air for the more numerous congregation. The mass was over, and in another minute the kneeling devotees would have risen to disperse, when suddenly a voice was heard sonorously and commandingly bidding them remain, and all eyes turned and fell on an old gentleman in white hair and of ruddy complexion from whom the words proceeded. In dead silence he spoke to the following effect:—"I take the opportunity of finding you assembled here to say a few words to you on the cholera. Your good priest, Don Antonio, by order of the excellent archbishop, has engaged you, as becomes his office, in matters which concern the soul. I as a layman and a member of the Communal Committee of Public Hygiene, will speak to you on matters which concern your body. Life has been given us by God, and it is our duty to guard it well and preserve it as long as possible; and I believe I am not desecrating this place by telling you how this, in the present circumstances, is to be done. The cholera is in full career throughout Italy. Workmen—mechanics without conscience, flying from the cholera-smitten towns of France, where they were employed, violating the sanitary cordon placed by Government on our confines, and refusing to submit to quarantine, where, after all, they are lodged and boarded gratis—have penetrated into the heart of Italy and carried the disease into many districts. So long as the danger was remote the syndics took precautions, and nothing more was thought of it. But now it is at our gates. Milan, Monza, and this neighbourhood have hitherto escaped attack; but not so Bergamo, Lodi, Treviglio, and Pescarenico. With the easy and frequent communication now established, we may from one moment to another have the enemy upon us, and we must therefore be prepared to repel it. First of all, let me enjoin on you cleanliness—cleanliness of your bodies and of your dwellings. Next, moderation in drinking and in eating. Finally, and above all, if any of you should have the ill-fortune to be seized with the malady, give immediate notice of the fact; prompt remedies can save you when delay would be fatal. We see how, by culpably persisting in concealing the outbreak at Spezia, the cases rose in twenty-four hours to sixty, of whom thirty-nine died. Yesterday I heard someone in his ignorance say, 'If I were seized with cholera, I would conceal the fact so as not to be taken to the lazaretto,' which is, when all is said and done, a pleasant enough domicile, quite isolated, with an agreeable exposure, conceded *ad hoc* by our excellent member of Parliament, Count Rinaldo Taverna, 'because,' added the individual, 'they give the patients poison there, of which they are sure to die.' These impressions are follies, which ought neither to be conceived nor uttered. Is it not the fact that the moment you feel ill, say with headache, you at once send for the doctor, and if he does not arrive forthwith and prescribe for you, you angrily upbraid him? And why is it that in the case of cholera you keep the physician at arm's length for fear he would hasten your death with poison? Does he not come to you in such a malady to the great risk of his own life? Would it not be less dangerous for him to leave you alone to die than come all the way to poison you? What interest can the medical man and the communal authorities who appoint him have in causing your death, when they would thereby be putting your widow and your orphans on the charity of the commune, which would have the burden of maintaining them? Be advised, then. The poison you seem to dread, given opportunely and in the proper dose, will be your salvation. You have seen my father, who, thanks to laurocerasus, which is a powerful poison, was cured, and lived for fifteen years, and yet a teaspoonful of it would kill you. It is a duty of conscience I am imposing on you. All of us have our lives at stake. I, in spite of my seventy-two winters, who would have but little to lose if I were stricken down with cholera, will continue to wear my flannel shirt and send for the first medical man the moment I require him."

The effect of this brief address was electrical. The people left the church profoundly impressed, and the harebrained chatter about avoiding the lazaretto, with its doctors and their drugs, has been heard no more in Peregallo. And who was the speaker? He turned out to be Signor Carlo Curti, a landed proprietor in the neighbourhood, a communal councillor, a patron of the Church, and superintendent of the communal schools. The leading Milanese journal printed the address pretty much as I have given it, and it is now being copied and circulated in other provinces, where it is much more required than in Lombardy.

In deplorable contrast to the wise words and philanthropic attitude of Signor Curti is the conduct of Signor Oliva, a well-known member of the Italian Parliament. On arriving at the Roman railway terminus, he declined to submit to the fumigation imposed on all passengers, and even used violence to the delegate of public security who was about to turn the carbolic spray upon him. Granting that such fumigations are medically useless, he had no right to contravene the orders of the Government. It would have cost him little to have undergone the process, which, be it remarked, reassures a vast number of his fellow citizens, and saves them from the panic which often invites the disease it dreads. The *Opinione* comments severely on the churlish demeanour of the *borné* lawgiver, and anticipates, on the reassembling of Parliament, a searching interpellation on the subject.

Rome, Sept. 1st.

HOSPITAL SUNDAY AT WESTON-SUPER-MARE.—The appeal on the 31st ult. in the churches of Weston-super-mare in aid of the local hospital produced £265. The offertories from other denominations are not yet complete, but is is hoped that these, with the out-town collections, will swell the total amount of the Hospital Sunday effort to £450.

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Obituary.

FREDERICK CHAMBERS, L.S.A., J.P.

THIS old and highly esteemed practitioner died on Aug. 21st, aged eighty-three, at his residence, Vicarage-crescent, Margate. His death was caused by old age and the depressing effect of an abscess in the foot, the result of a suppurating corn; grief for the loss of his wife, who had died a few months before, having previously brought him into a low condition of health. Mr. Chambers studied at the London Hospital in the days of Sir William Blizard and Dr. Ramsbotham, and the history of his early life carries us back to the memory of the past. In 1820, whilst a ship-surgeon, he visited Pitcairn Island and stayed a fortnight with John Adams, of the *Bounty*; after travelling in various parts of the world he resumed his studies at the London Hospital, and in 1832 passed the Apothecaries' Hall. Subsequently Mr. Chambers carried on a successful practice in the Hackney-road for thirty-six years, after which he retired and settled in Margate, where he remained till he died. His residence in Margate proved a real blessing to the town. He found the place in a wretched sanitary condition; the inhabitants drank water from polluted wells, and pigstys and filth were everywhere paramount. In spite of abuse and opposition, Mr. Chambers fought earnestly and untiringly in the cause of sanitation; he attacked abuses without fear or favour, and in time brought about a better state of things. For many years he was a leading spirit in the town; he was three times mayor, was a guardian of the poor, a justice of the peace, and filled various other honourable and unpaid offices.

Mr. Chambers was esteemed and respected by all, but probably only his more intimate friends knew the full worth of his character; his love of truth, his hatred of all sham, and his staunch and never-failing friendship rendered him especially dear to these. His funeral, which took place at Margate on Tuesday, the 26th ult., was attended by the Mayor and corporation, and by his relatives and friends.

JOHN POPHAM, M.A., M.B.

WE regret to have to record the death in his seventy-eighth year of an old member of the profession and public servant, Mr. John Popham, late of Cork. He was a scholar, senior classical moderator, and Berkeley gold medalist of the University of Dublin. He held the M.B. of Dublin and of Cambridge, the licences of the King and Queen's College of Physicians, Ireland, and the membership of the Royal College of Surgeons of England. Mr. Popham was for many years senior medical officer to the Cork Union Workhouse and for nearly forty-two years physician and chemical lecturer to the North Infirmary, Cork, once local secretary to the medical section of the British Association, and lecturer on materia medica to the Cork School of Physic. His contributions to the periodical medical press were both numerous and valuable. About two years ago he retired from practice and went to reside at Ealing, where he died on the 26th ult., after a few days' illness, of bronchitis and syncope of the heart, accelerated by the effects of an accidental fall.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 28th:—

Davies, Howard, The Ash Grove, Pontypridd.
German, Hanway, Maywood, Sevenoaks.
Green, C. R. Mortimer, St. Simon's Vicarage, Morpeth-street.
Uddin, Tamis, Pump-court, Temple.
Wharry, Henry Gordon Oliphant, Gordon-square.
Wood, Edward, Oakley, Lansdown-road, Tottenham.

The following gentleman also on the same day passed the Primary Professional Examination:—

Congdon, George Julius, Guy's Hospital.

BRITISH MEDICAL SERVICE.—In the list of successful candidates published last week, for "H. P. James" read "H. D. James."

ON their visit to Hull next month, the Duke and Duchess of Edinburgh have consented to take part in the ceremony of laying the foundation stones of two wings to be added to the Hull Infirmary.

ACCIDENT TO A GYMNAST.—Another case of serious injury resulting from perilous gymnastic performances has occurred at Blackpool. It is surely time these sensational exhibitions were prohibited, in the interest alike of audience and performers.

TWO remarkable cases of blood-poisoning in Suffolk have been reported. In one of them the morbid process seems to have been induced by a slight wound of the arm resulting from a fall on stubble; in the other case a farm labourer cut his finger with a wheat straw, the arm became greatly swollen, and the man died.

IN the endeavour to ascertain the cause of a serious outbreak of fever which occurred in Beverley a short time ago, the municipal authorities commissioned an eminent sanitary engineer to investigate the health conditions of the town. The report presented by that gentleman inculpates the water-supply—a charge which the water company repudiates, and undertakes to refute.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The following is the list of officers for the ensuing session: President: Mr. F. Lawrance. Vice-Presidents: Drs. Alderson, Travers, Thudichum, and Pickett. Council: Mr. Barnes, Dr. Clippingdale, Mr. Swinford Edwards, Mr. Hemming, Mr. J. R. Lunn, Mr. Potter, Mr. Walker, Dr. Hart Vinen, Mr. R. F. Benham, Mr. C. B Keetley, Dr. Owles, and Surgeon-Major Scriven. Treasurer: Mr. Alfred Cooper. Secretaries: Dr. Campbell Pope and Mr. Gunton Alderton. Meetings are held on the first Friday in each month, at 8 P.M., at the West London Hospital.

HAWICK COTTAGE HOSPITAL.—The memorial stone of this hospital was laid with masonic honours on the 30th ult. by the Earl of Mar and Kellie. The scheme for the erection of the hospital originated in 1882, when the surplus of the proceeds of the Combe Lectures by Dr. Andrew Wilson formed the nucleus of a fund which now amounts to nearly £3000. The building, which will contain fourteen beds, with space for more, will, with the grounds, cost about £1600, and the remainder of the funds will be applied towards the maintenance of the institution.

THE MALODOROUS LIFFEY.—The recent sultry weather has made this river a source of annoyance to the citizens of Dublin by the disgusting effluvia emanating from it at low tide. That these noxious gases must be deleterious there can be no question, and from a sanitary point of view the river is a disgrace to the corporation and citizens. The subject is ventilated and brought into notoriety every summer, and then gradually subsides until again resuscitated the following year. The main drainage scheme in the present highly taxed condition of the city seems impossible; but some more economical method which would remove the nuisance might surely be adopted.

SUICIDE OF A SURGEON.—The "Australasian Medical Gazette" reports the following sad event:—Mr. Griffith Job Jones, L.R.C.P. Edin., 1879, M.R.C.S. Eng., 1880, a medical officer connected with the Destitute Asylum, committed suicide in the York Hotel, Adelaide, on June 22nd, by taking a large quantity of chloroform. In a letter addressed to Dr. Way he gives as a reason for the rash act the inquiry which was pending as to the outbreak of ophthalmia amongst the Industrial School children at Magill that were under his charge, which appointment he had held for about six weeks. The deceased was twenty-six years of age.

DUBLIN MEDICAL STUDENTS' CLUB.—Several members of the medical profession resident in Dublin have issued a circular appealing for aid in starting a "furnishing fund" for this Club, which has hitherto, it is satisfactory to note, been self-supporting. The sum of £200 is asked for, and it is requested that contributions may be sent to Mr. W. G. Tetman, L.R.C.S.I., 91, Harcourt-street, Dublin. The circular is signed by Messrs. J. Kai Barton, President of the Club, Session 1882-83; W. L. Wheeler, President of the Club, Session 1883-84; D. J. Cunningham, Vice-President; W. Stoker, Vice-President; F. J. B. Quinlan, Vice-President; Wo Thursley Stoker; T. Alnutt Nixon; and W. G. Toomey, LL.D., who undertake to supervise the disbursement of all sums contributed, and to see that they are applied only to the purpose for which the money is subscribed.

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Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BATTEN, GEORGE B., M.B., C.M.Ed., has been appointed Assistant Medical Officer to the Fife and Kinross District Asylum, Cupar.

BERESFORD, CHARLES WILLIAM, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Markyate-street District of the Luton Union, vice Mackey.

BURRY, HENRY B. PULLEN, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Petersfield Union, vice Pearse.

CORNER, M. CURSHAM, L.S.A.Lond., has been appointed Resident Medical Officer to the Tower Hamlets Dispensary, vice Samuel E. Pritchard, L.R.C.P.Lond., M.R.C.S., deceased.

FORSYTH, WILLIAM, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Tirhut State Railway, and stationed at Mozafferpur.

FOWKE, FREDERICK WILLIAM, M.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Priors Marston District of the Southam Union, vice Culhane, resigned.

LOWE, GEORGE, M.B., C.M. St. And., L.R.C.P.Ed., has been appointed Medical Officer for the Eighth District of the Depwade Union.

MASKEW, JOHN S., L.R.C.P.Ed. &c., has been appointed a Medical Officer to the New Forest Union, vice R. W. Jenkins, deceased.

SPICER, R. H. S., M.D., has been appointed Medical Officer and Public Vaccinator for the North Molton District of the South Molton Union, Devon, vice James Flexman, resigned.

VIANT, HY., L.R.C.P.Ed. &c., has been appointed Medical Officer of Health for the New Forest Rural District, vice Jenkins, deceased.

WHITE, BARRINGTON STER, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Horsmonden District of the Tonbridge Union.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 30th ult., at Clifton-gardens, W., the wife of G. D'Arc Adams, M.D., of a daughter.

GAYFORD.—On the 28th ult., at Lady Margaret-road, London, N., the wife of Charles Gayford, M.R.C.S., late of Hoshangabad, C.P. India, of a son, stillborn.

GRAY.—On the 29th July, at Cinnamara, Assam, the wife of Edward Gray, M.B., C.M., of a son.

LANKESTER.—On the 29th ult., at Gwendwr-road, West Kensington, the wife of Herbert H. Lankester, M.R.C.S., of a daughter.

MARRIAGES.

BUCK—BEARE.—On the 30th ult., at the Church of St. Leonard, Streatham, London, Charles William Buck, M.R.C.S., of Settle, son of the late Richard Hardacre Buck, of Settle, Yorkshire, Solicitor, to Emma Foote, third daughter of William Beare, of Roboro Villa, Streatham, S.W., and Rathbone-place.

LATHAM—BERNARD.—On the 28th ult., at the Parish Church, Whitby, Peter Wallwork Latham, M.B., Downing Professor of Medicine, Cambridge, to Annie Frances Bernard, second daughter of the late James F. Bernard, of Clifton.

PARSONS—COLE.—On the 23rd ult., at St. John's, South Hackney, Charles W. Parsons, M.R.C.S., L.S.A.Lond., to Alice, eldest daughter of H. B. Cole, Esq., of Hackney.

SEWELL—WHITELAW.—On the 26th ult., at Rowmore, Row, Dumbartonshire, by the Rev. William Dunn, of Cardross, William R. Sewell, M.D., of Helensburgh, to Jessie, daughter of Alexander Whitelaw, Esq.

STRADLING—RENNY.—On the 29th ult., at St. James's, Shirley, Hants, William Arthur Stradling, M.R.C.S., C.M.Z.S.Lond., &c., of Watford, to Emmaline Isabelle (Lina), second daughter of Thomas Renny, Esq., of Durham Lodge, Shirley, and Arequipa, Peru.

DEATHS.

BROWNE.—On the 30th ult., at Ramsgate, after a brief but painful illness, John Collis Browne, M.D., late H.M. 98th Regiment, aged 64.

GARRARD.—On the 27th ult., suddenly, at his residence in Kington, Herefordshire, George Samuel Garrard, M.R.C.S., in his 59th year.

LYDALL.—On the 28th ult., at Exmouth, Devon, Wykeham Hawthorne Lydall, L.R.C.P.Ed., late of Mecklenburgh-square, London, aged 46.

MICHAEL.—On the 29th ult., at 1, The Circus, Bath, Surgeon-Major David Michael, F.R.C.S.E., in his 52nd year.

WORSLEY.—On the 30th ult., at his residence, Hornby House, Heywood, near Manchester, James Henry Worsley, M.R.C.S.Eng., aged 43.

YOUNG.—On the 31st July, at Bequia, St. Vincent, West Indies, James Justine Henry, infant son of James Vance and Mary Louisa Young, aged 14 days.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, September 4th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Aug. 29	29·71	N.W.	59	53	111	67	53	·02	Bright
,, 30	29·93	W.	59	56	85	69	53	..	Overcast
,, 31	29·82	S.W.	67	64	91	70	57	·10	Overcast
Sept. 1	29·64	W.	61	60	94	66	59	·15	Raining
,, 2	29·76	W.	61	56	111	69	55	·27	Cloudy
,, 3	29·75	S.W.	59	55	96	69	53	·03	Cloudy
,, 4	29·43	N.	55	54	..	..	54	·69	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE STUDENTS' NUMBER OF "THE LANCET" will be published on Saturday next, Sept. 13th. Those gentlemen holding official situations connected with medical institutions in the United Kingdom who have not yet forwarded the necessary information to our Office for publication in that number are earnestly requested to send it *without the delay of a single post.*

AN "UNPROFESSIONAL" DOCTOR.

THE author of "Between the Heather and the Northern Sea"—a capital tale appearing in *Good Words*—thus describes one of the characters in the story: "Dr. Armitage was a man whom it was good to have near you in such a moment [a case of sudden and serious illness]. He was the most unprofessional of professional men. Though you had stood by a dozen sick beds with him, you did not associate him with the sickness or with the gloom, but rather with all alleviating things—the smiles, the small pleasantries, the newest bit of lively news, the first hope he had given you, the last laugh he had had over your too tearful despondency. If he had been with you in a dark moment, you only remembered his skill, his quiet strength, his unfailing sympathy."

St. George's.—Notably in therapeutics.

TREATMENT OF THE BITES OF THE 'HARVEST BUG."

To the Editor of THE LANCET.

SIR,—Dr. Cornelius Fox's letter of inquiry as to relief from the bite of the "harvest bug" (Septus autumnalis), and Dr. C. S. Taylor's reply, containing careful preventive measures by sulphur fumigation, are interesting; for only those who are worried by these autumn pests can sympathise with any effort to rid themselves of them. I have been staying at the picturesque and healthy little seaside resort of Hythe, near Folkestone; and being troubled with these pests, I found a liniment composed of a drachm of spirits of chloroform and camphor, and two grains of bichloride of mercury, to four ounces of rosewater, a good application to allay the irritation caused by them. The character of the insect, together with the symptoms caused by the bite, are described in my Lectures on Parasitic Eruptions of the Skin, published by Messrs. Lewis and Son in 1881. A little camphorated oil rubbed into the skin of the legs and arms will generally prevent these attacks.

I am, Sir, yours obediently,

Sackville-street, W., Sept 2nd, 1884. JAMES STARTIN.

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THE LATE DR. MILLER OF SOUTHSEA.

DR. H. A. MARTIN of East Cosham, Hants, presents his compliments to the Editor of THE LANCET, and will feel greatly obliged by his permitting a copy of the enclosed to be inserted in the next issue of his journal, on behalf of the widow of the late Dr. Moore Miller, J.P., Southsea, who died in July last, leaving her in very straitened circumstances.

"Some friends of the late Dr. Miller are desirous of presenting his widow with some substantial mark of their appreciation of his merits, and of their respect for his memory. Any donation will be gladly received by Captain McCoy, Elm Grove Villa, Southsea; or can be paid into Messrs. Grant and Co.'s Bank, Portsmouth or Southsea, to the joint names of Admiral Chads and Captain McCoy."

Atropos.—Dr. Burney Yeo on Health Resorts and their Uses (Chapman and Hall).

Mr. R. Durdin will find in our next number the information he desires.

"SKILLED NURSING."

To the Editor of THE LANCET.

SIR,—As the letter in your issue of last week signed "E. Faithfull" is in many respects misleading, and evidently written without a clear knowledge of facts, may I, as the superintendent of an institution for nurses, say a few words in reply? First, a nurse does not (except in monthly nursing, in which the training is short, and consequently has to be paid for, as the nurse quits the hospital as soon as she is efficient) expend a considerable amount of money in attaining proficiency. Time, as a matter of course, she must give, but no longer than would be required to turn her out a thorough dressmaker or lady's maid. In all general hospitals a nurse receives a salary almost from the first, and uniform after the first few weeks. If at the end of her training she elects to enter an institution, she receives a salary of from £20 to £25 per annum, according to her capabilities, and in some homes uniform as well, and "everything found." She has only her clothes to provide from her salary, and if she has only herself to keep she ought to be able to save at least from £7 to £10 a year. Added to her salary must be taken into consideration the presents in money or other things that she often receives. Miss Faithfull says a nurse in an institution earns but a "bare subsistence," and that all her earnings are forfeited to the home, as if the nurse received no equivalent. But if we look at facts it is not so. Say a nurse gets, as mine do after their first six months' service, £25 per annum, and when not at work 1*s.* 6*d.* per week laundry money; reckon her board at 10*s.* a week and her lodging at 5*s.*, and she is receiving the equivalent of nearly £70 per annum, without including extras or beer money. In few employments would she make more money with less trouble. Now as to the non-resident nurses. Some institutions do, I believe, take half the fee; none more than half, and some only 5*s.* in the guinea. The rate of fee is certainly fixed by the institution; but the nurse knows what it is before she undertakes it, and the fact that many nurses prefer to work in this way proves that it cannot pay them badly. Miss Faithfull further speaks of nurses being harassed with many restrictions, and mentions two. That regarding the testimonials is not correct in all cases. I myself only hold the testimonials that the nurse earns in my service, and which is, in fact, a private communication to the institution. These are always at hand, if needed, and it is a common thing for a nurse to ask a patient for a duplicate for herself. In the interests of our clients we could not permit nurses to be transferred from one patient to another without our knowledge, as this would leave them at liberty to throw up any case, however critical, for one more lucrative.

There are, as your advertisement columns testify, many good existing institutions in London, to say nothing of suburban and country ones; and I think it would be far better to encourage the already existing institutions, all of which have been patiently worked up and perfected by experience, and so enable them to offer higher pay to their nurses, than to start fresh ones. I will venture to state as a fact that the lot of a nurse in one of the homes Miss Faithfull writes to disparage is far superior as to comfort and independence to that of many governesses; and I hope other institutions will speak up for themselves, and prove that our nurses are earning more than a "bare subsistence," and that if they do not save it is generally their own fault.—Yours faithfully,

ELINOR AGNES BEDINGFELD,
The Belgravia Institute for Trained Nurses, Superintendent.
Vauxhall-bridge-road, Sept. 2nd, 1884.

*** Several other letters on the above subject have reached us, but our space will not allow of their publication.—ED. L.

CURIOUS FACT IN NATURAL HISTORY.

To the Editor of THE LANCET.

SIR,—I wish to communicate a curious and, so far as I know, unprecedented fact in natural history.

A tenant of mine near London had a pet dog and cat. Lately the cat was delivered of a litter of what should have been kittens, but which appeared to be a cross between the dog and cat. The gardener's wife, who assisted on the occasion, states that there was a litter of four, born dead. All of them had puppies' heads and forelegs, and the hinder parts like kittens. The mother was so much injured that she had to be killed. They were all buried before I heard of it.

I am, Sir, yours truly,
Wing Vicarage, Leighton Buzzard, Aug. 25th, 1884. P. T. OUVRY.

CHOLERA AND SUPERSTITION.

EVEN the most civilised countries are remote enough from that sanitary millennium when every citizen shall have been taught to be "the intelligent custodian of his own health"; but surely the revelations of the *Echo di Bergamo* point a very serious moral to the Government of Italy. "The prevailing superstition," says that journal, "is incredible, and not confined to the people only. Everyone shares it. Physicians are distrusted. Medicines are suspected. We know of a place where people are ready to swear that the district doctor receives twenty lire (sixteen shillings) for every cholera patient who dies under his treatment, and that when his victims amount to a thousand he is rewarded with a pension! The result of this deplorable superstition, of which we could give many more examples, is that not only is the physician never sent for in time, but when he arrives his services are refused. Moreover, as it is generally the priests who send for him, the suspicious friends of the patient, knowing this, decline to call in the priest. Both priest and physician generally reach the bedside when the patient, quite capable of being rescued a few hours earlier, is past prescribing or praying for." Thus far one of the leading journals of Northern Italy. Another journal tells us that of the (about) 30,000,000 Italians more than 16,000,000 are *analfabeti*—i.e., can neither read nor write.

Dr. T. W. Hime.—The notice appeared in our last issue, page 370.

F. B.—We do not give medical advice.

CURIOUS CAUSE OF DISLOCATION OF THE SHOULDER.

To the Editor of THE LANCET.

SIR,—The following case of the true "subclavicular" form of dislocation of the shoulder may be of interest to your readers, not so much from the comparative rareness of the injury as from its unusual cause.

F. T——, aged nineteen, a muscular young man, was swinging himself standing on the seat of a garden swing. Whilst alternately lowering and raising his body by bending his knees, to propel himself, and with his hands extended over his head grasping the ropes, he suddenly "felt something give in his left shoulder-joint," the shock causing him to fall to the ground, though without striking the injured limb. On my stripping the patient's chest a well-marked case of complete "subclavicular" dislocation of the shoulder presented itself. The head of the humerus was seen to be lying quite internal to the coracoid process, and occupying the space just under the middle third of the clavicle, the coracoid process itself projecting considerably, with a very marked depression beneath it. An attempt to reduce the dislocation was made without anæsthesia being induced; but, on account of the pain caused by movement and the nervousness of the patient, it was not persevered in. However, under the influence of ether the head of the bone was easily brought into its proper cavity by appropriate traction, with the heel in the axilla.

The case is worthy of record as showing the great amount of muscular action that must have been exerted to have produced so marked an injury.—I am, Sir, yours truly,

HERBERT E. FRIEND, L.R.C.P. Lond.

Talbot-road, W., Aug. 23rd, 1884.

ALCOHOLIC PARAPLEGIA.

To the Editor of THE LANCET.

SIR,—In your issue of June 28th mention is made of alcoholic paraplegia. As far back as fifteen years ago two cases of alcoholic paraplegia came under my treatment at Lucknow. The abuse of alcohol was not given up, and both died. Some years after a third case came under my notice. I do not know whether he died, as I lost sight of him. There is a person buried in the cemetery here, who, I am told, died of paraplegia; he also had been a hard drinker. All these cases occurred in men. The spinal nerve centre of the lower extremities appears to have been the region most affected. Some years ago a case came under my notice in a person who was certainly not addicted to an excessive use of alcohol. On sitting down to dinner and drinking a glass of sherry he would experience a curious feeling of helplessness in his lower extremities, which passed off by taking food and more wine. It appears that the first impact of his alcoholised blood on the nerve-centre of his lower extremity produced these phenomena. Such a person, had he habitually drunk to excess, would very probably have had paraplegia. Why this nerve-centre should be specially affected I do not know; but there appears to be some elective action on the part of this centre for alcohol. The want of coördination in the movements of a drunken man's legs must, I think, depend on this same effect of alcohol.

I am, Sir, yours truly,
E. BONAVIA, M.D.,
Etawah, India, Aug. 8th, 1884. Surgeon-Major, I.M.D.

PERFORATED RUBBER KNEE-CAPS.

To the Editor of THE LANCET.

SIR,—Under the heading of "New Inventions" in your last issue Mr. Thomas of Birmingham introduces an indiarubber knee-cap with perforations. Stockings and knee-caps on this plan were introduced more than thirty years since. They were tried by practical men, and may say never came into use, as their great inferiority to other contrivances was manifest.

I am, Sir, yours truly,
Old Cavendish-street, W., Aug. 29th, 1884. EDWARD HUXLEY.

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F. J. B.—1. 300 cubic feet, if there exist proper means of ventilation by windows and chimney.—2. According to the quality of the gas. A cubic foot of gas in combustion will unite with from 0·9 to 1·64 cubic feet of oxygen, and produces on an average 2 cubic feet of carbon dioxide, and from 0·2 to 0·5 grains of sulphur dioxide. In other words, a cubic foot of gas will destroy the entire oxygen of about 8 cubic feet of air. One cubic foot of gas will raise the temperature of 31,290 cubic feet of air 1° F. Wolpert has calculated that for every cubic foot of gas 1800 cubic feet of air must be introduced to dilute properly the products of combustion. A common small gas-burner will burn nearly 3 feet per hour, and will consume 10, or probably 12, cubic feet in an evening of four hours, and therefore from 18,000 to 21,600 cubic feet of air must be introduced for this purpose alone in the four hours, unless the products of combustion are removed by some special channel.

WHAT IS A MINIM?

To the Editor of THE LANCET.

SIR,—Having sought an answer to the above question in various dictionaries, with no more satisfactory result than to learn that it is "the smallest liquid measure—a single drop," I next referred to Thompson's "Conspectus of the Pharmacopœia," hoping to find there at least some safe indication. In the appendix to that invaluable little compendium I find the minim defined, by its relation to the fluid drachm and ounce, as $\frac{1}{480}$th part of "a gallon"; but it is only by the juxtaposition of an identical subdivision of the "wine gallon" that I infer that it is to the wine gallon that the minim is thus related. Now, the wine gallon is known to contain 231 cubic inches, while the imperial gallon contains 277·274. Hence the two stand to each other in the practically exact proportion of 5:6. Therefore, since the weight of the "imperial gallon" (of water) is, by law 10 lb., or 70,000 grains, that of the "wine gallon" will be five-sixths of 70,000 grains; and consequently the minim (of water) must weigh $\frac{5}{6} \times \frac{70000}{480} = \frac{350000}{2880} = 0{\cdot}9494$ gr.—which is for all practical purposes the same as $\frac{1}{19}$ths of a grain; in other words, twenty minims of water weigh nineteen grains, and one fluid drachm weighs fifty-seven grains.[1]

Now, before I had worked out this theoretic result, I had sought for one practically by weighing a minim glass filled up to the sixty-minim mark (having first counterpoised the empty glass), and had found the weight to be 54·6 grains. It might, of course, be a mere accidental coincidence; but it is to be noted that at this rate eight drachms, or one fluid ounce, weighs 437 grains, which (allowing for an error of one-tenth of a grain in my measurement, thus bringing it up to 437·6) is exactly one ounce avoirdupois.

Now, whereas the proper weight of one fluid drachm is 57 grs., and the actual weight by trial of the contents of a drachm measure was found to be 54½ grs., or one-eighth of an ounce avoirdupois, the question arises whether the manufacturer confused the fluid and the avoirdupois ounces, or only made a grossly erroneous measure which accidentally tallied with the wrong one. The former seems much the most likely solution, which would be easily tested by the examination of several glasses; and it is to draw attention to what I conceive to be a systematic blunder that I make this communication.—Yours obediently,

J. HERSCHEL, Lieut.-Col. R.E.

Collingwood, Hawkhurst, Sept. 2nd, 1884.

INFANTILE CIRCUMCISION.

To the Editor of THE LANCET.

SIR,—Having been asked to circumcise a new-born infant, and being away from any suitable book of reference, will any of your correspondents kindly tell me the simplest method of doing so, especially as to number and kind of sutures used in the operation, local anæsthesia, &c.?

I am, Sir, yours obediently,

Aug. 27th, 1884. FOREIGN PRACTITIONER.

*** Local anæsthesia is not to be recommended. Draw the prepuce in front of the glans, and grasp it there between the parallel handles of a pair of scissors or some similar body, and shave it off by cutting close in front of the scissors; then allow the skin to retract, slit up the mucous membrane along the dorsum, and turn off the two flaps so made, taking care to go quite back over the corona glandis. These mucous flaps should be pared off a little, and then stitched to the skin by a continuous suture of fine catgut; this secures exact apposition, and does not require removal. A long narrow strip of boracic acid lint should then be firmly wound around the part, leaving the end of the glans exposed for micturition; and every time the parts are wetted with urine they should be thoroughly soaked with a saturated solution of boracic acid in water, and the dressing may be left on for a week or ten days, when the wound will be found healed. Care should be taken to remove first the skin which covers the glans. In infants the slight hæmorrhage is generally best controlled by placing the penis in a sponge, and grasping it firmly for a few moments.—ED. L.

[1] Should any reader be able to find this relation of the minim to the grain elsewhere stated, it would, I think, be satisfactory to others as well as myself to obtain a reference to the authority. Meanwhile, it is at the same time corroborated by the common belief that the minim and the grain are almost convertible terms, and also helps to explain that belief. That this belief, however, should be so deeply rooted as to find expression in actual graduation of glasses, I should certainly not have expected.

Mr. J. C. Richardson.—There is no definite arrangement on this subject. Some coroners are very chary of supplying copies of depositions to the public; others will do so freely, on payment of a clerk's fees for paper, copying, &c.; as so much a folio. Generally, if the person desiring information can supply the correct name of the deceased and the date of the inquest, the coroner's clerk will, on personal application, answer any questions gratis to a *bonâ fide* inquirer.

Dr. Ward (Sutton Coldfield).—In an early number.

POISONING BY ICE CREAM.

To the Editor of THE LANCET.

SIR,—In your issue of Aug. 2nd a few lines are devoted to the statement that a large number of people have been recently poisoned in Brooklyn by acetate of copper contained in ice cream. As a practitioner who had ten of these cases to treat during the night of July 4th, perhaps you will allow me to state the facts in these interesting cases.

Mr. G. H. G——, a confectioner of Brooklyn, N.Y., doing business at No. 829, Fulton-street, prepared a large quantity of ice cream of various flavours for sale during the day and evening of July 4th, most of which was sold in the usual course of trade, part being eaten at the shop, and part being delivered in freezers at private residences, the manufacturer and his family also freely partaking of the delicacy. From midnight of July 4th the physicians of that part of the city known as "The Hill" were busily engaged in relieving the sufferings of about 130 people who had eaten cream prepared by Mr. G——. The symptoms in all the cases were severe pains in the hypogastric and epigastric regions, with violent vomiting and purging, and in many cases serious collapse, with blueness, coldness, and shrinking of the skin, very like that seen in cholera. About a dozen cases were more than a week in perfecting convalescence. So far as I know, none of the victims observed any unpleasant taste with the cream; at all events, the confectioner and three of his family were among the sufferers. Some stupid persons started the acetate of copper cry, and it was of course published in the daily papers before, unfortunately, being corrected to *lactate* of copper, as it was said the cream must have been sour; but no metallic taste was noticed, nor were the tinned copper freezers found to be at all worn, so as to permit erosion of the copper.

An analysis was ordered at once by the Board of Health, and the result, communicated to the Board on July 14th, 1884, by Dr. H. H. Bartley, chemist to that body, was substantially as follows. The flavours used were vanilla and lemon, both properly made from the natural fruits. No metallic or other poison was found. The results depended somewhat on idiosyncrasy, as not all who partook became ill. In one case six persons ate freely of the cream, only four being made ill thereby. During the analysis of the cream Dr. Bartley noticed an extremely fetid odour evolved. This would seem to suggest that the cream, even before freezing, could not have been in sound condition; but as the cream came from two out of twenty-seven packages sent from the country, the other twenty-five causing no illness when made up into ice cream, and as the ill-fated two cans of Orange County cream represented the joint product of fifty-two dairies, it has hitherto been found impossible to point out the dairy whence the bad cream came. The illness was certainly not due to metallic poisoning; it may have been caused by the development of some of the very numerous alkaloids of decomposition, of which the "ptomaines" are best known—the so-called "cadaveric alkaloids."

So far as known no fatal cases have presented themselves; many of the patients have, nevertheless, been dangerously ill.

Within a few weeks another, but much smaller, series of cases has occurred in this city, due apparently to the use of artificial vanilline ($C_7H_5CH_3O_3$) or methyl-proto-catechine aldehyde—very far from being a stable body. The symptoms were somewhat similar, but the distress greater, and the prostration very marked.—Yours truly,

NELSON B. DE S. SIZER, M.D., B.Sc. (Neo-Ebor. Univ.).

Brooklyn, N.Y., Aug. 19th, 1884.

THE LATE DR. HILTON FAGGE.

To the Editor of THE LANCET.

SIR,—Dr. Moxon's sketch of the late Dr. Hilton Fagge is so true to life, so remarkable for its beauty of thought and intellectual vigour, and for its reflected interest as between the public and the profession, that I venture to express the hope that Dr. Moxon may be induced to reissue it in the pamphlet form.—I am, Sir, yours faithfully,

Sept. 3rd, 1884. X.

Ignoramus.—Alex. Redgrave, Esq., Factory Department, Home Office, Whitehall.

Sigma.—The principal no doubt has a rightful claim to the fee.

THE PINK FUND.

To the Editor of THE LANCET.

SIR,—Please publish the following additional subscriptions to the above Fund:—Mr. G. E. Norton, Gloucester-place, £1 1s.; Mr. L. Druitt, Clapham-road, £1 1s.; A. G., £1 1s.; Miss Smith, Clifton, 10s.; Mr. J. P. Atkinson, Surbiton, 10s.—I am, Sir, yours truly,

Montague-place, W.C., Sept. 2nd, 1884. JOSEPH ROGERS.

ERRATUM.—In the second part of the Bradshawe Lecture, published last week, twenty-first line of the second column of page 358, for "nerve" read *mere*.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Lady John Manners; Dr. Heron, London; Dr. Phillipson, Newcastle-on-Tyne; Dr. Joseph Rogers, London; Dr. Bonavia, Etawah; Mr. E. Huxley, London; Dr. C. T. Williams, London; Dr. H. V. Carter, Bombay; Dr. Peregrine, London; Dr. Fitzpatrick, London; Mr. J. C. Lucas, London; Mr. McKinney, London; Mr. J. R. Forrest; Mr. Startin, London; Mr. H. Sewill; Mr. E. W. White, Canterbury; Dr. Ward, Sutton Coldfield; Mr. Walters; Dr. Mynlieff, Brenkelen; Dr. Scott, Bacup; Mr. Freeman; Mr. Green; Mr. Anderson; Mr. Jones, West Bromwich; Mr. Brown; Mr. Herschel, Hawkhurst; Mr. W. S. Richmond; Dr. C. Pope, London; Dr. Gordon Holmes; Dr. Bolan; Mr. B. Duke, Clapham; Mr. W. Gilbert, London; Mr. Allender, Roehampton; Mr. H. S. Reynolds, Castle Donington; Mr. A. Westmacott, London; Mr. N. Alcock, Ballybrack; Dr. Eahelhy, Berhage; Mr. Howe, Bath; Mr. Morris, Swansea; Mr. Riordan, Bunfy; Dr. Armstrong, South Shields; Mr. Burley, Manchester; Dr. MacLeod; Mr. Cross; Dr. Vintras; Mr. Turner; Mr. Hughes, London; Dr. T. Williams; Mr. Banks; Mr. Young; Mr. Ambaran, Ramalee; Mr. Michael; Messrs. Bose and Co., Dinapore; Dr. Markham Skerritt, Bristol; Mr. Husband, Leeds; Dr. Sizer, Brooklyn; Dr. Martin, East Cobham; Dr. Grabham, Wellington; Dr. Usher, Barnsley; Dr. Burn, Leeds; Mr. Urquhart, Edinburgh; Dr. Tripe, London; Mr. Culley, Norwich; Dr. Ewart, Salisbury; Dr. Wiltshire, London; Dr. Bailey, Marple; Mr. J. F. Popham, London; Mr. Pratt, Wivelliscombe; Mr. Barker Smith, London; Mr. Beattie Campbell, London; Mr. Kesten, London; Dr. Ferguson, Toronto; Dr. Cameron, Huddersfield; Mrs. Hedingfield, London; Mr. Mayo Robson, Leeds; X. Y. Z.; J. C. A.; Foreign Practitioner; A. B. B.; L. C.; Observer.

LETTERS, each with *enclosure*, are also acknowledged from—Dr. Lennox; Dr. Taylor, St. Cervan; Dr. Moulding, Liverpool; Mr. Davies, Aberdare; Mr. Thomson, St. Leonards; Mr. Breffit; Mr. Coleman, Cardiff; Dr. Bowes, Bedford; Mr. Delworth, Preston; Mr. Nason, Bampton; Messrs. Savory and Moore, London; Messrs. Wright and Co., London; Mr. Burcombe, Lincoln; Mr. Monigomery, Londonderry; Dr. Fallen, Hull; Dr. Black, Glasgow; Mr. Watt; Mr. T. Brown; Dr. Guelpa, Paris; Mr. George Lawson; Mr. Wright; Mr. Smallies, Horley; Mr. Lang, Southport; Mr. Haywood, Manchester; Mrs. Harrison, Bath; Mr. Wortley; Mr. Hood; Mr. Shadwell, Ealing; Dr. Cook; Mr. Hutchwaite, Ramsgate; Dr. Codling, Ancaster; Mr. Birley; Mr. Whitmore, Dursley; Mr. Dowse, Manchester; Messrs. Aspinall and Son, Darwen; Mr. Humphrey; Mr. Bradford; Dr. Eberle, Thirsk; Mr. Lewis, Bath; Mr. Heaton, St. Asaph; Mr. Taylor; Dr. Steavens, Newbridge; Mr. McMunn; L.R.C.P.; 44; M.R.C.S.E.; Hong; A. C. B.; Zeta; Medicus, Brixton; B., Stratford; Medico; Medicus; Bookcase; Carpus; R. D.; Medicus, Ryde; Medicus, Cambridge; Ergates; Neuroses, Cambridge; Midland; T. N. C.; Scalpel; Alpha, Newbury; Oliver Twist; Medicus, Bridgerton; L. L. S., Aldershot; Bristol; A. L. X.; Alpha, Chester-le-Street; M.D., Edinburgh; W. H. K. S., Newcastle; Secretary, Bath; Bury Infirmary; H. M., Peterhead; H. W. R., Dalston; F. Gurney; Surgeon, Brighton; Junior; M.R., Edinburgh.

Liverpool Courier, Pioneer, Calcutta Englishman, Dumfries and Galloway Standard, Edinburgh Courant, Midleton Guardian, Brighton Times, Bath Argus, Ainsdale and County Gazette, Port Elizabeth Telegraph, Liverpool Echo, Dublin Freeman, Dundee Advertiser, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—Operations, 10½ A.M. each day, and at the same hour on Tuesday, Thursday, and Saturday.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. on Monday, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, CONSULTING.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, September 9.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

INTERNATIONAL HEALTH EXHIBITION, HYGIENIC LABORATORY.—4 P.M. Mr. Chas. E. Cassal, F.I.C., F.C.S.: Air and Air Analysis.

Wednesday, September 10.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

INTERNATIONAL HEALTH EXHIBITION, HYGIENIC LABORATORY.—4 P.M. Mr. Chas. E. Cassal, F.I.C., F.C.S.: Common Poisons.

Thursday, September 11.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, September 12.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

INTERNATIONAL HEALTH EXHIBITION, HYGIENIC LABORATORY.—4 P.M. Chas. E. Cassal, F.I.C., F.C.S.: Methods of Food Analysis.

Saturday, September 13.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 13, 1884.

ADDRESS TO STUDENTS.

As we show elsewhere, the hope for legislation in the interest of medical education is not merely deferred, it is killed; and the student who is now about to join our schools is little likely to see any change during his pupilage. We shall therefore make a few practical remarks, which may be useful in guiding him through the mazes of the different systems laid down by the twenty examining boards at present in existence.

Every medical student must pass a Preliminary Examination in Arts before he can register the commencement of his professional studies. This Preliminary Examination varies in severity from the Special Examinations held by the College of Preceptors and by some of the medical corporations, such as the Society of Apothecaries, to the Matriculation and Previous Examinations of the Universities; that of the University of London being pre-eminent for severity and extent of range. In all cases, English language, English history, geography, Latin, elementary mathematics and elementary mechanics are compulsory, and an option is allowed between Greek, a modern language, logic, and the rudiments of one of the natural sciences, as botany or chemistry. In many modern schools these subjects are selected for the Local Examinations held by the Universities of Cambridge and Oxford, and by this means a boy may pass a sufficient preliminary during his ordinary school course. Such an examination could easily be passed, one would suppose, by any average schoolboy; but the rejections at the least exacting of the examining boards are still very numerous, and average considerably more than 25 per cent. That the standard is not unnecessarily high is the testimony of every medical teacher, and becomes obvious at every subsequent technical examination at which the student has to appear. Practice in English composition and accuracy in spelling would seem to be passed over by many schoolmasters as of little consequence, while other subjects of less importance are cultivated to excess. Whatever opinion may be held respecting the relative merits of Classics *versus* Science, in the preliminary or general education, it must not be forgotten that the methods of Medicine are for the most part identical with those of so-called Natural Science, and hence an accurate training in mathematics and the education of the observing faculties in some branch of natural science are essential to the future medical student and practitioner. Perhaps the ideal education for a medical student would be, first of all, a good literary and classical education, and then at least a year's training in those branches of natural science that are most intimately connected with medicine—namely, Physics, Chemistry, and Biology. If, however, a boy, intended for the medical profession, gives promise of good literary attainments and has a gift for the rapid acquisition of languages, we should strongly recommend his being taught Greek instead of the now fashionable German. Latin is of course a necessity to every student of medicine. We need not here enter into any controversy as to the superiority of Greek over German literature, but would merely point out that unless a knowledge of the former language is obtained at school, it will rarely be acquired afterwards; whilst German, like French, is best learnt where it is spoken; and a year or two's study in foreign schools of medicine is a most valuable means of enlarging one's views on the nature, and improving oneself in many details in the treatment of medical and surgical affections. Medicine is cosmopolitan, and ignorance of the methods and theories of our continental neighbours will soon be considered a disgrace to us, rather than the badge of a boasted superiority.

Medical studies may be commenced either by attendance on lectures at a recognised medical school, by attending the practice of a recognised hospital, or by becoming the pupil of a legally qualified medical practitioner holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or having some similar opportunities of affording practical instruction. In all cases a certificate must be forwarded to the General Medical Council within fifteen days from such commencement. Most students now go direct from school to the medical lecture-room and hospital, and by doing so no break takes place in their education, and their habits of discipline are maintained. Technical instruction is at once engrafted on their general culture, and the student merely passes from one course of study to another; and great advantages may be urged for this plan. The BOB SAWYERS, BENJAMIN ALLENS, and RODERICK RANDOMS of fiction were largely the outcome of the indolent and vicious habits which the old apprenticeship system so rigorously insisted on in former days did so much to foster. Five years of more or less idleness in the country were ill calculated to provoke hard work and industry when the apprentice was transformed into the student "walking the hospitals" without supervision or guidance. A year in a provincial hospital, or with a general practitioner who can devote some time to instructing his pupil in some of the scientific branches as well as in the practical routine work of the profession, would be well spent. In most towns teachers of the various sciences can now be obtained, and in this way a year can be profitably spent in the country in the study of the preliminary sciences of physics, botany, inorganic chemistry, and general biology before the more technical medical studies be begun. Moreover, for securing the due familiarity with medical daily work (the need of which is often felt most sorely by many a fully-qualified practitioner fresh from the wards of a hospital, when called to his first cases of measles, chicken-pox, or scarlatina), and the tact which is so useful and necessary in visiting the sick, a year's pupilage or assistancy is advisable; but in our opinion this should be deferred to either just before or just after the student is qualified. In repeating this advice, we are at variance with many good authorities on medical education, who argue that acquaintance with minor surgery and pharmacy cannot be made too early in the career of the medical student, and so urge an apprenticeship by every student to a general practitioner as a first step. On the whole, probably a pupilage for a year with the house-

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surgeon of a county hospital or provincial infirmary, in addition to some honest work in chemistry, physics, and biology, is the best plan of commencing medical studies. Entrance into the profession is thus made more gradual, and it can be more readily abandoned, with less sacrifice of time and money, should the pupil form a matured dislike to the necessary studies and work, or be incapable of pursuing them with advantage.

Every medical student should obtain an adequate acquaintance with the various departments of general science after he has passed his examination in Arts, and before he commences his purely technical studies. The natural sciences are so closely interwoven with medical progress that no student can now be considered well educated who does not possess an acquaintance with them. It is better if such a knowledge be gained before entrance at a medical school; but if this has not been done, a large part of the student's first year's study must be devoted to this object. The superiority of a university career is mainly due to the insistence of the authorities on this desideratum, and many of the corporations—notably the Royal College of Physicians of London—now make it a prominent feature of their first professional qualification; whilst those bodies who do not urge its importance are sure to suffer in public esteem and professional reputation for their lukewarmness in this respect. Chemistry, physics, and biological science are gradually being removed from the list of strictly professional to that of preliminary subjects; and every qualifying body is drawing nearer and nearer to this ideal, so that the work of the student will be proportionately lightened, and his after-success rendered more certain. A student who cannot grasp the chief principles of these sciences will but seldom master the theories and practice of the exclusively medical sciences and technics, and is at a corresponding disadvantage throughout his course of study and in his subsequent career as a physician or surgeon. Passing a preliminary examination in Arts should therefore be followed as soon as possible by passing the examination in Science which may be appointed by the examining body before which the student intends to present himself for a qualification or degree.

The next step is the commencement of his purely technical education. Anatomy and physiology should occupy eighteen months at least, and a summer session must be devoted to materia medica. It is a question of some difficulty as to whether a student should devote any of his time at this period to hospital work, and if so how much. There can be no hesitation as to his unfitness for any ward duties; and we are inclined to think that he will be better employed in the dissecting-room and in the class of practical physiology than in the out-patient rooms of the hospital. The practical hints gained by attendance on the out-patient surgeons—for the student at this stage of his career can learn nothing useful in medical practice—are easily acquired at a later period, and too much time cannot be spent in the attainment of a thorough knowledge of the two great sciences of anatomy and physiology, on which his future art and practice must be based. Practical anatomy, so far as the grosser structures are concerned, has long been well taught, and now in every well-equipped medical school a thorough instruction is imparted in practical histology, in the use of the instruments employed in physiological experiment and research, and in physiological chemistry. The methods by which the great principles of the laws of healthy action have been determined must be clearly understood, and it is only in late years that such an expression as "practical teaching in physiology" has had for the student any definite meaning. The coarser anatomical dissections, which were alone known to the student of fifteen years ago, have been supplemented by the finer histological methods and preparations, and the advance in this direction has been so great that a student is now expected to prepare and describe tissues which were then seen only as museum specimens prepared by an industrious and expert demonstrator or anatomical assistant. The length of time devoted to practical anatomy varies at the different boards, but less than two winter sessions are useless; and for the acquirement of the details, a third winter session, when practicable, is of great advantage. Many students return to the dissecting-room after they have had some hospital work, and are then well able to superadd a knowledge of anatomical detail to their medical and surgical experiences. Practical work in physiology is not insisted on by some examining bodies, but this will soon be altered if these corporations be animated by any desire that their qualifications should be held in esteem by future students and teachers. It is generally at this period of the curriculum that the medical student complains of being overworked, and is almost in despair of eventual success. This is largely due to the manner in which the various licensing bodies have framed their regulations. Every authority has laid down its own regulations in total disregard of those required by other boards. Whilst the student is endeavouring to master his anatomy, physiology, and materia medica, he finds that attendances on courses of lectures on chemistry and botany are still enforced even by bodies which do not examine in these subjects, whilst other bodies which examine stringently in them are contented with certificates merely showing that the candidate has received some instruction therein, and that such a certificate may be signed by any capable teacher. If a preliminary examination in Science were made compulsory, as the examination in Arts now is, all these contradictory and vexatious regulations might be swept away, and the student could then obtain his scientific training in any provincial town; for good teachers in those subjects are no longer limited to recognised medical schools. There is no reason whatever but the existence of these regulations for the attachment of science teachers to the smaller medical schools, which are thereby hindered in developing the clinical side of their teaching. Again, whilst some authorities insist on two years' attendance on clinical lectures in medicine and surgery, others are content with nine or even six months, and one body—the Royal College of Physicians of Edinburgh—only insists on clinical surgery for three months. One of the greatest benefits to the student of a one-portal system would have been the reduction of these chaotic regulations to a definite and well-considered scheme of medical education. The regulations of most of the examining boards are no longer in proper relation with modern scientific and practical teaching, and require revision. They are, in the main, relics of a bygone age, to which, in some instances, a little modern patching has been added;

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in others they remain as they existed twenty or thirty years ago.

By the end of the second academical year the student should have passed his first professional examination in anatomy, physiology, and materia medica. When this is accomplished he should devote himself wholly to the real object of his study—a good knowledge of the principles of medicine, surgery, and therapeutics, and every care should be taken to secure a facile expertness in the use of the various instruments used for the detection and treatment of diseases in the daily practice of medicine, surgery, and midwifery. A student should now spend the greater part of his time in the wards, and should always strive to obtain in-patient dresserships and clerkships and similar offices. The more numerous and varied of these appointments he can hold, the better for his subsequent practice. At this period of his career it is usual for the student to attend lectures on medical jurisprudence, pathology, and hygiene. The two former subjects are compulsory, whilst the latter is made optional by most bodies. We have never been able to see the necessity of a course of lectures on such an *olla podrida* as forensic medicine; whilst pathology, to be of any value, should be essentially practical, and is the proper continuation of the course of practical physiology. In the best schools practical courses of pathology are given on these lines, but until the regulations of the examining bodies are altered the student must still attend the theoretical lectures, although he need have no practical instruction. Coarse morbid anatomy must be studied in the post-mortem theatre and the pathological museum, and the necessity of embracing every opportunity of increasing his knowledge in this branch is the more urgent, as the occasions which are presented to the general practitioner to revive his acquaintance with post-mortem appearances are necessarily very few. Moreover, it is only by a thorough conversance with the morbid processes and the changes effected by disease that a scientific and proper treatment can be established and carried out. In the last years of a student's career he should make every endeavour to secure a resident appointment at a hospital, for this will enable him to gain a familiarity with the immediate treatment of accidents and emergencies, and give him a sense of responsibility which such an experience alone can furnish. The readiness of resource and the calm discretion which never desert the able physician and surgeon have usually been acquired by filling one of these appointments. The study of mind disease is important, and attendance on the practice at a lunatic asylum is also of great value.

In tracing this outline of the proper course of study for a medical practitioner we have referred to no specialties, for we are strongly of opinion that every student should become as familiar with the diagnosis and treatment of the ordinary forms of disease affecting the eye, ear, throat, and skin as with those affecting the lungs, heart, or digestive organs. He should be as well able to use an ophthalmoscope, ear-speculum, and laryngoscope as a catheter or a clinical thermometer. No hospital staff discharges its duties to the students efficiently unless proper teaching in these subjects is secured for them, and an important reform would be effected if more care were taken to prevent students becoming qualified who had neglected these branches. After the student has obtained his qualification, it would be of lasting service and a source of much pleasure to him in after life if he could spare a year for increasing his acquaintance with these more special departments of our art, and, if possible, this year should be spent abroad. Paris and Vienna give greater facilities for studying many forms of disease, and for obtaining short courses of instruction in specialties, than perhaps any other cities in Europe or America. By this means, too, a fair knowledge of French and German may be acquired, and the importance of being able to converse and read in these languages is daily becoming more and more evident to the practitioner who desires to keep abreast of medical discoveries and to be acquainted with the theories on which the progress of medicine and surgery are dependent. The names of KOCH, PASTEUR, and LISTER prove that advances in medical science belong to no one country, and that the relations of our art and science are less insular now than at any other period in their history.

Before concluding this address on medical education, we would add a few remarks on our medical qualifications and degrees. The layman, and even the student, is often hopelessly ignorant of their meaning and relative value. At the University of Oxford a degree in Arts must be, and at Cambridge usually is, taken as a preliminary to the medical degree, but as this can be obtained by passing a previous examination in classics and mathematics, and then going out in Natural Science (some of the subjects being part of the series in the medical curriculum), there is very little difference in method or even in time between these universities and those which have separate preliminary examinations in Arts and Science, as the University of London, the Victoria University, and the Scotch Universities. The examination in Arts at the London University is spread over a most extensive range, and the Scientific Examination is unnecessarily severe. The papers in physics are especially open to this criticism; and as under the new regulations this examination must be passed previous to the commencement of medical studies, and is only held once a year, a candidate should do all in his power to minimise the possibility of rejection even in one subject, for this will probably act as an effectual barrier to his again presenting himself at this university, and all opportunity of obtaining the degree be lost through this mischance. The University of Durham and the Irish Universities have no separate examinations in science; chemistry and botany are included in their first professional examination, but they should be kept distinct. Higher examinations in Arts and Science are the essential differences between the degree-giving and the mere qualifying bodies, the standard in technical subjects being quite as high in some of the examining boards as at some universities, whilst the enforced curriculum is practically the same. The proposed fusion for examination purposes of the Colleges of Physicians and Surgeons of London will probably lead to their conjoined qualifications being considered the general qualifications of the modern English practitioner; and they will gradually supplant the older M.R.C.S. and L.S.A. qualifications. The well-known severity of the examinations in anatomy, physiology, and surgery at the College of Surgeons, and in chemistry, materia medica, midwifery, and medicine at the College of Physicians, affords an ample guarantee that everyone who obtains this double qualification has

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thoroughly good knowledge of his profession; indeed, from a practical standpoint it is quite equal if not superior to the degrees of some of the universities. The facilities for obtaining degrees in Scotland are so abundant that students who merely obtain qualifications in that country may themselves open to some suspicion of idleness or want of ability to attain the higher honour. The amount of practical work insisted on by these bodies is very insufficient, and contrasts badly with the English and Irish regulations. A practical injustice is experienced by the metropolitan student in the fact that the same amount of industry and intelligence applied to the same course of study will only give him a qualification in London, which in the north of England (Durham) and in Scotland would obtain for him a degree. The University of London does not concern itself with the average medical student.

Diligence, properly trained intelligence, and health are the only essentials for the successful pursuit of medicine; but it must always be remembered that they are essentials, and that without them a satisfactory progress in medical studies is unattainable. The sage aphorism of the Greek master—"Life is short; art is long"—is even truer in our day than it was in his.

MEDICAL STUDENTS AND LEGISLATION.

IN our Address to Students last year we were tempted to say, "Fortunately, the days of single and incomplete qualifications are now numbered; the Legislature itself deems the evil one to be crushed." At that time everything seemed most promising for the passing of a Medical Act which would secure a one-portal admission to our profession, and we had hoped that this year we should have been able to congratulate those who were entering the profession on a change which would have simplified their curriculum of study and made it uniform in the three divisions of the kingdom. We also hoped that we should have had to point out the alterations in the method of study which the new departure would have caused, and the modifications which would have been necessary for those who were desirous of higher qualifications. But all such anticipations have been cruelly disappointed; the press of political questions, the cumbrous working of the parliamentary machine, and the opposition of some of our own corporate bodies, have effectually destroyed a well-conceived scheme for getting rid of our present confusion in medical qualifications.

"Where are we now?" medical students may be ready to ask as regards the prospects of medical legislation. "What are we to do? By what body shall we be examined when our curriculum is complete? Is there any chance of getting a complete diploma, the respectability of which shall be above dispute?" In answer to the fundamental question "where are we now?" our answer would be, "Very much where your predecessors were ten years ago." It is true that a Royal Commission has condemned utterly the existing system, and that the action of certain bodies as examining boards has been severely noticed in the Report of the Commissioners. But it is not less true that, except to sanguine minds, there is no immediate prospect of any satisfactory legislation to enforce what is so much needed—viz., completeness of diplomas, a reduction of the number of licensing authorities from twenty to three, and a fair guarantee of equality in corresponding examinations in England, Scotland, and Ireland. What Sir DOMINIC CORRIGAN called the "Battle of Shops" is suspended when the "shops" are about to be reformed. They then stand shoulder to shoulder, and in Parliament at the last moment advantage is taken of the period of the session, or the obstructive forms of the House, to raise new questions, and often petty questions, which simply strangle the Bill or compel the Government to yield on vital principles. This is the more easy nowadays when nothing excites the interest of the House of Commons but a big Franchise Bill or a strong party question. A mere Medical Bill that aims at giving the public better doctors, and students fairer examination and complete diplomas, is too unsensational to be interesting.

Another unfortunate feature in the situation is the determination of Scotland and Ireland to override England in this matter, to refuse guarantees to England such as in the opinion of the Royal Commission are necessary for securing fairness and equality in the examinations of the different divisions of the country. Medical education and the granting of diplomas and degrees are to Scotland a matter of pounds, shillings, and pence; and in the recent session, even the Scottish Universities, under the unfortunate guidance of Sir LYON PLAYFAIR, receded from their dignified support of the fundamental principle of the Government Bill.

There seems little immediate prospect of any effective legislation. The glass houses will help to hold each other up. They will effect voluntary combinations in each division of the kingdom, which will be satisfactory only to those having their "interests" in the *status quo* in that division. Mere voluntary conjoint boards, dictated by interest and "trade" considerations, afford no security against that degrading competition which has brought discredit on certain bodies, which we need not name. Meantime we advise students to aim steadily at taking their diplomas and degrees in that division of the kingdom in which they mean to practise. While all attempts to gain international guarantees are foiled, it is safest and most honourable to hold the right of practice from that division in which one has to work. In this way only is disparagement to be refuted, and a better and fairer state of the law to be gained.

THE CHOICE OF A TEXT-BOOK.

THE question which the student is always asking, and naturally, is what book will best serve his purpose in preparing for such or such examinations. The answer to this question is one which becomes every year more difficult. The number of medical text-books of a high class is now very great; therefore to select a few from amongst them may seem invidious. At the same time a list, which by no means pretends to be exhaustive, can be drawn up that may prove of value as a guide to the student in his choice. As representing all the various examining bodies, we may take for this purpose the three London centres—the College of Surgeons, College of Physicians, and the University of London.

COLLEGE OF SURGEONS EXAMINATIONS.

For the Primary Membership Examination at the College of Surgeons the subject of *Anatomy* may be well studied in GRAY'S Anatomy, ELLIS'S Demonstrations, or HEATH'S

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Practical Anatomy; and in osteology specially may be mentioned the works of WARD and HOLDEN. The anatomical plates of ELLIS and those of GODLEE are very useful in supplementing practical work. In *Physiology* the books most to be recommended are KIRKES' Handbook, G. YEO'S Text-book, and H. POWER'S Elements; and *Histology*, apart from the sections devoted to it in the works of GRAY and KIRKES, may be read in KLEIN'S Elements. For the Primary Fellowship there may be read in addition (especially its histological and embryological sections) QUAIN'S Anatomy, which is the most complete and comprehensive in our language, FOSTER'S Text-book of Physiology, and GEGENBAUR'S Comparative Anatomy. Professor FLOWER'S Osteology of the Mammalia might also be read. For the Pass Examination (Membership) in the subjects of *Surgery and Surgical Anatomy* there are the text-books of BRYANT, HOLMES, and ERICHSEN'S work, so ably and learnedly edited by MARCUS BECK, the Practical Handbooks of BERKELEY HILL, CHRISTOPHER HEATH, and TREVES' Applied Surgical Anatomy. For *Surgical Pathology* PEPPER or BILLROTH may be recommended; in *Diseases of the Eye*, LAWSON or NETTLESHIP. For *Medicine and Midwifery*, *vide* College of Physicians, *infra*. For the Pass Examination (Fellowship) wider reading will be useful, and ERICHSEN'S work may be supplemented by chapters in the System of Surgery edited by HOLMES and HULKE. In *Operative and Practical Surgery* there are works by STIMSON, FERGUSSON, and S. SMITH, and HEATH'S Atlas. PAGET'S or BILLROTH'S Surgical Pathology and ZIEGLER'S Pathology may be profitably read in connexion with works mentioned under the Membership Examination.

COLLEGE OF PHYSICIANS EXAMINATIONS.

The subjects included in the various examinations for the licence of the College of Physicians, in addition to those which are also required by the College of Surgeons, comprise the following:—*Chemistry:* ROSCOE'S Elementary Chemistry, and ATTFIELD'S work. *Chemical Physics:* FOWNES' Inorganic Chemistry, edited by WATTS. *Botany:* OLIVER'S Elementary Botany; BALFOUR'S, or BENTLEY'S, or THOMÉ'S book. *Materia Medica and Therapeutics:* The works of MITCHELL BRUCE, GARROD, FARQUHARSON, and RINGER. *Medical Jurisprudence:* Those of GUY and TAYLOR. *Public Health:* WILSON. *Medicine:* ROBERTS, BRISTOWE, CARTER, and CHARTERIS. *Clinical Medicine:* FENWICK, FINLAYSON, and GRAHAM BROWN. *Pathology:* GREEN, COATS, and ZIEGLER (MACALISTER'S translation), and WOODHEAD'S practical work.

UNIVERSITY OF LONDON EXAMINATIONS.

For the Intermediate M.B. Examination of the University of London, the subject of *Organic Chemistry* may be studied in the text-books of WILLIAMSON and of FOWNES. *Materia Medica*, besides the books above mentioned, is more fully treated in the works of PHILLIPS, BARTHOLOW, and H. C. WOOD. *Physiology*, as for the Primary F.R.C.S., with perhaps the addition of such books as that of POWER and HARRIS for practical work, and of SCHAFER for practical histology. The anatomical text-books are those recommended for the College of Surgeons. For the M.B. Examination, the subject of *Medicine* may profitably be further studied in NIEMEYER'S Text-book, in that of AUSTIN FLINT, in some of the articles of QUAIN'S Dictionary or REYNOLDS'S System of Medicine, and in TROUSSEAU'S Lectures. Special monographs (see M.D.) may also be consulted. *Pathology*, which should be worked at practically, may be studied in GREEN'S, COATS', or ZIEGLER'S text-books; and also in the works of WILKS and MOXON, and CORNIL and RANVIER. *Midwifery*, in the writings of PLAYFAIR, LEISHMAN, LUSK, and BARNES; *Gynæcology*, in those of GALABIN, LOMBE ATTHILL, EDIS, and BARNES. *Dermatology*, in the text-books of TILBURY FOX, LIVEING, DUHRING, and M. MORRIS. *Medical Electricity*, in DE WATTEVILLE or POORE. *Medical Ophthalmoscopy*, in GOWERS' handbook. For the M.D. Examination the candidate will do well to extend his reading to the better known monographs, such MURCHISON on Continued Fevers and on Diseases of the Liver; ROSS, CHARCOT, and WILKS on Diseases of the Nervous System; BALFOUR, BYROM BRAMWELL, and WALSHE on Diseases of the Heart; POWELL and WALSHE on Diseases of the Lungs; W. ROBERTS and DICKINSON on Diseases of the Kidney. He will also have to dip into the works of BAIN, MILL, and JEVONS to prepare for the subjects of Logic and Mental Philosophy, included in this examination.

In the foregoing lists we have mostly indicated more than one work upon a subject; but it is, of course, impossible to indicate precisely a single work when so many exist. A certain amount of choice must be left to the student himself, who will do well to be guided in his final selection by the opinion of his teacher in the particular subject.

THE POOR-LAW MEDICAL SERVICE.

CAN we recommend the Poor-law Medical Service as a field for newly-fledged medical men? Before answering this question, using a phrase of the schools, "we must distinguish." The Poor-law Medical Service may be divided into two branches: (1) The workhouses and dispensaries, conducted on sound principles. (2) The Poor-law appointments, held under the old *régime*, which violate even the laws of justice. The first class finds examples in such infirmaries as Marylebone (London), Crumpsall (Manchester), and in the public dispensaries established in London, Birmingham, and other large cities and towns. At these large infirmaries an honest attempt is made to carry out fully hospital principles. There are resident surgeons, assistant surgeons, dispensers, paid nurses, and a complete hospital *personnel*. Besides Marylebone and Crumpsall, there are many other Poor-law infirmaries, which may be placed on a level with our subscription hospitals. What are the emoluments enjoyed by the medical superintendents of these institutions? The honoraria vary, for principal medical officers, from £200 to £500 a year. Marylebone is put down in the Medical Directory at £500; Shoreditch at £300, with apartments, rations, and washing; Leeds at £300, with residence; Birmingham at £250; and Greenwich at £250, with residence and rations. The assistant medical officers have usually salaries of £100 a year, with residence and rations.

The opportunities for studying all branches of medicine in a large workhouse are unrivalled. Every form of disease, and especially rare diseases, are therein to be found. We use the word medicine in its widest sense, necessarily including surgery, so that surgical experience is equally to be gained. We have only to point to the work done by ALEXANDER at the Liverpool workhouse, to impress this

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truth on our young readers. Any young qualified practitioner, fond of his profession and devoted to scientific pursuits, will find in these hitherto neglected institutions a field which, if he has ambition and talent, may enable him to rival CHARCOT and PASTEUR. The Salpétrière at Paris is only a large workhouse. What CHARCOT has done there is now matter of history, and should be known to every medical student. We therefore must recommend such appointments. They possess another advantage—the discipline of life may be there learnt. Habits of command, and of dealing with a large number of persons, are acquired. There is room for the display of tact, kindness, and skill. There is a necessary degree of friction in such establishments, and such friction has a certain beneficial influence on character. The young practitioner must not expect to find therein a bed of roses, nor will he find life one; but if gifted with a moderate share of common sense, he will be able to pass a few pleasant and useful years in this official occupation, and in after-life turn to good account the various lessons learnt therein. There are also workhouses which have non-resident medical officers, whose salaries vary from £50 to £200 a year, all drugs and medical appliances being found. These appointments are very numerous, and are sought for because private practice is at the same time allowed. We need hardly say that we would advise any young qualified medical man to accept such an appointment if he can obtain it. They are thrown open to competition, and though personal considerations occasionally influence such appointments, as a rule, in England, the elections are based on the candidates' merits and qualifications. All appointments are only worth what the man himself can make out of them, and it entirely depends on a workhouse medical officer as to what position he will hold with his own profession, the guardians, and the public. This is an axiom we cannot too strongly impress on young practitioners.

Besides the union infirmaries there are dispensaries, the salaries of which vary from £100 to £130, all medicine and appliances being found by the authorities. These appointments are very useful to young practitioners who have no private means. They form a nucleus for the building up of private practice, though there are certain drawbacks in connexion with them. The dwellings of the poor are not very attractive; for men who are very fastidious, the noisome court, the foulsome alley, the overcrowded, broken-down tenement, do not present a pleasant picture; and the wind that comes between their nose and their nobility is not always scented with the perfumes of Arabia.

The training of medical men renders them familiar with unpleasant scenes and odours. Their mission is to cure and relieve disease wherever found, and it is unfortunately amongst the poor that we have the maximum of disease. For those who are prepared to work, the Poor-law dispensaries offer a wide field for activity, and those who work honestly and conscientiously amongst the poor will be sure to reap their reward. Medical men are submitted to a rigid censorship by the public, and this censorship is exercised without their knowledge, so that the men who are devoted to their duties are noticed and their work appreciated. Respectability is a word often misapplied. Some young practitioners may imagine that it is more respectable to be connected with a voluntary dispensary, where medical services are unpaid. The class of work in institutions of this kind very closely resembles what is done in the Poor-law dispensaries. Respectability was once defined by a witness in a court of law in this wise. A counsel asked whether a certain person was respectable. The answer came that he was. "But how do you know this," retorted the counsel. "Why, he keeps a gig." The same kind of reasoning makes the difference between the honorary surgeon of a voluntary dispensary and the paid surgeon of the State dispensary. Respectability does not consist either in keeping a gig or holding any class of appointment. Something more is required; so that our young friends must not be deterred by a shibboleth from entering into a service in which they can gain both pecuniarily and scientifically.

We must now briefly allude to the second class of Poor-law appointments. Under the old tender system surgeons contracted for the treatment of the sick poor. Remnants of this custom still exist, though the tender systems has been abolished. Excessive competition has effected in many parts of England such a reduction of salaries that the worst evils of the tender system are preserved and the sick poor as much neglected. There are numerous Poor-law appointments, the salaries of which vary from £12 to £50 a year, and out of such salaries the medical officers have to find all drugs, medical appliances, &c. We have so often spoken of the injustice to the sick in such arrangements that we need not again repeat our strictures. It is a moot question as to who is the most to blame—the Local Government Board, the guardians, or the medical officers. It is known to the authorities that under such circumstances the sick poor cannot receive adequate medical attendance. The medical officer cannot afford to give away medicine. He cannot discharge his duties conscientiously, and such a system is a mere farce. These appointments may be taken by very needy men, and the poorer the men the worse is it for the sick poor. We need hardly say, then, that we would not counsel any young practitioner to accept an appointment the duties of which he could not conscientiously perform.

We trust that with the progress of the educational influences now being brought to bear upon those who are connected with hospitals and other public charities, the proper and efficient treatment of the sick poor will be embraced in a comprehensive scheme, which will place union infirmaries and dispensaries in their proper position as State-supported institutions of the utmost importance to the well-being of society, and therefore worthy of taking rank with our voluntary hospitals and dispensaries.

ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

THERE are three branches of the public service in which the appointments are open to the profession by competitive examination—the Army, the Navy, and the Indian Services. The examinations take place twice a year, in February and August; the number of appointments to be made varies according to the requirements of the service, but is stated in the advertisements notifying the date on which the examinations are to be held. To be eligible to compete candidates must hold the double qualification to practise medicine and surgery, must be registered under the Medical Act, and must not be under twenty-one nor above

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twenty-eight years of age. The public service holds out considerable inducements to young men, either as a temporary or permanent career. In the former point of view they are offered the means of passing a few years in a pleasant manner, with the advantage of seeing a good deal of the world, and with the right to retire into private life whenever they see fit, with a gratuity in case they have completed ten years' (or in the Navy eight years') full pay service. The advantages attaching to it as a permanent career are the receipt, from the commencement, of an income sufficient, with moderate care, to cover all ordinary expenses, the certainty of an increase to this after stated periods of service, the prospect of promotion to the higher ranks, carrying increase of pay and position, the right to retirement after twenty years' service on a pension for life, varying according to the rank which has been attained and the length of service on full pay, and a pension to widow and children varying according to the rank of the officer. But while these advantages are common to all three branches, there are differences which may exercise an influence in determining students for which they will decide to compete. In the Army there is the advantage of a certain amount of service at home and in temperate climates, the length of each tour of foreign service being restricted to five years; while in the Indian Medical Department the whole service must be performed in India. But, on the other hand, there are lucrative civil appointments open to a certain number of the Indian medical officers, and they have a right to retire, if they desire it, at an earlier period, and, when holding administrative rank, with a higher rate of pension than from the Army. The Naval Medical Service has certain advantages and drawbacks attached to it. The officer, on appointment, draws for the first four months a higher rate of pay than the others, but he loses the great advantage of the full course of instruction afforded at Netley. He is also liable, when his ship is paid off, to be placed on half-pay till he gets another, though this, we believe, is at present obviated by employing him in one of the naval hospitals. When it is in operation, however, it forms a very serious drawback, as the period passed on half-pay does not count as service towards the right to pension. In all three branches the surgeons are promoted to higher rank after twelve years' service, but are required to pass an examination intended to test their progress and proficiency in all those branches of knowledge which are essential to their continued efficiency as medical officers. In the Army and Indian Services this examination may be passed at any time between the fifth and tenth year of service; in the Navy after the completion of eight years from the date of entry. The promotions to the administrative ranks are made by selection; but in the Army and Indian Service Surgeon-Majors must pass an examination, chiefly on matters connected with administrative duties, before they are eligible to be selected. The examination is optional, but an officer who does not choose to undergo it cannot be promoted.

We have thought it well to call the attention of students to these special points in connexion with the public service, and would refer them for the details respecting the course of instruction at Netley and the rates of pay, half-pay, and pension to a subsequent part of this number.

SESSION 1884-85.

GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION OF THE UNITED KINGDOM.

Registration of Medical Students.—The following are the General Medical Council's Regulations in reference to the registration of students in medicine:—

Every medical student shall be registered in the manner prescribed by the General Medical Council. No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council,[1] and has produced evidence that he has commenced medical study. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration. The registration of medical students shall be placed under the charge of the branch registrars. Each of the branch registrars shall keep a register of medical students according to a prescribed form, and shall enter therein the name, the preliminary examination and date thereof, the date of registration, and the place and date of commencement of medical study, as certified by a master or a teacher, or an official in a medical school or hospital. Every person desirous of being registered as a medical student shall apply to the branch registrar of the division of the United Kingdom in which he is residing; and shall produce or forward to the branch registrar a certificate of his having passed a preliminary examination as required by the General Medical Council, and *evidence that he has commenced medical study*. The branch registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration. Each of the branch registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students. The several Branch Councils—and in England the Executive Committee, if its meeting be more convenient and the case be urgent — have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory. A copy of the Register of Medical Students, prepared by each of the branch registrars, shall be transmitted on or before Dec. 31st, in each year, to the registrar of the General Council, who shall as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised list to each of the bodies enumerated in Schedule A to the Medical Act (1858), and through the branch registrars to the several medical schools and hospitals. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils—and in England the Executive Committee, if its meeting be more convenient and the case be urgent—have power to admit exceptions to this recommendation.

Pursuant to resolutions passed by the General Medical Council at its session in July, 1880, the Regulations for Preliminary General Education, which took effect from January 1st, 1882, are as follows:—

No person shall be allowed to be registered as a medical student unless he shall have previously passed a Preliminary Examination in the subjects of General Education as specified in the following list:[2] — 1. English Language, including

[1] Exception may be made in the case of a Student from any Indian, Colonial, or Foreign University or College, who shall have passed the Matriculation or other equivalent Examination of his University or College, provided such Examination fairly represents a standard of General Education equivalent to that required in this country.

[2] The Examinations in General Education conducted by Universities will be accepted as heretofore, but if in any of these Examinations the subjects of Elementary Mechanics of Solids and Fluids are not included, a knowledge of these subjects will be required at a subsequent Examination.

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Grammar and Composition.[3] 2. English History. 3. Modern Geography. 4. Latin, including Translation from the original and Grammar. 5. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid or the subjects thereof. 6. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics.[4] 7. One of the following optional subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) any other Modern Language; (*f*) Logic; (*g*) Botany; (*h*) Elementary Chemistry.

Communications relating to the Medical Students' Register, or to the registration of medical students, should be sent to the registrars, to the following addresses:—

W. J. C. Miller, B.A., Registrar of the General Council and of the Branch Council for England, 299, Oxford-street, London, W. — Archibald Inglis, M.D., Registrar of the Branch Council for Scotland, 33, Albany-street, Edinburgh. —R. L. Heard, M.D., Registrar of the Branch Council for Ireland, 35, Dawson-street, Dublin.

REGULATIONS OF THE MEDICAL EXAMINING BOARDS IN THE UNITED KINGDOM.

UNIVERSITY OF OXFORD.

A student desiring to graduate in Medicine must pass the requisite examinations for the degree of B.A. He must afterwards spend two years in study[5] prior to the first or scientific examination for the degree of Bachelor of Medicine, and two years more, after passing the first, prior to the final or practical examination for the same degree.

Every student must reside in one or other of the Colleges or Halls, or in licensed lodgings, for three years, passing at least two examinations in Arts, and one in either Mathematics, Natural Science, Law, Modern History, or Theology, when, if he obtain a first, second, or third class, he can take his B.A. degree; if he do not gain such honour, he has to pass a third examination *in Literis Humanioribus*.

There is an examination in State Medicine and Public Health, to which Bachelors of Medicine of the University are admissible.

A dissertation has to be publicly read, three years after obtaining the M.B., before being eligible for the M.D.

The study of Natural Science is carried on at the Museum, in which are extensive opportunities for the study of Physics, Chemistry, General, Comparative, and Human Anatomy, Histology, and other departments of Natural Science, together with courses of lectures and of practical instruction by the several professors. There is in the medical department a pathological series, including the collection of Schroeder Van der Kolk, and a sanitary laboratory. The Radcliffe Library, containing above 40,000 scientific volumes, is open to all students daily from 10 till 4, and on certain evenings during term. There are lectures and practical instruction in Botany at the Botanical Gardens, and clinical instruction at the Infirmary.

The medical examinations take place every year in the Trinity (summer) term. Scholarships of about the value of £75 are obtainable at Christ Church, Magdalen, and other colleges, by competitive examination in Natural Science. Every year a Radcliffe Travelling Fellowship is competed for by any who, having taken a first class in any of the schools, or having obtained a University prize or scholarship, propose to study Medicine. The Travelling Fellows receive £200 a year for three years, half this period being spent in study abroad.

More detailed information may be obtained from the University Calendar; from the Students' Handbook to the University; from the Regius Professor of Medicine; from the Professors in the several departments; from E. Chapman, Esq., M.A., Frewin Hall; and from the Sub-Librarian in the Radcliffe Library at the Museum.

UNIVERSITY OF CAMBRIDGE.

The student must enter at one of the Colleges, or as a non-collegiate student, and keep terms for three years by residence in the University. He must pass the Previous Examination in Classics and Mathematics, which may be done, and should if possible be done, immediately on coming into residence, or, which is best, through the Oxford and Cambridge Schools Examination Board or the Local Examinations, before commencing residence. He may then devote himself to medical study in the University, attending the hospital and the medical lectures, dissecting, &c. Or he may proceed to take a degree in Arts, either continuing mathematical and classical study, and passing the ordinary examinations for B.A., or going out in one of the Honour Triposes.

The expenses of residence, lectures, &c., at a College are about £150 per annum; but these are in many cases lessened by Scholarships, ranging in value from £20 to £80 a year, which are very numerous, and obtainable by most students of industry and ability. They are chiefly given for mathematical and classical proficiency.

Non-collegiate students can reside at less expense (£80 or £90 a year) than those who enter a College. They are allowed to attend certain of the College lectures and all the professors' lectures, and have the same University status and privileges as the other students. Cavendish and Selwyn Colleges have been recently founded to afford facilities for obtaining a degree at a moderate cost.

For the degree of *Bachelor of Medicine* five years of medical study are required, except in the case of medical students who have graduated with honours as Bachelors of Arts, four years only being then required, though it is rarely sufficient. This time may be spent in Cambridge or elsewhere. The earlier portion of it is usually spent in Cambridge, the student remaining in the University till he has passed the examination for the Natural Sciences Tripos and the first and second examinations for M.B. Cambridge being now a complete School of Medicine, all the requisite Lectures and Hospital Practice may be attended here, and some students remain to attend Lectures and Hospital Practice after they have passed the second examination for M.B.

There are three examinations for M.B. The *first* in Chemistry and other branches of Physics, and in Elementary Biology. These may be taken together or separately. The *second* in Human Anatomy and Physiology, and in Pharmacy and Pharmaceutical Chemistry. These may be taken together or separately. The *third* may be also taken in two parts—viz., (1) Principles of Surgery and Midwifery and Diseases of Women, and (2) Pathology, Principles and Practice of Medicine, Elements of Hygiene, and Medical Jurisprudence. The examinations are partly in writing, partly oral, and partly practical, in the hospital, in the dissecting-room, and in the laboratories. They take place twice annually (in June and December).

An Act has to be kept, which consists in reading an original thesis and passing a *viva voce* examination on the subject of the thesis and on other subjects.

Previously to the first examination, lectures must have been attended on Chemistry (with manipulations). Previously to the second examination, the student must have attended lectures on Human Anatomy, Pharmacy and Pharmaceutical Chemistry, Physiology, have Dissected for six months and attended Hospital Practice six months. Previously to the first part of the third examination, he must have attended lectures on Pathological Anatomy, the Principles of Surgery and Midwifery, the Surgical Practice of a Hospital with Clinical Lectures for a year, ten cases of Midwifery, and produce a certificate of proficiency in Vaccination. Previously to the second part of the third examination he must have attended Lectures on the Principles and Practice of Physic, the Physiological Action and Therapeutic uses of Drugs, and Medical Jurisprudence; also the Medical Prac-

[3] The General Medical Council will not consider any Examination in the English Language sufficient that does not fully test the ability of the candidate:—(1) To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (2) to write correctly from dictation; (3) to explain the grammatical construction of sentences; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use.

[4] This subject may be passed either as Preliminary, or before, or at the first Professional Examination.

[5] If he have taken the higher honours in the Natural Science School he may go in for the first M.B. examination on the first opportunity, and so have a longer period of practical study before the second M.B. examination. The "testamur" of the Natural Science School exempts from examination in Physics and Chemistry at the first M.B. This examination, therefore, comprises in the cases of such candidates Anatomy and Physiology alone. By a recent decree candidates who have not passed the Natural Science School are allowed to take up Physics and Chemistry, only in the examination, before entering for the Anatomy and Physiology.

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tice of a hospital with Clinical Lectures, and have been clinical clerk for six months.

The degree of *Doctor in Medicine* may be taken three years after M.B. An Act has to be kept, with *vivâ voce* examination; and an extempore essay has to be written on some subject relating to Physiology, Pathology, the Practice of Medicine, or State Medicine.

The candidate for the examination for the degree of *Bachelor of Surgery* is required to have passed the *first* and *second* examinations, and the first part, of the *third* examination for M.B.; to have attended the Surgical practice of a hospital for two years, have acted as House Surgeon or Dresser for six months, and have gone through a course of instruction in Practical Surgery. The subjects of the Examination are Surgical Operations and the application of Surgical Apparatus, and the Examination of Surgical patients. Before *admission* to the degree he must also have passed the *second* part of the third examination for M.B.

For the degree of *Master in Surgery* the candidate must have passed all the examinations for B.C. two years. He is required to pass an examination in Surgical Anatomy and Surgical operations, Pathology, and the Principles and Practice of Surgery. A surgical case and a topic relating to surgery are submitted to him, on one or both of which, at his option, he is required to write a short extempore essay.

The examination for certificates in *Sanitary Science* by the University of Cambridge will begin on Tuesday, Oct. 7th. The names of candidates, who must be on the Medical Register of the United Kingdom, should be sent to Dr. Anningson, Cambridge, on or before Sept. 28th.

The following is a summary of the course which a student (commencing at the University, say, in October, 1884) may follow:—He enters at any one of the colleges, or as a non-collegiate student, and passes the Previous Examination (in Classics and Mathematics), in October, 1884, or in December, 1884, or in April, 1885, unless he has already passed the equivalent examination under the Local Examinations or the Oxford and Cambridge Schools Examination Board. He is then registered as a student of medicine, and pursues his medical studies in the University for a part or the whole of the period. Natural Sciences Tripos Examination (in Human and Comparative Anatomy, Chemistry, and Botany), in June, 1887; this admits to the B.A. degree in June, 1887. Second Examination for M.B. (in Human Anatomy and Physiology, and Materia Medica), June or December, 1887, or May, 1888. Third examination for M.B. (in Medicine, Surgery, Midwifery, and Medical Jurisprudence), November, 1889. Examination for B.C. Surgery, November, 1889. Degree of M.B. or B.C., November, 1889. Practically, however, more time than this is usually required.

Attendance at the hospital and the several lectures in the medical school is recognised by the Universities of Cambridge and London, and by the Colleges of Physicians and Surgeons.

Students should remain in Cambridge during the long vacation (July and August) and part of the Christmas vacation, as well as during the terms.

UNIVERSITY OF LONDON.

The *Matriculation Examinations* take place on the second Monday in January and the third Monday in June. Candidates must be above sixteen years of age. The fee for the examination is £2. Provincial examinations are appointed by the Senate from time to time at specified centres. Several scholarships, exhibitions, and prizes are associated with these examinations.

The *Preliminary Scientific* (*M.B.*) *Examination* takes place once in each year, and commences on the third Monday in July.[6] No candidate will be admitted to this examination until he shall have passed the Matriculation Examination, nor unless he have given notice of his intention to the registrar at least fourteen days before the commencement of the examination. Fee for this examination, £5.

Candidates are examined on the following subjects: Inorganic Chemistry, Experimental Physics, and General Biology. Candidates for Honours may also be examined in Botany and Vegetable Physiology, and Zoology, unless they have previously obtained an exhibition in any one of the subjects of this examination at the Intermediate Examination in Science, in which case they shall not be admissible to the examination for Honours in that subject.

Bachelor of Medicine.—Every candidate for the degree of Bachelor of Medicine will be required—1. To have passed the Matriculation Examination in this University. 2. To have passed the Preliminary Scientific Examination. 3. To have been engaged in his professional studies during four years subsequently to passing the Preliminary Scientific Examination[7] at one or more of the medical institutions or schools recognised by this University, one year at least of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom. 4. To pass two examinations in Medicine.

Intermediate Examination.—The Intermediate Examination in Medicine takes place once in each year, and commences on the last Monday in July. No candidate shall be admitted to this examination unless he have passed the Preliminary Scientific Examination at least one year previously, and have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having, subsequently to having passed the Matriculation Examination, been a student during two years at one or more of the medical institutions or schools recognised by this University, and of having attended a course of lectures on each of three of the subjects in the following list:—Descriptive and Surgical Anatomy, Histology and Physiology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine. 3. Of having, subsequently to having passed the Matriculation Examination, dissected during two winter sessions. 4. Of having, subsequently to having passed the Preliminary Scientific Examination, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of General and Pharmaceutical Chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of mineral waters, animal secretions, urinary deposits, calculi, &c. 5. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines. These certificates (as is the case also with all the certificates hereinafter mentioned), must be transmitted to the registrar at least fourteen days before the commencement of the examination. Fee for this examination, £5.

Candidates will be examined in the following subjects:—Anatomy, Physiology, Histology, Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry. Candidates will not be approved by the examiners unless they have shown a competent knowledge in all these subjects.

Any candidate who has passed the Intermediate Examination in Medicine in all its subjects at one time may be examined at the Honours Examination next following the Intermediate Examination in Medicine at which he passed for Honours in (1) Anatomy, (2) Materia Medica and Pharmaceutical Chemistry, (3) Physiology and Histology, and (4) Organic Chemistry. The examinations take place in the week following that in which the Pass Examination commenced. They are conducted by means of printed papers and practical work.

If, in the opinion of the examiners, sufficient merit be evinced, the candidate who shall distinguish himself the most in Anatomy, and the candidate who shall distinguish himself the most in Histology and Physiology, will each receive an exhibition of £40 per annum for the next two years; the candidate who shall distinguish himself the most in Organic Chemistry, and the candidate who shall distinguish himself the most in Materia Medica and Pharmaceutical Chemistry, will each receive an exhibition of £30 per annum for the next two years. On receiving each quarterly instalment he must declare his intention of presenting himself at the M.B. Examination within three academical years from the time of his passing the Intermediate Examination in Medicine. Under the same circumstances, the first and second candidates in Anatomy and in Histology and Physiology, and the first candidate in Organic Chemistry and in

[6] Candidates for the Degree of M.B. are required after Jan. 1st, 1885, by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies, and are recommended to devote a preliminary year to preparation for it according to the following programme:—Winter Session: Experimental Physics, Chemistry (especially Inorganic), Zoology. Summer Session: Practical Chemistry (Inorganic), Botany.

[7] Candidates who pass the Matriculation Examination in January, 1885, or previously, will be allowed to date the commencement of their Professional studies, as heretofore, from that Examination.

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Materia Medica and Pharmaceutical Chemistry will each receive a gold medal of the value of £5.

M B. Examination.[8]—The M B Examination takes place once in each year, and commences on the first Monday in November. Each candidate, two academical years after passing the First Examination, must produce certificates to the following effect:—1. Of having passed the Intermediate Examination. 2. Of having, subsequently to having passed the Intermediate Examination, attended a course of lectures on each of two of the subjects enumerated in Section 2 of the regulations for that examination, and for which the candidate had not on that occasion presented certificates. 3. Of having conducted at least twenty labours. Certificates on this subject will be received from any legally qualified practitioner in Medicine. 4. Of having attended the Surgical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Surgery. 5. Of having attended the Medical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Medicine. 6 Of having, after having attended Surgical and Medical Hospital Practice for at least twelve months subsequently to passing the Intermediate Examination, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a hospital, infirmary, dispensary, or parochial union, during six months, such attendance not to be counted as part of either the Surgical or the Medical Hospital Practice prescribed in Clauses 4 and 5. 7. Of having acquired proficiency in Vaccination. Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council. The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has exteded. The fee for this examination is £5.

Candidates will be examined in the following subjects:—General Pathology, General Therapeutics and Hygiene, Surgery, Medicine, Obstetric Medicine, Forensic Medicine. The examinations will include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. Candidates will not be approved by the examiners unless they have shown a competent knowledge in all the subjects of examination.

Any candidate who has passed the M.B. Examination may be examined at the Honours Examination next following the M.B. Examination at which he has passed for Honours in (1) Medicine, (2) Obstetric Medicine, and (3) Forensic Medicine. The examinations commence in the week following that in which the Pass Examination terminated. Except in the case of Forensic Medicine they are conducted by means of printed papers, but the examiners will not be precluded from putting *vivâ voce* questions upon the written answers of the candidates.

If, in the opinion of the examiners, sufficient merit be evinced, the candidate who shall distinguish himself the most in Medicine will receive £50 per annum for the next two years, with the style of University Scholar in Medicine. Under the same circumstances the candidate who shall distinguish himself the most in Obstetric Medicine will receive £30 per annum for the next two years, with the style of University Scholar in Obstetric Medicine. Under the same circumstances the candidate who shall distinguish himself the most in Forensic Medicine will receive £30 per annum for the next two years, with the style of University Scholar in Forensic Medicine. Under the same circumstances the first and second candidates in each of the preceding subjects will each receive a gold medal of the value of £5.

Bachelor of Surgery.—The examination for the degree of Bachelor of Surgery takes place once in each year, and commences on the Tuesday following the first Monday in December. Candidates must produce certificates to the following effect:—1. Of having passed the Examination for the degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. Fee for this examination, £5.

Any candidate who has passed the B.S. Examination may be examined at the Honours Examination next following the B.S. Examination at which he has passed for Honours in Surgery. The examination takes place on Tuesday in the week following the Pass Examination, and is conducted by means of printed papers. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who shall distinguish himself the most will receive £50 per annum for the next two years, with the style of University Scholar in Surgery. Under the same circumstances, the first and second candidates will each receive a gold medal of the value of £5.

Master in Surgery.—The examination for the degree of Master in Surgery takes place once in each year, and commences on the first Monday in December.

Candidates must produce certificates to the following effect:—1. Of having taken the degree of Bachelor of Surgery in this University.[9] 2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University: (*a*) To Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University. (*b*) Or to Clinical or Practical Surgery during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession. (*c*) Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B S. Examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability. Fee for this degree, £5. The examination is conducted by means of printed papers and *vivâ voce* interrogation.

Candidates will be examined in Logic and Psychology and in Surgery, and will not be approved unless they have shown a competent knowledge in both the subjects of examination.

If sufficient merit be evinced, the candidate who shall distinguish himself the most in Surgery at this examination will receive a gold medal of the value of £20.

Doctor of Medicine.—The examination for this degree takes place once in each year, and commences on the first Monday in December.

Candidates must produce certificates to the following effect:—1. Of having passed the examination for the degree of Bachelor of Medicine in this University. 2. Of having attended, subsequently to having taken the degree of Bachelor of Medicine in this University, (*a*) to Clinical or Practical Medicine during two years in a hospital or medical institution recognised by this University; or (*b*) to Clinical or Practical Medicine during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession. (*c*) Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Medicine in this University. One year of attendance on Clinical or Practical Medicine or two years of practice will be dispensed with in the case of those candidates who at the M.B. Examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability. Fee for this degree, £5. The examination is conducted by means of printed papers and *vivâ voce* interrogation.

Candidates will be examined in Logic and Psychology and in Medicine, and will not be approved unless they have shown a competent knowledge in both the subjects of examination. If sufficient merit be evinced, the candidate who shall distinguish himself the most in Medicine at the examination for the M.D. degree will receive a gold medal of the value of £20.

Public Health.—A Special Examination will be held once in every year in subjects relating to Public Health, to commence on the second Monday in December. Candidates must have passed the second examination for the M.B. degree in this University at least one year previously; and must give notice of their intention to the registrar, at least *two calendar months* before the commencement of the examination. The fee for this examination is £5. Candidates will be examined in Chemistry, Microscopy, Meteorology, Geology, Physics and Sanitary Apparatus, Vital Statistics, Hygiene, and Sanitary Law. The examination will be both written and practical, and will extend over four days.

[8] Any candidate for the M.B. Examination who has passed the Intermediate Examination under the former regulations will be required to have also passed the examination in Physiology at some previous Intermediate Examination carried on under the present regulations, at which examination he shall not be allowed to compete for Honours.

[9] Candidates who have obtained the degree of Bachelor of Medicine previously to 1866 will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and in the case of such candidates the attendance on surgical practice required by Regulation 2 may commence from the date of the M.B. degree.

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Candidates will not be approved unless they have shown a competent knowledge in all the principal subjects of the examination. If sufficient merit be evinced the candidate who shall distinguish himself the most will receive a gold medal of the value of £5.

UNIVERSITY OF DURHAM.

A certificate, two licences, and three degrees are conferred—viz., a certificate of proficiency in Sanitary Science, a licence in Medicine, and a licence in Surgery; and the degrees of Bachelor in Medicine, Master in Surgery, and Doctor in Medicine.

For the degree of *Bachelor in Medicine* there are two professional examinations, the first being held twice yearly—viz., in September (in 1884 commencing on the 22nd) and April (in 1885 commencing on the 20th); the second is also held twice yearly—viz., in December (in 1884 commencing on the 1st) and in June (in 1885 commencing on the 22nd).

The subjects for the first examination are—Anatomy, Physiology, Chemistry and Botany. Candidates must produce the following certificates:—(1) Of registration as a medical student. (2) Of having passed one of the following examinations in Arts: (*a*) the examination for graduation in Arts at one of the following universities—Oxford, Cambridge, Durham, Dublin, London, Queen's (Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), and Queen's College (Kingston); or (*b*) the Preliminary or Extra-professional Examination for graduation in medicine at one of the following universities—London, Edinburgh, Glasgow, St. Andrews, Aberdeen, and Queen's (Ireland); or (*c*) the Preliminary Examination in Arts qualifying for the membership of the Royal College of Physicians of London or for the fellowship of the Royal College of Surgeons of England; or (*d*) the Preliminary Examination in Arts for the degrees in medicine of the University of Durham (in 1884 commencing on September 22nd, and in 1885 commencing on March 24th and September 21st). (3) Of attendance on two courses of Anatomy, on one of Physiology, on one of Theoretical and one of Practical Chemistry, and on one of Botany; of twelve months' dissection; and of attendance on a course of Practical Physiology of not less than thirty lessons.

The subjects for the Second Examination are Medicine, Surgery, Pathology, Materia Medica and Therapeutics, Midwifery and Diseases of Women and Children, Medical Jurisprudence and Public Health. For it candidates must produce the following certificates—viz., (1) of being not less than twenty-one years of age; (2) of good moral character; and (3) of attendance on the remainder of the course of medical and surgical study as prescribed by the Royal College of Surgeons of England, together with the following additional subjects—viz., one course of lectures on Medicine, one on Therapeutics, one on Public Health, and one on Botany, and on Medical Hospital Practice, with Clinical Lectures, during one winter and one summer session.

N.B.—It is required that one of the four years of professional education shall be spent in attendance at the College of Medicine, Newcastle-upon-Tyne.

For the degree of *Master in Surgery* the candidate must have passed the Examination for the degree of Bachelor in Medicine and must have attended one course of lectures on Operative Surgery. Each candidate will have an additional paper on Surgery, and will have to perform operations on the dead body, and to explain the use of instruments.

For the degree of *Doctor of Medicine* candidates must be not less than twenty-four years of age, must have obtained the degree of M.B. at least two years previously, and in the interim have been engaged in medical and surgical practice. Each candidate will be required to write an essay on some medical subject selected by himself and approved by the Professor of Medicine, and to pass an examination thereon.

Candidates for any of the above degrees must give at least twenty-eight days' notice to the registrar of the College.

The degree of Doctor of Medicine, for Medical Practitioners of fifteen years' standing, without residence.—There is a special Examination, under the following regulations:—1. That the candidate shall be registered by the General Council of Medical Education and Registration of the United Kingdom. 2. That the candidate shall have been in the active practice of his profession for fifteen years as a qualified practitioner. 3. That the candidate shall not be under forty years of age. 4. That the candidate shall produce a certificate of moral character from three registered members of the medical profession. 5. That if the candidate shall not have passed, previous to his Professional Examination (in virtue of which he has been placed on the Register), an examination in Arts, he shall be required to pass an examination in Classics and Mathematics. 6. That if the candidate shall have passed, previous to his Professional Examination (in virtue of which he has been placed on the Register), a preliminary examination, he shall be required to translate into English passages of certain named Latin authors. 7. That the candidate shall pass an examination in the following subjects: *a*, Principles and Practice of Medicine, including Psychological Medicine and Hygiene; *b*, Principles and Practice of Surgery; *c*, Midwifery and Diseases peculiar to Women and Children; *d*, Pathology, Medical and Surgical; *e*, Anatomy, Medical and Surgical; *f*, Medical Jurisprudence and Toxicology; *g*, Therapeutics. 8. That the fee shall be 50 guineas. 9. That if the candidate shall fail to satisfy the examiners, the sum of 20 guineas shall be retained; but that if he shall again offer himself for the examination, the sum of 40 guineas only shall then be required.

Examinations in accordance with the above regulations will commence on Dec. 1st, 1884, and June 22nd, 1885, in the College of Medicine, Newcastle-on-Tyne.

Certificate of Proficiency in Sanitary Science.—Candidates for this certificate must be registered medical practitioners and have attended one course of lectures on Public Health, at the College of Medicine, Newcastle-on-Tyne, extending over one winter session. The examination will be by written papers, practical, and *viva voce*, and will commence on October 2nd, 1884, and on April 20th, 1885. In the practical examination the candidate will be required:—To report upon the condition of some actual locality, to analyse liquids and gases, to explain the construction and use of instruments employed in meteorology, and to make microscopic examinations. The fee is £5 5*s*.

Medical Officers of Health of five years' standing, who were registered as qualified members of the profession before January 1st, 1873, may obtain the certificate of proficiency in Sanitary Science under the following conditions:—They must be registered medical practitioners, and be not under thirty years of age; they will be required to pass the same examination as before-mentioned, write an essay upon some practical sanitary subject, and will be examined upon the essay and upon other sanitary questions. The fee is £10 10*s*.

VICTORIA UNIVERSITY.

Three degrees are conferred by the Victoria University—viz.: Bachelor of Medicine (M.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). All candidates for degrees in Medicine and Surgery are required to have matriculated in the University.

Before admission to the degree of Bachelor of Medicine a candidate must produce certificates of four years' study subsequently to the date of his registration as a medical student, two of such years having been passed in a college of the University, and one year, at least, having been so passed subsequently to the date of passing the Preliminary Examination in Science. The subjects of this examination are, Chemistry, Inorganic and Organic; Zoology and Botany; Elementary Mechanics and Physics. The subjects of the Intermediate Examination for the degree of Bachelor of Medicine are Anatomy, Physiology, Materia Medica, and Pharmacy. The subjects of the final examination for the degree are Systematic, Practical, and Clinical Surgery; Systematic and Clinical Medicine, including Mental Diseases, Obstetrics and Diseases of Women and Children; Pharmacology and Therapeutics; General Pathology and Morbid Anatomy; Forensic Medicine; and Hygiene. The final examination is divided into two parts, which may be passed separately or together. The first part consists of an examination in Systematic Surgery, Pharmacology and Therapeutics, and General Pathology. Candidates are permitted to offer themselves for examination in these subjects at any time not prior to the completion of their third year of medical study. No candidate is admitted to the second part until he has completed his fourth year of study in accordance with the University regulations.

Doctor of Medicine.—No candidate can be admitted to this degree unless he has previously received the degree of Bachelor of Medicine, and at least one year has elapsed since he passed the examination for that degree. Candi-

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dates are required to present a printed dissertation embodying the results of personal observations or original research, either in some department of medicine, or of some science directly relative to medicine. Candidates may be examined on any subject connected with their dissertation.

Master of Surgery.—Candidates presenting themselves for this examination are required to have graduated as Bachelors of Medicine in the University, and to pass an examination in Surgical Anatomy, Surgical Pathology, Practical Surgery, Clinical Surgery, and Ophthalmology.

The following fees are payable:—For matriculation, £2; for the Preliminary Examination in Science, £1; for the Intermediate Examination for the degree of M.B., £1; for the Final Examination, £2; for the examination for the degree of Ch.M., £2. A fee of £2 is payable on sending in the dissertation for the degree of M.D., £5 on the conferring of the degree of M.B., £10 on that of M.D., and £10 on that of Ch.M. No fee entitles the candidate to more than one examination.

UNIVERSITY OF EDINBURGH.

Three medical degrees are conferred by the University of Edinburgh—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The degree of Master in Surgery is not conferred on any person who does not also at the same time obtain the degree of Bachelor of Medicine.

No candidate is admitted to a professional examination who has not passed a satisfactory examination on at least two of the following subjects (in addition to the subjects mentioned above):—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philsophy; and the examination on these latter subjects also takes place before the candidate has entered on his medical curriculum.

No one is admitted to the degrees of Bachelor of Medicine and Master in Surgery who has not been engaged in medical and surgical study for four years—the medical session of each year, or *annus medicus*, being constituted by at least two courses of not less than one hundred lectures each, or by one such course and two courses of not less than fifty lectures each; with the exception of the clinical courses, in which lectures are to be given at least twice a week during the prescribed periods.[10]

Every candidate for the degrees of M.B. and C.M. must give sufficient evidence by certificates—(*a*) That he has studied each of the following departments of medical science—namely, Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Children, and General Pathology, each during courses including not less than one hundred lectures; Practical Anatomy, a course of the same duration as those of not less than one hundred lectures;[11] Practical Chemistry, three months; Practical Midwifery, three months at a midwifery hospital, or a certificate of attendance on six cases from a registered medical practitioner; Clinical Medicine, Clinical Surgery,[12] courses of the same duration as those of not less than one hundred lectures, or two courses of three months' lectures, being given at least twice a week; Medical Jurisprudence, Botany, Natural History (including Zoology), during courses including not less than fifty lectures. (*b*) That he has attended, for at least two years, the medical and surgical practice of a general hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons. (*c*) That he has attended, during a course of not less than fifty hours' instruction, the class of Practical Materia Medica in the University of Edinburgh, or a similar class conducted in a university or recognised school of medicine, or a similar class conducted by a teacher recognised by the University Court; or that he has been engaged, for at least three months, by apprenticeship or otherwise, in compounding and dispensing drugs at the laboratory of a hospital or dispensary, by a member of a surgical college or faculty, a licentiate of the London or Dublin Society of Apothecaries, or a member of the Pharmaceutical Society of Great Britain. (*d*) That he has attended, for at least six months, by apprenticeship or otherwise, the out-practice of a hospital, or the practice of a dispensary physician, a surgeon, or a member of the London or Dublin Society of Apothecaries.

Students of Medicine in the London schools, and in the school of the College of Surgeons in Dublin, can obtain there two *anni medici* out of the four required for the Edinburgh degrees in Medicine. One *annus medicus* may be constituted by attendance on Practical Anatomy and Hospital Practice during the winter session. Another *annus medicus* by attending either (*a*) full winter courses on any two of the following subjects:—Anatomy, Physiology, Chemistry, Pathology, Surgery, Medicine, Clinical Surgery, Clinical Medicine; or (*b*) on one such course and two three months' courses on any of the following subjects:—Botany, Practical Chemistry, Natural History, Medical Jurisprudence. If the student selects the arrangement prescribed in (*a*), attendance on a third course, although unnecessary to constitute an *annus*, will also be accepted. The other subjects and the additional courses, not given in London or Dublin, necessary for the degrees of the University, require to be attended at this University. In provincial schools, where there are no lecturers recognised by the University Court, a candidate can only have one *annus medicus*, and this is constituted by attendance at a qualified hospital along with a course of Practical Anatomy. But in a provincial school where there are two or more lecturers recognised by this University, a second *annus medicus* may be made by attendance on at least two six months', or one six months' and two three months', recognised courses.

Every candidate must deliver, before the 31st day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine a declaration in his own handwriting, that he has completed his twenty-first year, or that he will have done so on or before the day of graduation, and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master; together with a statement of his studies, accompanied with proper certificates.

Each candidate is examined, both in writing and orally, on Chemistry, Botany, and Natural History; on Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; clinically on Medicine and on Surgery in a hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica, and Pathology are conducted, as far as possible, by demonstrations of objects placed before the candidates.

Students who profess themselves ready to submit to an examination in the first division of these subjects at the period of examination immediately preceding their second winter session of professional study may be admitted to examination at that time; provided always that students who commence their medical studies in the summer session shall not be admitted to a degree in Medicine unless their course of study, subsequent to the completion of the summer session in which they commence their medical studies, shall not be less than the minimum course of four years prescribed in Section 4 hereof.

Students who have passed their examination on the first division of these subjects may be admitted to examination on the second division at the end of their third year.

The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *annus medicus*.

Candidates may, if they choose, be admitted to examination on the first two of these divisions at the end of their third year, or to the fourth examinations at the end of their fourth year.

If any candidate at these examinations be found unqualified, he cannot be again admitted to examination unless he has studied during another year two of the prescribed subjects, either in the University or other medical school.

The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degrees of Bachelor of Medicine and Master in Surgery, and who is of the age of twenty-four years, and produces a certificate of

[10] No course of lectures will be allowed to qualify unless the lecturer certifies that it has embraced at least one hundred lectures, or fifty lectures in conformity with the requirements of this section. Three months' courses on Materia Medica, Pathology, and Midwifery do not qualify.

[11] Certificates of attendance on Practical Anatomy must express not only the number of months engaged in dissection, but the names of the parts dissected, and the degree of care with which the dissections have been made. Students are recommended not to appear for an examination in Anatomy with a view to a degree until they have dissected the human body at least once.

[12] The Medical Faculty recommend that medical students should not attend Clinical Surgery during their first six months' attendance on Clinical Medicine.

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having been engaged, subsequently to his having received the degrees of M.B. and C.M., for at least two years in attendance on a hospital, or in the military or naval medical service, or in medical and surgical practice; provided always that the degree of M.D. shall not be conferred on any person unless he be a graduate in Arts of one of the universities of England, Scotland, or Ireland, or of such other universities as are above specified, or unless he shall, before or at the time of his obtaining the degrees of M.B. and C.M., or thereafter, have passed a satisfactory examination on *three* of the subjects mentioned in Section II. of the statutes relative to preliminary examination. Two of these must be Greek and Logic or Moral Philosophy, and the third is to be one of the following subjects, at the option of the candidate—namely, French, German, Higher Mathematics, and Natural Philosophy; and provided also that the candidate for the degree of M.D. shall submit to the Medical Faculty a thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the degrees of M.B. and C.M., which he may have made a subject of study after having received that degree. The candidate must lodge his thesis with the dean on or before 30th April of the year in which he proposes to graduate. No thesis will be approved by the Medical Faculty which does not contain either the results of original observations in Practical Medicine, Surgery, Midwifery, or in some of the sciences embraced in the curriculum for the Bachelor's and Master's degree; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.

Persons who began their medical studies before the 4th of February, 1861, are entitled to graduate under the system in force before or after that date, according as they may comply with the regulations in force in the University before or after that date.

Examinations on the preliminary branches of extra-professional education will take place on the 7th, 8th, 9th, and 10th October, 1884; and on the 10th, 11th, 12th, and 13th March, 1885.

The fees for M.B. and C.M. are £22. Total fees and stamp for graduating as M.D. only, by regulations for students commencing before February, 1861, £25. The fees for examination must be paid at the secretary's office ten days before the dates thereof, and the fees for the degree of M.D., and the stamp duty for the latter, must be paid on or before the 15th day of July in the year of graduation. In the event of the candidate not passing any one of the professional examinations the fee is not returned; but he may appear at one subsequent examination without paying an extra fee, and at any future examination on paying one-half the fee.

UNIVERSITY OF GLASGOW.

Three degrees in Medicine are granted—viz., Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. The curricula of study and the examinations for the several degrees conferred are nearly the same as in the University of Edinburgh. The annual term for conferring medical and surgical degrees is the 1st of August. The Preliminary Examinations of medical students in branches of general education begin on the 8th of October, 1884, and on the 1st of April, 1885.

The fees for the degrees are the same as in the University of Edinburgh.

The regulations under which the above degrees are granted and the notices of the subjects of examination may be obtained by application to the assistant-clerk of the Senate of the University.

UNIVERSITY OF ABERDEEN.

The curricula for the several degrees conferred are nearly the same as in the University of Edinburgh.

Professional Examinations will be held twice in each year—namely, in April and July, directly after the close of the winter and summer sessions.

The fees for graduation are the same as in the University of Edinburgh. Matriculation fee, including all dues, for the winter and summer sessions, £1; summer session alone, 10s.

Candidates who commenced their medical studies before November, 1861, are entitled to appear for examination for the degree of M.D. after four years' study, one of which must have been in the University of Aberdeen.

Besides the Royal Infirmary, students have the opportunity of attending the following institutions:—Sick Children's Hospital; General Dispensary, and Lying-in and Vaccine Institutions, daily; Royal Lunatic Asylum; Eye Institution, in which is given clinical instruction on the Diseases of the Eye, and on the Application of the Ophthalmoscope for their diagnosis.

Application for further information should be addressed to Professor Brazier, Dean of the Medical Faculty.

UNIVERSITY OF ST. ANDREWS.

Two degrees in Medicine are granted—namely, Bachelor of Medicine and Master in Surgery (M.B., C.M.), and Doctor of Medicine (M.D.). The curricula for these degrees, and the regulations under which they are conferred, differ from those of the University of Edinburgh only in the particulars noticed below.

The degree of *Doctor of Medicine* may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years whose professional position and experience are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always that degrees will not be conferred under this section on a greater number than ten in any one year. The examinations are held yearly, towards the end of April. Candidates must lodge with the Dean of the Medical Faculty the following certificates, along with application for admission to examination:—1. A certificate of age, being a baptismal certificate or an affidavit of age. 2. Holograph certificates from at least three medical men of acknowledged reputation in the medical profession or in the medical schools, recommending the candidate to the Senatus for the degree, and testifying to his professional skill and position. As only ten can graduate yearly, candidates will be selected whose service and certificates seem to the Medical Faculty to present the highest professional claims, and where these seem equal preference will be given to age and priority of application. 3. A portion of the graduation fee (viz., £10 10*s.*) shall be forfeited should the candidate fail to appear, or to graduate, at the time appointed. A satisfactory examination, written and *viva voce*, must be passed in the following departments—viz., Materia Medica and General Therapeutics, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, Midwifery, and Diseases of Women and Children.

No one will be received as a candidate for the degree of *Bachelor of Medicine* and *Master in Surgery* unless two years at least of his four years of medical and surgical study shall have been in one or more of the following universities or colleges—viz., the Universities of St. Andrews, Glasgow, Aberdeen, Edinburgh, Oxford, and Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

Subject always to the condition here specified, the studies for candidates for the degree of Bachelor of Medicine and Master in Surgery will be under the following regulations: The remaining years of medical and surgical study may be either in one or more of the universities and colleges above specified, or in the hospital schools of London, or in the school of the College of Surgeons of Dublin, or under such private teachers of medicine as may from time to time receive recognition from the University Court. Attendance during at least six winter months on the medical or surgical practice of a general hospital which accommodates at least eighty patients, and during the same period on a course of Practical Anatomy, may be reckoned as one of such remaining years.

Every candidate for examination for the degree of M.B. and C.M. is required to lodge a declaration of age, a statement of his course of study, his inaugural dissertation, and all his certificates with the Dean of the Medical Faculty, on or before the 25th of March in each year.

UNIVERSITY OF DUBLIN (TRINITY COLLEGE).

Matriculation.—All students in the School of Physic intending to practise Physic must be matriculated, for which a fee of 5*s.* is payable. No student can be admitted for the winter course after Nov. 25th.

Previous Medical Examination.—Candidates for degre

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and licences in Medicine and Surgery are required to pass a previous examination in Physics, Chemistry, Botany, Materia Medica and Pharmacy, and Descriptive Anatomy and Institutes of Medicine (Practical Histology and Physiology) previous to their degree examination.

Bachelor in Medicine.—A candidate for this degree must be a graduate in Arts, and may obtain the degree of Bachelor in Medicine at the same commencement as that at which he receives his degree of B.A., or at any subsequent commencement. The medical education of a Bachelor in Medicine is of four years' duration, and comprises attendance on a single course of each of the following lectures:—Anatomy, Practical Anatomy, Theory of Surgery, Chemistry, Materia Medica and Pharmacy, Physiology, Practice of Medicine, Midwifery, Botany, Medical Jurisprudence, Heat, Electricity, Magnetism, Comparative Anatomy. Three courses of nine months' attendance on the Clinical Lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board of Trinity College. Six months' instruction in Practical Midwifery, including Clinical Lectures. A certificate of personal attendance on Fever cases, with names and dates of cases. Six months' dissections, three months' laboratory instruction in Chemistry, three months' Practical Histology, and one month's instruction in Vaccination are required. Any of the above-named courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows. Fee for the *Liceat ad Examinandum*, £5; for the M.B. degree, £11.

Doctor in Medicine.—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must perform exercises for the degree before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this degree, £13.

Bachelor in Surgery.—A Bachelor in Surgery must be a Bachelor in Arts and in Medicine, and have spent four years in the study of Surgery and Anatomy. He must also pass a public examination in the Hall before the Professors of the School of Physic, having previously completed the prescribed curriculum of study, which includes the following additions to the courses named above for the M.B.: Operative Surgery, Two Courses of Dissections, Ophthalmic Surgery.[13] Candidates are required to perform surgical operations on the dead subject. Fee for the *Liceat ad Examinandum*, £5; for the degree of Bachelor in Surgery, £5.

Master in Surgery.[14]—A Master in Surgery must be a Bachelor in Surgery of three years' standing, or have been qualified to take the degree of Bachelor in Surgery for three years; and must read a thesis publicly before the Regius Professor of Surgery, or undergo an examination before the Regius Professor, according to regulations to be approved by the Provost and Senior Fellows. Fee for the degree of Master in Surgery, £11.

University Licences.—Candidates for the Licences in Medicine or Surgery must be matriculated in Medicine, and must have completed two years in Arts and four years in medical studies.

Licentiate in Medicine—The medical course and examination necessary for the Licence in Medicine are the same as for the degree of M.B. Fee for the *Liceat ad Examinandum*, £5; for the Licence in Medicine, £5.

Licentiate in Surgery.—The surgical course and examination necessary for the Licence in Surgery are the same as for the degree of Bachelor in Surgery. Fee for the *Liceat ad Examinandum*, £5; for the Licence in Surgery, £5.

Qualification in State Medicine.—Doctors in Medicine or graduates in Medicine and Surgery of Dublin, Oxford, or Cambridge who wish to obtain from the University a Certificate of Qualification in State Medicine can do so on passing an examination in a limited course of the following subjects: 1. Law, comprehending sanitary legislation, and the laws relating to the conduct and duties of medical men. 2. Engineering in its sanitary aspects. 3. Pathology, including the laws of epidemics, vaccination, insanity, &c. 4. Vital and sanitary statistics. 5. Chemistry in relation to air, water, gaseous poisons, deodorisation, and disinfection. 6. Meteorology. 7. Medical jurisprudence. 8. Hygiene.

The total cost of the education and first degrees in Medicine and Surgery is as follows, in addition to the fees for education in Arts and B.A. degree (£83 4*s.*); Medical and Surgical Lectures, £63 15*s.* 6*d.*; Hospitals, £44 2*s.*; Medical and Surgical Examinations and Degrees, £31.

[13] Students in the School of Physic who matriculated before June 22nd, 1872, may obtain the degree of Master in Surgery according to the regulations in force previous to the creation of the degree of Bachelor in Surgery.

[14] Masters in Surgery must be of the standing of Masters of Arts.

ROYAL UNIVERSITY OF IRELAND.

The following degrees are conferred by the University in this Faculty:—Bachelor of Medicine, Doctor of Medicine, Master of Surgery; in Obstetrics, a special diploma; in Sanitary Science, a special diploma. After the year 1884 all the Medical Examinations will be held twice yearly—viz., towards the end of April and in October.

The course for degrees in Medicine, &c., shall be one of at least four years' duration. All candidates for these degrees are, in addition to attending the lectures and complying with the other conditions to be from time to time prescribed, required to pass the following examinations: The Matriculation Examination, the First University Examination, the First Examination in Medicine, the Second Examination in Medicine, and the Degree Examination.

The First Examination in Medicine.—Students shall be admitted to this examination after the lapse of one academical year from the time of their matriculation. The subjects of this examination shall be:—Zoology, Botany, a modern language (either French or German). Candidates who have passed in a Modern Language at the First University Examination in Arts are exempt from again presenting this subject at the First Examination in Medicine, except as a qualification for admission to compete for Honours, the answering of the candidates in the three subjects above mentioned being taken into account in awarding Honours.

The Second Examination in Medicine.—Students shall be admitted to this examination after the lapse of one academical year from the time of passing the First Examination in Medicine, provided they have completed the First Period of the Course of Medical Studies. The subjects of this examination shall be:—Anatomy, Physiology, Materia Medica, Chemistry.

The Examination for the Degree of M.B.—Students shall be admitted to this examination after the lapse of one academical year from the time of passing the Second Examination in Medicine, provided they have completed the Second Period of the Course of Medical Studies. The subjects of this examination shall be:—Anatomy, including Practical Anatomy; Physiology, including Practical Physiology; Histology; Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Medical Jurisprudence. Students who have commenced their medical studies since January 1st, 1884, must also produce a certificate of having been registered as Students in Medicine by the Medical Council for a period of at least forty-five months.

M.D. Degree.—Candidates may be admitted to this degree after the lapse of two academical years from the time of obtaining the degree of M.B. Provided, however, that all persons who shall be students in Medicine in the Queen's University at the date of its dissolution shall be entitled, if they so desire, to obtain the degree of M.D., instead of the degree of M.B., upon passing the examination herein prescribed for the M.B. degree. Every candidate shall be examined at the bedside, and required to diagnose at least six cases, medical and surgical, and prescribe treatment, and to write detailed reports on at least two cases to be selected by the examiners, and to discuss all the questions arising thereon. Every candidate shall submit to the Medical examiners, for their approval, a thesis certified by him (or her) to have been composed by himself (or herself). No thesis shall be approved which does not contain some original or personal observations in practical Medicine, Surgery, Midwifery, or in some of the sciences embraced in the curriculum, or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted.

The M.Ch. degree shall be conferred only on graduates in Medicine of the University. The examination will comprise the Theory and Practice of Surgery, including Operative and Clinical Surgery.

The Diploma in Obstetrics will also be conferred only on graduates in Medicine of the University. The examination will comprise the Theory and Practice of Midwifery, and the use of Obstetrical instruments and appliances.

The Diploma in Sanitary Science will be conferred only on graduates in Medicine of the University. The exami-

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nation shall embrace the following subjects:—Climate, Chemistry, Geology, Physics, Vital Statistics, Hygiene, Sanitary Law.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The licence of this College is a qualification to practise Medicine, Surgery, and Midwifery, and is recognised by the Local Government Board as a qualification in Surgery as well as in Medicine.

Licentiates.—Every candidate for the College licence (except when otherwise provided by the bye-laws) is required to produce satisfactory evidence to the following effect:—Of having attained the age of twenty-one years. Of moral character. Of having passed before the commencement of professional study an examination in the subjects of general education recognised by the General Medical Council. Of having been registered as a medical student in the manner prescribed by the General Medical Council. Of having been engaged in professional studies during at least forty-five months, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions in one or other of the following ways:—1. Attending the practice of a hospital or other institution recognised by the College for that purpose. 2. Receiving instruction as the pupil of a legally qualified practitioner having opportunities of imparting a practical knowledge of Medicine, Surgery, or Midwifery. 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Of having attended, during three winter sessions and two summer sessions, the medical and surgical practice at a recognised hospital or hospitals.[15] Of having discharged the duties of a medical clinical clerk during six months; and of a surgical dresser during other six months; and of having been engaged during six months in the clinical study of Diseases peculiar to Women. Of having received instruction in Chemistry, Practical Chemistry, Materia Medica, Botany, and Practical Pharmacy. Of having attended a course of lectures on the following subjects:—Anatomy (with Dissections), during twelve months; Physiology; a practical course of General Anatomy during a winter or a summer session, consisting of not less than thirty meetings of the class; Pathological Anatomy; Principles and Practice of Medicine; Principles and Practice of Surgery; Midwifery and the Diseases peculiar to Women; Forensic Medicine. Of having attended Clinical Lectures on Medicine during nine months, and also Clinical Lectures on Surgery during nine months, and of having been engaged during a period of three months in the Clinical study of Diseases peculiar to Women. Of having passed the professional examinations, of which there are three, each partly written, partly oral, and partly practical. The subjects of the first examination are:—Chemistry and Chemical Physics—viz., Heat, Light, and Electricity; Materia Medica; Botany and Pharmacy; and Osteology. The subjects of the second examination are Anatomy and Physiology. The subjects of the final examination are Medical Anatomy and Pathology, including Morbid Anatomy; the Principles and Practice of Medicine; Surgical Anatomy and Pathology, including Morbid Anatomy; the Principles and Practice of Surgery; Midwifery and Diseases peculiar to Women; Forensic Medicine; Public Health and Therapeutics.

Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by a university in the United Kingdom, in India, or in a British colony, or by the College of Surgeons in England, Scotland, or Ireland, or the Faculty of Physicians and Surgeons of Glasgow, shall be exempt from re-examination on those subjects. Any candidate who shall produce satisfactory evidence of having passed an examination on Chemistry and Materia Medica, required for a degree in Medicine at a university in the United Kingdom, in India, or in a British colony, will be exempted from re-examination on those subjects. Any candidate who shall have obtained a degree in Surgery at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery.

Members.—The members of the College, present and future, shall be alone eligible to the Fellowship. Every candidate (except such as are admissible under special provisions relating to practitioners) must produce proof of his having been engaged in professional studies during a period of five years. The examination will be partly written and partly *vivâ voce*. Doctors and Bachelors of Medicine may claim exemption from all or any part of the examination, except such as relate to the Third or Pass Examination. Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule A to the Medical Act and recognised by the College as requiring a course of study and an examination satisfactory to the College, will be exampt from re-examination on the subjects of the Primary Examinations. Any candidate who shall have obtained a degree in Surgery, at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, after a course of Study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery.

[15] A three months' course of clinical instruction in the wards of a recognised lunatic hospital or asylum may be substituted for the same period of attendance in the medical wards of a general hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

REGULATIONS RESPECTING THE EDUCATION AND EXAMINATION OF CANDIDATES FOR THE DIPLOMA OF MEMBER OF THE COLLEGE.

Professional Education.—The following are recognised modes of commencing professional education:—(1) Attendance on the practice of a hospital, or other public institution recognised by this College for that purpose. (2) Instruction as the pupil of a legally qualified surgeon, holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council. (3) Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

Candidates, prior to their admission to the First or Primary Examination on Anatomy and Physiology, will be required to produce the following certificates, viz:—Of having, prior to the commencement of professional study, been registered by the General Medical Council. Of having attended lectures on Anatomy during two winter sessions. Of having performed dissections during not less than two winter sessions. Of having attended lectures on General Anatomy and Physiology[16] during one winter session. Of having attended a Practical Course of General Anatomy and Physiology[17] during another winter or a summer session, consisting of not less than thirty meetings of the class.

Candidates, prior to their admission to the Second or Pass Examination on Surgical Anatomy and the Principles and Practices of Surgery, Medicine, and Midwifery, will be required to produce the following certificates, viz.:—Of being twenty-one years of age. Of having been engaged, subsequently to the date of registration by the General Medical Council, during four years, or during a period extending over not less than four winter and four summer sessions, in the acquirement of professional knowledge. Of having attended lectures on Surgery during one winter session. Of having attended a course of Practical Surgery during a period occupying not less than six months prior or subsequent to the course required by the preceding Clause 3.[18] Of having

[16] By the Practical Course referred to in Clause 3, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, &c.; but it is not hereby intended that the learners shall perform vivisections.

[17] The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

[18] The course of Practical Surgery referred to in Clause 4 is intended to embrace instruction in which each pupil shall be exercised in practical

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attended one course of lectures on each of the following subjects, viz :—Chemistry,[19] Materia Medica, Medicine, Forensic Medicine, Midwifery (with practical instruction), and a certificate of having personally conducted not less than ten labours, and Pathological Anatomy during not less than three months. Of having studied Practical Pharmacy during three months. Of having attended a three months' course of Practical Chemistry (with manipulations), in its application to medical study.[20] Of instruction and proficiency in the practice of Vaccination.[21] Of having attended, at a recognised hospital or hospitals, the Practice of Surgery, during three winter[22] and two summer[23] sessions. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher, during not less than three months.[24] Of having, subsequently to the first winter session of attendance on Surgical Hospital Practice, attended at a recognised hospital or hospitals, clinical lectures on Surgery, during two winter and two summer sessions. Of having been a dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery. Of having attended during the whole period of attendance on Surgical Hospital Practice (see Clause 9) demonstrations in the post-mortem rooms of a recognised hospital. Of having attended at a recognised hospital or hospitals, the Practice of Medicine, and Clinical Lectures on Medicine, during one winter and one summer session.

Special Notice.—Candidates commencing their professional education on or after the 1st of October, 1882, will not be admitted to the Second or Pass Examination until after the expiration of two years from the date of their passing the Primary or Anatomical and Physiological Examination for such diploma, except in the following cases:—When a candidate, before presenting himself for the Primary Examination, shall possess a recognised degree or diploma in Medicine or Surgery, or shall have completed the curriculum of professional education for the diploma. In the case of a candidate who, being desirous of obtaining the Fellowship, shall fail to present himself for the Primary Examination for the Membership at the end of his second year of professional study, but who shall pass at the end of his third winter session the Primary Examination for the Fellowship, it being required in such case that not less than one year of attendance on the Surgical Practice of a recognised hospital shall intervene between the date of his passing the Primary Examination for the Fellowship and the date of his presenting himself for the Second or Pass Examination for the diploma of Member. In the case of a candidate who, having commenced his professional studies by attendance on the practice of a recognised provincial or colonial hospital and having completed a year of such attendance, shall fail to pass the Primary Examination at the end of his second winter session of attendance at a recognised medical school, provided that in his case not less than one year shall elapse between the date of his passing the Primary Examination and the date of his presenting himself for the Second or Pass Examination for the diploma of Member. When a candidate owing to illness, duly certified by one or more of the teachers of his medical school, shall be prevented from presenting himself for the Primary Examination on the completion of his second year of professional study. And in the case of a candidate who, from some unforeseen circumstances, shall fail to present himself for the Primary Examination on the completion of his second year of professional study, it being left to the Court of Examiners to determine whether in such case the candidate shall or shall not be required to comply with the regulation.

Certificates of attendance upon the practice of a recognised provincial or colonial hospital unconnected with, or not in convenient proximity to, a recognised medical school will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College. Those candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland from candidates for their diploma, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied subsequently to the date of registration by the General Medical Council, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge; and in case of candidates who shall have pursued the whole of their studies at recognised foreign or colonial universities, upon the production of the several certificates required for their degree by the authorities of such universities, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

Professional Examination.—This examination is divided into two parts. The first or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body. The second or Pass Examination, on Surgical Anatomy and the Principles and Practice of Surgery, Medicine, and Midwifery,[25] is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients.

The Primary Examinations are held in the months of January, April, May, July, and November, and the Pass Examinations generally in the ensuing week, respectively. Candidates will not be admitted to the Primary Examination until after the termination of the second winter session of their attendance at a recognised school or schools; nor to the Pass, or Surgical Examination, until after the termination of the fourth year of their professional education. The fee of five guineas, paid prior to the first admission to the Primary Examination, is retained whether the candidate pass or fail to pass the examination, but is allowed as part of the whole fee of twenty-two pounds[26] payable for the diploma. A candidate, after failure at any Primary Examination, is required, on admission to any subsequent Primary Examination, to pay a further fee of three guineas, which is retained, whether he pass or fail to pass the examination, and which further fee is not allowed as part of the whole fee of twenty-two pounds for the diploma.

The fee of sixteen pounds fifteen shillings is payable prior to each admission to the Pass Examination; but on each occasion of failure the balance of eleven pounds ten shillings is returned to the candidate. A candidate, having entered his name for either the Primary or Pass Examination, who

details, such as in the application of anatomical facts to surgery, on the living person, or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents on the living person, or on the dead body; the performance, where practicable, of the operations of surgery on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated in the contents of a museum of morbid anatomy and otherwise.

[19] The course of lectures on Chemistry included in Clause 5 will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

[20] The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

[21] The certificate of instruction in Vaccination must be such as will qualify its holder to contract as a Public Vaccinator under the Regulations at the time in force of the Local Government Board.

[22] The winter session comprises a period of six months, and, in England, commences on the 1st of October and terminates on the 31st of March.

[23] The summer session comprises a period of three months, and, in England, commences on the 1st of May and terminates on the 31st of July.

[24] It is intended that the candidate should receive the instruction required by Clause 10 at an early period of his attendance at the hospital.

[25] Candidates can claim exemption from examination in Medicine and Midwifery under the following conditions, viz:—The production by the Candidate of a degree, diploma, or licence in medicine and midwifery entitling him to register under the Medical Act of 1858 or a degree, diploma, or licence in medicine and midwifery of a colonial or foreign university approved by the Council of the College. A declaration by the candidate, prior to his admission to the Pass Examination, that it is his intention to obtain either of the qualifications in medicine and midwifery mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said qualification, or proof of having passed the several examinations entitling him to receive the same.

[26] This sum of £22 is exclusive of the fee of £2 paid for the Preliminary Examination.

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shall fail to attend will not be allowed to present himself for examination within the period of three months from the date at which he shall have so failed to attend. A candidate referred on the Primary Examination is required, prior to his admission to re-examination, to produce a certificate that he has pursued, to the satisfaction of his teachers, his anatomical and physiological studies in a recognised medical school during not less than three months subsequently to the date of his reference. A candidate referred upon the Primary Examination, who shall not obtain more than half of the total minimum number of marks, is not readmitted to examination until after the lapse of six months. A candidate referred on the Pass Examination is required, unless the Court of Examiners shall otherwise determine, to produce, prior to his admission to re-examination, a certificate of at least six months' further attendance on the surgical practice of a recognised hospital, together with lectures on clinical surgery, subsequently to the date of his reference.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

After the 16th October, 1884, the College will cease to grant its "Single Qualification" in Medicine, except under the following conditions:—

1st. The College will grant its Single Qualification in Medicine to Candidates who already possess a recognised British or Irish Qualification in Surgery, upon their passing an Examination (written and oral) before the Examining Board of the College, in Medicine, Clinical Medicine, Materia Medica, Midwifery, and Medical Jurisprudence. Such an Examination will be held on the first Wednesday, and succeeding days, of every month, except September and October.

2nd. Candidates who, before the 18th October, 1884, have passed the First Professional Examination of the College, will be allowed to obtain the Single Qualification under the old Regulations, provided they pass the Final Examination before the 18th October, 1886.

The Licence.—No one can obtain the licence of the College until he has completed the age of twenty-one years. Every applicant for the licence must produce evidence that he has attended the following courses at a university, or at some medical school recognised by the College:—Anatomy, six months; Practical Anatomy, six months; Chemistry, six months; Practical Chemistry, three months; Materia Medica and Pharmacy, three months; Physiology or Institutes of Medicine, three months; Practice of Medicine, six months; Clinical Medicine, six months; Principles and Practice of Surgery, six months; Clinical Surgery, three months; Midwifery, three months; Medical Jurisprudence, three months; General Pathology or Pathological Anatomy, three months; Practical Pharmacy, three months. The applicant must also produce evidence of having attended the practice of a public hospital (containing not fewer than eighty beds) during a period of not less than twenty-four months, twelve of which must have been spent in attendance on the medical wards. He must have attended for six months the practice of a public dispensary, or have acted for six months as clinical clerk or dresser in a hospital, or have been engaged for six months as visiting assistant to a registered practitioner. He must produce a certificate of having attended at least six cases of Labour under the superintendence of a qualified medical practitioner, and that he has studied Vaccination under a competent and recognised teacher.

No candidate will be admitted to the first examination until the end of his second winter session, or to the second until he has completed four years of professional study. The examinations will be conducted partly *viva voce*, partly by written papers. Candidates for the licence of the College who have passed the first Professional Examination before a qualified body (provided it be as extensive as that required by this College) will be at once admitted to the second part of the examination in October, 1884, but not to any of the subsequent final examinations, unless they have previously obtained a recognised qualification in Surgery.

Meetings for the examination of candidates who already possess a qualification from a recognised licensing body will be held on the first Wednesday of every month (with the exception of September and October), and, if necessary, on the following days. No one is admissible to examination who has within the previous three months been rejected by any licensing board. The fee for the licence is fifteen guineas.

The Membership.—Any licentiate of a College of Physicians, or Graduate of a British or Irish University, with whose knowledge of Medical and General Science the College may be satisfied, may be admitted a Member of the College provided he shall have attained the age of twenty-four years.

Every candidate for the Membership (except in the case of medical practitioners of ten years' standing, distinguished for scientific attainments, whom the Council may see fit to exempt) shall be required to pass an examination—1. On the Principles and Practice of Medicine, including Therapeutics. 2. On one of the following subjects, to be selected by the candidate:—(*a*) Pathology, including Morbid Anatomy; (*b*) Medical Jurisprudence and Public Health; (*c*) Midwifery and the Diseases of Women; (*d*) Psychological Medicine.

The Fellowship.—No one shall be elected a Fellow of the College until he has been at least one year a member thereof, and has attained the age of twenty-five years.

The fee to be paid by a member is £31 10*s*. When a licentiate is raised to the rank of a member, he pays £21, but if his licence has been obtained subsequent to August 1st, 1876, he only pays £15 15*s*. When a member is raised to the rank of a Fellow, the fee is £31 10*s*, exclusive of stamp duty, which amounts to £25.

Qualification in Public Health.—The College now confers certificates of competency in Public Health. Fee for certificate, £18 18*s*.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

The following regulations are applicable to candidates already registered, Licentiates of one of the Colleges of Physicians of the United Kingdom, or Graduates in Medicine of a British or Irish University mentioned in Schedule (*a*) of the Medical Act, and candidates who have already entered for either of the professional examinations for the single qualification of the College.

Professional Examination.—Candidates are subjected to two Professional Examinations, conducted at separate sittings, partly in writing and partly orally.

The First Examination embraces Anatomy, Physiology, and Chemistry. Examinations will be held on Oct. 21st, 1884; Jan. 27th, April 21st, July 14th, 1885.

Candidates who desire to pass the First Professional Examination must apply to the Secretary on or before the Tuesday preceding the day of examination, and must produce certificates of attendance in regard to all those courses of study which have reference to the subjects of that examination. They must also produce evidence of having passed the Preliminary Examination. The sum of £6 6*s*. must be paid to the treasurer of the College for this examination not later than 9 A.M. of the Saturday preceding it. This sum will be considered as paid to account of the entire fee of £15 15*s*. payable for the diploma.

The Second Examination embraces Surgery and Surgical Anatomy; also Medicine, Midwifery, Materia Medica, and Medical Jurisprudence; and does not take place before the termination of the winter session of the last year of study; in the case of candidates who began their course of study after 16th of September, 1866, it will not take place till forty-five months after the examination in general education.

Applications for examination must be made to the secretary not later than the Monday previous to the day of the examination.

Every candidate must produce to the secretary—1. Satisfactory evidence of his having attained the age of twenty-one years, and of having been duly registered. 2. The certificates of his classes. 3. The certificate of his having passed the First Professional Examination. 4. A tabular statement (for which a printed form will be furnished) exhibiting the full amount of his professional education, and distinguishing the classes, hospitals, dispensaries, and schools attended during each session of his studies. If he have been an apprentice, he must also insert the name of his master, the date of his indenture, and the length of time for which he is bound. This statement, accurately filled up, must be attested by his signature, and afterwards delivered by the candidate to the officer of the College, to be preserved by the College. If the candidate have been an apprentice to a Fellow of the College, he must also produce his discharged indenture.

The remaining fee payable to the College (being £9 9*s*.),

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together with the receipt for the fee paid for the First Professional Examination, must be lodged, not later than 9 A.M. of the Tuesday preceding the examination day, in the hands of the treasurer. £5 5s. will be returned to unsuccessful candidates.

Candidates who have passed the First Examination of the College in Anatomy, Physiology, and Chemistry, and registered practitioners as defined previously, will be admissible to the Second Professional Examination on producing certificates of the whole course of study, of having passed their Preliminary and First Professional Examinations, and of having been registered. If any of the three subjects of the First Examination have been omitted, such candidates will have to undergo the First Examination on the omitted subjects; and none of the subjects set down will be omitted at the Second Examination, even if some of them should have formed part of the First Examination by another board. The fee is £15 15s. Unsuccessful candidates under this regulation receive back £11 11s.

No candidate will be admissible to examination who has been rejected by any other licensing board within the three months preceding his application to be examined.

The Dental Diploma.—Every candidate for the Dental Diploma must have attended the general lectures and courses of instruction required at a university or an established medical school recognised by the College as qualifying for the diploma in Surgery. The special courses of instruction may have been followed in a recognised dental hospital or school, or by teachers recognised by the College. The examinations will be both written and oral, and be conducted in the same manner as the ordinary surgical examinations.

Candidates for the Dental Diploma must produce evidence of having attained the age of twenty-one years, and will be required to produce a certificate of having passed the Preliminary Examination in General Education required for the ordinary licence in Surgery, or an examination equivalent to this, and recognised by the General Medical Council, except in the case of candidates who shall have commenced their professional education previous to the 1st day of August, 1878.

Candidates will also be required to produce certificates of having been engaged during four years in the acquirement of professional knowledge, and of having been during that period, or at some time previous to their examination, engaged for not less than three years in the acquirement of a practical knowledge of Mechanical Dentistry with a practitioner registered under this Act. The fee for the diploma is £10 10s.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

The Royal College of Physicians of Edinburgh, and the Royal College of Surgeons of Edinburgh, have made arrangements by which, after one series of examinations, the student may obtain the diplomas of both Colleges. The general principle of this joint examination is, that it shall be conducted by a board in which each body is represented in those branches which are common to both medicine and surgery; but that the College of Physicians shall take exclusive charge of the examination in Medicine, and the College of Surgeons of the examination in Surgery. The object of the joint examination is to give to students facilities for obtaining from two separate bodies, and at less expense, a qualification in Medicine and a qualification in Surgery. Students passing that examination successfully will be enabled to register two qualifications under the Medical Act—Licentiate of the Royal College of Physicians of Edinburgh and Licentiate of the Royal College of Surgeons of Edinburgh.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Preliminary Examinations in General Literature, in accordance with the regulations of the General Council, will be held in the Faculty Hall during the session 1884–85 on the following Fridays, commencing at 9 o'clock—namely, October 17th, 1884, March 26th, June 25th, and October 8th, 1885; and on each occasion the examination will be continued on the succeeding days. The fee for the examination and certificate is 10s.

The course of study is the same as that for the Royal College of Surgeons of Edinburgh.

The Professional Examinations are held at four periods—in January, April, July, and October. The following are the dates at which the examinations will begin in 1884–85: Oct. 20th, 1884; Jan. 13th, April 21st, July 14th, 1885.

No one is admissible to the Examination for the Single Licence of the Faculty unless he is registered as a Licentiate of one of the Colleges of Physicians of the United Kingdom or a Graduate in Medicine of a British or Irish University. Candidates who passed the Primary Examination of the Faculty before July 20th, 1884, will be admitted to the Final Examination on the rules in force before that date, provided they present themselves previous to December 31st, 1886. The Examination embraces the following subjects:—Surgery (including Operative and Clinical Surgery) and Surgical Anatomy, Clinical Medicine, Midwifery, and Medical Jurisprudence. The production of the candidate's diploma will be received as evidence that he has attended the curriculum of study required for the degree or licence which he holds; but if the curriculum of the Faculty in any subject in excess of that covered by the diploma produced, to that extent the applicant will be called upon to submit direct evidence of study. A schedule in which to tabulate the course of study attended may be had on application. This schedule should be sent to the Secretary at least one week before the day of examination.

The fee is fifteen guineas, of which the sum of seven guineas is returned to the candidate in the event of his being remitted to his studies. The fee is payable at the time of entering for examination. Candidates rejected by another board are not admissible till the expiry of six months from the date of rejection.

Certificate of Qualification in Public Health.—Candidates may be admitted to examination before they have obtained a qualification to practise; but in no case shall the certificate be granted till the candidate is registered under the Medical Act. The examinations are written, oral, and practical. The examination is divided into two parts. Part I. comprises Chemistry, Physics, and Meteorology; Part II. includes Medicine in its bearings on Sanitary Science; Sanitary Law, and Vital Statistic.

The fee is eight guineas, of which three guineas shall be payable on entering for the first part, three guineas on entering for the second part, and two guineas on obtaining the certificate.

The examination will be held on the following dates:—First part—16th April, and 23rd July, 1885. The examination for the second part will be held two days subsequent to these dates.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

Examinations in the subjects of the First Professional Examination are held quarterly, in January, April, July, and October. Examinations in the subjects of the Final Examination for the licence in Medicine of the College and for the licence in Midwifery are held in the week following the first Friday in each month, except August and September. Every candidate for a licence must return his name to the Registrar of the College, and lodge with him his certificates, bank (Royal Bank of Ireland) receipt of fees, and his schedule, at least four days before the first Friday in each month.

Licence in Medicine.—Every candidate for the license of the College to practise Medicine must produce satisfactory evidence—1. Of character, from a Fellow of the College, or from two registered practitioners. 2. Of having passed an examination in general education, held by some one of the examining bodies recognised by the General Medical Council. 3. Of having been engaged during a period of four years in the study of Medicine. 4. Of having attended courses of lectures on the following subjects, at schools recognised by the College: Practical Anatomy, two courses; Physiology or Institutes of Medicine, Chemistry, Practical Chemistry, Materia Medica, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery—each, one course. 5. Of having attended for twenty-seven months a recognised Medico-Chirurgical Hospital, in which clinical lectures and clinical instruction in Medicine are given, the attendance not to be for more than nine months in any one year—viz., six winter, and three summer months. 6. Of having discharged the duties of Medical Clinical Clerk during six months, or of having taken notes, to the satisfaction of the physician in charge of the case, and certified under his

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hand, of at least six separate Medical cases—including different varieties of acute and chronic disease—in the wards of a recognised hospital; and of having attended, during the whole period of his attendance on hospital practice, Demonstrations in the post-mortem room of a recognised hospital.—(This rule to be enforced in the case of all candidates who shall have commenced their professional studies after Sept. 30th, 1883.) 7. Of having studied Fever, for not less than three months, in a recognised clinical hospital, containing fever wards, and recorded from daily personal observation at least five cases of fever, to the satisfaction of the attending clinical physician, as attested by his signature.[27] 8. Of having attended Practical Midwifery and Diseases of Women for six months at a Lying-in Hospital or Maternity recognised by the College or, where such hospital attendance cannot have been obtained during the course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding public appointments; in either case not less than twenty labour cases must have been actually attended. 9. Of having lodged the admission fee in the Royal Bank of Ireland, Foster-place, Dublin, to the credit of the College.

The professional examination is divided into two parts: 1. Anatomy, Physiology and Practical Histology, Chemistry, and Materia Medica. 2. Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics. Candidates may be examined in the subjects of the first part at the termination of the second year of study, on producing the certificates in these subjects, or in all the subjects of their education, on the completion of their medical studies. No candidate can be examined in the subjects of the first and second parts in the same month.

Candidates qualified as follows are required to undergo the second part only of the professional examination—*viz.*: (1) Graduates in Medicine of any university in the United Kingdom, or of any foreign university approved by the College; (2) Fellows, Members, or Licentiates of the Royal Colleges of Physicians of London or Edinburgh; (3) Graduates or Licentiates in Surgery; (4) Candidates who, having completed the curriculum laid down above, shall have passed the previous professional examination or examinations (where there are more than one) of any of the licensing medical authorities in the United Kingdom.

Licence in Midwifery.—Candidates for the licence in Midwifery, who are not Licentiates in Medicine, may be admitted to examination on the following qualifications: (1) The degree or license in Medicine or Surgery from any University or College of Physicians or Surgeons in the United Kingdom; (2) Testimonials as to character; (3) Certificates of having attended (*a*) a course of lectures on Midwifery in a school recognised by the College; (*b*) Practical Midwifery and Diseases of Women, as in Section 6 of the regulations for the Licence in Medicine.

The fees are: For the licence to practise medicine, £15 15*s*. Examination for the midwifery licence, £3 3*s*. For the licences in medicine and midwifery, if obtained within a month, to be lodged in one sum,[28] £16 16*s*. In case the candidate be a graduate, both in Arts and in Medicine of any University in Great Britain or Ireland, the fee for the licence in medicine shall be £5 5*s*. The admission fee, less the sum paid to the examiners, is returned to any candidate rejected at any of the College examinations.

The Membership.—Members of the College alone are eligible to the Fellowship. Every candidate for the membership is required to produce satisfactory evidence—1. Of having attained the age of twenty-five years. 2. Of being a licentiate of this College for three years at least; or a licentiate of one year's standing, who shall be a graduate of Arts of a university in the United Kingdom at the time of his obtaining the licence; or a licentiate of one year's standing, who shall be a registered practitioner of seven years' standing at the time of his obtaining the licence. 3. Of professional conduct and moral character, as testified by a fellow or member of the College, or by a fellow of the Royal Colleges of Physicians of London or of Edinburgh. 4. Of not being engaged in trade; of not dispensing medicine, or making any engagement with a chemist, or any other person, for the supply of medicines; and of not practising medicine or surgery in partnership, by deed or otherwise. 5. Of having held, during at least six months, the office of resident physician, or resident medical pupil, in a hospital recognised by the College; or of having acted for the same period as clinical clerk in the medical wards of such hospital; or of having been in medical charge, for at least twelve months, of any public institution for the treatment of the sick. 6. Of having lodged the admission fee of twenty guineas in the Royal Bank of Ireland to the credit of the College.

Every candidate shall be required to pass an examination in (1) Principles of Medicine, including Pathology, Medical Anatomy, and Medical Chemistry. (2) Practice of Medicine, including Principles of Public Health. (3) Clinical Medicine.

The examination for the membership is held quarterly—in January, April, July, and October, and is conducted (1) by printed papers, (2) clinically, and (3) orally.

The Fellowship.—The election for fellowship takes place twice a year, on the first Friday in April, and on St. Luke's day (October 18th). Candidates must be proposed and nominated three months previously. Fee, £60.

The Certificate in Sanitary Science.—Every candidate for the Certificate in Sanitary Science must be a licentiate in medicine of the College or a registered medical practitioner of the United Kingdom. He must return his name to the Registrar of the College a week before the examination, and lodge with him a testimonial of character from a Fellow or Member of the College, or from a Fellow of the Royal Colleges of Physicians or Surgeons of London, Edinburgh, or Dublin. Stated examinations for the Certificates in Sanitary Science are held quarterly, on the Thursday and Friday following the first Friday of the months of January, April, July, and October. The examination comprises the following subjects:—(1) Etiology and Prevention of Disease; (2) Engineering; (3) Law; (4) Chemistry; (5) Meteorology, Climatology, and Vital Statistics. The fee for the examination for licentiates in medicine of the College, and for other registered medical practitioners, is £10 10*s*., which shall be lodged in the Royal Bank of Ireland to the credit of the College before the candidate is admitted to examination.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Candidates for the Letters Testimonial of the College may present themselves either at a Stated or a Special Examination, as hereinafter set forth. Stated Examinations are held in the months of April, July, and November, commencing on dates of which due notice shall be given beforehand by the Council of the College. Candidates *cannot be admitted to these Examinations unless they be registered pupils*. They will be divided into two classes—junior and senior.

The junior class shall produce certificates of—(*a*) Having passed a Preliminary Examination recognised by the General Medical Council (into the curriculum of which the Greek language enters as a compulsory subject), and having attended the following Lectures—(*b*) three courses of lectures on Anatomy and Physiology; (*c*) three courses of lectures on Practical Anatomy, with dissections; (*d*) two courses of lectures on Chemistry; (*e*) one course of lectures on Materia Medica; (*f*) one course of lectures on Botany; and (*g*) one course of lectures on Forensic Medicine. This class shall be examined in Anatomy, Histology, Physiology, Materia Medica, and Chemistry. The fee for this examination shall be five guineas (in addition to the registration fee of five guineas).

The senior class shall produce certificates of having attended the following lectures:—(*a*) Three courses of lectures on the Theory and Practice of Surgery; (*b*) one course of lectures on the Practice of Medicine; (*c*) one course of lectures on Midwifery; also certificates of attendance on (*d*) a recognised hospital, for three winter and three summer sessions; (*e*) of instruction in Clinical Ophthalmology, three months, and of attendance for one month at the Cow-pock Institution or some other institution approved of by the Council, or under the instruction of a public vaccinator specially recognised by this College for that purpose. This class shall be examined in Surgery, Operative Surgery on the subject, and Surgical Appliances, Practice of Medicine, Medical Jurisprudence, and Prescriptions. Each of these examinations shall be partly written, partly *viva voce*, and partly practical. The fee for the senior class examination shall be fifteen guineas, returnable to the candidate in case of rejection, or to be allowed to him in case he presents

[27] Candidates who commenced their hospital studies between September, 1876, and October, 1879, will be required to conform to Rule 8, or to produce evidence of having attended for nine months a hospital which contained fever wards.

[28] Any candidate rejected at the Examination for the Licence in Medicine must pay the full amount of fee for the Licence in Midwifery.

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himself a second time for the same examination. A further fee of one guinea is to be paid to the registrar.

Every candidate rejected at any of the Stated Examinations, on applying for re-examination shall be required to pay to the College, in addition to the regular fees, the sum of two guineas, to reimburse the College the necessary expense of his examination. Candidates seeking a Special Examination must make application to the Council, and, if admitted thereto, must pay five guineas, in addition to the fees for Stated Examinations. The subjects for examination, and the mode of carrying out a special examination, will be the same as those laid down for the Stated Examinations. The fees are the same as those for the Stated Examinations, as set forth above; and a rejected candidate will only be entitled to receive back fifteen guineas of the fees lodged by him.

Fellowship Examination for Candidates possessing no Qualification. — The examination shall consist of two divisions, and extend over, at least, three days; the first two of which shall be devoted to the Examination for the Letters Testimonial of the College. The third day shall be devoted to additional subjects required for the Fellowship. Candidates who do not pass the first two days' examination shall not be allowed to proceed to the third, but those who do pass shall be entitled to receive the Letters Testimonial of the College, although they may not have passed the third day's examination. No credit will be given, on a subsequent occasion, for passing a part only of either examination.

THE SOCIETY OF APOTHECARIES, LONDON.

Every candidate for a licence to practise as an Apothecary will be required to pass two examinations, the Primary and the Final. Each examination is divided into two parts, written and oral.

Examinations in Arts will be held on January 8th, 9th, 10th; April 30th; May 1st, 2nd; and on September 10th, 11th, 12th, 1885.

The course of medical study required for a licence must occupy at least four years, of which not less than three winter and two summer sessions must be passed at a recognised school or hospital. The following will be recognised and considered equivalent to eighteen months' study, in addition to the two years and a half above-mentioned:—(*a*) Attendance on the practice of a hospital or other public institution recognised by this Hall for that purpose; (*b*) instruction as the pupil or assistant of a registered practitioner, physician or surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as may be deemed satisfactory.

Course of Study.—Every candidate must attend the following lectures and medical practice: each winter session to consist of not less than six months, to commence on the 1st of October; each summer session to commence on the 1st of May.

First Year.—Winter Session: Chemistry, Anatomy, and Physiology (including Dissections and Demonstrations). Summer Session: Botany, Materia Medica, and Therapeutics, Practical Chemistry.

Second Year.—Winter Session: Anatomy and Physiology (including Dissections and Demonstrations), Principles and Practice of Medicine, Hospital Medical Practice. Summer Session: Midwifery and Diseases of Women and Children, Forensic Medicine and Toxicology, Hospital Medical Practice.

Third Year.—Winter Session: Principles and Practice of Surgery, Clinical Medical Lectures, Morbid Anatomy, Pathology, and Hospital Medical Practice. Summer Session: Practical Midwifery and Vaccination, Morbid Anatomy, Hospital Medical Practice.

Professional Examinations — The Court of Examiners meet in the Hall every Wednesday and Thursday, where candidates are required to attend at 4.30 P.M. Every candidate intending to offer himself for examination must give seven days' notice previous to the day of examination.

The Certificates required for the Primary Examination are:—Of registration as medical student. Of having passed an examination in Elementary Mechanics, recognised by the General Medical Council. Of the commencement of lectures and hospital attendance. Of the course of medical study. (The prescribed curriculum being completed to the close of the second winter session.) Of Practical Pharmacy, three months.

The Primary Examination, which may be passed after the second winter session, embraces the following subjects:—Physicians' Prescriptions and Pharmacy; Anatomy and Physiology; an examination on the Living Body; General and Practical Chemistry, conducted in the Laboratory at the Hall of the Society; Materia Medica and Botany; Histology. Rejected candidates cannot be re-examined until after the expiration of three calendar months.

The Final Examination at the termination of the medical studies embraces Principles and Practices of Medicine, including an examination of one or more patients; Pathology and Therapeutics; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology; Microscopical Pathology. Rejected candidates cannot be re-examined until after the expiration of six calendar months.

Certificates are required of candidates for the Final Examination:—Of having completed four years' medical study, including the period spent at the hospital. Of birth. Of registration as medical student. Of the commencement of lectures and hospital attendance. (If these last two certificates have been furnished before, they need not be produced again.) Of the course of medical study. (The prescribed curriculum occupying at least forty-five months, of which not less than three winter and two summer sessions shall be passed at any recognised hospital and school of medicine.) Of having acted as clinical clerk at a recognised hospital. Of proficiency in Practical Vaccination, from a public vaccinator. Of having attended not less than twenty Midwifery cases, from any registered practitioner. Of examinations passed, if any, here or elsewhere. Of moral character. Of having been examined at the class examinations instituted by the various lecturers and professors of their respective medical schools and colleges.

Fees.—The fee for the licence is £6 6*s.*; for certificate to act as assistant, £2 2*s.*

Prizes are annually offered for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry. The prizes consist of a gold medal awarded to the candidate who distinguishes himself the most in the examination; and a silver medal and a book, or books, to the candidate who does so in the next degree. Also two prizes for proficiency in the knowledge of Botany, consisting of a gold medal to the candidate who distinguishes himself the most in the examination; and a silver medal and a book, or books, to the candidate who does so in the next degree.

Medical and Surgical Scholarship.—Each Scholarship is of the annual value of £100, and is tenable for two years on certain conditions. It is open to all students of the medical profession whose standing at the time of the examination is not less than four and not more than five years from the date of their registration, and who have obtained and possess an English medical qualification. Lectures on Botany are given at the Society's garden in Chelsea during the summer session, open to all medical students and others.

APOTHECARIES' HALL OF IRELAND.

Professional Education.—Every candidate for the licence to practise Medicine and Pharmacy must produce certificates to the following effect:—Of having passed an examination in Arts duly recognised by the General Medical Council previously to entering on professional duty. Of registration as a medical student from the Registrar of the Medical Council. Of being at least twenty-one years of age, and of good and moral character. Of pupilage to a qualified apothecary, or of having been otherwise engaged at *practical* Pharmacy under the superintendence of a registered general practitioner holding a public dispensary for a period of twelve months subsequent to having passed the examination in Arts. Of having spent four years in professional study. Of having attended the following courses, namely:—Chemistry, during one winter session; Anatomy and Physiology, during one winter session; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Practical Chemistry (by daily instruction in a recognised laboratory), during three months; Materia Medica during three months; Principles and Practice of Medicine during one winter session; Pathology, a course; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery, at a recognised hospital (attendance upon twenty cases); Surgery, during one winter session; Forensic Medicine, during one summer session; instruction in the Practice of Vaccination. Of having attended at a recognised hospital or hospitals the Practice of

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Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session. Of practical study, with care of patients, as apprentice, pupil, assistant, clinical clerk, or dresser. Of having performed vaccination successfully under a vaccinator recognised by the Local Government Board.

The *Examination for the Licence* is divided into two parts. The first part comprehends Chemistry, including Physics, Botany, Anatomy, Physiology, Materia Medica, and Pharmacy; the second, Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene.

Candidates at the examination on Anatomy are liable to be called on to perform dissections; and at the examination on Surgery to perform operations on the dead subject.

The *Professional Examinations* will be held quarterly, and will commence on the first and second Monday in January, April, July, and October. They will be carried on as follows:—The first part on the first Monday at eleven o'clock A.M. and on the Tuesday and Wednesday succeeding at the same hour. Subjects: Chemistry, including Chemical Physics and Botany, Monday; Materia Medica and Pharmacy (the Pharmacy to include the compounding and dispensing of medicine and medical prescriptions), Tuesday; Anatomy and Physiology, Wednesday. The second part, or final examination, on the second Monday at 11 o'clock A.M.; and on the Tuesday and Wednesday succeeding at the same hour. Subjects: Medicine and Surgery, including Pathology and Therapeutics, Monday; Midwifery and Diseases of Women and Children, Tuesday; Forensic Medicine and Hygiene, Wednesday; Clinical Examination, Thursday.

Notice.—That on and after the 1st of October, 1885, candidates for the licence of the Hall will be required to produce certificates of having attended the practice of a recognised medico-chirurgical hospital or hospitals for not less than twenty-four months, including three winters and two summers.

THE ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

Admission into the Army and Indian Medical Services is gained as the result of competitive examination; for although by the last Army Warrant power is reserved to the Secretary of State for War to fill up, without an examination, a number not exceeding half the vacancies in the department, with qualified candidates recommended by the governing bodies of public schools of medicine in the United Kingdom or Colonies, this has never yet been exercised. Candidates for both services must, before being admitted to examination, possess the double qualification to practise medicine and surgery, and be registered under the Medical Act, and must also furnish satisfactory certificates of moral character. Candidates for the army must be between the ages of twenty-one and twenty-eight, in good health, and both parents of unmixed European blood; for the Indian service, between twenty-two and twenty-eight, of sound bodily health, and natural born subjects of Her Majesty. Both are examined as to physical fitness by a Board of Medical Officers. These conditions being satisfied, the candidate is admitted to the competitive examination, which is usually held in London twice a year, in the months of February and August. The number of appointments to be competed for on each occasion varies according to the requirements of the services. The subjects of examination are divided into *compulsory* and *voluntary*. The former comprise Anatomy and Physiology, Surgery, Medicine, including Therapeutics and the Diseases of Women and Children, Chemistry and Pharmacy, and a practical knowledge of Drugs. The eligibility of the candidate for admission into the service is determined by the result of this part of the examination. The *voluntary* subjects are French, German, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with especial reference to Materia Medica, and for the Indian service Hindustani. Although the results of the examination on voluntary subjects do not affect the question of the eligibility of the candidate for a commission, they influence his position on the lists, which is determined by the numbers obtained under the two heads conjointly. After having passed his examination the successful candidates for both services are sent to the Army Medical School at Netley as "surgeons on probation," with the rank of lieutenant and the daily pay of 8*s.*, to go through a four months' course of special instruction in the duties required of them in the service. The staff of the school consists of four professors, all of them men of acknowledged ability and high standing in their special departments; Surgeon-General Longmore, C.B., is Professor of Military Surgery; Inspector-General Maclean, M.D., C.B., of Military Medicine; Surgeon-Major de Chaumont, M.D., F.R.S., of Military Hygiene; and Dr. Aitken, F.R.S., of Pathology. To each of these an Army Medical Officer is attached as Assistant Professor. The lectures on Military Surgery include gunshot and other wounds, transport of sick and wounded, duties of army medical officers in the field, during sieges, and on board troopships and transports, &c. Those on Military Medicine treat of tropical and other diseases to which soldiers are exposed in the course of their service, the mortality and invaliding by disease, in peace and war, at home and abroad. The course of Hygiene comprises the examination of water and air, the general principles of diet, with the quality and adulterations of food and beverages, the sanitary requirements of barracks, hospitals, and camps, the clothing, duties, and exercises of the soldier, and the circumstances affecting his health with the best means of preventing disease, and instruction in the mode of preparing the various statistical and other returns required of the medical officer. The surgeons on probation are detailed for duty in the wards of the hospital, under the Professors and Assistant-Professors of Medicine and Surgery, and receive practical instruction in the mode of examining recruits. The Surgeons on probation are provided with quarters, and are members of the excellent mess established at Netley. After having passed through the course of instruction they are examined on the subjects taught in the school. For the army this is merely a "pass," and does not affect the position gained at the entrant examination; for the Indian service the numbers obtained are added to those previously assigned, and the seniority on the list is determined by the combined results of the preliminary and final examinations. At the close of each session five prizes are awarded: the Herbert prize of £20 to the surgeon on probation who has obtained the highest number of marks at the London and Netley examinations conjointly; the Parkes Memorial Bronze Medal to the one who gains the highest number of marks in the examination on Hygiene at Netley, combined with those given for the answers to a special question set on the same subject; the Martin Memorial Gold Medal to the highest number of marks in the final examination on Military Medicine, with the addition of those gained for a special question connected with it; the Montefiore Gold Medal and £20, awarded in the same manner for Military Surgery; and the Montefiore Second Prize, consisting of works on Military Surgery, to the surgeon on probation who obtains the second highest numbers in this branch. The competition for the last four prizes is optional.

The conditions of admission into the Naval Medical Service are the same as those for the Army; but the candidate is also required to declare his readiness to engage for general service, and to proceed on duty abroad whenever required to do so. After having passed the competitive examination in London the successful candidate will receive a commission as surgeon in the Royal Navy, "and will undergo a course of practical instruction in Naval Hygiene at Haslar Hospital." At present Fleet Surgeon Walter Reid, M.D., has been appointed to Haslar "for instruction of surgeons on entry," and Surgeon Gilbert Kirker, M.D., "to assist in instruction of surgeons on entry;" but we have no information as to the length of the course, the conditions under which it is conducted, or the subjects professed to be taught.

The following tables, showing the rates of pay and half-pay of the three branches, will probably be acceptable to students who entertain any intention of entering the public service.

ARMY.

Rank.	*Rates of Pay.*	*Gratuities.*	*Relative Military Rank.*
	Daily.		
Surgeon on probation ..	£0 8 0 ..	— ..	Lieutenant
	Annual.		
Surgeon	200 0 0 ..	.. ..	Captain
„ aft. 5 years' service	250 0 0 ..	— ..	
	Daily.	Gratuity.	
„ 10 „ ..	0 15 0 ..	£1250 ..	
Surgeon-Major	1 0 0 ..	— ..	Major
„ aft. 15 years' service	1 2 6 ..	£1800 ..	
„ 19 „	— ..	£2500 ..	

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Rank.	Rates of Pay.	Half-pay.	Relative Military Rank
Surgeon-Major:			
,, aft. 20 years' service	1 5 0	£1 0 0	Lieut.-Colonel
,, ,, 25 ,,	1 7 6	1 2 6	
,, ,, 30 ,,	—	1 5 0	
Brigade Surgeon	1 10 0	—	Lieut.-Colonel
,, aft. 5 years in rank	1 13 0	—	(but always
,, aft. 20 years' service	—	1 7 6	senior to
,, ,, 30 ,,	—	1 10 0	Surgeon-Major)
Deputy Surgeon-General	2 0 0	1 15 0	Colonel
Surgeon-General	2 15 0	2 0 0	Major-General

Surgeons are promoted to be Surgeons-Major on completing twelve years' full-pay service, of which three must have been abroad. Before being promoted they will be required to pass an examination intended to test their progress and proficiency in all those branches of knowledge which are essential to their continued efficiency as medical officers, which may be taken at any time between the fifth and tenth year of service. It will embrace the following subjects:—(a) Surgery, operative and practical, including field surgery and transport of sick and wounded. (b) Medicine and pathology, including practical pharmacy and modes of prescribing and administering remedial measures, food, drink, &c. (c) Hygiene, within the limits treated of in "Parkes' Practical Hygiene." (d) Duties of executive medical officers during peace and war at home and abroad, and at sea, as defined in the various codes of regulations issued for their guidance. Medical officers possessing the following qualifications will be exempted from examination in medicine, surgery, and hygiene respectively, provided they have obtained their qualifications five years subsequent to their entry into the service:—(a) The Fellowship of any Royal College of Physicians or Surgeons of Great Britain or Ireland, granted under a higher standard of qualification than that for Licentiate or Member, will be accepted in lieu of an examination in medicine and surgery. (b) The diploma in Hygiene and State Medicine, or any corresponding diploma of any University in Great Britain or Ireland, such diploma being granted after examination, will be accepted in lieu of an examination in this subject. A certificate will be required from a recognised teacher of surgery in any medical school at home or abroad in which operative surgery is taught, showing that the medical officer has gone satisfactorily through a complete course of operative surgery during the period within which the examination must be taken, and that he is a competent operator. A report on any subject of a practical professional character to be selected by the officer himself, and certified to be his own composition, and in his own handwriting, will also be required. Considerable importance will be attached to the literary and scientific merits of this report.

The selection of Surgeons-Major for advancement to the grade of Brigade Surgeon is made on the grounds of ability and merit, in determining which the following points will be considered:—The officer to be so selected must have been favourably reported on by the several military and departmental officers under whom he may have served, as set forth in their Annual Confidential Reports. He must be physically fit for general service, and have the necessary qualifying foreign and Indian service under existing rules. He must, before he can be selected for promotion to the grade of Brigade Surgeon, establish before an examining board, appointed for the purpose by the Director-General, his efficiency in the following subjects:—(a) Hospital organisation and administration in peace and war. (b) The administration, interior economy, command, and discipline of the Medical Staff Corps and bearer columns. (c) The relations of the medical to all other departments and corps of the army, as defined by the various Codes of Regulations in force. (d) Recruiting and invaliding. (e) The management of sick and wounded in war. (f) Field medical organisation. (g) The transport of the sick and wounded by land and sea. (h) The medical and surgical equipment and hospital arrangements for an army corps. (i) The duties and responsibilities of medical officers, quartermasters, and non-commissioned officers and men of the Medical Staff Corps in regard to the charge and supervision of stores and equipments, and the nursing, dieting, and general management of the sick. (k) The sanitary duties of medical officers in charge of camps and hospitals in the field and at the base of operations. (l) The sanitary inspection and equipment of hospital ships and troop transports, and all other sanitary duties in camps, garrisons, and quarters. (m) The origin, progress, and best methods of dealing with outbreaks of epidemic disease among troops under any given circumstance. (n) The most approved methods of securing the sick, and especially the wounded, against pyæmia, septicæmia, and all other forms of blood poisoning, and the management and treatment of such outbreaks when they occur. (o) Questions on operative surgery and practical medicine will also form part of this examination. A medico-topographical report will be required of any district or country in which British troops have been, or are likely to be, actively employed, as well as a sketch of the medical arrangements suitable for an army corps operating in such a district or country, compiled by the officer, and certified to be his own composition and in his own handwriting.

Brigade Surgeons, to be eligible for selection as Deputy-Surgeons-General, must have served abroad at least ten years, of which three must have been in India. All officers under the rank of Deputy-Surgeon-General are placed on the retired list at the age of fifty-five, and those of that rank and Surgeons-General at the age of sixty.

INDIAN MEDICAL SERVICE.

From date of leaving Netley till embarkation, 10s. per diem.

Pay and allowances in India.

Rank.	Monthly pay.	If in charge of a Native Regiment.	Pension, annual.
	Rs. a. p.	Rs.	Rs.
Surgeon under 5 years' service	286 10 0	450	
,, after 5 ,,	304 14 2	600	
,, 6 ,,	392 5 2		
Surgeon-Major & Brigade-Surgeon: after 10 years' service	410 9 5		
,, 12 ,,	649 14 6	800	
,, 15 ,,	677 6 11		
,, 17 ,,			200
,, 20 ,,	852 3 7		300
,, 25 ,,	838 12 6	1000	500
,, 30 ,,			700
Deputy Surgeon-General, 2 at	2250 0 0	(aft. 5 yrs.' service in rank addtnal. to service pension.	250
,, ,, the rest at	1800 0 0		
Surgeon-General	2500 0 0		350
,, in Bengal	2700 0 0		

The regulations above noted respecting the promotion of Surgeons and Surgeons-Major are equally applicable to the Indian Medical Service.

ROYAL NAVY.

Rank.	Daily pay.	Half-pay.	Gratuities and retired pay. Rank.	Gratuity.
	£ s. d.	£ s.		
Surgeon	0 11 6	0 6	Surgeon and Staff	
aft. 2 years' f. p. in rank	..	0 7	Surgeon:	
4 ,,	0 13 6	0 8	aft. 8 years' f. p.	£600
6 ,,	..	0 9	12 ,,	1500
8 ,,	0 15 6	0 10	16 ,,	2250
10 ,,	..	0 11		
Staff-Surgeon:				
on promotion	1 1 0	0 12		
aft. 2 years' f. p. in rank	..	0 13		
4 ,,	1 4 0	0 14		
6 ,,	..	0 15		
Fleet Surgeon:			Fleet Surgeon.	Daily.
on promotion	1 7 0	0 17	aft. 20 years'	£1 0 0
aft. 2 years' f. p. in rank	..	0 18	24 ,,	1 2 6
4 ,,	1 10 0	0 19	27 ,,	1 5 0
6 ,,	..	1 0	30 ,,	1 7 6
8 ,,	1 13 0	..		
Deputy Inspector-General:				
on promotion	2 2 0	1 5		
aft. 2 years' f. p. in rank	..	1 7		
4 ,,	..	1 9		
Inspector-General	2 15 0	1 13		

Surgeons are promoted to Staff Surgeons after twelve years' service, provided they pass the requisite examination, and Staff Surgeons to Fleet Surgeons after twenty years, if recommended by the Director-General. Deputy Inspectors-General are promoted by selection from the Fleet Surgeons, and Inspectors-General from the Deputy Inspectors-General having three years' foreign, four years' mixed or five years' home service. Inspectors and Deputy Inspectors-General are retired compulsorily at sixty, and the grades at fifty-five years of age, and all ranks at any time if they have not served for five years. In calculating service for retired pay, time on half-pay will be taken as equivalent to one-third service on full-pay.

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The Medical Student's Class Guide.

TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS FOR THE SESSION 1884-85.

LECTURES, &c.	ST. BARTHOL. HOSP. & COL.			CHARING-CROSS HOSP. & COLL.			ST. GEORGE'S HOSPITAL.		
	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES. One Session.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.
WINTER SESSION.			£ s.			£ s.			£ s.
ANATOMY AND PHYSIOLOGY	Mr. M. Baker Dr. Klein	M. Tu. Th. 2½	9 9	Vacant	M. W. F. 3	6 6	Dr. Ewart Ditto, *Phys. Chem.*	T. Th. 3, S. 10 T. W. 10, S. 11	7 7 3 3
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. Marsh Mr. Langton	Tu. W. Th. F. 9	7 7	Mr. Bellamy	M. W. F. 9	6 6	Mr. Bennett	M. W. 3, F. 4	7 7
ANATOMICAL DEMONSTRATIONS	Messrs. Clarke and Lockwood	Daily, 10½ to 4	...	Mr. Cantlie	Daily	6 6	Mr. Turner Ditto, *Osteology* *Histol.* Dr Délépine	Daily T. Th. S. 10 M W F 11½, T 2	... ... 3 3
CHEMISTRY	Dr. Russell	M. W. F. 9	6 16	Mr. Heaton	M. W. F. 4	5 5	Mr. Donkin	T. Th. S. 11½	6 6
MEDICINE	Dr. Andrew Dr. Gee	M. Tu. Th. 3½	6 16	Dr. Pollock Dr. Lubbock	M. W. Th. 3 M. Th. 12	6 6 2 2	Dr. Dickinson	T. Th. F. 4	7 7
SURGERY	Mr. Savory	W. Th. F. 2½	6 16	Mr. Barwell	Tu. Th. F. 4	6 6	Mr. Rouse and Mr. Pick Mr. Carter, *Oph.*	M. W. F. 9½	7 7 W. 4
HOSPITAL PRACTICE:							Dr. Wadham	Daily, 1	12
PHYSICIANS...	Dr. Andrew Dr. Church Dr. Gee	Tu. Th. S. M. Tu. Th.	6 mths. 15 15	Dr. Pollock Dr. Green Dr. Bruce	Daily, 1.30	6 mths. 10 10	Dr. Dickinson Dr. Whipham Dr. Cavafy		mths. 10 10
	Dr. Duckworth Dr. M. Duncan (*Obstet.*)	M. Tu. Th. F. S.					*Obst. Phys.*: Dr. Barnes		
ASSISTANT-PHYSICIANS ...	Dr. Hensley Dr. Brunton Dr. Legg Dr. Norman Moore	Tu. F. 11 W. S. 11 M. Th. 11	...	Dr. Abercrombie Dr. Lubbock Dr. Willcocks	Tu. F. W. S. 1.30 M. Th.	...	Dr. Ewart Dr. Owen *Assist. Obstet.*: Dr. Champneys	Daily, 12	...
SURGEONS	Messrs. Savory, Willett, Smith, Langton, and Baker	Daily M. Th. F. S. Tu. F. S. Daily	6 mths. 19 19	Mr. Barwell Mr. Bellamy Mr. Bloxam	M. Th. M. Th. W. S. 1.30	6 mths. 10 10	Mr. Holmes Mr. Rouse Mr. Pick Mr. Haward	Daily, 1	12 mths. 10 10
ASSISTANT-SURGEONS... ...	Messrs. Marsh, Butlin, Walsham, Cripps, and Bruce Clarke	W. S. 12 M. Th. 12 Tu. F. 12	...	Mr. Cantlie Mr. Morgan Mr. Stanley Boyd	M. Th. Tu. F. W. S. 1.30	...	*Ophth. Surg.*: Mr. B. Carter Mr. Bennett Mr. Dent	Daily, 12	...
	Ophth.-Surgs.: Mr. Power Mr. Vernon	Tu. Th. S. 1½					*Assist. Ophth.*: Mr. Frost		
CLINICAL MEDICINE	Drs. Andrew, Church, Gee, and Duckworth	... F. 1	...	The Physicians and Assistant-Physicians	Weekly	...	The Physicians	M. 2	...
CLINICAL SURGERY	Messrs. Savory, Smith, Willett, Langton, and Baker	S. 12.45	...	The Surgeons and Assistant-Surgeons	Weekly	...	The Surgeons	Tu. 2	...
CLINICAL MIDWIFERY, &c.	Ds. Duncan, Godson	...	...	Drs. Black & Routh	T. F. 1.30	...	Dr. Barnes	F. 2	...
DENTAL SURGERY	Mr. Coleman	S. 10 Operations	...	Mr. Fairbank	M. W. F. 9.30 Operations	...	Mr. Winterbottom	Tu. 10 Operations	...
	[*Hygiene*: Dr. Thorne M. 10]	W. & S. 1½ Post-mort. exam. daily at 12 & 2½			Th. S. 2			Thurs. at 1 Operations on the Eye, F. 1½	
SUMMER SESSION.									
MATERIA MEDICA, &c. ...	Dr. Brunton	Tu. Th. S. 10, W. 11½	6 16	Dr. Bruce	T. Th. S. 9	3 3	Dr. Owen	M. W. F. 2	4 14
MIDWIFERY, &c.	Dr. M. Duncan	Daily, 9	5 5	Dr. Black	M. Tu. W. F. 3	3 3	Dr. Barnes	M. W. F. 9	4 14
BOTANY	Rev. G. Henslow	M. W. F. 10	4 4	Dr. Willcocks	M. W. F. 9	3 3	Mr. Murray	M. W. F. 10	3 13
MEDICAL JURISPRUDENCE	Dr. Hensley	M. Tu. S. 9	4 4	Dr. Abercrombie	M. W. F. 9	3 3	Dr. Wadham	Tu. Th. S. 9	4 14
PATHOLOGICAL ANATOMY	Dr. Legg	W. 9½	2 12	Dr. Lubbock & Mr. Boyd	M. Th. 3-5	...	Dr. Délépine Mr. Donkin	... Daily	... 4 4
PRACTICAL CHEMISTRY ...	Dr. Russell	M. Tu. F. 11 to 1	3 3	Mr. Heaton Mr. Vasey	...	4 4 ...			
COMPARATIVE ANATOMY...	Dr. Moore	M. Th. 11	2 12	Dr. Garson	...	3 3	Dr. Whipham (in Winter)	F. 3½	3 3
PATHOLOGY & MORB. ANAT.	Dr. Moore and Surg. Regs.	F. 11 12, 2½	...	Dr. T. H. Green	Tu. W. F. 4				
OPHTHALMIC SURGERY ...	Mr. Power Mr. Vernon in Winter	Tu. W. 4 M. 2	2 12	Staff of Royal West. Oph. Hosp.	...	...	Mr. B. Carter *Pract. Med.*: Dr. Whipham	F. 3 T. Th. S. 9 in Summer	... 4 4
PSYCHOLOGY	Dr. Claye Shaw	...	2 12	...	...	...	Dr. Blandford	Tu. 3	...
DENTAL SURGERY	Mr. Coleman	...	2 12	Mr. Fairbank	M. W. F. 9	...	Mr. Winterbottom	Tu. 10	...
PRACTICAL SURGERY... ...	Mr. Butlin Mr. Walsham (and in Winter)	...	...	Messrs. Bloxam & Morgan (in Winter & Sum.)	...	2 2	Mr. Dent	M. W. F. 3	4 4
PRACTICAL PHYSIOLOGY...	Dr. Harris (and in Winter)	...	7 7	Vacant (& in Winter)	Tu. S. 11, Th. 10	4 4	*Hyg.*: Dr. Bridges *Aural Surg.*: Mr. Dalby, T. 2	...	...
PRACTICAL PHARMACY ...	Pharm. Laborat.	...	...	Mr. Sandall	Daily	...			
OPERATIVE SURG. (DEMONST.)	Messrs. Clarke, Edwards, Lockwood	...	5 5	Mr. Bloxam	...	...	Mr. Turner *Pract. Midw.*: Dr. Champneys, W. 1	M. W. F. 9½	3 3
DISEASES OF THE EAR ...	Mr. Cumberbatch	Tu. F. 2	...	Mr. Cantlie	F. 9	...	Mr. Dalby	W. 2	...
DISEASES OF THE SKIN ...	Dr. Legg	W. 1½	...	Dr. Sangster	M. Th. 1½	...	Dr. Cavafy	Th. 1	...
ORTHOPÆDIC SURGERY ...	Mr. Walsham	F. 12½	...	...	...	...	Mr. Bennett	...	...
	[*Larynx*: Mr. Butlin, F. 2½]						[*Dis. Throat*: Dr. Whipham]	Th. 2	
FEE for all Lectures and Hosp. Med. and Surg. Practice ...	... ...		131 5	...	...	£99 15	...	...	£125 0

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TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1884–85—(CONTINUED.)

LECTURES, &c.	GUY'S HOSPITAL.			KING'S COLLEGE AND HOSPITAL.		
	LECTURERS.	DAYS & HOURS.	FEES. One Course.	LECTURERS.	DAYS & HOURS.	FEES. One Course.
WINTER SESSION.			£ s.			£ s.
PHYSIOLOGY	Mr. Golding-Bird Dr. Wooldridge	M. W. F. 4½ M. W. S.	7 7 7 7	Dr. Gerald Yeo	Daily, 12½	8 8
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. Howse Mr. Davies-Colley	Tu. W. Th. F. 9	7 7	Dr. Curnow	W. Th. 11½, F. S. 9* M. Tu. W. Th. 9†	9 9
ANATOMICAL DEMONSTRATIONS	Dr. White, Mr. Lane, & Mr. Poland	Daily, 9 to 4	7 7	Dr. Curnow Mr. A. S. Kenny	Daily	7 7
CHEMISTRY	Dr. Debus Dr. Stevenson Mr. Groves	Tu. Th. S. 11	7 7	Mr. Bloxam Mr. Thomson Mr. Johnson	M. W. Th. 10½	8 8
MEDICINE	Dr. Wilks Dr. Pavy	M. W. F. 3	7 7	Dr. Beale	M. F. 4, W. 5	8 8
SURGERY	Mr. Bryant Mr. A. E. Durham	Tu. Th. 3½ S. 2½	7 7	Mr. H. Smith	Tu. W. Th. 4	8 8
PRACTICAL SURGERY	Mr. Lucas	...	4 4	Messrs. H. Smith, Bell, W. Rose, & Cheyne	...	3 3
HOSPITAL PRACTICE:	Sir W. Gull & Dr. Owen Rees (*consult.*)	...	3 mths. 10 10	Dr. G. Johnson Dr. Beale Dr. Duffin	M. Th. 2 Tu. F. 2 W. S. 2	6 mths. 9 9
PHYSICIANS	Drs. Wilks, Pavy, Moxon, & Pye-Smith Dr. Hicks (*cons. obst.*) Dr. Galabin (*obst.*)	M. Th. S. M. Th. S. M. W. F. M. Th. F.	1½ 6 mths. 15 15	Dr. Playfair (*sec.*) Dr. Barney Yeo Dr. Hayes (*accou.*)	Tu. Th. S. 12 M. Th. 1½ M. W. F. 12½	
ASSISTANT-PHYSICIANS	Drs. Goodhart, Taylor, Mahomed, & Horrocks (*obst.*)	M. Tu. W. F. Th. S. 12	Out-patnts. at 12 1 year 24 3 Perpet. 31 10	Dr. Ferrier Dr. Curnow Dr. Baxter	Tu. F. 1 W. S. 1½ W. S. 1½	
SURGEONS	Messrs. Cock, Birkett (*cons.*), Bryant, Durham, Howse, & Davies-Colley Mr. Bader (*consult. oph.*) Mr. Higgens (*oph.*) Mr. Moon (*dent.*) Mr. L. Purves (*aural*)	M. Th. S. M. Th. M. Th. W. S. M. T. Tu. F. Tu. Th. F. Tu. F.	1½ 3 mths. 10 10 6 mths. 15 15 1 year	Mr. Wood Mr. Lister Mr. H. Smith Mr. Bell Mr. S. H. Cartwright (*surg.-dentist*) Mr. McHardy (*ophthalmic*)	Tu. Th. S. 1½ M. W. F. 1½ M. W. F. 1½ M. Th. 1 Tu. F. 10 M. Th. S. 1	6 mths. 9 9
ASSISTANT-SURGEONS	Mr. Lucas Mr. Golding-Bird Mr. Jacobson Mr. Symonds	W. Th. M. S. Out-patients at 12	24 3 Perpet. 31 10	Mr. Rose Mr. Cheyne	Tu. F. 1 W. S. 1	...
CLINICAL MEDICINE	Drs. Wilks, Pavy, Moxon, & Pye-Smith	S. 1½	...	Dr. Duffin Dr. G. Johnson Dr. Beale	Alt. F. 3 Alt. M. 3 Alt. Tu. 3	...
	In Summer: Drs. Taylor, Goodhart, & Mahomed	W. 1½	...	...	...	...
	Messrs. Bryant, Durham, Howse, & Davies-Colley	W. 1½	...	...	...	...
CLINICAL SURGERY	*In Summer:* Mr. Lucas Mr. Golding-Bird Mr. Jacobson Mr. Symonds	F. 1½	...	Mr. Wood Mr. Lister	Tu. Th. 3 M. F. 1½	To Med. & Surg. Practice £42
CLINICAL MIDWIFERY	Dr. Galabin Dr. Horrocks	W. 1½ Operations Tu. F. at 1½	...	Dr. Playfair	Alt. Th. 3 Operations W. 1½ S. at 1½	...
	[*Surgical Classes:* Mr. Jacobson]	On the Eye, M. F. 1½				
SUMMER SESSION.						
MATERIA MEDICA & THERAPEUTICS	Dr. Taylor	M. Tu. Th. 2	5 5	Dr. Baxter	Tu. W. Th. F. 8½	5 5
MIDWIFERY &c.	Dr. Galabin	Tu. W. Th. F. 9 A.M.	7 7	Dr. Playfair	Tu. W. Th. F. 9	5 5
BOTANY	Mr. Bettany	Tu. Th. S. 11½	5 5	Mr. Bentley	M. Tu. Th. F. 12½	4 4
MEDICAL JURISPRUDENCE	Dr. Stevenson	Tu. Th. S. 10	5 5	Dr. Ferrier	M. Tu. W. Th. 4	5 5
DISEASES OF WOMEN	Dr. Galabin	M. 3	...	Dr. Playfair	...	...
PRACTICAL CHEMISTRY	Mr. Groves	M. W. F. 10 to 1	7 7	Mr. C. L. Bloxam Mr. Thomson Mr. Johnson	M. W. Th. 10½	6 6
PRACTICAL PHYSIOLOGY	...	...	...	Dr. G. Yeo, Mr. Groves, & Dr. Barrett	Tu. F. S. 11½	6 6
PRACTICAL BIOLOGY	...	...	...	Mr. Groves	Tu. F. 2	3 3
NATURAL PHILOSOPHY	Mr. Reinold	M. 11	4 4	Mr. W. G. Adams	Tu. 2	...
COMPARATIVE ANATOMY	Dr. Brailey (*with Zoology*)	Tu. Th. 2½	5 5	Mr. F. J. Bell (in Winter)	M. F. 4	4 4
PATHOLOGY AND MORBID ANATOMY	Dr. Goodhart Dr. Mahomed	Daily, 2½ (in Sum., S. 9)	7 7 3 3	Dr. Duffin	W. Th. F. 3	3 3
OPERATIVE SURGERY	Mr. Lucas	...	5 5	Mr. Royes Bell	...	6 6
MORBID HISTOLOGY	Mr. Symonds	W. S. 1	4 4	Mr. E. Thurston	...	...
OPHTHALMIC SURGERY	Mr. Higgens	Th. 3	...	Mr. McHardy	M. Th. 1	3 3
PSYCHOLOGICAL MEDICINE	Dr. Savage	Tu. 11, F. 10½	3 3	Dr. Sheppard	...	...
DENTAL SURGERY	Mr. Moon	Th. 12	...	Mr. S. H. Cartwright	Tu. F. 10	10 10
AURAL SURGERY	Mr. L. Purves	Tu. 12	...	Dr. Pritchard	Th. 2	...
DEMONST. OF CUTANEOUS DISEASES	Dr. Pye-Smith	Tu. 12	...	Dr. Duffin	W. 2	...
VACCINATION	...	...	...	Mr. Dunn	M. 10½	...
HYGIENE	Mr. Turner	M. Th. 1½	3 3	Dr. Kelly (in Wint.)	F. 3	1 1
PRACTICAL PHARMACY	...	...	3 3	Mr. Wilmot	Daily	3 3
Gen. or Lectures, and Hospital Medical and Surgical Practice	...	...	£131 5	...	...	126 11 6

* Elementary Course.

† Advanced Course.

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TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS, AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1884-85—(CONTINUED.)

LECTURES, &c.	LONDON HOSPITAL.			ST. MARY'S HOSPITAL.			MIDDLESEX HOSPITAL.		
	LECTURERS.	DAYS AND HOURS.	FEES. One Session.	LECTURERS.	DAYS AND HOURS.	FEES. One Session.	LECTURERS.	DAYS AND HOURS.	FEES. One Session.
WINTER SESSION.			£ s.			£ s.			£ s.
PHYSIOLOGY	Mr. M'Carthy	M. Th. S. 9 A.M.	4 4	Dr. Waller	M. W. Th. 12	4 4	Mr. Lowne	M. W. F. 9	6 6
EXPERIMENTAL PHYSIOL.	...	...	...	Dr. Waller	Tu. W. F. 10	4 4	Messrs. Lowne & Karop (in Summer)	Tu. Th. S. 9	6 6
PATHOL. & MORBID ANAT.	Dr. Sutton	...	...	Mr. Silcock	Tu. F. 12	4 4	Dr. Coupland	M. W. 9	4 4
ANATOMY, DESCRIPTIVE & SURGICAL.	Mr. F. Treves	M. Th. 12 Tu. W. F. 9	5 5	Mr. Edm. Owen	M. Tu. Th. F. 9	7 17	Mr. Hensman	M. Tu. Th. F. 4 or 4½	8 8
ANATOMICAL DEMONSTRATIONS.	[*Pract. Anat.*]: Mr. C. M. Moullin	Daily, 10 to 5 (except S. aft.)	5 5	Dr. Phillips Mr. E. Lane	Daily	...	Mr. Hensman Mr. Sutton Mr. Wynter	Daily 9 till 4	6 6
CHEMISTRY	Dr. Tidy	M. W. F. 10.30	7 7	Dr. Wright	M. Th. 10 W. Sat. 9	6 16	Mr. W. Foster	M. W. Th. F. 3 or 3½	8 8
MEDICINE	Dr. Stephen Mackenzie	M. W. F. 4	5 5	Dr. Broadbent Dr. Cheadle	M. Tu. Th. 3	5 5	Dr. Cayley	Tu. Th. S. 9	6 6
SURGERY	Mr. Rivington	Tu. Th. 4 S. 10 A.M.	5 5	Mr. Norton Mr. Page	M. Tu. W. Th. 4	5 5	Mr. H. Morris	M. W. Th. 3½	6 6
PRACTICAL SURGERY	Mr. Reeves	Tu. Th.	...	Mr. Pepper	M. Th. 12	4 4	Mr. A. Clark	M. W. Th. 3 or 3½	6 6
HOSPITAL PRACTICE:									
PHYSICIANS	Sir A. Clark, Drs. Down, H. Jackson, Sutton, Fenwick, Herman (*obstet.*), S. Mackenzie, A. E. Sansom F. C. Turner	Daily, 2 Daily, 2 M. Th. 1½	6 mths. 10 10	Dr. H. Jones Dr. Sieveking Dr. Broadbent Dr. Cheadle Dr. Shepherd Drs Lees & Phillips Drs. Meadows & Wiltshire (*obs.*)	M. Th. 1½ Tu. F. 1½ W. S. 1½ Tu. F. 9 W. S. 1 M. Th. 1 Tu. F. 9½ Tu. F. 1½	6 mths. 5 5	Dr. W. Cayley Dr. Coupland Dr. D. Powell Dr. Edis (*obst.*) Dr. Duncan (*assist. obst.*)	Daily, 1½ Daily, 1½ Tu. F. 1½ W. S. 1	3 mths. 5 5
ASSISTANT-PHYSICIANS	Dr. G. Smith Dr. F. Warner Dr. Raife	...	...	...	...	...	Dr. D. Finlay Dr. Fowler Dr. Bise	M. Th. 9 Tu 3½, F 9 W. 9, S. 9½	...
SURGEONS	Mr. Couper Mr. Rivington Mr. J. E. Adams & Mr. W. Tay (*Oph.*) Mr. M'Carthy Dr. Woakes & Mr. T. M. Hovell (*Aur.*) Mr. Barrett (*Dent.*)	Daily, 2 W. S. 9 S. 9.30 Tu. 9	6 mths. 10 10 10 10	Mr. H. Walton Mr. Norton Mr. Owen *Out patients:* Mr. Page Mr. Pye Mr. Pepper Mr. Norton (*throat dis.*)	M. Th. 1½ W. S. 1½ Tu. F. 1½ Tu. F. 1 M. Th. 1 W. S. 1 M. Th. 1½	6 mths. 5 5	Mr. Hulke Mr. G. Lawson Mr. Morris Mr. S. Bennett & Mr. Claude Rogers, (*dental*) Mr. Lang (*oph.*) Mr. Hensman (*aural*)	M. Th. 1½ M. Th. 1½ Tu. F. 1½ M. 9½, W. 9 W. 9, F. 9½ W. S. 8.30	3 mths. 5 5 ...
ASSISTANT-SURGEONS	Mr. Reeves Mr. F. Treves Mr. C. Mansell Moullin Mr. Harry Fenwick	Daily, 1½	...	Mr. Critchett & Mr. Juler (*ophth.*) Mr. Field (*aur.*) Mr. Hayward (*dental*) Mr. Morris (*dermatol.*)	Tu. F. 9 M. Th. 3 W. S. 9½ Tu. F. 1½	...	Mr. Andrew Clark Mr. Pearce Gould	M. Th. 1.15 Tu. F. 1.30	
CLINICAL MEDICINE	The Physicians and Asst.-Phys.	Twice week 2	...	Dr. H. Jones Dr. Sieveking Dr. Broadbent	Twice week	...	The Physicians	F. 2	...
CLINICAL SURGERY	The Surgeons and Asst.-Surg.	Twice week 2 Operations, W. Th. S. 2	...	Mr. H. Walton Mr. Norton Mr. Owen	Twice week Operations W. 1½ P.M. ex. 2	...	The Surgeons Superintend. of P.-M. exam.: Dr. Fowler	Tu. 2 Operations W. at 1 P.M. at 2 daily	...
SUMMER SESSION.									
MATERIA MEDICA	Dr. James	Tu. Th. F. 3	3 3	Dr. Lees	W. F. 12	5 5	Dr. Thorowgood	M. W. F. 4	4 4
MIDWIFERY, &c.	Dr. Herman	M. W. F. 9	4 4	Dr. A. Meadows Dr. Wiltshire	Tu. W. Th. F. 9	5 5	Dr. A. W. Edis	Tu. Th. S. 9	4 4
BOTANY	Dr. Warner	M. W. F. 12	3 3	Rev. J. M. Crombie	M. W. F. 10	4 4	Dr. Bise	M. Th. F. 10	4 4
MEDICAL JURISPRUDENCE	Dr. Sansom	M. Th. 3.30	3 3	Dr. Randall	M. Tu. Th. 10	4 4	Dr. Finlay	M. W. F. 9	4 4
TOXICOLOGY	Dr. Tidy	W. F. 10							
PRACTICAL CHEMISTRY	...	M. W. 9, 10½, 2½; S. 9, 10½, 12	5 5	Dr. C. R. A. Wright	W. F. S. 9	4 4	Mr. W. Foster [*Psycho. Med.*: Mr. H. Case]	M. W. F. 3 ...	2 4 3 3
COMPARATIVE ANATOMY	Mr. C. Mansell Moullin	Tu. Th. 9	3 3	Mr. St. Geo. Mivart	W. Th. 10	2 12	Mr. J. B. Sutton	Tu. Th. 4	2 2
PATHOLOGY AND MORBID ANATOMY.	Dr. Sutton	Th. 12½, S. 10	3 3	Mr. Silcock	M. Th. 3	4 4	...	...	...
OPERATIVE SURGERY	Mr. Rivington	...	3 3	Mr. Pepper	...	...	Mr. A. Clark		
PRACTICAL PHYSIOLOGY	Mr. M'Carthy	...	3 3	Drs. Nall & Waller	Daily	...	Messrs. Lowne & Karop (in Summer)	Tu. Th. S. 9	4 4
HISTOLOGY AND THE MICROSCOPE.	Mr. M'Carthy (& in Winter)	Tu. Th. 9,15	3 3	... (in Winter)	Tu. W. F. 10	...			
OPHTHALMIC SURGERY	Mr. Adams	...	2 2	Mr. Critchett	Th. 2½	2 12	Mr. Lang	W. S. 8½	2 2
AURAL SURGERY	Dr. Woakes	Th. 4	2 2	Mr. Field	F. 3	2 12	Mr. Hensman	Tu. 9	...
DENTAL SURGERY	Mr. Barrett	Tu. F. 4	2 2	Mr. Hayward (in Winter)	...	2 12	Mr. Storer Bennett (in Winter)	Daily, 9.30	...
DISEASES OF THE SKIN	Dr. Stephen Mackenzie	Th. 9	...	Mr. Morris (in Summer)	Th. 3	2 12	Dr. E. Liveing	F. 4	...
DISEASES OF THE THROAT	Dr. M. Mackenzie	W. 4	2 2	...	...	...	Mr. Hensman	Tu. 9	...
PRACT. PHARM. & DISPENS.	Mr. Robertson	...	...	...	...	3 3	Mr. Fardon [*Pub. Health*: Dr. Finlay]	...	5 5
FEE for all the Lectures required by the Colleges and Hall	£52 10			...	...	65 12	...	...	...
FEE for ditto, and Hospital Medical and Surgical Practice	£105, in three instalments, or £99 10 in one sum.			...	... Or in 1 sum.	112 7 106 1	...	...	...

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TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1884-85.—(CONTINUED.)

LECTURES, &c.	ST. THOMAS'S HOSPITAL AND SCHOOL.		UNIVERSITY COLLEGE AND HOSPITAL.			WESTMINSTER HOSPITAL.		
	LECTURERS.	DAYS AND HOURS.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.
WINTER SESSION.					£ s.			£ s.
ANATOMY AND PHYSIOLOGY ...	Dr. J. Harley	T. W. F. 4	*Professor E. A. Schafer	Daily, 10 (ex. S.)	2, 4, 5, & 7 gs.	Dr Heneage Gibbes	M. W. F. 4	6 6
PRACTICAL PHYSIOLOGY AND HISTOLOGY	Dr. T. C. Charles (in Summer)	M. Tu. F. 12½	*Professor E. A. Schafer	Daily (ex. F & S.) 12	...	Dr Heneage Gibbes	Tu. Th. F. 1.30	7 7
PHYS. DEMONSTRATIONS ...	Dr. T. D. Acland	W. F. 11½	Mr. M'William Mr. Halliburton	...	...	...	...	...
ANATOMY, DESCRIPTIVE AND SURGICAL	Mr. Reid Mr. Anderson	M. T. W. Th. F. 9½	Prof. Thane	Daily, 12	11 11	Mr. Black	Tu. W. Th. F. S. 9	6 6
ANATOMICAL DEMONSTRATIONS	Mr. Reid, Mr. Anderson, Dr. Taylor, Mr. Ballance, & Assistants	Daily, 10 to 4	Mr. Godlee Mr. C. Sooham Mr. E. T. Thring	...	...	Mr. Hebbert [*Morbid Histology:* Dr Heneage Gibbes, Tu. Th. 11, £5 5s.]	Daily, 10 to 1	5 5
PATHOLOGICAL ANATOMY ...	Dr. Payne & Dr. Sharkey	S. 11½ M. W. F. 9*	...	...	...	...	...	...
CHEMISTRY	Dr. A. J. Bernays	T. Th. F. 10½	Drs. Williamson, Morley, Plumpton	Daily, (ex. S.) 11	7 7	Dr. Dupré	W. Th. F. 3	6 6
MEDICINE	Dr. Bristowe Dr. Ord	M. Th. F. 4	Dr. Ringer Dr. D. W. Buxton	Daily, (ex. M. & S.) 9	9 9	Dr. Sturges Dr. Allchin	M. W. Th. 3	6 6
SURGERY	Mr. S. Jones Sir W. Mac Cormac	M. Th. F. 9	Prof. Marshall	Tu. W. F. 4	7 7	Mr. Cowell Mr. Macnamara Dr. Allchin	Tu. Th. 4 F. 3 ...	6 6 ...
GENERAL PATHOLOGY	...	...	...	...	...	...	...	...
NATURAL PHILOSOPHY	Dr. Stone (*with Physics*)	S. 12	Prof. Foster	W. F.	6 6	Dr. Ogilvie	...	3 3
HOSPITAL PRACTICE: Physicians	Dr. Bristowe Dr. Stone Dr. Ord Dr. Harley Dr. Gervis (*obst.*)	Daily, Winter & Summer, 2	Dr. W. H. Walshe Dr. Reynolds, Sir W. Jenner, Drs. Fox, Ringer, Bastian, Roberts Hewitt (*acc.*), ... Dr. Crocker (*Skin*)	Daily, 1 & 2 Each twice weekly Twice weekly	12 mths. 15 15	Dr. Sturges Dr. Allchin Dr. Donkin Dr. Potter (*obst.*) Dr. Colcott Fox (*Skin*)	M. Th. 1½ Tu. F. 1½ W. S. 1½ Tu. F. 3 W. 1½	12 mths. 15 15
Assistant-Physicians	Drs. Payne, Sharkey, Gulliver, and Cory (*obst.*) Semon (*Throat*)	Daily, 12½ T. F. 1½	Dr. Gowers Dr. Williams (*obst.*) Dr. T. Barlow Dr. G. V. Poore	...	...	Dr. Hall Dr. Bennett Dr. Murrell Dr. Grigg (*Obst.*) Dr. Hall (*Throat*)	M. Th. 1½ Tu. F. 1½ W. S. 1½ Tu. F. 9 W. 9	...
Surgeons	Mr. S. Jones Mr. Croft Sir Wm. Mac Cormac Mr. F. Mason Mr. Nettleship (*ophthal.*)	Daily, 2	Mr. R. Quain Mr. Erichsen Sir H. Thompson Profs. Marshall, B. Hill, & Heath Prof. Streatfeild (*ophth.*), Mr. S. J. Hutchinson (*dent.*) Prof. M. Beck	Daily, 1 & 2 Three weekly	...	Mr. Cowell Mr. Davy Mr. Macnamara Dr. Walker Mr. M. Smale (*dent.*) [*Ophth. Prac.*: Mr. Cowell] [*Orthopædic:* Mr. Davy]	M. Th. 1½ Tu. F. 1½ W. S. 1½ W. 9½ S. 9½ M. Th. 3 F. 2½	12 mths. 15 15
Assistant-Surgeons	Messrs. Mac Kellar, Clutton, Anderson, & Pitts	Daily, 12½	Mr. Hutchinson, *dent.*, Mr. Barker, Mr. R. J. Godlee, & Prof. J. Tweedy	...	...	Messrs. Cooke, Bond, & Barrow Mr. Barrow (*Anr.*)	M. Th. 1½ Tu. F. 1½ T. F. 9	...
CLINICAL MEDICINE	The Physicians	After visits	The Physicians	Fortntly. & twice a week	...	Dr. Sturges Dr. Allchin Dr. Donkin Mr. Cowell Mr. Davy Mr. Macnamara	Weekly	...
CLINICAL SURGERY	The Surgeons in rotation Mr. Croft	After visits M. 9,* T. 9	By the Surgeons	Once a week and Fortntly.	...			...
CLINICAL MIDWIFERY, &c.	Dr. Gervis [*Vac.*: Dr. Cory, W. 11½.]	Tu. 4 Operations, W. S. 1½ *oph.* T. 4, F. 2	Dr. G. Hewitt Dr. Williams	Fortntly. Operations, W. at 2	...	Dr. Potter [*Morb. Anat.*: Dr. Hebb] [*Minor Surg. & Bandaging* by Mr. Barrow, in Summer]	Altern. F. 3 Post-mortem exam. 2 Operations, Tu. W. at 2	...
SUMMER SESSION.								
MATERIA MEDICA, &c.	Dr. Stone	M. W. F. 9 A.M.	Dr. Roberts	M 9, Tu W Th F 10	6 6	Dr. Murrell	Tu. Th. S. 9	3 3
MIDWIFERY, &c.	Dr. Gervis	M. Tu. Th. F. 4	Dr. Hewitt	Daily, (ex. M. Th.) 9	6 6	Dr. Potter	Tu. W. Th. F. 4	4 4
BOTANY	Mr. A. W. Bennett	Tu. W. S. 10	Prof. Oliver	Daily, (ex. S.) 8	3 13	Mr. Worsley-Benison	M. W. F. 9, Th. 10	4 4
MEDICAL JURISPRUDENCE	Mr. Clutton, Drs. Bernhards & Cory	Tu. Th. S. 9	Dr. G. V. Poore	Tu. W. Th. F. 10	5 5	Dr. Hall	Tu. W.	3 3
PRACTICAL CHEMISTRY	Dr. Bernays	M. Th. F. 10 to 12	Dr. Williamson	Daily, (ex. M. S.) 11	5 5	Dr. Dupré	F. 3	...
STATE MEDICINE	Dr. A. Carpenter	W. 4	Dr. Corfield	...	...	Dr. Dupré	M. W. F. 10 to 12	4 4
MENTAL DISEASES	Dr. Rayner	F. 12	...	...	...	...	...	...
HYGIENE AND PUBLIC HEALTH	(with Med. Jur.)	...	Dr. Corfield	Tu. Th. 4	2 2	Dr. Sutherland	...	...
CLINICAL MEDICINE	The Physicians	After visits	As in Winter	...	...	Dr. Hall As in Winter	...	...
COMPARATIVE ANATOMY	Dr. Gulliver (with Zoology)	M. Th. 12	†Prof. Lankester	T. W. Th. F. 1	6 6	Dr. L. Ogilvie	...	3 3
PATHOLOGY & MORB. ANATOMY	Dr. Sharkey	Daily, 2	†Mr. A. G. Bourne Dr. Bastian	M. S. 10, Th. 4	6 6	Dr. Allchin (in Summer)	M. W. Th. 4	3 3
OPHTHALMIC SURGERY	Dr. Hadden	...	Mr. V. A. H. Horsley	...	...	Mr. Cowell	M. 2½	...
DENTAL SURGERY	Mr. Ranger	Tu. F. 10	†Prof. J. Tweedy	M. W. 4	2 2	Dr. Walker	W. 2½	2 2
PRACTICAL SURGERY	Mr. Truman Mr. Mason	... Tu. F. 4	Mr. S. J. Hutchinson	...	...	...	...	...
OPERATIVE SURGERY	Mr. Mac Kellar (and in Wint.) Mr. Mac Kellar	... S. 9 ...	†Prof. B. Hill †Prof. M. Beck †Mr. Barker Prof. Beck	M. Th. 4	6 6	Mr. Davy	F. 12½	4 4
PRACTICAL PHARMACY	Mr. Clutton Mr. Plowman	... ...	... Mr. Gerrard	... ...	5 5 5 5	Mr. Davy Mr. Cobden	... ...	4 4 3 3
Fee for Lectures and Hospital Practice	...	£125	...	...	131 5	In 1 sum, £100. In 2, £105. In 5, £115 No extras ex. dissectns. & exr. physics		

* In Summer. † In Winter.

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TABULAR LIST OF THE CLASSES, LECTURERS ETC., AND FEES, AT THE PROVINCIAL SCHOOLS OF MEDICINE, FOR THE SESSION 1884-85.

LECTURES, &c.	BIRMINGHAM QUEEN'S COLLEGE.			BRISTOL MEDICAL SCHOOL.			CAMBRIDGE UNIVERSITY.			LEEDS SCHOOL OF MEDICINE.		
	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES. Sessional Course.	LECTURERS.	DAYS AND HOURS.	FEES.
WINTER SESSION.			£ s.			£ s.			£ s.			£ s.
ANATOMY AND PHYSIOLOGY	Mr. J. Berry Haycraft*	M. T. W. Th. F. 11	6 6	Dr. Smith	M. W. F. 10	5 5	Prof. Macalister	Tu. Th. S. 1		Drs. Birch and Barrs (Physiology only)	M. T. S. 10	6 6
ANATOMY, DESCRIPTIVE & SURGICAL	Dr. C. A. Windle	M. Tu. Th. F. 12	6 6	Mr. Cross	F. 11 Tu. Th. S. 9	5 5	Prof. Macalister Mr. Hill	Daily, 11	5 5	Messrs. Robinson and M'Gill	Daily, 9	6 6
ANATOMICAL DEMONSTRATIONS	Messrs. Jordan Lloyd, Haslam, & Barling	Daily	5 5	Mr. Harsant	...	...	Mr. Hill	Daily, 11	...	Mr. Travis	...	...
PRACTICAL PHYSIOLOGY	...	...	...	...	...	...	Dr. M. Foster (and in Summer)	M. W. F. 12	2 2	Mr. Wright and Dr. Jacob	...	6 6
CHEMISTRY	Dr. W. A. Tilden*	Daily (ex. S.) 9½	5 5	Mr. Coomber	M. W. F. 9	5 5	Prof. Liveing (and *Prac. Chemis.*)	M. Tu. Th. F. 12	3 3	Prof. Thorpe	M. Tu. Th. F. 4	5 5
MEDICINE	Dr. B. W. Foster	Tu. W. F. 3	6 6	Drs Spencer & Skerritt	M. W. F. 9	5 5	Prof. Paget	M. W. F. 9	3 3	Drs. Churton & Eddison	M. W. F. 1	5 5
THERAPEUTICS	...	...	...	...	...	...	Prof. Latham	Tu. Th. 5	...	...	...	...
SURGERY	Mr. Pemberton	Tu. W. F. 4	6 6	Mr. Dobson	Tu. Th. S. 9 A.M.	5 5	Prof. Humphry	M. W. F.	...	Mr. Jessop and Mr. Atkinson	M. W. F. 3	5 5
HYGIENE	Mr. F. Jordan	...	...	Mr. Davies	M. F. 10 A.M.	2 2	...	...	...	...	...	...
HOSPITAL PRACTICE:												
PHYSICIANS	GENERAL HOSPITAL AND QUEEN'S HOSPITAL	...	31 10	BRISTOL ROY. INFIRMARY, AND BRISTOL GENERAL HOSPITAL. (*See Additional Information on Schools.*)	Daily, 11½ to 3	...	ADDENBROOKE'S HOSPITAL. Prof. Paget Prof. Latham Dr. Bradbury Prof. Humphry	Daily	6 mths. 8 8 12 mths.	LEEDS GENERAL INFIRMARY. Dr. Allbutt Dr. Eddison Dr. Churton Mr. Wheelhouse	...	...
SURGEONS	(*See Additional Information on Schools.*)	...	...			...	Mr. Carver Mr. Wallis Mr. Wherry	Daily	10 10 perp. 15 15	Mr. T. P. Teale Mr. Jessop Mr. Atkinson	...	...
SUMMER SESSION.												
MATERIA MEDICA, &c.	Dr. Sawyer	Tu. W. Th. 12	4 4	Dr. Shaw	Tu. Th. S. 9 A.M.	3 3	Prof. Latham (and *Pharmacy*)	Tu. Th. S.	2 2	Dr. Churton	T. Th. F. 9	4 4
MIDWIFERY, &c.	Mr. Clay and Dr. Bassett	Tu. W. Th. F. 1	5 5	Dr. Swayne Dr. Lawrence	Daily (ex. S.) 8 A.M.	4 4	Dr. Ingle	M. W. F.	2 2	Dr. J. B. Hellier Dr. J. Braithwaite Mr. Wright	M. W. F. 11½	4 4
PRACTICAL SURGERY	...	...	...	Mr. Prichard	Tu. Th. S. 9	3 3	[*Osteology*: Prof. Macalister] Mr. Wherry	Daily	...	Mr. Robson	...	...
OPERATIVE SURGERY	Mr. Bartleet Mr. B. May	...	...	Mr. Keall	Tu. W. F. 10 A.M.	3 3						
BOTANY	Mr. W. Hillhouse*	M. W. F. 3	4 4	Mr. Leipner	Tu. Th. S. 8 A.M.	3 3	Prof. Babington	M. W. F. 1	1 1	Prof. Miall	Tu. W. F. 2	4 4
MEDICAL JURISPRUDENCE	Mr. Wilders Dr. A. B. Hill	M. T. 1 F. 12	4 4	Dr. Eager Mr. A. J. Harrison Dr. Harrison	M. Th. S. 10 A.M.	3 3	Dr. Appingson	T. Th. S.	1 1	Mr. Scattergood	M. Tu. Th. F. 12½	4 4
MENTAL DISEASES	...	...	...	...	...	...	...	...	...	Dr. H. C. Major	W. 4½, 2, 3	...
PRACTICAL CHEMISTRY	Dr. W. A. Tilden*	T. Th. 2-4	4 4	Mr. Coomber	M. W. F.	3 3	Prof. Liveing Dr. Hicks	Daily	...	Prof. Thorpe	Tu. Th. 10	4 4
PRACTICAL PHYSIOLOGY & HISTOL.	Mr. J. B. Haycraft	M. W. F.	4 4	Mr. G. F. Atchley	9 A.M.	...						
COMPARATIVE ANATOMY	...	...	...	Mr. Morgan	Tu. W. F. 10 A.M.	4 4	† Prof. Newton (in Winter)	M. Tu. F. 1	...	Prof. Miall	M. Th. 3.30	2 2
PATHOLOGY AND MORBID ANATOMY	Dr. E. Rickards (in Winter)	Th. 3	...	Dr. Spencer Dr. Skerritt	M. W. F. 9 A.M.	3 3	Dr. Bradbury	M. Tu. Th. F. 9	...	Dr. Jacob	M. S. 10	3 3
PRACTICAL HISTOLOGY	...	...	...	Mr. Atchley	M. W. F. 8 A.M.	3 3	Mr. Hill	S. 12	...	Dr. Barrs (*Physiology*)	M. W. F. 10	6 6
DENTAL SURGERY	Mr. T. Hawkins	...	3 3							Mr. Carter	...	...
CLINICAL MEDICINE	The Physicians of the two Hospitals.	...	...	...	Weekly	...	The Physicians	Daily	...	...	...	...
CLINICAL SURGERY	The Surgeons of the two Hospitals. [*Hon. Curat. Museum*: Dr. C. A. Windle]	...	...	...	Ditto	...	The Surgeons	Daily	...	Drs. Allbutt, Eddison, and Churton Surgeons of the Infirmary	Tu. F. 1	...
FEES for all the Lectures required by the College and Hall	...	...	£63 0	...	...	£63 0	...	...	...	...	...	£50 8
Perpetual Fee for Hospital Medical and Surgical Practice	...	...	£42 0	...	...	£36 15	...	...	...	...	...	£42 0

* Held in Mason Science College.

† With Zoology.

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TABULAR LIST OF THE CLASSES, LECTURERS, ETC., AND FEES, AT THE PROVINCIAL SCHOOLS OF MEDICINE, FOR THE SESSION 1884-85.

LECTURES, &c.	UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.			UNIVERSITY COLLEGE, LIVERPOOL.			OWENS COLLEGE (VICTORIA UNIV.) SCHOOL OF MEDICINE.			SHEFFIELD SCHOOL OF MEDICINE.		
	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.
WINTER SESSION.			£ s.			£ s.			£ s.			£ s.
PHYSIOLOGY	Mr. Williamson Dr. Oliver	M. Th. F. 3¼	5 5	Dr. Caton	Tu. Th. S. 9½	5 5	Prof. A. Gamgee‡ (*with Histology*)	M. Tu. W. Th. F. 11½	...	Dr. Dyson Dr. Sinclair White	W. 12½ F. 4	3 3
PRACTICAL PHYSIOLOGY	Dr. Oliver (*in Summer*)	Tu. W. Th. 2½	5 5	Mr. Larkin (Demonstrator)	M. W. 2, F. 9½	...	Prof. Gamgee Mr. W. H. Waters	Daily, 10 to 5	...	Mr. R. J. Pye Smith	...	3 3
ANATOMY, DESCRIPTIVE & SURGICAL	Dr. Mears	Daily, 9½ Tu. Th. 12	5 5	Mr. Banks	Daily, 11	5 5	Prof. Watson	Daily (ex.S.) 1	5 5	Mr. E. Skinner Mr. Snell	M. W. F. 6 Tu. Th. 5	4 4
ANATOMICAL DEMONSTRATIONS	Dr. Mears	Daily, from 8 to 5	5 5	Mr. Barrow	...	3 3	Mr. J. Collier Mr. A. M. Paterson	...	...	...	Daily	2 2
CHEMISTRY	Prof. Bedson	M. W. F. 12	5 5	Dr. Brown	M. Tu. Th. F. 3	5 5	Prof. Roscoe Prof. Schorlemmer	Daily, 9½	3 10	At Firth College	M. W. F. 11½	4 4
MEDICINE	Prof. Philipson	M. W. F. 5	5 5	Dr. Glynn	Tu. Th. S. 9½	5 5	Prof. Morgan Prof. Roberts	M. 4, Tu. Th. 3 Tu. F. 9½	5 5	Drs. Bartolomé, Banham, & Thomas	M. W. F. 5	4 4
SURGERY	Dr. Heath Dr. Arnison	M. W. F. 6	5 5	Mr. Parker	M. W. Th. 3	5 5	Prof. Lund Mr. F. Southam	M. W. F. 3	5 5	Mr. A. Jackson	M. W. F. 8 A.M.	4 4
PRACTICAL SURGERY	...	...	...	...	M. Th. 4	4 4	Mr. Jones (*with Operat. Surg.*)	Tu. Th. 1	4 4	The House-Surg. at the Infirmary	...	...
PATHOLOGY	Drs. Gibb & Drummond (in Summer)	M. W. Th. 5	...	Dr. Davidson	Tu. F. 4	3 3	Prof. Dreschfeld Mr Young, *Surg. Path.*	M. 3, Tu. Th. 4	4 4	...	...	...
EXPERIMENTAL PHYSICS	Prof. Herschel	...	...	Dr. Lodge	4 times wkly.	4 4	...	...	...			
PUBLIC HEALTH	Mr. Armstrong	T. 3	5 5	...	...	...	Dr. Ransome (*in Summer*)	Tu. F. 2	...	Dr. Drew	...	...
HOSPITAL PRACTICE:	NEWCASTLE INFIRMARY.			LIVERPOOL ROYAL INF.			ROYAL INFIRMARY.			SHEFFIELD GEN. INFIRMARY.		
PHYSICIANS	Dr. Philipson Dr. Drummond Dr. Oliver	Each twice weekly, 11	6 months 5 5 12	Dr. Waters Dr. Glynn Dr. Davidson	12 to 2½	6 mon. 6 6 12 mon. 7 7	The Physicians	Daily, 8½ to 12	Composition fee, full period, £42	Dr. Bartolomé Dr. Law Dr. Banham	T. Th. S. 11 M. W. S. 11 M. W. Th. S. 11½	Perpet. £15 15 ; £21 12 mths' prac. £10 10 6 months, £6 6s.
SURGEONS	Dr. Arnison Dr. Armstrong Dr. Hume Mr. Page	Each twice weekly, 10	mths £12 12 Comp. £26 5	Mr. Bickersteth Mr. Harrison Mr. Banks	12 to 2½	6 mon. 7 7 12 mon. 10 0	The Surgeons	...		Messrs. Barber, Favell, & A. Jackson	...	
ASSISTANT-SURGEONS	Mr. T. A. Dodd Mr. Williamson	Once weekly, 11	...	Mr. Parker	...		...	...		PUB. HOSP. & DISP.		
				[*Dental Anat. & Phys.*: Mr. Paul, £3 3s.—*Dental Metallurgy*: Mr. Connell, £3 3s.]						Drs. Dyson, Thomas, Porter, & Keeling; Messrs. Thorpe & Pye-Smith		
SUMMER SESSION.	[*Therapeutics*: Dr. Barron]	M. W. 3	5 5				[*Mental Diseases*: Mr. Mould]	Tu. Th. 4		[*Medical Tutor*: Mr. Lee]		
MATERIA MEDICA	Mr. McBean	M. W. F. 4	5 5	Dr. Carter	Tu. Th. F. S. 9 A.M.	4 4	Prof. Leech	M. T. W. Th. 1	4 4	Dr. Young	M. W. F. 8 A.M.	3 3
MIDWIFERY, &c.	Dr. Nesham Dr. Gibson*	Daily, 9 A.M.	5 5	Dr. Wallace† Dr Gee (*child. dis.*)	M. W. F. S. 9½ M. W. F. 11	5 5 2 2	Dr. Thorburn Dr. Ashby (*Dis. Chil.*)	M. T. Th. F. 1 W. F. 3	4 4 2 2	Dr. Keeling, Messrs. R. Fasell & Lever	M. W. F. 8 P.M.	3 3
BOTANY	Dr. Murphy	Tu. Th. F. 4	5 5	Dr. Shearer	M. T. W. F. 3	4 4	Prof. Williamson	Daily (ex. S.) 2½	2 12 6	Mr. Birks	Tu. Th. 8	3 3
MEDICAL JURISPRUDENCE	Mr. Page	Tu. Th. F. 3	5 5	Dr. E. Whittle	M. W. F. 3	4 4	Mr. Cullingworth	T. W. Th. F.	4 4	Mr. J. W. Harrison	Tu. Th. 5	3 3
PRACTICAL CHEMISTRY	Prof. Bedson	Daily, 10 to 5	5 5	Dr. Brown	M. T. Th. F. 10	4 4	Prof. Roscoe	M. W. 10½	4 4	At Firth College	M. W. F. 11	3 3
COMPARATIVE ANATOMY	Prof. Brady	T. F. 4½	5 5	Dr. Herdman	4 times wkly.	3 3	Dr. A. M. Marshall† (*with Embryology*)	M. W. F. 10½	4 14 6	...	...	...
PATHOLOGY & MORBID ANATOMY	Dr. Gibb	M. W. Th. 5	5 5	Mr. Paul (*Path. Histol.*)	Once weekly	1 1	Prof. Dreschfeld	...	...	The House-Surg. at the Infirmary	...	3 3
OPHTHALMIC SURGERY	Dr. Drummond Mr. Williamson	M, 12	...	Mr. Walker†	W. 4	1 1	Dr. Little	W. F. 4	3 3	Mr. Snell	W. 12½	...
DENTAL SURGERY & MECHANICS	Mr. Fothergill	Tu. F. 4	...	Mr. Phillips Mr. Stewart	...	3 3	Mr. L. Matheson	...	...	...	...	...
OPERATIVE SURGERY	Dr. Armstrong	...	5 5	Mr. Parker	Thrice wkly.	4 4	Mr. Jones	M. 4	4 4	...	...	3 3
CLINICAL MEDICINE	Phys. and Surg. of Infirmary	...	...	Phys. and Surg. of Roy. Infir.	...	...	Physicians and Surgeons of the Royal Infirmary	...	...	Phys. & Surg. of Gen. Infirm. & Pub. Hosp. & Dispensary	Tu. 6 P.M. Th. 6 P.M.	...
CLINICAL SURGERY		...	...		...	...		...	...			...
FEE for all Lectures required by the College and Hall	...	...	£63 0	...	...	£63 0	...	...	£63	...	...	£45
Ditto for Hospital Medical & Surgical Practice	...	...	£26 5	...	...	£42 0	...	...	£42	...	...	£18 18s.

* Diseases of Women and Children. † In Winter. ‡ Physiol. Laborat., Prof. Gamgee, daily, 3½ to 5.

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TABULAR LIST OF THE CLASSES, LECTURERS ETC., AND FEES, AT THE MEDICAL SCHOOLS OF SCOTLAND, FOR THE SESSION 1884–85.

LECTURES, &c.	ABERDEEN UNIV.		EDINBURGH UNIV.		SCHOOL OF MEDICINE, EDINBURGH.		GLASGOW UNIV.		GLAS. ROY. INFIRM. SCHOOL OF MEDICINE.		GLASGOW, ANDERSON'S COLLEGE.		GLASGOW WESTERN MEDICAL SCHOOL.	
	LECTURERS.	FEES. One Course.	LECTURERS.	FEES. —	LECTURERS.	FEES. First Course.	PROFESSORS.	FEES. One Course.	LECTURERS.	FEES. One Course.	LECTURERS.	FEES. One Course.	LECTURERS.	FEES. One Course.
WINTER SESSION.		£ s.		£ s.		£ s.		£ s.		£ s.		£ s.		£ s.d.
ANATOMY (DEMONSTNS., &c.)	Dr. Struthers, 11, 9	5 5	Mr. Turner, 1, 4	4 4	Messrs. Symington & Cathcart, 9 to 4	7 9	Dr. J. Cleland, 11, 2	6 6	Mr. Clark, 4	4 4	Dr. A. M. Buchanan, jun. 4, sen. 12½	4 4	Vacant	4 4 0
CHEMISTRY (PRACTICAL, &c.)	Mr. Brazier, 3	3 3	Dr. Crum Brown, 10 (Adv. Class in Sum.)	4 4	Dr. S. Macadam, Messrs. King, Macadam, Drinkwater, & Buchanan, 10	3 5	Mr. J. Ferguson, 10	3 3	Dr. Milne, 10	2 2	Mr. Dittmar, 10¼	2 2	Mr. Milne, 10	2 2 0
PHYSIOLOGY (INST. OF MED.)	Dr. Stirling, 2 (*Pract.* in Summer)	3 3	Dr. Rutherford, 11	4 4	Dr. James & Mr. J. Hunter, 11	3 5	Dr. McKendrick, 12	3 3	Dr. Barlow, 1	2 2	Dr. Christie, 5	2 2	Mr. Limont, 1	2 2 0
GENERAL PATHOLOGY, &c.	Dr. Hamilton, 3	3 3	Dr. Greenfield, 3	4 4	Dr. J. B. Buist, 9	3 5	3 o'clock	3 3	Dr. Newman, 10†	3 3	(In Infirmary)	...		
MEDICINE	Dr. Smith-Shand, 11	3 3	Dr. Grainger Stewart, 9	4 4	Drs. Wyllie, Affleck, & Byrom Bramwell	3 5	Dr. Gairdner, 11	3 3	Dr. Anderson, 1	2 2	Dr. Gemmell, 5	2 2	Dr. McVail, 11	2 2 0
SURGERY	Dr. Alex. Ogston 10	3 3	Dr. Chiene, 10	4 4	Dr. MacGillivray, Mr. Duncan, & Mr. Miller, 10	3 5	Dr. Macleod, 1	3 3	Dr. Macewen, 11	2 2	Dr. Dunlop, 3	2 2	Mr. Knox, 12	2 2 0
											[Dental Practice daily, 5]	10 10 Fl. Cur		
MATERIA MEDICA, &c. ...	Dr. Davidson, 4	3 3	Dr. T. R. Fraser, 2	4 4	Drs Moinet, Craig, 2	3 5	Dr. Charteris, 12	3 3	Dr. Dougall, 3	2 2	Dr. Morton, 4	2 2	Dr. Carmichael, 3	2 2 0
MIDWIFERY, &c.	Dr. Stephenson, 4	3 3	Dr. Simpson, 11 (Dis. Wom. & Child.)	4 4	Drs Bell & Young, 11	3 5	Dr. Leishman, 2	3 3	Dr. Stirton, 3	2 2	Dr. A. Wallace, 1 (In Summer)	2 2	Dr. Reid, 12	2 2 0
MED. JURISPRUDENCE, &c.	Dr. Hay, 9	3 3	Dr. D. Maclagan, 11 (in Summer only)	4 4	Dr. Littlejohn, 2	3 5	Dr. Simpson, † 11	3 3	Dr. Glaister, 11 (in Summer)	2 2	Dr. A. Lindsay, 3 (In Summer)	2 2	Dr. Duncan, 4	2 2 0
NATURAL HISTORY	Dr. Nicholson, 2	3 3	Dr. Ewart, 2	4 4	Dr. And. Wilson, 3	3 5	Dr. Young, 9	3 3	...	...	...	...	...	...
NATURAL PHILOSOPHY ...	...	...	Mr. Tait, 11	3 3	...	...	...	...	...	...	Prof. Blyth	...	...	...
HOSPITAL PRACTICE:	ABERDEEN R. INF.		EDIN. ROYAL INF.		EDIN. ROYAL. INF.		GLASGOW ROY. INF AND WEST. INF., 9		...	...	GLASGOW ROY. INF.		The Physicians & Surgeons in the Western Infirmary.	
PHYSICIANS	Drs. J. F. Smith-Shand, Beveridge, and A. Fraser Daily	One year, £3 10s. Perpetual, £6.	...	Perpetual ticket, £12	Drs. Wyllie, Muirhead, Brakenridge, & Macdonald, 12	1 year, £5 5s.	The Physicians and Surgeons of the Infirmaries	1st year, £10 10s.; 2nd year & perpetual, £10 10s.	Dr. Robertson Dr. Scott-Orr Dr. Perry Dr. Wood Smith	Perpetual, including Clin. Lectures, £21	Drs. Scott Orr, Perry, M'Laren, & A. Wood Smith, 9 *Out-patients:* Drs. Dougall and Anderson	1st year, £10 10s.; 2nd, £10 10s.; afterwards free; 6 months, £6 6s.; 3 months, £4 4s.	...	...
SURGEONS	Drs. Ogston, Will, Garden, Hall, & Williamson (*dental*) Daily		...		Mr. J. Bell, 12		9 o'clock		Dr. Watson Dr. Dunlop Dr. Macewen Mr. Clark		Drs. E. Watson, Morton, Dunlop, Macewen, and H. E. Clark, 9			
ASSISTANT-SURGEONS ...	...	...	...	...	...	...	...		Dr. Muir Dr. Shaw		*Out-patients:* Drs. Lothian and Fleming			
CLINICAL MEDICINE	Drs. J. F. Smith-Shand, Beveridge, and A. Fraser	3 3	Drs. Maclagan, G. Stewart, Fraser, & Greenfield, & Dr. Simpson (Dis. of Women), Tu. F. 12 to 2	4 4	Drs. Wyllie, Muirhead, Brakenridge, & Macdonald, Tu. F. 12 †	3 5	Drs. McCall Anderson & Gairdner, 9 (and in Summer)		The Physicians	...	The Physicians, 9	...	...	...
CLINICAL SURGERY	Drs. Ogston, Will, and Garden	3 3	Dr. Annandale, M. Th. 12	4 4	Mr. J. Bell, M. Th. 12 †	3 5	Drs. Buchanan & Macleod, 9 (and in Summer)	...	*Dent. Surg.:* Dr. Woodburn, 3 } The Surgeons	5 0 ...	[*Mechan. Dentist.:* Mr. Woodburn, 8 P.M., £2 2s.] The Surgeons, 9	...	...	...
SUMMER SESSION.														
PRAC. ANAT. & DEMONS. ...	Dr. Struthers, 9 to 4	2 2	Mr. Turner, 1, 4	5 5	Dr. Cathcart & Mr. Symington, 9 to 4	2 2	Dr. Cleland and Demonstrators, 11	...	Mr. Clark, 12	1 11 6	Dr. Buchanan, 12½	1 11 6	Vacant	1 11 6
BOTANY	Dr. Trail, 8	3 3	Dr. Dickson, 8	4 9	...	...	Dr. Balfour, 8	3 3	...	...	Mr. Wilson, 1	1 1	...	
HISTOLOGY	Dr. Struthers and Dr. Stirling	...	...	2 2	...	...	Dr. McKendrick, 12	...	...	...	...	...	Mr. Limont, 3	1 11 6
COMPARATIVE ANATOMY...	...	...	...	...	Dr. A. Wilson	...	Dr. Young	3 3	...	...	...	...	...	...
PRACTICAL CHEMISTRY ...	Mr. Brazier, 10	3 3	Dr. Crum Brown, 10, 11	3 3	Mr. J. F. King	3 3	Mr. J. Ferguson, 10	...	Dr. J. M. Milne	2 2	Mr. Dittmar, 3½	2 2	Mr. Milne, 10	2 2 0
DISEASES OF THE EAR ...	...	...	...	...	Dr. Duncanson	3 3	...	...	Dr. Macfie, 4	1 1	Dr. Barr, 3	Free	...	...
DISEASES OF THE EYE ...	Dr. A. D. Davidson	1 1	Dr. A. Robertson, 9	3 3	Dr. J. Robertson	...	Dr. T. Reid, 1	1 1	Mr. Clark, Tu. F. 4	...	Dr. Wolfe, 12	Free	[*Prac. Mat. Med.:* Dr. Carmichael, 12, 2gs.]	
DISEASES OF CHILDREN ...	Dr. Stephenson	...	...	...	Drs. Andrew & Carmichael, 3	2 2	...	...	...	...	(With Midwifery)	...	[*Pub. Health:* Dr. Duncan, 2 gs.]	
NATURAL HISTORY	Dr. Nicholson, 2	3 3	Dr. Ewart, 2	4 4	Dr. And. Wilson, 2	3 5	Dr. Young	...	...	...	...	...		
MED. PSYCHOL. & INSANITY	...	...	Dr Clouston,* M W F	3 3	Dr. J. Tuke, 2	2 2	Dr. Yellowlees	2 2	Dr. Robertson, 12	1 1	(With Jurisprud.)	...		
GYNÆCOLOGY	Dr. Stephenson, 11 (In Winter)	2 2	Dr. Simpson, 10	3 3	Dr. H. Croom, 5	...	...	...	Dr. Stirton	...	(With Midwifery)	...		
MIDWIFERY, &c.		...	[*Pr M. Anat. & Path.*] Dr. Greenfield, 11] }	3 3	Drs. Macdonald, Croom, & Bell, 10	3 5	Dr. Leishman	2 2	Dr. Stirton, 3	2 2	Dr. A. Wallace, 1	2 2	Dr. Reid, 12	2 2 0
OPERATIVE SURGERY... ...	Dr. Alex. Ogston, 10	2 2	Dr. Chiene, 4	3 3	... ‡	...	Dr. Macleod	2 2	Dr. Macewen, 1	2 2	*Pb. H.:* Dr. Christie, 4 Dr. Dunlop, 11	Free 2 2	Mr. Knox, 1	2 2 0

* With Prac. Instruction at an Asylum (Mon. Wed. Fri.), £3 3s.

† And in Summer.

‡ Mr. A. G. Miller and Dr. MacGillivray.

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TABULAR LIST OF THE CLASSES, LECTURERS ETC., AND FEES, AT THE MEDICAL SCHOOLS OF IRELAND, FOR THE SESSION 1884–85.

LECTURES, &c.	DUBLIN UNIVERSITY.		DUBLIN R. C. OF SURGEONS.		LEDWICH SCHOOL OF SURG. & MED.	DUBLIN, CARMICHAEL COLL.		DUBLIN, CATHOLIC UNIVERSITY.			BELFAST, QUEEN'S COLLEGE.			CORK, QUEEN'S COLLEGE.			GALWAY, QUEEN'S COLL.	
	LECTURERS.	FEES.	LECTURERS. DAYS AND HOURS.	FEES.	LECTURERS.	LECTURERS. DAYS AND HOURS.	FEES.	LECTURERS.	DAYS & HOURS.	FEES.	LECTURERS.	DAYS & HOURS.	FEES. First Course.	LECTURERS.	DAYS & HOURS.	FEES. First Course.	LECTURERS. DAYS AND HOURS.	FEES. First Course.
													£ s.			£ s.		£ s.
ANATOMY AND PHYSIOLOGY	Dr. Macalister (*chirurgery*)		Dr. Mapother M. W. F. S. 3		Mr. T. P. Mason Mr. M. A. Ward	Dr. J. A. Scott* daily (ex. S.) 2		Dr. Nixon DrCoppinger	Daily (ex.S.)12		Dr. P. Redfern	Daily (ex. S.) 2	3 0	Dr. J. J. Charles	Daily 1	3 0	Dr. Pye daily (ex.S.)3	3 0
ANATOMY, DESCRIPTIVE & SURGICAL			Mr. Stoker Daily, 12. Dr. Cunningham		Messrs. T. P. Mason, Glanville, Ward, Robinson	Dr. Heuston, M. W. F.		Dr. R. Cryan Dr. Hayden	Daily (ex. S.) 1		Dr. P. Redfern	...	...		Daily (ex.S.)12	...	Dr. Pye daily(ex.S.) 1	...
PRACTICAL ANATOMY AND DISSECTIONS	Dr. Little		Drs. Knott, Warren, White, and Myles		...	Dr. Stoney daily (ex. S.) 1 Drs. Doyle, Heuston, McVittie, Broomfield, Lentaigne, Beatty, Gunn, Brooks, & Wynne		Dr.Redmond Dr. M'Cullagh Dr. M'Ardle Dr. Chance Dr. O'Carroll	7 to 7 daily		Dr.Anderson	Daily (ex. S.) 12	3 0	Dr. Charles and Demonstrators	Daily, 12	3 0	Dr. Pye (and Demonstrators) Daily, 9 to 4	3 0
CHEMISTRY	Dr. Reynolds		Dr. Cameron Tu. Th. S. 2		Mr. E. Lapper	Dr. Tichborne Tu. Th. S. 3		Dr.Campbell	M. W. F., 11, 12		Dr. Letts	Daily (ex. S.) 3	2 0	Dr. Maxwell Simpson	M. W. F.	2 0	Dr. Rowney M. W. F. 12	2 0
PRACTICAL CHEMISTRY	Dr. Reynolds		Dr. Cameron		Mr. E. Lapper	Dr. Tichborne† M. W. F. 12		†Dr. Campbell	M. T. W. F., 11, 1		Dr. Letts (*in Summer*)	Daily (ex.S.) 12	3 0	Dr. Maxwell Simpson	M. W. F.	3 0	Dr. Rowney Tu. Th. S. 2	3 0
MATERIA MEDICA AND PHARMACY	Dr. W. G. Smith		Mr. Macnamara		Mr. R. D. Purefoy	Dr. Duffey† Tu. Th. S. 1.30		†Dr. Quinlan	M. Tu. W. Th. 1		Dr. J. S. Reid	M.Tu.W. Th. 4	2 0	Dr. O'Keefe	Tu.Th.S. 12	2 0	Dr. Colahan M. W. F. 2	2 0
BOTANY AND ZOOLOGY	Dr. Wright Prof. Mackintosh		Dr. Minchin		Mr. Robinson	Dr. McNab† M. W. F. 11 [*Practical Histology:* Dr. J. A. Scott†]		†Dr. Sigerson	Th. 2 F. S. 1		‡Dr. R. O. Cunningham	*Zoology* MTWF1 (*Botany*) M.Tu.W. Th. F. 11	2 0	...	M. W. 3 S. 12	2 0	Dr. W. King Tu. Th. S. 11	2 0
INSTITUTES OF MEDICINE AND PATHOLOGY	Dr. Purser	Practical Anatomy, £3 3s.	Dr. Foot	For each Course, £3 3s.; except Dissections, £5 5s.; and Practical Chemistry, £5 5s.	Mr. T. Mason Mr. Ledwich	Dr. Woodhouse (*in Sum.*)		Dr. Lyons	S. 3	£3 3s. each Course, except Dissections and Pract. Chem., which are £5 5s. each.								
NATURAL PHILOSOPHY	Prof. FitzGerald		...		Mr. Lapper			†Rev. G. Molloy	Tu. Th. 1 S. 2		Dr. J. Everett (*in Winter*)	M. T. W. T F 11 & 1	2 0	Mr. J. England	Tu. Th. 2	2 0	*Exp. Physics:* Prof. Larmor Tu. Th. 12	2 0
HOSPITAL PRACTICE	Sir P. Dun's or other Dublin Hospital.		City of Dublin Hospital. (Daily, 9) Three times weekly		Various Dublin Hospitals.	House of Indust., Adelaide, Meath Jervis-st., City of Dublin, Cork-street (Fever).		...	...		Belf. Roy., Ulstr., Un., and other Hospitals.	...	...	North and South Infirmaries.	...	...	Galway Infirmary & Town Hosp. Daily	Sess 4 4
CLINICAL LECTURES	...		...		...	...		...	...		...	...	...	...	...	...	Drs. Browne, Pye, Colahan & Lynham T. F. 10	...
SURGERY	Dr. E. H. Bennett		Mr. Hughes Mr. Stokes Tu. Th. S. 1		Mr. J. E. Kelly Mr. Nixon Mr. Stoker	[*Ophthal. Surg:* Dr. Fitzgerald, W. 1 Mr. Barton Mr. Corley Tu. Th. S. 12		Mr. J. P. Hayes	M. W. F. 3		Dr. A. Gordon	M.Tu.W. Th. 1	2 0	Dr. S. O'Sullivan.	Tu. Th. S. 4	2 0	Dr. J. V. Browne M. W. F. 11	2 0
MIDWIFERY, &c.	Dr. Kirkpatrick		Dr. Roe Tu. Th. S. 3		Mr. S. R. Mason	Dr. Jennings Dr. Macan M. W. F. 3		Dr. Byrne	Tu. Th. S. 2		Dr. Dill	M. Tu. W. Th. 3	2 0	Dr. Corby	Tu. Th. S. 4	2 0	Dr. Kinkead M. W. F. 2	2 0
MEDICINE	Dr. Finny		Dr. Foot M. W. F. 11		Dr. Foot	Dr. Moore M. W. F. 12		Dr. R. D. Lyons	Tu. Th. S. 3		Dr. Cuming	M. Tu. W. Th. 4	2 0	Dr. D. C. O'Connor	M. W. 12 S. 12	2 0	Dr. Lynham Tu. Th. S. 2	2 0
MEDICAL JURISPRUDENCE	Dr. Travers		Dr. Davy		Mr. R. Travers	Mr. Auchinleck (*in Summer*) M. W. F. 1		†Dr. Macswiney	M. T. W. Th. 12		Dr. Hodges (*in Summer*)	M. Tu. W. Th. 2	2 0	Professors O'Keefe and O'Shaughnessy	M. W. S. 3	...	Dr. Rowney Dr. Kinkead Tu. Th. S. 4	2 0
COMPARATIVE ANATOMY	Dr. Macalister		Dr. Mapother	Course, £3 3s., in all Classes, ex. Descr. Anat. (£5 5s.), Prac. Chem. (£3 3s.), Oph. & Aur. Surg. & Hygiene, which are free.	...	...		...	...		...	...	...	...	...	2 0	[*Modern Languages:*	...
PRACTICAL PHARMACY	...		[*Hygiene:* Dr. Cameron		...	...		...	...		...	...	...	...	...	...	Dr. Geisler, £2]	...
LOGIC	The College Tutors		[*Ophth. and Aural Surg.:* Dr. Swanzy]		...	...		[*Ophthalmology:* Dr. D. D. Redmond]	...		...	...	...	...	...	1 0	Dr. T. W. Moffett M. W. F. 1	...

* Prac. Phys. in Summer. † In Summer. ‡ Zoology in Winter; Botany in Summer.

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METROPOLITAN HOSPITALS AND MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—The clinical practice of the hospital comprises a service of 750 beds, of which 676 are in the hospital at Smithfield, and 75 are for convalescent patients at Swanley.

Four house-physicians, ten house-surgeons, and a midwifery assistant are appointed annually, each of them holding office for one year, and provided with rooms by the hospital authorities. The ophthalmic house-surgeon is appointed for six months, and is eligible for re-election for a second term of six months. The senior assistant chloroformist and junior assistant chloroformist are appointed annually, and are provided with rooms. No fee is paid for any of these appointments, and each receives a salary of £25. The clinical clerks, the obstetric clerks, the clerks to the medical out-patients, the dressers to the surgical out-patients, and the dressers in the special departments are chosen from the diligent students. Forty ward-dresserships are given annually to the students who pass the best examination in the subjects of study of the first year. Other ward-dresserships may be obtained by payment of the usual fees.

A college is attached to the hospital, in which students can reside, subject to the college regulations.

Foundation and other Prizes.—Open Scholarships in Science of the value of £130 each, tenable for one year, will be competed for in September. Candidates must not be more than twenty-five years of age for one, and twenty-one for the other, and must not have entered to the medical or surgical practice of any metropolitan medical school. The subjects of examination are Physics, Chemistry, Botany, Physiology (not more than four subjects to be taken), and Zoology.—Preliminary Scientific Exhibition (founded 1873). The subjects of examination are identical with those of the Open Scholarship in Science. This Exhibition, of the value of £50, is tenable for one year. The Examination is confined to students of the Hospital of less than six months' standing, and will be held in October. The Jeaffreson Exhibition, of the value of £50, and tenable for two years, is awarded after examination in the subjects of General Education. It is now an Open Exhibition. A Senior Scholarship, £50, in Anatomy, Physiology, and Chemistry. Lawrence Scholarship, and Gold Medal, of the value of forty guineas (founded in 1873 by the family of the late Sir Wm. Lawrence. Two Brackenbury Scholarships in Medicine and Surgery, £30 each. Junior Scholarships in the subjects of study of the first year: 1st, £50; 2nd, £30; 3rd, £20.

CHARING-CROSS HOSPITAL AND COLLEGE.—Total fees, £99 15*s.*, payable by instalments, including the fee of £2 2*s.* for matriculation, which involves no examination. Matriculated students pay proportionately lower fees, and are admitted without additional fee to the courses of Clinical Medicine and Surgery and to the practice of the Royal Westminster Ophthalmic Hospital. They alone are entitled to compete for the scholarships, gold medal, and Pereira prize.

Two entrance scholarships, of the value of £30 and £20 respectively, tenable for one year, are awarded annually in October, after a competitive examination in the following subjects:—*Compulsory*. English, Latin, French, or German, Mathematics; *Optional* (only one of which may be selected), Chemistry, Mechanics, German or French; the subjects being those of the matriculation examination of the University of London. Candidates must give notice of their intention to compete on or before Saturday, September 20th, 1884. Two scholarships are open for competition among the matriculated students: the Llewellyn Scholarship of £25, for students who have just completed their second year; and the Golding Scholarship of £15, for students who have just completed their first year. The Pereira prize of £5 is open to all matriculated students, and is awarded annually for the best clinical reports. The Governors' Gold Medal is given for excellence in clinical work. Silver or Bronze Medals are awarded to the most distinguished students in all classes.

ST. GEORGE'S HOSPITAL.—Perpetual pupils, by payment of £130 in three instalments, or £125 in one sum, are entitled to admission to the medical and surgical practice; to compete for prizes and exhibitions; to hold the appointments of house-physician and house-surgeon, assistant house-physician, assistant house-surgeon, ophthalmic assistant, registrar's assistant, and to become clinical clerks for two periods of three months each, and dressers for similar periods. A reduction is made in the case of students who have already completed a part of their course at an English university. The house-physician and house-surgeon receive their board and lodging free, and *no payment* is made for the appointment. Gentlemen are admitted to the hospital practice and lectures required by the College of Physicians and Surgeons and the Society of the Apothecaries on payment of £45 at the commencement of the first year of study, £45 at the commencement of the second year of study, £20 for the third, and £15 for each subsequent year of attendance. These payments entitle the pupil to hold the offices of clinical clerk and dresser for three months each, and to become a candidate for the offices of medical and surgical registrar and demonstrator of anatomy and curator of the museum. These are all salaried offices. The obstetric assistant is resident, with a salary of £100.

Prizes.—The William Brown Exhibition of £100 per annum, tenable for two years, open to any perpetual pupil of St. George's who is under twenty-five years of age, and who shall have obtained a diploma or licence entitling him to be registered as a practitioner of medicine or surgery in England, within two years previous to the period fixed for the examination (July). The examination is to test the proficiency of the candidate in Medicine, Midwifery, and Surgery, including Ophthalmic Surgery. The William Brown Exhibition of £40 per annum, tenable for three years, for general fitness for the exercise of the medical profession, and for moral conduct, open to perpetual pupils in their fourth year of study. Sir Charles Clarke's Prize (interest of £200 Consols) for good conduct. The Brackenbury Prize in Medicine, value nearly £40; the Brackenbury Prize in Surgery, value nearly £40; the Brodie Prize for Clinical Surgery; the Acland Prize for Clinical Medicine; the Pollock Prize in Physiology; the Henry Charles Johnson Prize in Anatomy, and General Proficiency Prizes, value £10 10*s.* each, for students of each year.

GUY'S HOSPITAL.—House-physicians and house-surgeons, obstetric residents, dressers, clinical and other clerks, are selected from the students, according to merit, and without payment. The house-physicians, of whom there are three constantly on duty, one as junior and two as seniors, hold office for six months each, the first two months in the former capacity, the other four in the latter. The duty of the junior house-physician is to attend in the medical out-patient room three times a week, in a room adjoining that occupied by the assistant-physician for the day, and prescribe for those patients who are not seen by the assistant-physician. The senior house-physicians are chiefly occupied in the medical wards, and attend to all emergencies that may arise in the absence of the physicians. They have separate rooms in the clinical building, and are boarded at the charge of the hospital. The house-surgeons, of whom there are also three on duty, hold office for six months each. During the first two months the house-surgeon assists in the out-patient department. During the next two months he has the general superintendence of the surgical casualty department, and assists the senior when required; and subsequently, as senior house-surgeon, he has, in the absence of the surgeons and assistant-surgeons, the care of the patients in the surgical wards, and lives during these four months in the hospital, being boarded free of expense. The dressers are selected from those gentlemen who have completed their third winter session, and who have been most diligent in the junior appointments. They hold office for six months each. Three are attached to each surgeon. During their week of special duty they reside in the hospital, and board with the house-surgeons free of expense. Two obstetric residents reside and are boarded in the hospital.

Scholarships, Prizes, &c.—Open scholarships of the value of £131 5*s.* in Arts, Latin, Greek, Mathematics, and modern languages. Open Scholarship of £131 5*s.* in Science. Subjects: Inorganic Chemistry, Zoology, Botany, Physics (these will be competed for on Thursday, September 25th). At the end of the summer session: first prize £50; second prize, £25. Subjects: Anatomy, Physiology, Chemistry, Materia Medica, and Botany, or Comparative Anatomy.—For Students in their second year: First prize, £25; second prize £10. Subjects: Anatomy, Physiology. The Sands Cox Scholarship of £15 per annum for three years. Sub-

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ject: Physiology. The Michael Harris Prize of £10 for Anatomy. For students in their third year: First prize, £25; second prize, £10. Subjects: Medical and Surgical Anatomy, Midwifery, and Therapeutics. Fourth year's students: First prize, £25; second prize, £10. Subjects: Medicine, Surgery, Midwifery, and Medical Jurisprudence. For senior students: The Treasurer's Gold Medal in Medicine; the Treasurer's Gold Medal in Surgery; the Gurney Hoare Prize of £25 for Clinical Medicine and Surgery; the Beaney Scholarship of 30 guineas for Pathology; the Mackenzie Bacon Prize of 10 guineas for Ophthalmoscopy; the Mackenzie Bacon Prize of £15 for Nervous Diseases; the Burdett Prize, value £10, for Hygiene. The Physical Society awards the following prizes: Two of £5 each to the members who send in the best essays on selected subjects; prizes of £10 and £5 for the best papers read before the Society; and one of £5 to the member who has most distinguished himself in the debates of the sessions.

KING'S COLLEGE.—The physicians' assistants, the physician-accoucheur's assistant, the clinical clerks, and the house-surgeon and dressers, are selected by examination from among those matriculated students of the College who are pupils of the hospital. Rooms are provided within the walls of the college for the residence of a limited number of matriculated students. Rooms and commons are provided at the hospital for the resident officers free of charge.

Scholarships.—Warneford Scholarships: Two of £25 per annum for three years. Science: One of £50 and one of £25 each for two years. Sambrooke: One of £60 and one of £40 for Science and Literature. College Scholarship: One of £40 per annum for two years; one of £30, for one year; three of £20, for one year. The Daniell Scholarship, for Chemistry, of the annual value of £20. Sambrooke Registrarships, of the annual value of £50 each, and tenable for two years, are open to all matriculated students who have filled any one of the higher appointments of the hospital, or who have become Associates. The Leathes Prizes, value £7, and the Warneford Prizes, value £40, are given annually amongst the matriculated medical students. Two Medical Clinical Prizes, one of £3 for the winter session, and one of £2 for the summer session, and two Surgical Clinical Prizes, of £3 each, are given. The Todd Medical Clinical Prize consists of a bronze medal and books to the value of £4 4*s*. The Tanner Prize for Obstetric Medicine, value £10, and the Carter Gold Medal and Prize for Botany, value £15, are given annually in July.

LONDON HOSPITAL AND COLLEGE.—The Medical School of the London Hospital is under the direction of a College board, composed of six members of the hospital staff, and six of the house committee. The executive authority is committed to a Warden. The hospital, which is the largest in Great Britain, contains nearly 800 beds. Last year the number of in-patients was 7388, out-patients 62,256.

The following Scholarships and prizes will be offered for competition during the ensuing winter and summer sessions:—Two Entrance Scholarships in Natural Science, of the value of £60 and £40 respectively, will be offered for competition on September 22nd, 23rd, and 24th, 1884. The subjects are Physics, Botany, Zoology, and Inorganic Chemistry. The successful candidates must forthwith become full pupils of the hospital and school, if not already entered; and are not eligible to compete for the Buxton Scholarships:—The two Buxton Scholarships, value £30 and £20, will be offered for competition on September 25th, 26th, and 27th, 1884. The subjects are those appointed by the General Council of Medical Education and Registration as the subjects of the Preliminary Examination. A Scholarship, value £25, in Anatomy, Physiology, and Chemistry, will be competed for at the end of the winter session by first and second year students. The Letheby Prize, value £30, for proficiency in Chemistry. (At the end of the summer session.) Open to all full students who have completed their second summer session up to the termination of their fourth year from entrance. A Hospital Scholarship, value £20, for proficiency and zeal in Clinical Medicine. (At the end of the winter session.) A Hospital Scholarship, value £20, for proficiency and zeal in Clinical Surgery. (At the end of the winter session.) A Hospital Scholarship, value £20, for proficiency and zeal in Clinical Obstetrics. (At the end of June.) The Duckworth Nelson Prize, value £10, will be offered biennially for competition at the end of the winter session, and be open to all students on similar conditions to those of the Hospital Scholarships. The subjects of examination will be Practical Medicine and Surgery. The Hutchinson Prize, value £35, will be given triennially to the author of the best essay upon a subject in Clinical Surgery. Candidates must be full students of the hospital who have not been registered more than ten years. Out-patients Dressers' Prizes. Six prizes, of the aggregate value of £60, will be offered for competition at the end of the winter session. Candidates must pass an examination in Minor Surgery, have dressed diligently for twelve months, and have passed the Primary Examination of the Royal College of Surgeons. Two Dissection Prizes, value £6 and £4.

ST. MARY'S HOSPITAL.—There are five resident medical officers, four of whom are appointed for twelve months, and one, the obstetric officer, for six months, who board free of expense in the hospital. These appointments are awarded after competition, without additional fee.

Two demonstrators of anatomy are appointed annually with a salary of £70 and £50 respectively; a demonstrator of physiology at £100 a year, and a medical tutor at £100 a year. All these officers are eligible for re-election.

A Demonstratorship in Pathological Anatomy, of the value of £15, and tenable for six months, will be given by competitive examination in Pathology and Morbid Anatomy, among those students who have completed their third winter session. The holder of the scholarship will assist the pathologist in the discharge of his duties in the Museum and Dead-house.

Two Prosectors of Anatomy, and two Assistant Demonstrators of Physiology, are appointed annually, and receive a certificate and £5 each for satisfactory service in their respective departments.

All students are required to perform the duties of clinical clerk and dresser during the last two years of their curriculum. Students of the third year and of subsequent years are also appointed as clerks and dressers to assist the physicians and surgeons in charge of the out-patients.

A Maternity Department is attached to the hospital. There are special departments for Diseases of the Eye, the Ear, the Skin, and the Throat, in which clinical demonstrations are constantly given by the physicians and surgeons.

Scholarships, Prizes, &c.—Five Open Scholarships in Natural Science, one of the value of £100, and four of £50 each, will be offered for competition on Tuesday, September 23rd, and following days.

In addition to the open Entrance Scholarships, Class Prizes, and usual Appointments, Scholarships will be offered for competition at the end of each year, open to all pupils. These Scholarships are of the value of £20, £25, and £30, for the first, second, and third years respectively.

MIDDLESEX HOSPITAL.—There is a special Cancer Department, affording accommodation for thirty-three in-patients, whose period of residence in the hospital is unlimited. Classes, open to all the students, are held for practical instruction in the microscopical examination of healthy and diseased tissues, and also in the application of bandages and other surgical apparatus. Students are allowed to take out to read at their own homes the books from the large and carefully selected medical library of the school. The Museum has recently been rearranged and a complete catalogue prepared of the various specimens. Two Entrance Scholarships, of the annual value of £25 and £20, and tenable for two years, also an Entrance Science Scholarship, value £50, are offered for competition at the commencement of the winter session. An Exhibition in Elementary Anatomy, Osteology, and Physiology, value £10 10*s*., is awarded to students at the end of their first year. The Lyell Medal is awarded annually for proficiency in Surgical Anatomy and Practical Surgery. Two Broderip Scholarships, of the annual value of £30 and £20, tenable for two years, are awarded to those students who pass the best examination at the bedside and the post-mortem room. The Murray Medal and Scholarship, founded in connexion with the University of Aberdeen, is awarded every third year to a student of this hospital; it will be next awarded in May, 1886. The Governors' Prize of twenty guineas is also awarded annually to the student who shall most distinguish himself during his three years' curriculum. Valuable class prizes are also given, and ten resident clinical appointments are annually awarded, after

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competitive examination, to students who have completed their education, and complied with the regulations of the school. The officers thus appointed reside and board in the hospital free of expense. The tutors assist all general students, especially those who are preparing for examination, free of charge; and their instruction is arranged with a view to avoid the necessity of students obtaining any private tuition apart from that of the Medical School. The fee for attendance on the hospital practice and lectures required by the Colleges of Physicians and Surgeons and by the Society of Apothecaries is 90 guineas, if paid in one sum on entrance. The fees may be paid by instalments—£40, first year; £40, second year; £20, third year; £5, fourth year.

The clinical clerk and dresser of the physician and surgeon of the week dine at the board-room table, free of charge. A limited number of general students are also allowed to dine at the board-room table. The paid offices of medical registrar, surgical registrar, resident medical officer, and demonstrator of anatomy are open to qualified men as they become vacant.

ST. THOMAS'S HOSPITAL.—*Prizes and Appointments for the year* 1884-85.—For First-year's students: Two Entrance Scholarships in Natural Science of the value of £100 and £60 respectively, open to all first-year's students, will be awarded during the first week in October, after an examination in Physics, Chemistry, and either Botany or Zoology at the option of the candidate; the William Tite Scholarship, the proceeds of £1000 Consols (£30 per annum), is awarded each year; also prizes of £20 and £10; summer £15 and £10. For Second-year's Students: The Peacock Scholarship of 40 guineas, and the Musgrove Scholarship of 40 guineas, are awarded biennially to the students who shall take the highest place in the first-class list in the examinations at the end of the second winter session; they are tenable for two years, provided the holder obtains a place in the first class in the subsequent examinations: making the winter prizes, £42, £20, and £10, and the Prosector's Prize of £5; summer, £15 and £10; with the dresserships and the clinical clerkships. For Third-year's students (winter): Second Tenure of Scholarship £42, and prizes of £20, £15, and £10; summer, £15 and £10. Clinical clerks and dressers are selected according to merit. The Grainger Testimonial Prize of £20, awarded biennially to students who shall be from three to six years' standing, for the best Physiological Essay, to be illustrated by preparations and dissections; the next award will be made in 1886. The Cheselden Medal for Surgery and Surgical Anatomy; and the Mead Medal, for Practical Medicine, are awarded annually to fourth-year's students. The Solly Medal, with a prize from 10 to 20 guineas, will be awarded biennially to a student of the third, fourth, fifth, or sixth year, for the best report of Surgical Cases. The next award will be made in 1886. The Treasurer's Gold Medal, for general proficiency and good conduct, is awarded annually to a fourth-year's student. The house-physicians, house-surgeons, assistant house-physician and surgeon, and resident accoucheur are chosen from gentlemen who have obtained their professional diplomas according to merit, and, with the dressers, are provided with rooms and commons. Two hospital registrars, at £100 per annum each, will be selected from gentlemen distinguished for merit.

The medical and surgical casualty out-patients are seen by the resident assistant-physician, the resident assistant-surgeon, the house-physicians, house-surgeons, and dressers, at from 12 to 1 o'clock daily.

UNIVERSITY COLLEGE, LONDON.—The fees for lectures and hospital practice required by the College of Physicians and Surgeons and the Society of Apothecaries during the student's entire course amount to 125 guineas if paid in one sum, or 130 guineas if paid by instalments—viz., first year 60 guineas, second year 50 guineas, third year 20 guineas.

Exhibitions, Prizes, &c.—Three Entrance Exhibitions, of the respective values of £100, £60, and £40 per annum, tenable for one year, are annually awarded, upon examination by printed papers, to gentlemen who are about to commence their first winter attendance in a medical school. The subjects of the examinations are—Chemistry, Physics, Botany, and Zoology. The next examination will take place at the College on September 25th and 26th. The Atkinson Morley Surgical Scholarship of £45, tenable for three years, is annually awarded to the student who, upon examination, is found to possess the greatest proficiency in the Theory and Practice of Surgery. The Sharpey Physiological Scholarship of about £105 per annum, tenable for three years, for proficiency in Biological Science. Fellitter Exhibition: a prize of £30 is awarded annually, in July, to the most proficient student in the class of Pathological Anatomy. An Atchison Scholarship, value about £55 per annum, tenable for two years. The Erichsen Prize, a surgeon's operating case of the value of £10 10*s.*, awarded yearly to the student of the class of Practical Surgery who shall most distinguish himself by manipulative skill. The Morris Bursary of £25 a year, tenable for two years. Besides the above, gold and silver medals and other prizes are awarded in each class. The appointments of demonstrators of anatomy, of resident medical officer to the hospital, and of surgical registrar—all of which have emoluments attached to them—are almost invariably conferred upon students of the College. Physicians' assistants, house-surgeons, midwifery assistants, physicians' clerks, surgeons' dressers, ward clerks, and ophthalmic surgeons' assistants are selected from the pupils, without additional fees.

WESTMINSTER HOSPITAL.—The Hospital contains upwards of 200 beds. There are separate departments for Disease of the Eye, Ear, Skin, Teeth, and Throat, and for Diseases of Women. The Anatomical Museum is constantly open to the students. There are also a Pathological Museum and a Materia Medica Museum.

A Curator of the Museum and Pathologist, with a salary of fifty guineas, and a Medical and a Surgical Registrar are appointed annually, each with a salary of £40. Two House-Physicians, a House-Surgeon, and a Resident Obstetric Assistant are appointed for six months after examination, and are provided with rooms and commons. The Senior House Physician, who is also the chloroformist to the hospital, receives in addition an honorarium of twenty guineas. An Assistant House-Surgeon is appointed from among the senior students; he is provided with commons at the hospital table. Clinical Assistants to the Physicians and Surgeons, and to the officers in charge of special departments, are appointed from students of the fourth year.

Scholarships and Prizes.—The Fence and Houldsworth Entrance Scholarship, on alternate years, each £40 a year; and one Entrance Scholarship value £40. The Treasurers' Prize, an exhibition in Anatomy, Physiology, and Chemistry, value £10 10*s.*, tenable for one year for first year's men. A Prize of £2 2*s.*, by Mr. James Black, to the first year's student who is most regular and diligent in the Dissecting Room. The President's Prize, a Scholarship in Anatomy, Histology and Physiology, value £21, given by His Grace the Duke of Westminster, President of the Hospital, to student of second year (to be styled Assistant Demonstrator). At the end of the third summer, Prizes of £5 each (books or instruments), in Clinical Medicine and Clinical Surgery. Frederick Bird, Medal and Prize, value £15, to students who have completed their fourth winter; subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology. Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth.

GREAT NORTHERN CENTRAL HOSPITAL, Caledonian-road.—Consulting Surgeon: Frederick Le Gros Clerk. Physicians: Drs. Cholmeley, Cook, Robert Bridges, Burnet, and Beale. Obstetric Physicians: Drs. Gustavus C. P. Murray and Faucourt Barnes. Ophthalmic Surgery: Mr. R. Marcus Gunn. Surgeons: Messrs. Gay, W. Adams, W. Spencer, Watson, J. Macready, and C. B. Lockwood. Aural Surgeon: Mr. A. E. Cumberbatch. Chloroformist: Mr. George Eastes. Dental Surgeon: Mr. E. Keen. House-Surgeon: Mr. Francis A. Stokes. Junior Resident Medical Officer: Mr. H. M. Sutton. Dispenser: Mr. B. Marks.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Consulting Physicians: Dr. C. J. B. Williams, F.R.S., Dr. W. H. Walshe, Dr. R. Quain, F.R.S., Dr. J. E. Pollock. Consulting Surgeon: Professor John Marshall, F.R.S. Physicians: Drs. E. S. Thompson, C. T. Williams, R. D. Powell, J. Tatham, R. E. Thompson, and F. Roberts. Assistant-Physicians: Drs. T. H. Green, J. M. Bruce, J. Fowler, P. Kidd, C. Y. Biss, and C. T. Acland. Pathologist: Dr. P. Kidd. Dental Surgeon: Mr. C. J. Noble.

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Resident Medical Officer: Dr. H. D. Waugh. Secretary: Mr. H. Dobbin.—Three Clinical Assistants reside in the hospital for a period of six months. Pupils are admitted to the practice of the hospital: terms £3 3s. for three months; perpetual, £5 5s. The medical practice of the hospital is recognised by the University of London, the Apothecaries' Company, and the Army and Navy and Indian Medical Boards. The hospital contains 192 beds. 137 additional in the new extension building.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Established 1814. 26 beds. Consulting Physicians: Drs. Herbert Davies and Horace Dobell. Physicians: Drs. P. J. Hensley, Gilbart-Smith, and D. W. Finlay. Assistant-Physicians: Drs. W. Murrell, W. H. White, and J. J. Pringle. Consulting Surgeon: Mr. Jonathan Hutchinson. Surgeon: Mr. Pearce Gould. House-Physician: Mr. Halpin. In-patients, 576; out-patient cases, 7432. This hospital has recently been enlarged by the addition of a very complete new out-patients' department, and wards for 14 additional in-patients; and is now being still further enlarged by the addition of wards for about 60 more in-patients. The office of house-physician, tenable for six months, and for which a sum at the rate of £80 per annum is voted in lieu of board, is filled up in April and October.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—The new hospital, now in course of building, will contain £180 beds and cots. The physicians attend every Monday, Tuesday, Wednesday, and Friday, at 2 30 P.M. In- and out-patients' practice and electrical room treatment at that hour. Physicians: Drs. Ramskill, Radcliffe, Hughlings Jackson, and Buzzard. Physicians for out-patients: Drs. H. Charlton Bastian, W. R. Gowers, and Ferrier. Assistant-Physicians: Drs. Ormerod and Beevor. Surgeon: W. Adams, F.R.C.S. Resident Medical Officer and Registrar: J. Oliver.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. The hospital, founded in 1804, and considerably enlarged in 1876, now contains 100 beds for patients, which were occupied during last year by 1988 persons. The out-patients are yearly over 20,000; attendances, 121,190. Operations are performed daily from half-past ten to one o'clock, and three surgeons attend on each day: Mr. Streatfeild, Mr. Waren Tay, and Mr. Adams, on Monday and Thursday; Mr. Lawson, Mr. Couper, and Mr. Tweedy, on Tuesday and Friday; Mr. Hulke, Mr. Nettleship, and Mr. Gunn, on Wednesday and Saturday. Students are admitted to the practice. Fees for six months, £3 3s.; perpetual, £5 5s.; with admission to demonstrations and lectures, to be given during the winter. Students of the hospital are eligible for the office of house-surgeon, or may be appointed clinical assistants. The Secretary, Mr. Robert Newstead, will furnish further information, as may be desired.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, 19, King William-street, West Strand.—The hospital contains 50 beds; and the patients, who number 10,000 annually, are seen and operations performed daily at two o'clock. The following are the days of attendance of the surgeons: Mr. Power, Monday and Friday; Mr. Rouse, Tuesday and Saturday; Mr. Macnamara, Monday and Thursday; Mr. Cowell, Wednesday and Saturday. The practice of the hospital is open to students. Fees for six months, £3 3s.; perpetual, £5 5s. Students of the hospital are eligible for the post of house-surgeon. Special Demonstrations and Lectures will be given during the session. Secretary, Mr. T. Beattie-Campbell.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford-street.—Surgeons: Messrs. B. E. Brodhurst, H. A. Reeves, Charles Read, and William E. Balkwill. House-Surgeon: Mr. H. F. Baker. Secretary: Mr. Maskell. Operations on Mondays at 2 P.M. The hospital is open to all legally qualified practitioners. Pupils are admitted to witness the practice of the hospital on the following terms: Six months, £3 3s.; twelve month, £5 5s.; perpetual, £10 10s.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester-square.—Lectures are delivered in winter on Mechanical Dentistry, by Dr. J. Walker, on Wednesdays at 5 P.M. In summer, by Mr. Coleman, on Dental Surgery and Pathology, on Tuesdays and Fridays at 8 A.M., and by Mr. Arthur Underwood, on Dental Anatomy and Physiology (Human and Comparative), on Wednesdays and Saturdays, at 8 A.M. *Fees:* General fee for special lectures required by the curriculum, £15 15s.; fee for two years' hospital practice required by the curriculum, £15 15s.; total fees for lectures and practice, £31 10s. Hospital Surgeons: Messrs. Hepburn, Woodhouse, Gregson, Hutchinson, Moon, and Canton. Assistant-Surgeons: Messrs. Read, Underwood, Claude Rogers, Parkinson, Storer Bennett, and Truman. Chloroformists: Messrs. Braine, Bailey, Bird, and Mills. House-Surgeon: Mr. Buckland. Assistant House-Surgeon; Mr. King. Medical Tutor: Mr. W. Paterson. The winter session will commence October 1st. All communications to be addressed to Mr. Morton Smale, Dean.

SEAMEN'S HOSPITAL (late *Dreadnought*), Greenwich, S.E. This institution is established for the relief of seamen of all nations. Casualties are received at all hours. Apartments are provided in the house of the Principal Medical Officer for students and others who may be desirous of studying diseases incidental to tropical climates before entering the services or going abroad. There is a House-Physician and a House-Surgeon. Honorary Consulting Physicians: Dr. Robert Barnes, F.R.C.P., and Dr. Richard Quain, F.R.C.P. Visiting Physicians: Drs. John Curnow, F.R.C.P., and R. E. Carrington, M.R.C.P. Honorary Consulting Surgeon: Mr. George Busk, F.R.C.S., F.R.S., &c. Visiting Surgeon: Mr. G. Robertson Turner, F.R.C.S. Medical Officer, Well-street Dispensary: Mr. E. Muirhead Little, M.R.C.S. Principal Medical Officer: Mr. W. Johnson Smith, F.R.C.S. Secretary: Mr. W. Thomas Evans.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Queen-square, W.C., and Cromwell House, Highgate.—Physicians: Drs. Sturges, Gee, and W. B. Cheadle. Assistant-Physicians: Drs. R. J. Lee, Thomas Barlow, D. B. Lees, Montagu Lubbock, and Abercrombie. Surgeons:—Mr. Howard Marsh, Mr. Edmund Owen, Mr. J. H. Morgan, Mr. Bernard Pitts, and Mr. Arbuthnot Lane. Ophthalmic Surgeon: Mr. R. Marcus Gunn. Surgeon-Dentist: Mr. A. Cartwright. Secretary: S. Whitford. There are now 121 beds in the hospital, Great Ormond-street, and 52 beds at the country branch; total 173. In-patients last year, 943; out-patients, 14,700. The practice at the hospital has recently been thrown open gratuitously to the pupils of the different hospitals and medical schools of London on conditions which may be ascertained of the Secretary.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London, W.—Physicians to the in-patients: Drs. Hope and Chapman Grigg. This hospital has been recently enlarged and is in full operation. It receives nearly 700 patients annually, besides having a large out-patient maternity. The pupils are permitted to see the practice in both departments. Medical pupils are received at all times of the year. Pupils enjoy unusual opportunities of seeing obstetric complications and operative midwifery, on account of the very large number of primiparous cases—upwards of three-fourths of the total admissions. Clinical instruction is given on the more important cases that present themselves in both departments. Certificates of attendance at this hospital are received by all universities, colleges, and licensing bodies; and a diploma is granted in midwifery. Monthly nurses and midwives are received for training.

For further particulars, application should be made to the Secretary, at the hospital.

THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road.—Instituted 1816. Consulting Physicians: Dr. Wilks, Dr. John Williams. Consulting Surgeons: Mr. J. Cooper Forster, Mr. Edwin Canton. Physicians: Drs. W. A. Duncan, W. B. Haddon, W. Park, and G. Gulliver. Surgeon: Mr. H. C. Jacobson. Assistant-Surgeon: Mr. E. Overman Day. Surgeon Dentist: Mr. W. Whitehouse. Resident Medical Officer: Dr. Sunderland. Secretary: Mr. R. G. Kestin. Advanced students in medicine, and such practitioners as may desire it, are permitted to attend the practice of this hospital gratis. If a certificate signifying such attendance be required, the sum of £5 5s. must be paid to the physicians and surgeons in ordinary conjointly.

HOSPITAL FOR WOMEN, Soho-square, W.—Physicians: Drs. Protheroe Smith, Heywood Smith, C. H. Carter, Richard T. Smith. Assistant-Physicians: Dr. E. Holland, Mr. J. A. Mansell Moullin, Dr. Bedford Fenwick, Dr. James Oliver. Surgeon: Mr. H. A. Reeves. Assistant-Surgeon: Mr. S. Osborn. Registrar: Dr. Bedford Fenwick. Anæsthetist: Dr. Dudley Buxton. Pathologist: Dr. James Oliver.

Clinical Department.—Qualified medical men, students of three years' standing, are appointed for terms of three months, to act as assistants to the Physicians and Surgeons of the in- and out-patients' departments. Thorough practical

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instruction in Gynæcology can be thus obtained. The in-patients in 1883 numbered 573, the out-patients 4980. Two valuable prizes are offered annually for competition. Clinical lectures are given on alternate Thursday afternoons throughout the winter session. Fee for a three months' course three guineas. Any further information can be obtained by letter addressed to the Registrar at the Hospital.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W., and Churchfields, Margate.—The Hospital contains 60 beds and 12 at the home at Margate; and has a large out-patient department (over 500 weekly). Physicians: Dr. Julian Evans and Dr. Ridge Jones. Physicians to the out-patients: Drs. Albert Venn, T. Colcott Fox, F. D. Drewitt, and Henry Philpot. Surgeon: Mr. Cowell. Surgeons to the out-patients: Messrs Churchill and Walter Pye. Dental Surgeon: Mr. Francis Fox. House-Surgeon: Henry Blatherwick. Registrar: John A. Shaw. Secretary: Captain W. C. Blount, R.N. Out-patients are seen daily as under:—Medical cases: Daily, except Saturday and Sunday, at 9 A.M.; also on Mondays and Thursdays at 1.30. Surgical cases: Daily, except Monday and Thursday, at 10 A.M. Dental cases: Saturdays at 9 A.M.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Consulting Physicians: Dr. Robert Barnes and Sir Andrew Clark, Bart., M.D. Consulting Surgeon: Mr. Buxton Shillitoe. Consulting Ophthalmic Surgeon: Mr. George Cowell. Physicians: Dr. Eustace Smith, and Mr. Horatio B. Donkin. Surgeons: Mr. Arthur Cæsar and Mr. H. A. Reeves. Assistant Physicians: Mr. R. W. Parker, Dr. H. Radcliffe Crocker, and Dr. G. N. Pitt. Administrator of Anæsthetics: Mr. Thomas Bird. Medical Officer: Mr. J. Scott Battams. Secretary: Mr. Ashton Warner. The hospital contains 92 beds, besides 10 beds in an infirmary for nurses and children who require isolation.

WEST LONDON HOSPITAL, Hammersmith-road, W.—By a recent enlargement this hospital has now 100 beds. In 1882 (47 beds), 678 in patients and 13,503 out-patients were treated. There are two appointments of House-Surgeon, each tenable for six months, salary £80 per annum, no board. A new one of Registrar, honorarium, £25 per annum. Also appointments for a limited number of clinical Assistants. Physicians: Drs. G. Goddard Rogers, J. C. Thorowgood, D. W. C. Hood. Physician for Diseases of Women: Dr. Alfred Wiltshire. Surgeons: Messrs. Bruce Clarke, C. B. Keetley, and F. Swinford Edwards. Surgeon for Diseases of the Eye: Mr. B. J. Vernon. Secretary: Mr. R. J. Gilbert.

A Preparatory School of Medicine has recently been opened in connexion with this hospital and a definite Course of Practical Instruction is now offered to students who wish to prepare themselves for either one of the medical schools of the metropolis. The objects now aimed at are: 1. To give in a more complete and systematic manner than has heretofore ever been attempted all the advantages of a year's pupilage at a first-class provincial infirmary or county hospital. 2. To give instruction in Natural Science. 3. To give commencing medical students an early insight into medical work, so that they may, without needless loss of time or money, be able to judge whether or not they have chosen the right profession. Instruction will be given in the following subjects:—Elementary Medicine, Elementary Surgery, Elementary Physiology and Histology, Materia Medica and Pharmacy, Osteology, Physics, Chemistry, and Botany.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Consulting Physician: Dr. W. S. Playfair. Consulting Surgeons: Mr. Prescott Hewett and Mr. W. Morrant Baker. Physicians: Drs. Fred. Willcocks, F. Taylor, N. I. C. Tirard, James Goodhart. Surgeons: Messrs. H. G. Howse, R. Clement Lucas, and C. J. Symonds. Ophthalmic Surgeon: Dr. W. A. Brailey. Dental Surgeon: Mr. Newland Pedley. House-Surgeon: Dr. W. H. C. Newnham. Hon. Secretary: Dr. I. Dobree Chepmell.

THE ALL SAINTS CHILDREN'S HOSPITAL, Margaret-street, W.—Twelve beds; chiefly for Chronic Joint Diseases. Founded by the All Saints Sisterhood. Surgeon: Mr. Noble Smith.

MR. THOMAS COOKE'S SCHOOL OF ANATOMY, PHYSIOLOGY, AND SURGERY.—This school is intended to meet the requirements of two distinct classes of students—i.e., (1) Advanced students and qualified practitioners, who may wish either to extend their knowledge of the foregoing subjects or to recall to mind what they once knew and have since forgotten; (2) beginners entering upon their medical studies by a short term of apprenticeship. For the former, rapid advance classes, complete in three months, but still thoroughly practical, are provided; and for the latter, when required, more elementary classes of six months' duration. The dissecting-room is open daily. The Physiological Laboratory is fitted up with the requisites for practical work, and every effort is made to render the teaching thoroughly practical and demonstrative. The operations of surgery are all performed on the dead body by the students. Private address: 16, Woburn-place, Russell-square.

SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—Lectures on Chemistry and Pharmacy by Professor Redwood, Ph.D., F.I.C., F.C.S., and Mr. W. R. Dunstan, F.C.S. Botany and Materia Medica by Professor Bentley, M.R.C.S. Eng., F.L.S. Practical Chemistry, Professor John Attfield, Ph.D., F.R.S., F.I.C., F.C.S., Director of the Laboratories; F. W. Short, Demonstrator; E. J. Eastes, Assistant-Demonstrator. The session commences on Wednesday, October 1st, at 9 A.M. Application for admission to the School, or for further information, may be made to the professors or their assistants in the lecture theatre or laboratories, 17, Bloomsbury-square, London, W.C.

ENGLISH PROVINCIAL HOSIPTALS AND MEDICAL SCHOOLS.

BATH ROYAL UNITED HOSPITAL.—120 beds. Honorary Consulting Physician: Dr. Coates. Physicians: Drs. Goodridge, Cole, and Fox. Surgeons: Messrs. Stockwell, Fowler, and Freeman. Assistant-Surgeons: Messrs. Green, Scott, and Ransford. Honorary Medical Officers for Out-patients: Dr. Field, and Messrs. Cowan and Craddock. Dental Surgeon: Mr. Gaine. Pathological Registrar and Curator: Mr. H. Culliford Hopkins. The hospital is recognised by the General Medical Council, and licensed for dissection. It has a good library and an excellent museum, containing a large number of interesting specimens, both in Pathology and Comparative Anatomy. A year spent at the hospital counts as one out of the four required before qualifying for practice. Fees for attending the hospital practice, six months, £5 5*s.*; twelve months, £10 10*s.* Instruction in Practical Pharmacy, £5 5*s.* The number of patients admitted during the past year was 1053; out-patients 8914.

For further particulars apply to the Registrar and Curator.

QUEEN'S COLLEGE, BIRMINGHAM.—The Sands Cox Prize, of the value of £20, is offered annually in the Medical Department. It is open to students who have completed their curriculum, and is awarded after examination in Medicine, Surgery, and Midwifery. The examination for this prize in 1885 will be held in the last week in March. Two Ingleby Scholarships will be offered annually after examination in Obstetric Medicine and Surgery, and Diseases of Women and Children. The Scholarships are open to students who have completed the first two years of their curriculum in this College. One or more Sydenham Scholarships will be offered annually, of the value of thirty guineas each. The orphan sons of former students of the Birmingham Medical School shall have priority of election. No Sydenham scholars shall be elected whose age exceeds twenty-three years on the day of election. The Scholarships shall be held for three years, subject to good behaviour. One or more Queen's Scholarships will be offered annually of the value of thirty guineas. They are held for three years, one third being paid each year, subject to good behaviour. Students of Queen's College are qualified to compete for all Scholarships, gold medals, and other prizes offered by the University of London, the Royal College of Surgeons, and the Apothecaries' Society.

THE GENERAL AND THE QUEEN'S HOSPITALS, BIRMINGHAM.—*The General Hospital.*—Consulting Physician: Dr. Fletcher. Consulting Surgeons: Mr. Crompton and Mr. Baker. Physicians: Drs. Russell, Wade, Foster, and Rickards. Surgeons: Messrs. Pemberton, Bartleet, Jolly, and Chavasse. Obstetric Officer: Dr. Malins. Assistant-Physicians: Drs. Saundby and Simon. Assistant-Surgeons: Messrs. Archer and Haslam.—*The Queen's Hospital:* Consulting Obstetric Surgeon: Mr. Berry. Consulting Surgeon: Mr. S. Gamgee. Physicians: Drs. Sawyer, Carter, and Hunt. Surgeons: Messrs. Furneaux Jordan, Wilders, Bennett May, and Lloyd. Obstetric Surgeon: Mr. John Clay. Ophthal-

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mic Surgeon: Mr. Priestley Smith. Dental Surgeon: Mr. Charles Sims. Physician for Out-patients: Dr. Suckling. Casualty Surgeons: Messrs. Hawkins and Moore.

MASON SCIENCE COLLEGE, BIRMINGHAM.—Founded 1875. Opened 1880. The session will commence on October 3rd. Instruction is given in Science and Arts, and students are prepared for the various examinations of the University of London. Full particulars may be obtained on application to the secretary.

BRISTOL SCHOOL OF MEDICINE (affiliated to University College, Bristol).—Students can complete in Bristol the entire course of study required for the Medical and Surgical Degrees of the University of London, and for the Diplomas of the Royal College of Physicians of London, the Royal College of Surgeons of England, the Apothecaries' Society of London, and the Army and Navy Boards. The lectures and instructions given at University College, Bristol, are adapted to the various Preliminary Arts Examinations above referred to, and also to the Matriculation and Preliminary Scientific Examinations of the University of London; while the Medical School, the Royal Infirmary, and the General Hospital together provide for every detail of the professional curriculum required by the University of London and the above Examining Boards. All necessary information may be obtained from the Dean of the Bristol Medical School. Further particulars regarding the Infirmary may be obtained from the Dean of the Infirmary Faculty, Dr. Spencer, and respecting the Hospital from the Dean of the Hospital Faculty, Dr. Markham Skerritt.

BRISTOL GENERAL HOSPITAL.—164 beds. Physicians; Drs. Markham Skerritt, Harrison, and Baron. Physician Accoucheur: Dr. Lawrence. Surgeons: Messrs. Lansdown, Dobson, Keall, and Pickering. Dentist: Mr. Parson. House-Surgeon: Mr. Penny. Physician's-Assistant: Mr. Rudge. Assistant House-Surgeon: Mr. Cornish. Clinical clerkship, six months, five guineas. Dresserships, six months, five guineas. Obstetric clerkship, three months, three guineas. Special clinical instruction is given in Diseases of the Skin, Eye, Ear, and Throat, also in Diseases of Women, and in Dental Surgery.

Further information may be obtained of the Secretary, at the hospital, or from Dr. Markham Skerritt, Dean of the Faculty.

BRISTOL ROYAL INFIRMARY.—250 beds. Physicians: Drs. Spencer, Shingleton Smith, Waldo, and Shaw. Surgeons: Messrs. Board, Dowson, Prichard, Cross, and Greig Smith.

Pupils are entitled to attend the practice not only of their own physician or surgeon, but also that of all the physicians or surgeons. Surgical pupils, on requiring the requisite experience, are permitted to dress all the out-patients, and also to reside in the house in weekly rotation, where they are in charge of all the casualties under the supervision of the house-surgeon. A Pathological Clerk, who performs all the post-mortem examinations, is appointed for three months from among the senior students. Physician for the out-patients, Dr. Prowse; House-Physician, Dr. Fenton Evans; House-Surgeon, Mr. J. Paul Bush; Assistant Resident Officer and Pathologist, Mr. John Dacre. In-patients, last year, 3184; out-patients, 25,696; total, 28,880.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.—Clinical Lectures in Medicine and Surgery in connexion with the Cambridge Medical School are delivered at this hospital twice a week during the academical year; and practical instruction in Medicine and Surgery, in the wards and out-patient rooms, is given by the physicians and surgeons daily, during the vacations as well as term time. Instruction is also given in all the special modes of medical and surgical investigation. Clinical clerks and dressers are selected from students according to merit, and without payment.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne.—*Scholarships, &c.*—Four University of Durham Scholarships, of the value of £100 each, awarded one every year, for proficiency in Arts to full students in their first year only. The Dickinson Scholarship, value £15 annually, with a gold medal, for Medicine, Surgery, Midwifery, and Pathology. The Tulloch Scholarship, value £20 annually, for Anatomy, Physiology, and Chemistry. The Charlton Scholarship, value £35 annually, for Medicine. The Gibb Scholarship, value £25 annually, for Pathology. The Goyder Memorial Scholarship, value about £15, awarded for Clinical Medicine and Clinical Surgery in the Infirmary. At the end of each session a Silver Medal and Certificates of Honour are awarded in each of the regular classes. An Assistant Curator of the Museum is annually appointed from among the senior students, and receives £12 as an honorarium. Four Assistant Demonstrators of Anatomy (each receiving an honorarium of £5), Assistant Physiologists, Pathological Assistants, and Assistants to the Dental Surgeon are also elected. Four times in the year, two Resident Medical Assistants, two Resident Surgical Assistants, three Non-resident Clinical Clerks, and sixteen Non-resident Dressers (eight for the In-patient and eight for the Out-patient Department), are appointed for three months. The Medical and Surgical Assistants are provided with apartments and board in the Infirmary, on payment of five guineas for three months.

GENERAL KENT AND CANTERBURY HOSPITAL.—Open for the reception of patients April 26th, 1793. 47,300 in-patients and 83,643 out-patients have been admitted since the hospital was open. The hospital contains 102 beds. Pupils of the staff are admitted to the practice of the hospital, and have the use of the library of the East Kent and Canterbury Medical Society, for £7 7*s*. Operation day, Thursday, 11 A.M. Consulting Physician: Dr. Alfred Lochee. Physician: Dr. Henry Alex. Gogarthy. Consulting Surgeon: Mr. James Reid. Surgeons: Messrs. Charles, Holttum, Frank Wacher, T. Whitehead Reid, and John Greasley. Dentist: Mr. Martin L. Ball. House-Surgeon: Mr. F. E. Hubbard. Assistant House-Surgeon and Dispenser: Mr. A. J. Griffith. Secretary: Mr. Charles H. Read. Over one thousand dental cases are attended in a year.

LEEDS GENERAL INFIRMARY AND MEDICAL DEPARTMENT OF THE YORKSHIRE COLLEGE.—The Leeds General Infirmary has accommodation for 320 in-patients, surgical and medical, and during the last year 3754 in-patients and 20,971 out-patients were treated; these numbers show a remarkable increase, if compared with statistics of ten years ago, when only 11,500 out-patients were seen. An idea of the extent of operative work may be gleaned from the fact of 612 major operations and 439 ophthalmic operations having been performed in 1883; during the same period ether was administered 2000 times. In consequence of the increase of work, two honorary Assistant-Surgeons were appointed last year, and two honorary Assistant-Physicians this year, to take charge of and to teach in the out-patient department. Clinical teaching is done daily in the wards, and Clinical Lectures are given in the operating-room. There are Medical, Surgical, Ophthalmic, Aural, and Electrical Departments, in each of which special instruction is imparted to students. The Public Dispensary, the Fever Hospital, and the West Riding Lunatic Asylum are other medical institutions which are made use of by the Leeds students.

The Leeds Medical School has undergone a complete revolution this year by its incorporation with the Yorkshire College, which is expected to become affiliated with the Victoria University almost immediately, when its students will be able to obtain a university degree in their ordinary curriculum. The subject of Physiology will in future be taught by a Professor, who will devote the whole of his time to the work of his Chair, as will also be the case with a paid Demonstrator of Anatomy, who will be assisted by Honorary Demonstrators. All the other courses required by examining boards are given by Professors and Lecturers. The Museums and Library offer special advantages. Several valuable prizes are given at the end of each session. A House-Physician and a House-Surgeon are elected from time to time; there are also five resident assistant medical officers, who continue in office one year, and are chosen from the senior students of the school.

UNIVERSITY COLLEGE, LIVERPOOL.—Three house-surgeons and two house-physicians are elected every six months from the pupils of the school who have obtained a qualification. Nine clinical dressers and nine clerks are elected quarterly, and post-mortem clerks for six weeks. Pupils of the infirmary are admitted to learn pharmacy in the dispensing department for six months. Three Scholarships of £21, held for two years, and one of £16. The hospital contains 300 beds, including 40 beds for the treat-

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ment of diseases of women. The Lock Hospital adjoining contains 60 beds.

LIVERPOOL NORTHERN HOSPITAL.—142 beds. There is a special ward for the treatment of children. Clinical lectures are delivered by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all students without additional fee.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Physicians: Drs. Cameron, Carter, and Williams. Surgeons: Messrs. Hamilton, Little, and Paul. Senior House-Surgeon: Mr. A. H. Gordon. Junior House-Surgeons: Mr. F. Knight and Mr. J. R. L. Dixon. 200 beds. Clinical Lectures are given by the physicians and surgeons during the winter and summer sessions. Clinical clerkships and dresserships open to all students. Special wards for accidents and diseases of children.

NORFOLK AND NORWICH HOSPITAL.—150 beds. One year's attendance recognised by examining boards. Fees: For the physicians' practice, five guineas for six months; ten guineas, perpetual. For the surgeons' practice, including dresserships, £10 for three months; £15 for six months; £20 for one year; £30 for two years; and £40 perpetual. Pupils resident and non-resident. Physicians: Dr. Eade, Dr. Bateman, and Dr. Taylor. Surgeons: Mr. Cadge, Mr. Crosse, and Mr. Williams. Assistant-Surgeons: Dr. Beverley and Mr. Robinson. House-Surgeon: Mr. D. D. Day.

NORTHAMPTON GENERAL INFIRMARY.—Established 1743; rebuilt 1793. In-patients, 1693; out-patients, 8223. Beds, 144. Physicians: Dr. Buszard and Dr. Jones. Surgeons: Messrs. Kirby Smith and G. H. Percival. House-Surgeon: Mr. J. Oswald Lane. Assistant House-Surgeon: Mr. W. A. Winwood Smith. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given in Anatomy and Materia Medica, and Practical Pharmacy. Pupils' fee £25 per annum, or a perpetual fee of £50.

MEDICAL DEPARTMENT OF OWENS COLLEGE, VICTORIA UNIVERSITY.—This medical school is located in a large new building, which forms a part of Owens College. It is provided with a very large dissecting-room, physiological laboratory, private laboratories, and work-rooms, besides lecture-rooms, a museum, and a library. In order to give the fullest possible opportunities for teaching and investigation in the departments of Physiology, Pathology, and Materia Medica, a great extension of the school buildings has been made. This addition is now completed, and will be opened for regular work at the beginning of the winter session. The departments of Anatomy, Physiology, Chemistry, and Zoology are taught by professors who devote the whole of their time to the duties of their respective chairs. The more strictly practical departments of medical study are taught partly in the Medical School and partly in the Royal Infirmary, to which are attached a fever hospital, a lunatic asylum, and a convalescent home. Medical and surgical clinical classes are conducted in the infirmary by the professors of medicine and surgery, and separate instruction is afforded in the elements of medical and surgical physical diagnosis, in obstetric medicine, ophthalmic surgery, and pathological anatomy by the different members of the staff of the medical school and infirmary. The following scholarships and prizes are open to students of the medical school:—1. A Dauntesey Scholarship of the value of about £100 is offered annually for competition at the beginning of October to persons who have not been students in any medical school in the United Kingdom, and whose age does not then exceed twenty-five years. The subjects of examination are—(*a*) General and Comparative Anatomy; (*b*) Physiological Botany; (*c*) Chemistry; (*d*) Mathematics or Latin. 2. A Scholarship and Prizes are awarded at the end of each academic year to students of the first, second, and third year. 3. A Platt Physiological Scholarship of £50 a year for two years is offered annually to the student who, having studied for one entire session in the physiological laboratory of Owens College, has prosecuted the best original investigation in Physiology, and has passed a satisfactory examination in Physiology. 4. Two Platt Exhibitions of the value of £15 each, to be competed for by first and second year's students in the class of Physiology. 5. A Dumville Surgical Prize of £20 is offered annually for proficiency in Clinical Surgery. 6. Medical and Surgical Clinical Prizes, each of the value of six guineas, are open to competition each year for the best reports (with comments) of cases which have occurred in the wards of the infirmary.

MANCHESTER ROYAL INFIRMARY.—Consulting Physicians: Drs. R. F. Ainsworth, Frank Renaud, Henry Browne, Wm. Roberts. Consulting Surgeons: Mr. George Bowring and Mr. Lund. Physicians: Drs. Henry Simpson, John E. Morgan, D. J. Leech, J. Dreschfeld. Assistant-Physicians: Drs. James Ross and Graham Steell. Obstetric Physician: Dr. John Thorburn. Surgeons: Messrs. F. A. Heath, Walter Whitehead, Thomas Jones, James Hardie. Assistant-Surgeons: Messrs. Fred. A. Southam and G. A. Wright. Ophthalmic Surgeon: Dr. D. Little. Dental Surgeon: Mr. G. W. Smith. Resident Medical Officer: Dr. David Grant. Resident Surgical Officer: Mr. Bilton Pollard. Medical and Surgical Registrar: Mr. A. H. Young. Pathological Registrar: Dr. Robert Maguire. Assistant Medical Officers: Drs. S. Moritz and A. T. Wilkinson. General Superintendent and Secretary, Mr. W. L. Saunder.

MANCHESTER GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury and Gartside-street.—The hospital contains 140 beds, including twenty-eight for scarlet fever. The medical staff visit the hospital daily at 10 A.M. Special classes are held for clinical instruction on Saturday afternoons during the winter months. Out-patients are seen daily at 9 A.M. Physicians: Drs. Ashby and Hutton. Surgeon: Mr. G. A. Wright.

SHEFFIELD SCHOOL OF MEDICINE.—The Infirmary contains 180 beds, a Museum of Pathology, Library, and Post-mortem Theatre, with microscopes and all the appliances for clinical research. Perpetual fee for attendance on all the lectures required by the Royal College of Surgeons and the Apothecaries' Hall, £47. A tutor's fee of £2 2*s.* is required from students entering for Anatomy and Physiology.

JESSOP HOSPITAL FOR WOMEN, Gell-street, Sheffield.—Medical Officers: Dr. Keeling, Mr. F. Woolhouse, Mr. R. Favell, and Mr. A. H. Laver. The hospital is devoted to diseases peculiar to women. There is also an obstetric department attached to the hospital for the admission of a small number of cases. A staff of midwives connected with the hospital attend lying-in women at their own homes, and in case of need are assisted by the members of the medical staff of the hospital. Out-patients are attended daily at the hospital. Students can attend the practice of the hospital, and be supplied with cases of midwifery. Secretary, H. B. Warner, Hallamshire-chambers, Church-street.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—The New Infirmary, opened in 1869, is built on the pavilion plan, has accommodation for nearly 220 patients, including detached fever wards, children's wards, and special ovarian wards. In-patients last year, 1754; out-patients, 8468. The attendance of pupils at this infirmary is duly recognised by all the Examining Boards; and there are unusual facilities for acquiring a practical knowledge of the profession. Physicians and Medical Officers: Dr. J. T. Arlidge, Dr. C. Orton, Messrs. Ashwell and J. G. West. Surgeons: Messrs. W. H. Folker, J. Alcock, and W. D. Spanton. Secretary: Mr. R. Hordley, Hartshill, Stoke-on-Trent, from whom particulars as to fees &c. may be obtained.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Founded 1848. Beds, 210. A preparatory school of Medicine and Surgery. The pupils have the advantage of seeing the whole of the practice of the physicians and surgeons, and are trained in clinical work by the medical and surgical staff. The attendance of pupils at this hospital is recognised by all the examining boards. Operations are performed every Thursday at eleven o'clock, and practitioners are welcomed.

YORK COUNTY HOSPITAL.—Established 1740; rebuilt 1851. 110 beds. In-patients, 857; out-patients, 5821. Physicians: Drs. W. Matterson and L. J. Hobson. Consulting Surgeon: Mr. W. D. Husband. Surgeons: Messrs. R. Hewetson, W. H. Jalland, and F. Shann. Dental Surgeon: Mr. W. Glaisby. House-Surgeon: Mr. Arthur Jefferson. Assistant House-Surgeon: Mr. Thomas Birt. Secretary: Mr. R. Holtby.

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SCOTTISH HOSPITALS AND MEDICAL SCHOOLS.

SCHOOL OF MEDICINE, EDINBURGH.—The lectures qualify for the University of Edinburgh and the other universities, the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin, and the other medical and public boards.

Fees.—For a first course of lectures, £3 5*s.*; for a second, £2 4*s.*; perpetual, £5 5*s.* To those who have already attended a first course in Edinburgh the perpetual fee is £2 4*s.* Practical Anatomy (six months' course), £3 3*s.*; course of demonstrations, £2 2*s.*; perpetual, £4 4*s.* Practical Anatomy, with course of demonstrations, £4 4*s.* Practical Chemistry, £3 3*s.* Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months. Practical Materia Medica, including Practical Pharmacy and Diseases of the Ear, Diseases of Children, Diseases of the Skin, each £2 2*s.* Vaccination, £1 1*s.* For summer courses of Clinical Surgery and Clinical Medicine, each £2 4*s.*; Practical Anatomy, including Anatomical Demonstrations, Operative Surgery, and Practical Medicine, and Medical Diagnosis, each £2 2*s.*; Insanity, £1 1*s.* The minimum cost of the education in this School of Medicine for the double qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons, including the fees for the joint examination, is £95; whilst the minimum cost for the single qualification of either Physician or Surgeon, including fee for examination, is £85.

EDINBURGH SCHOOL OF MEDICINE AND PHARMACY, Marshall-street, Nicolson-square. — The classes of this school will be resumed for the winter session on Oct. 28th. Chemistry, Midwifery, Surgery, and Medicine. From the Dispensary attached to this institution, Pharmacy, Practical and Theoretical, Practical Midwifery. Out-door Practice, and Surgical Diagnosis. Attendance at this institution qualifies for the University of Edinburgh and all other Licensing Boards. Tutorial classes in all the branches of the medical curriculum. Preliminary Medical Classes, 11 A.M. to 4 P.M., and in the evening; Theoretical Chemistry, 10 A.M. to 11 A.M.; Theoretical Midwifery, Dr. C. Bell, 11 A.M. to 12 A.M.; Theoretical Pharmacy, R. Urquhart, 3 P.M to 4 P.M.; Class for Surgical Diagnosis, 3 P.M. to 4 P.M.; Practical Midwifery and Out-door Practice at the Dispensary, 2 P.M. to 4 P.M., under the supervision of Drs. Bell, Troup, Maciver, Baviston, and Stewart; Practical Pharmacy, 2 to 4 and 7 to 8 P.M.; Practical and Analytical Chemistry, 9 A.M. to 5 P.M.; Class for Practical Medicine, 2 P.M. to 3 P.M. The Pharmaceutical Section of this School will open on Oct. 1st. Particulars of R. Urquhart, Secretary.

ROYAL INFIRMARY, EDINBURGH.—Beds are set apart for clinical instruction by the professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary physicians and surgeons. Special instruction is given in the medical department on Diseases of Women, Physical Diagnosis, &c., and in the surgical department on Diseases of the Eye, the Ear, and Larynx. Separate wards are devoted to fever, venereal diseases, diseases of women, diseases of the eye, also to cases of incidental dilirium or insanity. Post-mortem examinations are conducted in the anatomical theatre by the pathologist, who also gives practical instruction in Pathological Anatomy and Histology. The fees for hospital attendance are as follows—viz.: Perpetual ticket, in one payment, £12; annual ticket, £6 6*s.*; six months, £4 4*s.*; three months, £2 2*s.*; monthly, £1 1*s.*. Separate payments amounting to £12 12*s.* entitle the student to a perpetual ticket. No fees are paid for any medical or surgical appointment. The appointments are as follows:—1. Resident physicians and surgeons are appointed, and live in the house free of charge. The appointment is for six months, but may be renewed at the end of that period by special recommendation. 2. Special non-resident clerks are appointed for such periods and under such conditions as may be deemed expedient. 3. Each surgeon appoints his own dressers, the appointment being for six months. 4. Assistants in the Pathological Department are appointed by the pathologist.

ANDERSON'S COLLEGE, GLASGOW.—The following courses are given, which qualify for all the licensing boards: In winter, Anatomy, Chemistry, Physiology, Surgery, Medicine, Materia Medica, Mechanical Dentistry, &c. In summer, Midwifery, Medical Jurisprudence, Botany, Hygiene, Dental Anatomy, Surgery, &c. The Chemical Laboratory is open daily from 10 to 5. Students of the College are admitted to the practice of the Ophthalmic Institution on payment of a matriculation fee of 5*s.*

Fees.—Each course of lectures (except Anatomy), first session, £2 2*s.*; second session, £1 1*s.*; afterwards free. Anatomy (including Dissecting-room), first session, £4 4*s.*; second session, £4 4*s.*; third session and perpetual, £1 1*s.*; summer (including Practical Anatomy), £1 11*s.* 6*d.*; Practical Anatomy only, £1 1*s.*; Osteology, £1 1*s.*; Dental courses, each £2 2*s.*; Fee for two years' curriculum at Dental Hospital, £10 10*s.* Students who have attended classes at other schools will be admitted to such classes as they may have attended elsewhere at reduced fees. Fees for all the Lectures and Hospital Practice required of candidates for the diplomas of Physician and Surgeon, £48.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—The winter session will open on October 30th. Courses of lectures are given on all the subjects required by the licensing bodies for qualification, and lectures and demonstrations are also given on Practical Physiology, Operative Surgery, Aural Surgery, Dental Surgery, and Diseases of the Eye. During summer, lectures on Insanity are given by Dr. A. Robertson, in the City Asylum under his charge.

Class Fees.—For each course, first session, £2 2*s.*; second session, and perpetual, £1 1*s.* Anatomy: First winter session, £4 4*s.*; summer session, £1 11*s.* 6*d.*; second winter session, £4 4*s.*; afterwards the fee for lectures and practical anatomy is £1 11*s.* 6*d.* per session. Lectures on Diseases of the Ear, £1 1*s.*; with clinique to those not students of the hospital, £2 2*s.* Dental Dispensary free to students of the hospital; to others, £5; first year, perpetual, £10. Lectures on the Eye, £1 1*s.*

GLASGOW ROYAL INFIRMARY.—Number of beds, 532. In addition to the ordinary medical and surgical wards, there are separate wards for the treatment of Venereal Diseases and the Diseases of Women, whilst Diseases of the Eye, Ear, Throat, and Teeth are specially treated at the Dispensary. Courses of clinical medicine and surgery are given by the physicians and surgeons; instruction in pathological anatomy and histology is given by the pathologist.

Appointments.—There are five physicians' and five surgeons' assistants. These appointments are free, and can be held for six months; they are open to students who have passed all their examinations except the last, or to gentlemen who have a qualification in medicine or surgery. Clinical assistants, dressers, dispensary clerks, and pathological assistants are selected from the students without additional fee.

Fees for Hospital Practice and Clinical Lectures.—First year, £10 10*s.*; second year, £10 10*s.*; afterwards free. For six months, £6 6*s.*; three months, £4 4*s.* Vaccination certicates, £1 1*s.*

GLASGOW HOSPITAL AND DISPENSARY FOR THE DISEASES OF THE EAR, 239 and 241, Buchanan-street.—Senior Consulting Physician: Dr. R. Scott Orr. Senior Consulting Surgeon: Dr. James Morton. Consulting Dental Surgeon: Dr. J. Cowan Woodburn. Pathologist: Dr. Joseph Coats. Physicians: Dr. A. K. Irvine, Dr. A. L. Kelly, Dr. J. Gardner. Aural Surgeon: Dr. Thomas Barr. Assistant Aural Surgeon: Dr. James Erskine. Number of cases treated annually, 3600.

The hospital, which contains twelve beds for in-door patients, is always open for urgent cases. Hours of surgeons' visits, 2 P.M. daily; clinical teaching daily. Out-door patients are seen on Mondays, Tuesdays, Thursdays, and Fridays, at 2 P.M., by Dr. Barr, and assistant; and operations and special demonstrations to students and practitioners on Thursdays, from 3 to 4 P.M. Adam Sutherland, 75, West Nile-street, Secretary.

GLASGOW WESTERN MEDICAL SCHOOL, University-avenue, Hillhead.—The winter session will open on October 30th. The school is situated close to the Western Infirmary, where students obtain their Hospital Practice and Clinical Lectures. The class-rooms have been newly arranged and enlarged. The attention of students is directed to the unusual facilities presented for the study of practical anatomy and operative surgery, the supply of subjects being practically unlimited. The dissecting-rooms are open for work from the beginning of October till the end of July.

The lectures qualify for the University of Glasgow in accordance with the regulations, the Faculty of Physicians and Surgeons, Glasgow, and the other corporations.

Class Fees.—For each course of lectures, first session,

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£2 2s.; second session, £1 1s. Students who have attended a first course elsewhere pay £1 1s. Anatomy, including practical anatomy, £4 4s. Summer session, £1 11s. 6d.

GLASGOW WESTERN INFIRMARY.—This hospital adjoins the University of Glasgow. Number of beds upwards of 400. Special wards are set apart for Diseases of Women and for Cutaneous Affections. In the out-patient department there are special cliniques for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students may attend whichever they select at the beginning of the session. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. All the courses of clinical instruction are recognised by the University of Glasgow and the other boards in the kingdom. In the Pathological Department a systematic course is given in the winter and a practical course in the summer; these are likewise recognised by the University for graduation. Eight resident assistants are appointed annually, without fee, from those who have completed their course. The fee for the hospital practice, including the various courses of clinical instruction, is twenty guineas in one payment, or in two equal instalments for the first and second years; for six months, seven guineas; and for three months, four guineas.

GLASGOW HOSPITAL FOR SICK CHILDREN, situated at Garnet-hill, was opened last year, and is now available to Medical Students for Clinical instruction in the diseases peculiar to childhood. The hospital includes 57 beds for non-infectious cases only, and is visited by the following physicians and surgeons—viz.: Drs. Leishman, Finlayson, Cameron, and Macewen. It is expected that an out-patient department will be opened in the course of the year.

GLASGOW OPHTHALMIC INSTITUTION, 126, West Regent-street.—40 beds. Clinical and systematic course of lectures for students during the winter and summer sessions. Acting Surgeon: Dr. Wolfe.

ABERDEEN ROYAL INFIRMARY.—Contains about 250 beds. Consulting Physician: Dr. A. Harvey. Physicians: Drs. J. W. F. Smith-Shand, R. Beveridge, and Angus Fraser. Surgeons: Messrs. A. Ogston, J. O. Will, R. J. Garden, and John Hall. Ophthalmic Surgeon: Dr. Alex. D. Davidson. Dental Surgeon: Dr. Williamson. Resident Superintendent and Apothecary: Dr. T. Collins. Treasurer and Secretary: Mr. W. Carnie.

THE ABERDEEN ROYAL LUNATIC ASYLUM contains about 540 beds. Physician: Dr. Robert Jamieson. Clinical instruction is given to students during three months in summer.

IRISH HOSPITALS AND MEDICAL SCHOOLS.

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Belfast.—Eight Junior Scholarships have been founded in the Faculty of Medicine, of the annual value of £25 each. Two are tenable by Matriculated Students commencing the first, second, third, and fourth years of their course respectively. The Examinations for Junior Scholarships of the second and third years in the Faculty of Medicine take place at the commencement of the second and third years of their medical course. Matriculated Students in Medicine intending to compete for Medical Scholarships of the second year must be of not more than one year's standing as Students of Medicine, and must have attended in some of the Queen's Colleges, or in a University capable of granting degrees in Medicine, two at least of the following courses—viz.: Chemistry, Botany and Zoology, Anatomy and Physiology, Materia Medica and Pharmacy, Practical Chemistry, Practical Anatomy. Matriculated Students in Medicine intending to compete for Medical Scholarships of the third year must be of two years' standing, and not more, and must have attended in some of the Queen's Colleges or in a University capable of granting degrees in Medicine, four at least of the following courses—viz.: Chemistry, Botany and Zoology, Anatomy and Physiology, Materia Medica and Pharmacy, Practical Chemistry, Practical Anatomy. Matriculated Students in Medicine intending to compete for Medical Scholarships of the fourth year must be of three years' standing, and not more, and must, in addition to the qualifications prescribed above, have attended, in their third year, two at least of the following courses—viz.: Theory and Practice of Medicine, Theory and Practice of Surgery, Midwifery and Diseases of Women and Children.

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Cork.—The building is provided with a very large, well-ventilated dissecting-room, with physiological and toxicological laboratories, materia medica, anatomical and pathological museums, as well as a room for surgical and obstetrical instruments and appliances. There are well-appointed physical and chemical laboratories, and a large natural history museum in the adjoining building; and part of the College ground is laid out as a botanical garden. The plant houses are now completed and well filled with plants, and are open to the students in the class of Botany.

Fees.—For Practical Anatomy, £3, for Practical Chemistry, £3, each course; for Anatomy and Physiology, £3 first course, and £2 for each subsequent course. Other medical classes, £2 first course, and £1 each subsequent course. Eight scholarships (value about £30 each), as well as several exhibitions and class prizes, are awarded every year.

SIR PATRICK DUN'S HOSPITAL, Dublin (in connexion with the School of Physic).—Consulting Surgeon: Dr. William Colles. Physicians: Drs. John Mallet Purser, J. Magee Finny, and J. R. Kirkpatrick (Midwifery Physician). Surgeons: Drs. Charles Ball, Edward H. Bennett, and Thomas Evelyn Little.

The payment of £3 3s. to the hospital entitles any student to attend the clinic of the hospital for twelve months, and to attend the lectures delivered by Dr. R. G. Butcher, University Lecturer in Operative Surgery. Students who have taken out the degrees of Bachelor in Medicine and Master in Surgery in Trinity College are entitled to attend the hospital as perpetual free pupils.

Clinical Lectures are delivered in the hospital theatre at ten o'clock on Mondays and Tuesdays. In addition to the hospital fee, the payment of a fee of £9 9s. is required for the privilege of attending these lectures. Total fees for hospital and lectures for twelve months, £12 12s.

Sir Patrick Dun's Maternity.—Total fees for college students, £3 3s. Total fees for externs, £6 6s.

THE ADELAIDE MEDICAL AND SURGICAL HOSPITALS, Peter-street, Dublin.—Fee for nine months' Hospital attendance, £12 12s.; six months', £8 8s. Summer, three months', £5 5s.

Three resident pupils are selected half-yearly. At the termination of the session, prizes in Clinical Medicine and Surgery, in Obstetric Medicine, and in Ophthalmic Surgery will be awarded.

Hudson Scholarship.—In addition to the junior prizes, the Hudson Scholarship, £30 and a gold medal, as well as a prize of £10, together with a silver medal, will be awarded at the end of the session for proficiency in Clinical Medicine and Medical Pathology, Clinical Surgery and Surgical Pathology, Pathological Histology, Surgical Appliances, including instruments and bandaging, Ophthalmology, and Gynæcology.

The certificates of attendance are recognised by all the Universities and Licensing Bodies in the United Kingdom.

LEDWICH SCHOOL OF SURGERY AND MEDICINE, Peter-street, Dublin (formerly original School of Anatomy, Medicine, and Surgery).—There are endowments in favour of students, subject to conditions prescribed by the founder, in the following departments:—Two in Anatomy and Physiology; two in Minute Anatomy; two in Practical Anatomy; one in Surgery. Certificates of attendance on these lectures are received by the various examining boards; by the Apothecaries' Halls of Dublin and London; by the King and Queen's College of Physicians in Ireland; by the Royal Colleges of Physicians, London and Edinburgh; by the Royal University, the Universities of Dublin, London, and Glasgow; by the Glasgow Faculty of Physicians and Surgeons; and by the Queen's University in Ireland. The Senate of the Royal University having recognised the lectures of this school, arrangements have been made to educate students for its Medical and Surgical Degrees in accordance with its requirements. This school is in a central situation, and is replete with every convenience for study and successful instruction. By its teachers it is connected with nine hospitals, four of which are Medical and Surgical hospitals, one for Fever, one for Midwifery and Diseases of Women and Children, one for Diseases of the Eye and Ear, &c.

Returns for the session 1884-85 have not been received from this school.

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CARMICHAEL COLLEGE, Aungier-street, Dublin.—The following scholarships, &c, are awarded to students entering for an *annus medicus* for the current year:—The Carmichael Scholarships, value £15 and £10; the Mayne Scholarship, value £15; Class Prizes, £10, £7, £5, £4, £3, and £2; also twelve Lecture Prizes, value £3 each.

DR. STEEVENS'S HOSPITAL.—This hospital, containing beds for 250 patients, is situated close to the Kingsbridge Terminus of the Great Southern and Western Railway, occupying a position in the centre of one of the busiest manufacturing districts of the city, otherwise unprovided with medical institutions. Immediately adjoining is St. Patrick's (Swift's) Asylum for the Insane. The hospital is easily accessible by two lines of tramways, and owing to its position affords exceptional advantages for clinical instruction. There is a ward entirely devoted to Syphilitic Disease, a detached building for Fever cases, and an extensive Out-patient Department, with separate Clinics for Diseases of the Skin, Throat, Teeth, and those peculiar to Women. The hospital is visited daily, at half past eight A.M., by the resident surgeon, and at nine A.M. by the physicians and surgeons. The Surgical wards are also visited each evening. Clinical Lectures are given by the physicians and surgeons during the session. There is accommodation in the hospital for two medical and six surgical resident clinical assistants, who, in addition to their rooms and furniture, are provided with coal and gas.

Fees.—Hospital Practice: Nine months, £12 12*s.*; six months, £8 8*s.*; three months, £5 5*s.* Dressership—Winter, six months, £21; summer, do., £15 15*s.*

MATER MISERICORDIÆ HOSPITAL, Dublin.—This hospital contains 230 beds, 50 beds being specially reserved for patients suffering from fever and other contagious diseases. Two Clinical Lectures will be delivered in each week, in addition to the daily bedside instruction. A special course of lectures on Fever will be given. A certificate of attendance upon this course, to meet the requirements of the King and Queen's College of Physicians, may be obtained. A ward has been assigned for the treatment of Ophthalmic Diseases. Opportunities are afforded for the study of Diseases of Women in the ward under the care of the Obstetric Physician, and at the dispensary held on Wednesdays and Fridays during the session. Lectures on Clinical Gynæcology will be delivered on Wednesdays. "Leonard Prizes" (Clinical): Prizes of the value of thirty pounds will be given at the end of the winter session, in accordance with the directions contained in the will of the late Mark Leonard, Esq. Certificates of attendance upon this hospital are recognised by the Royal University and all the Licensing Bodies in the United Kingdom. *Fees:* Nine months, £12 12*s.*; six winter months, £8 8*s.*; three summer months, £5 5*s.*

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS, North Brunswick-street, Dublin.

These hospitals contain 312 beds—110 for Surgical cases, 82 for Medical cases, and 120 for Fever and other epidemic diseases.

There will be a distinct course of Lectures and Clinical Instruction in Fevers. Operations are performed on Monday and Wednesday mornings, except in cases of emergency. A course of Practical Instruction in Ophthalmic Surgery will be given. Fee for the Certificate, three guineas.

A Resident Surgeon is appointed every alternate year, receives a salary, and holds office for two years. Eight Resident Clinical Clerks are appointed each half-year, and provided with furnished apartments, fuel, &c., &c. These appointments are open not only to advanced students, as formerly, but also to those who are qualified in Medicine or Surgery. Dressers are selected from among the best qualified of the pupils, without the payment of additional fee.

COOMBE LYING-IN HOSPITAL, AND GUINNESS DISPENSARY FOR THE TREATMENT OF DISEASES PECULIAR TO WOMEN.—The hospital contains 65 beds, and has also a large extern maternity attached. Nearly 3000 confinements are attended annually by the pupils of the hospital. A special dispensary for diseases peculiar to women is held daily, and clinical instruction given. The certificates of the hospital are recognised by all licensing bodies, and its diploma is accepted by the Local Government Board, &c. Further particulars can be learned from the registrar.

ROTUNDA HOSPITAL, Rutland-square, Dublin.—This institution consists of two distinct hospitals—namely, the Lying-in Hospital and the Auxiliary Hospital, the latter for the reception of patients suffering from uterine and ovarian diseases. There is also a large extern maternity in connexion with the hospital, and a dispensary for diseases peculiar to women, which is open daily. Clinical instruction is given daily (Saturdays excepted), in midwifery and the diseases peculiar to women, special attention being directed to the application of antiseptics in midwifery, and lectures on these subjects are delivered regularly throughout the session. Accommodation is provided for a limited number of intern pupils.

MEDICAL TEACHERS.

DR. ALTSCHUL has made Stuttering, Lisping, Falsetto, recent or of long standing, due to Nervousness, &c., irrespective of age or sex (without any mechanical appliances), his special, life-long study. The voice developed and strengthened.—9, Old Bond-street, W.; and at Brighton and Hastings.

Mr. J. BECKTON, C.M., prepares candidates for the London Matriculation, Medical and Law Preliminary, University, Local, and other Examinations. Boarders received.—41, Torrington-square, W.C.

Mr. L. BRYAN, M.A. Cantab., continues for the eleventh year his most successful preparation of resident and non-resident students for Matriculation and the Medical Preliminaries. Students entering at any of the hospitals are taken as boarders and receive careful supervision, every home comfort, and assistance in their professional studies.—140, Gower-street, W.C.

Mr. H. CAMPBELL, M.B., B.S. Lond., M.R.C.S., prepares candidates for the Colleges of Physicians and Surgeons, the Hall, and other Professional Examinations.—64, Guilford-street, Russell-square, W.C.

Mr. H. CRASWELLER, B.A., prepares candidates for Medical and Law Preliminaries and Matriculation.—89, Down's-park-road, Clapton.

Mr. A. H. DAWES, 1st B.A. Lond., gives lessons privately, in class or by post, in preparation for the London Matriculation and Medical Preliminary Examinations.—Adderstone, Vardens-road, New Wandsworth (close to Clapham Junction station).

Dr. EBERLE (Thirsk, Yorks), late Principal of the Easingwold Medical College, Author of "Students' Medicine," &c. &c.—Gentlemen prepared for the Preliminary Examination in Arts of the Universities, any of the Professions and Services, also for the Primary, Pass, and Competitive Examinations. Personal and special attention directed to the assistance of Practitioners, Assistants, and others, by letter.

Mr. S. ELLIOTT, B.A. Lond., prepares for Matriculation and Degree Examinations, Law, Medical, and other Preliminaries.—Emery Hill's Hospital, Rochester-row, S.W. (near Victoria Station).

Mr. J. GIBSON, M.A., prepares candidates for the London Matriculation, and Preliminary Medical and Legal Examinations.—24, Chancery-lane, E.C.

Dr. N. HEINEMANN, F.R.G.S., F.R.Hist.Soc., prepares for the Preliminary Examinations &c.—80, Upper Gloucester-place, Portman-square, London.

Dr. CRESSWELL HEWETT prepares candidates for the M.D. Brussels, the Services, and other Professional Examinations.—5A, London-street, Norfolk-square, W.

Mr. THOMAS LYLE, M.A., F.R.Hist.S., of the London and Dublin Universities, prepares gentlemen, resident and non-resident, for the various Preliminary Arts Examinations and Matriculation at the London University.—Grove House, Shacklewell-lane, London, N.E.

Mr. J. W. SAUNDERS, A.P.S., G.S.T., prepares gentlemen for Examination in Anatomy, Physiology, Botany, Chemistry, Materia Medica, Pharmacy, &c.—6, Rochester-square (late Camden-road), N.W.

Mr. H. SERGEANT, B.A. Lond., holds special classes for London University Matriculation, the Preliminary Medical Examinations, &c.—8, High-street, Camden-town, N.W.

Mr. BUTLER SMITH assists pupils in reading up for the London Matriculation, and Legal, Medical, and Pharmaceutical Examinations.—Polytechnic, Regent-street, W.

Mr. H. WAITE prepares pupils for Matriculation, Preliminary Scientific, and the Examinations for Medical Registration of all the licensing bodies.—135, Strand, W.C.

Mr. F. A. WHITE, B.A., prepares candidates for Matriculation and Medical and Legal Preliminary Examinations.—83, Hereford-road, Bayswater, W.

Mr. MAURICE WILLIAMS prepares candidates for Examination in Theoretical and Practical Chemistry, Materia Medica, &c.—5, King-street, Finsbury-square.

Mr. J. WOODLAND, F.L.S., F.C.S., holds classes and demonstrations in Practical and Theoretical Chemistry, Chemical Physics, Materia Medica, and Pharmacy; in the Botanical classes specimens are supplied to each student, and all apparatus is found for the Practical Chemistry course. These classes are held for candidates for the Primary L.R.C.P., L.S.A., and the M.B. degree of the different Universities, at the Central School of Chemistry, 173, Marylebone-road, N.W.

To Correspondents.

WE tender our best thanks to those gentlemen who have kindly supplied us with the returns and prospectuses upon which the information given in this Students' Number of THE LANCET relative to the various medical examining bodies, hospitals, and medical schools of the United Kingdom is based.

The present number being exclusively devoted to information especially interesting to students, we are necessarily compelled to defer the publication of communications on other important subjects.

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ABSTRACT OF A

Clinical Lecture

ON A

CASE WHERE A SCIRRHOUS CARCINOMA OF THE PROSTATE WAS REMOVED.

Delivered at the Liverpool Royal Infirmary,

BY REGINALD HARRISON, F.R.C.S.,
SURGEON TO THE INFIRMARY.

GENTLEMEN,—About twelve months ago I brought under your notice two specimens of large adenomas of the prostate which had been successfully removed in the course of operations for lateral lithotomy. Both of the patients now remain perfectly well, and have shown no signs either of a recurrence of the prostatic growths or a re-formation of calculi. One of these cases was at the period referred to under my care in the infirmary, when you had the opportunity of watching what was done for the patient. I have since learnt from his medical attendant, Dr. Samuels of this city, that he has continued to enjoy good health. The other case occurred in the practice of Mr. Bickersteth, who kindly allowed me to show the tumour removed, which will be found in our museum. Four years after this operation Mr. Bickersteth knew that the patient was in the enjoyment of perfect health. The size of the tumours in these cases and the process of enucleation which was employed in their removal distinguished them, in my opinion, from the majority of instances where portions of hypertrophied prostate have been accidentally detached in the course of operations for stone, or have come away between the blades of the forceps. So important did I consider these cases, in conjunction with others that may be found scattered through surgical records, that I then ventured to draw the following conclusions:—

1. That in some cases of enlargement of the prostate attended with pressing symptoms of distress otherwise irremediable, it might be expedient to practise digital exploration of the gland, such as the operations as for lithotomy permitted. 2. That this proceeding might permit of the safe removal of the whole or a portion of the growths with such advantage to the patients as was illustrated in the cases that I brought forward. 3. That the operation of exploration, even if it did not permit of the removal of the growth, would relieve the patient's symptoms so far as micturition was concerned. Mr. Lund's important case of prostatotomy[1] furnished a good illustration of this.

In continuation of this subject I will proceed to narrate the particulars of the case I am bringing under your notice to-day; after which the patient will be introduced.

J. B——, aged sixty-four, came under my observation in August, 1882. His chief symptoms related to hæmaturia and frequency in micturition. The patient had up to nine months previously enjoyed good health. There was no history either of syphilis or tubercle. Two months ago he noticed that his left testicle became swollen. This was strapped, when the swelling passed to the right one, which was considerably enlarged on his admission to the infirmary. On exploration by the rectum the prostate was found somewhat enlarged, indurated, and nodulated. On examination with a sound some obstruction was revealed in the prostatic urethra, but neither stone nor roughness within the bladder could be detected. He passed urine every two hours or oftener both by day and night, and the urine was largely mixed with blood. Nothing like a villous structure could be detected after careful examination with the microscope of some shreds contained in the urine. The right testicle was somewhat enlarged but uniformly so. No glandular enlargement could be detected. All kinds of treatment were tried; but though matico diminished the quantity of blood in the urine, yet the extreme irritability continued, under which the patient's health was rapidly giving way. Under these circumstances I determined to explore the prostate and neck of the bladder with the finger. On October 25th I opened the membranous urethra as for the median operation for stone. On exploring the prostate I found a solid mass projecting into the urethra and occupying the neck of the bladder. This, with some little trouble and with the assistance of Mr. Rushton Parker, I succeeded in enucleating tolerably completely, though a hard cord-like band in the roof of the prostatic urethra was only imperfectly scraped away with the finger. The mass removed was about the size of the last phalanx of my thumb, and was evidently a new and rare growth. The exploration of the bladder was not as complete as I could have wished, notwithstanding the viscus was well pulled down towards my finger from above the pubes. The removal of the tumour was not attended with any serious hæmorrhage, it not being necessary to tie a vessel. The patient suffered very little from the operation. As the urine now passed entirely through the wound, the patient was able to enjoy what he had not had for many months—namely, uninterrupted sleep. On the third day after the operation the urine was clear from blood and remained so for ten days, when it again returned in a small quantity, and finally disappeared. On Dec. 1st the patient was able to leave the infirmary, the perineal wound having almost entirely healed; he had not complete control over his bladder.

On Dec. 15th he returned to the infirmary for relief, by reason of some preputial irritation which had been caused by the use of a rubber urinal. The dresser's report is as follows:—"The urine is free from blood, and all comes by the urethra.—Dec. 20th: A rubber catheter was tied in the bladder for a few hours daily.—Jan. 8th, 1883: The patient is in much the same condition, but he is able to retain his urine for about half an hour. He was measured by Mr. Reynolds, the surgical instrument maker, for a urinary truss, made after Mr. Harrison's directions, with the view of providing against the incontinence.—12th: The patient was fitted with the truss yesterday afternoon. It consists of an ordinary leather-covered truss-spring, terminating in an ivory ring, well padded, through which the penis is passed, the object being to exercise steady pressure on the urethra immediately below the arch of the pubes. It was found that this apparatus completely restrained the escape of urine and enabled the patient to get about his business with comfort. Before leaving the infirmary on Jan. 24th, it was noticed that so effectual was the truss in controlling the escape of urine, that a slight leakage through the perineal wound took place, which required some few applications of nitrate of silver. On the 19th Mr. Harrison introduced the patient at his clinical lecture for the purpose of demonstrating the use of the urinary truss and in illustration of his remarks relating to the case."

This patient lived comfortably for fourteen months after the operation. He had no recurrence of the hæmorrhage, and partially resumed his occupation as a stevedore; then the glands in his left groin began to enlarge extensively, and in two months more he died.

I am indebted to my dresser, Mr. Cooke, for the notes of this case, and to Mr. Paul for the following report of the tumour:—

"The piece of tumour hardened for microscopical examination was the size of a small filbert, and was rather less than one-half of the whole bulk of what was removed. It was softer and more fleshy in appearance than normal prostate, and was plainly to the naked eye a new growth. Microscopically, the portion examined consists of prostatic tissue, infiltrated with carcinoma, except along one margin, where the normal prostatic structure is unaltered. The growth is spreading both by direct extension along the gland tubes, and as a cellular infiltration of the stroma. The carcinoma is of the acinous variety, the general appearance resembling an ordinary scirrhus of the breast. The cells are from two to three times the size of a pus cell, and some contain more than one nucleus. Those next the basement membrane are in places elongated and more regularly arranged. The alveolar stroma is very rich in cells, and in many places shows a number of non-striated muscular fibres. The growth may be considered to have originated in the prostate, and not to have spread to it from the bladder, as it is very doubtful if an acinous variety of carcinoma ever originates in the latter."

Such, gentlemen, are the chief features, clinical and histological, of a case of more than usual interest and rarity. Though the operation which was performed may not have cured the patient, it has been the means of prolonging life, and rendering its continuation less distressing than it pre-

[1] Trans. International Medical Congress, London, 1881.

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viously was. That the growth was of a rare kind must be evident to all who have any acquaintance with the enlargements and tumours to which the prostate is liable. That the proceeding adopted was the only means of affording relief I have not the least doubt, nor was the risk incurred a great one to run. On more than one occasion I have opened from the perineum the bladders of persons suffering from malignant disease with considerable benefit. No condition can be more distressing than that of malignancy associated with difficult micturition, hæmorrhage into the bladder, and the constant catheterism that these entail. If my incision in the case brought under your notice to-day had only temporarily relieved these symptoms, the continuance of which could only have brought about a speedy termination, without permitting the removal of the growth, even then something would have been gained by it. The means successfully employed for providing against the incontinence which resulted is also worthy of your attention, as the principle might be extended to other circumstances. I have often noticed how slight a pressure applied over the urethra at the root of the penis will effectually stop micturition. The application of this principle by a truss suggested itself to me as being a likely, if not an entirely novel, means of affording the remedy that was desired.

ON THE

RHEUMATIC ORIGIN AND THE TREATMENT OF CHOREA.

BY OCTAVIUS STURGES, M.D.,
PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

THE several enumerations with reference to the incidence of rheumatism in chorea which I have communicated to THE LANCET from time to time are now brought to a close, owing to the routine of promotion among the medical staff at the Hospital for Sick Children. I wish, therefore, to make a final communication upon the subject, and to indulge in a retrospect.

Since my last communication (Nov. 10th, 1883), there have been but seventeen cases to add to the 202 already recorded. These furnish four which, upon the principle which has hitherto been pursued, may be put to the rheumatic account—viz., one that had had rheumatic fever, two that had had joint pains presumably rheumatic, and one swelling of the feet and legs not further described, but which we also assume to have been rheumatic. In none of the four did the rheumatism appear to be the immediate cause of the chorea.

The total number of cases, the product of ten years' observation, is thus brought up to 219. Of these sixteen had had rheumatic fever, twenty-five to twenty-eight pains presumably rheumatic, and twelve were without information upon the point. Let us suppose that forty-two were really rheumatic subjects, we should then have the rheumatic proportion represented by very nearly 20 per cent.—hardly more than a third of these being cases of acute rheumatism—and a statement I ventured to make some years ago upon a review of a smaller number of patients that "chorea had nothing to do with rheumatism in three-fourths of the cases," would be still borne out.[1]

But if, without stickling for precise numbers, we assume that from 20 to 25 per cent. fairly represents the rheumatic proportion among choreic children, we have still to consider how that proportion compares with what I have called the *normal* incidence of rheumatism. For it is not (as was urged in my last paper), the percentage of rheumatism taken absolutely which represents the chorea proclivity; it is the excess of this percentage over the normal incidence among children of like age. It was roughly estimated that the normal percentage of rheumatism to be attributed to the community at large was for adults certainly over 12, and possibly over 20 per cent., while for children it was estimated at about 15 per cent. Since that was written my friend Dr. Coutts has taken up a similar inquiry at the East London Hospital for Children, and has been good enough to furnish me with the result in 194 cases, the number collected up to the present time. The method followed was this. The out-patients were taken consecutively and without selection (excepting only infants), the youngest three, the oldest fourteen. The question first asked in each instance was whether or not the child had had any pain in the joints at any time during its life. In case of a negative answer and in the absence of erythema or tonsillitis, the patient was dismissed as probably non-rheumatic. In case of an affirmative reply further questions were put as to the age when the pain first occurred, the joints chiefly affected, the duration of the pain, and whether or not swelling or redness accompanied it; finally, a careful examination was made of the cardiac sounds. By this method the children probably rheumatic got grouped into three classes, (1) those that had had joint pain only, (2) those that had pain with swelling of joints, (3) those that, besides these two, had moreover at the time of examination a cardiac bruit. An inquiry thus carefully devised, and which, instead of applying names, gives the reader the precise material he is in want of, is, as far as possible, secured against error. It has in this case the further advantage of being undertaken by one who has an open mind upon the point at issue.

The general result may be stated as follows. Of the first 100 patients, twelve had chorea, and are therefore excluded. There remain eighty-eight. Of these six had had joint pain and swelling; three had had joint pain with swelling, and had at the time of seeing a cardiac bruit; three had had joint pains without swelling, but had a cardiac bruit; three had had joint pains of an indeterminate kind. Thus, upon the plan of reckoning hitherto followed, fifteen out of the eighty-eight gave evidence of rheumatism; or if the three with joint pain merely be excluded, then twelve out of the eighty-eight. Of the second series of ninety-four; fourteen had chorea, and are accordingly excluded.[2] Of the remaining eighty, five had had joint pain with swelling, and had at the time a bruit; two had had joint pains and swelling; nine had had joint pains only; one had had bruit pains and one had a cardiac bruit. Excluding these two last we have sixteen of the eighty presumably rheumatic. It is true that the numbers with joint pains alone are a large proportion of the whole. Yet even if we assume that more than half of these (five out of the nine) were not truly rheumatic—a concession which is beyond the terms of the calculation—we have still twenty-six rheumatic out of 163 patients. This is more than 15, it is close upon 16 per cent. The figures go to prove that for children in general the allowance of 15 per cent. of rheumatism which was arrived at in my last paper was rather an under- than an over-estimate. It is only the broad conclusions, however, that need be insisted on. They are these—

If, on the one hand, without insisting upon less equivocal evidence of rheumatism, the mere occurrence of pains in the joints be accepted in that light, then such evidence is to be met with in full 15 per cent. of our London children taken as they come, and in about 20 per cent. of choreic children. The statement, therefore, that three-fourths of choreic children have *personally* (the word is needed to keep clear of the question of inheritance) nothing whatever to do with rheumatism has to be supplemented by this further statement. Rheumatism does not befall choreic children exclusively. It is a very wide possession, and here in London falls to the lot of three out of twenty. The special proclivity to chorea arising out of rheumatism is represented, therefore, not by 20 per cent., but by 5 per cent. If, on the other hand, more trustworthy evidence of rheumatism be required than joint pain of itself affords—swelling, redness, and tenderness of the joints (with or without cardiac bruit)[3]—

[1] From the admirable Abstracts of Medical and Surgical Cases, published annually by the Pendlebury Hospital for Sick Children (copies of which have been kindly sent me by Dr. Ashby, the senior physician, and Dr. Chaffey, lately medical officer at that institution), it appears that in the years 1881-83 there were 112 cases of chorea admitted; seventy-seven of these had no rheumatism, eight were doubtful, twelve had had pains doubtfully rheumatic, fifteen were beyond reasonable question rheumatic subjects, four of these having had acute rheumatism. Now, if the above supposition as to the three-fourths proportion be true, eighty-four of these 112 patients should have nothing to do with rheumatism, and seventy-seven are so given by positive statement. We want seven more; and, surely, as many might be allowed us of the twelve [illegible] doubtfully rheumatic and the eight doubtful [illegible] the largest estimate, we find twenty-seven [illegible] than one-fourth. The Collective Investi- [illegible] their Preliminary Report on this subject, have [illegible] less than one-fourth (Collective Investigation [illegible]

[2] As an independent observation, Dr. Coutts in his report remarks upon the very large proportion of chorea which these figures indicate; and expresses the opinion that the affection is unusually prevalent among the children of the poor in East London.

[3] Were the question to be settled upon the evidence of heart murmur, we might say without reserve that almost every choreic child is also rheumatic, for nearly every one at some time or other exhibits this symptom. It is mainly by the varying weight given to it that testimony is so various and conflicting.

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that is to say, acute polyarthritis, then, whether we take children as they come or choreic children, the percentage of such cases is extremely small (I do not think we are in a position to state it even approximately), although it may, perhaps, be admitted that it is somewhat higher for the choreic than for the non-choreic.

If calculations such as these are anywhere near the truth (they do not profess to be an exact statement of it), it is impossible any longer to represent rheumatism as the grand fact and basis of chorea. Such a view of the affection would be untenable even had we to say that the rheumatic element was more often absent than present. We have to say much more than that. The etiology of chorea must find some broader basis than any that rheumatism affords. And when this is admitted, and rheumatism takes its proper place as one amongst many agencies, predisposing to chorea, if not directly producing it, then and then only can its pathology, and what is much more, its treatment, be rationally determined.

And here I should conclude; but this view of the practical importance of what may seem to some a barren inquiry lengthened beyond measure tempts me to add one word more. These 219 children that have formed the text of these papers were all under close observation for some time, observation which was not confined to the single question of rheumatism, and which spread over more than ten years. And the children had to be treated as well as observed, if possible to be cured. Many of them were stubborn and chronic cases. Many had been under special treatment, chiefly by arsenic, up to the time of their arrival, when such treatment was suspended in favour of that to be presently described. Some few relapsed, but no child had to be sent back to Ormond-street owing to its complaint returning in acute fashion. The majority made rapid improvement from the first. All ultimately recovered. We have thus ten years' unbroken experience, and it is all of one tenour. I do not say that nothing could be better, because there is the element of time to be considered. But does time matter much, or if it did, is it reasonable to expect that an affection of this kind can be cured in a hurry? Chorea is not painful or actively injurious unless you make it so. It is, indeed, in a measure preservative, a signal of distress giving timely warning of overstrain. The business concerns of these little children are not of great moment, and inasmuch as not rheumatism, but nervous shock, overwork, or alarm, or ill usage, is often the direct cause of their complaint, it is inevitable, as the experience of the whole world teaches, that time should be granted as one of the conditions of cure. But putting time out of the question, and taking the entire material dealt with over ten years, we have but one result to record—namely, recovery. That is almost as good as saying that under the treatment adopted chorea always recovers. I put aside that extreme form of the disorder which is so rare that it is impossible to speak precisely about it, but of which, as I have shown elsewhere, the treatment in question can give as good an account as any other; and I say, what other treatment than ours is needed, or, indeed, justifiable, for chorea in general, unless it can claim to reach as good a result in shorter time?

And what is the treatment? If, after saying so much, I were to go on to describe the particular medicinal agent that had been employed, I appeal to the reader's candour to say whether or not he would begin to respect that drug, and admit that a very good case had been made out in its favour. But when I go on to say, as I must, that the treatment adopted was rest, bodily and mental, good food, country air, patience and encouragement, treatment as yet in want of a name, I know very well that, far from putting such treatment upon any equality with drugging, many a reader will turn away as though some deceit or cajolery had been put upon him.

Wimpole-street.

FIRE AT A COUNTY LUNATIC ASYLUM.—On the 15th inst. a fire of an alarming and destructive character occurred in the grounds attached to the Surrey County Lunatic Asylum, Wandsworth Common. The discovery was made among some timber stores, and but little time elapsed before the flames began to make considerable ravages. The firemen had to contend with great difficulties, owing to the great distance of water, of which there was a bad supply from the asylum, and about three hours elapsed before the fire was virtually got under. The cause of the fire is not known.

ON THE

DISEASE OF THE SKIN NAMED "PITYRIASIS MACULATA ET CIRCINATA."

BY T. COLCOTT FOX, M.B. LOND., M.R.C.P.,

PHYSICIAN FOR DISEASES OF THE SKIN TO THE WESTMINSTER HOSPITAL, AND TO THE SKIN DEPARTMENT OF THE PADDINGTON-GREEN CHILDREN'S HOSPITAL.

THE affection under consideration has not hitherto, I believe, been described in England, and my own attention was redirected to it by a paper in the *American Journal of the Medical Sciences* of Oct. 1880, in which Dr. Duhring gives careful independent descriptions of six cases observed by him in adults, and refers to the few existent notices of the affection which he had met with in the course of his researches. I shall deal at present only with the affection as seen in children, because my experience of it in adults is, so far, limited to two cases. Dr. Duhring, in his easily accessible paper, has given exhaustive extracts from the writings of Bazin and Hardy, and of Horand of Lyons, who first described the "pityriasis circiné" in children, so that I shall not repeat these references at length; but whereas Dr. Duhring writes that, "to Bazin, I think, undoubtedly belongs the honour of having first described it," I will establish Gibert's claim by giving the latter's account of pityriasis rosea (referred to by Bazin) from p. 402 of the third edition of the "Traité Pratique des Maladies de la Peau," 1860. C. M. Gibert thus sums up the characters of the disease in adults and youth: "Little furfuraceous, very slightly coloured, itchy, irregular macules, scarcely exceeding a finger-nail in size, numerous and thickly set, although separated always by some interval of healthy skin, distributed upon the upper part of the body and in preference upon the neck, the upper part of the chest, and the upper arms, but possibly invading regions beyond, even to the thighs, in such a manner that the total duration of the eruption, which dies out gradually in the regions first attacked *pari passu* with its further extension, is prolonged ordinarily for six weeks or two months. This eruption, more common in the female than male, is noticed frequently during the warm season. It scarcely shows itself in youth or in persons with a white, thin, and delicate skin." Further on, p. 410, he adds that the little macules are rosy or approaching the colour of erythema if the inflammation be very active, very slightly raised, at first of little extent, but afterwards enlarging, approaching one another, and even coalescing. It is to be remarked that Gibert does not mention the ringed form. He carefully distinguishes the affection from erythema, in which the lesions are less extensive, more prominent and profound, and from psoriasis, in which the plaques are more prominent and injected, rounded and shining, and the scales larger. No fungus was ever found by him.

Bazin[1] writes that it is a trifling idiopathic affection terminating spontaneously by resolution, in acute cases after a duration of from ten to fifteen days, and in others after from six to eight weeks, but never becoming chronic. He mentions the existence of prodromata, and describes a second ringed phase of the eruption. Hardy[2] draws a word picture of the circinate variety. Both writers carefully distinguish the affection from "herpès circiné" (tinea circinata) and psoriasis. So far the eruption was noticed in adults and youth, but in the *Annales de Derm. et Syph.*, tome vii., 1875-76, Horand of Lyons recounts seven cases in children, and his description tallies so closely with the cases I have observed that it was impossible to doubt that I had to deal with the same affection. He, like the other writers, failed to find any fungus, and considers the name "pityriasis circiné" the most suitable. He identifies it with the "pityriasis circiné" of Hardy, but not with the pityriasis circinata of Bazin. Now, Dr. Duhring has brought forward a strong case for grouping all these phases under one heading. With such a limited experience I do not feel in a strong enough position to satisfactorily offer criticisms on this point; but I am quite positive the cases I have seen in children are similar to those Horand described. I will only mention the circumstance that Bazin was very hazy as to what Willan and his followers described

[1] Les Affections Génériques de la Peau, 1862.
[2] Leçons sur les Maladies Dartreuses. Third Ed. 1868.

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and figured as roseola annulata.[3] Rayer thought it an erythema annulatum, and Bazin, after saying he had never seen it as Bateman describes it, adds, "Roseola annulata is no other, in the majority of cases, than the affection described by us under the name of pityriasis circinata amongst the arthritides pseudo-exanthémiques." Dr. Allan Jamieson of Edinburgh has also noticed the affection. Lastly, I must mention Vidal[4] as a writer who seems to be well acquainted with the affection. In his experience the eruption rarely lasts longer than from five to six weeks, and he observed that the desquamative plaques were preceded for a very short time by raised, congestive, erythematous plaques or papules, not yet exfoliating; and, moreover, that some spots carried quite thick epidermic scales, which separate *en masse*, leaving a little collaret adherent at the periphery, whilst sometimes slight moisture exudes or a little crust forms. In a later paper[5] Vidal further describes a special parasitic form of P. circinata et marginata met with in persons from six and a half to thirty-five years of age, distinct from Gibert's P. rosea. The fungus which he names "microsporon anomœon vel dispar" is very minute, having an average length of a thousandth of a millimetre. The rounded spores have an irregular outline, and lie in irregular masses and groups, very rarely in chains amongst the epithelial cells of the superficial and middle layers of the epidermis, whose cohesion they undermine. Mycelium is absent. Vidal distinguishes this fungus from the minute spores (? Torula vulgaris) so commonly found amongst the epithelial cells of the skin.

Of the five cases which I have recognised without hesitation in children, I will here give a fair example, as all have been marked by a close uniformity.

Blanche G——, aged seven years, came under my care at the Westminster Hospital on January 24th, 1884. Her mother declared she had not suffered from any infectious disease, and that all the other children were well, and continued so. The eruption had existed for three weeks, and was preceded by a fright three days previously, and also a slight cold and sore-throat, but no running from the eyes or nose. The eruption seems to have evolved mainly in the night. The mother stated that the eruption came out in successive crops, increasing for some days; that it appeared first over the back and shoulders, the axillæ and abdomen; that the face was affected later on, and the dorsum of the hands last of all. The scalp also was involved and tender. The spots were moderately itchy, rounded, rosy-red in colour, mostly the size of a split pea, with some smaller ones interspersed. The appetite and general health were excellent. The eruption paled on exposure to the air, but after a bath the colour revived. When I saw the child the face, with the exception of the forehead, the scalp, the neck, the trunk, the arms and hands, except the palms, and the legs down to the knees were covered with thickly disseminated, fading, roseolous, slight desquamating macules about the size of the little finger nail. The mouth was free. The eruption was usually discrete, but over the shoulders, trunk, and back of the neck the eruption was exceedingly closely set, and even coalescent here and there. In some places, chiefly on the limbs, slightly but distinctly raised, faint rosy, crimson or brick-red, freshly evolved macules were conspicuous, from a split pea to a finger nail in size, of rounded or oval but somewhat irregular outline. A minority of the lesions were obviously ringed, by reason partly of the fading colour and partly of the subsidence of congestion of the central parts. The majority, however, faded throughout, leaving slight desquamation or roughness, more conspicuous in certain incidences of the light, and some pigmentation, reminding one strongly of certain phases of tinea versicolor. The scaling was very constant and characteristic, for, though far more delicate than that of psoriasis, it instantly attracted notice. The eruption gradually died away in a month after I first saw it.

This case is a fair example of the rest, which I will not occupy space here in detailing. I have never been fortunate enough to observe the very earliest crops of eruption, but the histories I have obtained go to show that the macules may evolve primarily on the limbs or trunk, that it bursts out in profusion and pretty acutely, and is continued irregularly in a lessening degree for several weeks. I cannot say I have noticed with Gibert that it always commences on the chest and fades in the older parts *pari passu* with its extension elsewhere. The eruption has its chief centre of incidence on the upper part of the trunk and upper arms. Each macule commences as a rosy, very faintly raised, congested macule, the size of a pin's head or lentil, and extends to that of a finger nail, scanty fine adherent scales soon forming, and a considerable number of lesions becoming ringed. The bright colour fades and the macule gets to look like roughened discoloured spots which often bear, especially when confluent, a close resemblance to tinea versicolor. Each macule appears to last for several weeks and leaves behind on its disappearance some roughness and pigmentation. I have never observed any febrile excitement nor constitutional symptoms of moment, although the subjects were pallid.

In conclusion, I must add one word on the diagnosis. To the eye it is not such a bold eruption as psoriasis, nor are the scales so thick, prominent and silvery, nor is the distribution similar, though it is well to remark that we sometimes see an acute general evolution of psoriasis, in which the eruption is small, and far less prominent and scaly than in the usual run of cases. Then it is not a parasitic disease, at least no one has yet discovered a fungus. The affection to which it approaches closest is roseola annulata. It is certainly an eruption of the roseolous type, but quite distinct in aspect and course from the varieties of ephemeral roseola described and figured by Willan and his followers and well known to us. It is often strongly suggestive of the acquired roseolous syphilide, a point not referred to by authors, and a real difficulty might easily occur where corroborative signs of syphilis were not present, as I had the opportunity of observing in a case of either disease which simultaneously presented. The roseolous syphilide, it is well known, may be ringed, and I would refer to the coloured illustration in the *Clinique Photographique* (Hardy and Montméja) of the thighs and trunk of a patient covered with regularly circumscribed, rosy circles, with a yellowish tint, one to three centimetres in diameter. Such an eruption, the authors say, may last two, three, or four months, and relapse six, ten, or fifteen months after the initial lesion. Fournier's observations also on the very tardy circinate roseolar syphilide are very interesting.

Harley-street, W.

[3] See Willis's Atlas.
[4] Du Pityriasis, Progrès Méd., 1877.
[5] Annales Derm. et de Syph., Jan. 1882.

SOME REMARKS ON THE

TREATMENT OF DEFORMITIES OF THE NOSE FOLLOWING INJURY.

BY W. J. WALSHAM, F.R.C.S.,

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DURING the last few years I have had a considerable number of cases of deformities of the nose due to injury under my care; and as the treatment of such deformities is but lightly touched upon in works on surgery, it may be interesting to some to learn the result of my experience. It is not my intention here to speak of recent injuries of the nose, as the deformities with which I have had more especially to deal have been the result of injuries received months or even years previously. For convenience of treatment they may be divided into those affecting, first, the lateral cartilages and, second, the nasal bones.

1. *The cartilages.*—These may be variously bent or twisted to one or other side, or they may be depressed at the spot where they join the nasal bones, giving the nose in this instance a sunken appearance. In the former case the septum nasi (the central column of support) will as far as I know be always found deflected in a direction opposite to that of the bent lateral cartilage, blocking up more or less completely the corresponding nostril. In the latter case—i.e., when the cartilages are depressed, the septum may not only be deflected, but also, as is unfortunately too often the case, fractured with lateral displacement of the fragments, or else dislocated from the maxillary crest. In addition to the deformity, therefore, there will exist the usual train of symptoms accompanying nasal stenosis from other causes—i.e., a sensation of stuffiness in one or both nostrils, a nasal tone of voice, &c. In neither class of cases will either operative or mechanical treatment alone suffice. The septum must be straightened, and the lateral cartilages at the same time be forced into position, and there retained by mechanical apparatus till the septum has had time to consolidate. For

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retaining the septum in position, in my earlier cases I used Adams' retentive apparatus, modified so as not to injure the columnella. More recently I have had an instrument made of vulcanite, which, however, is open to the objection that the vulcanite is apt to become softened by the heat of the nose, and lose its shape and retaining powers. The advantages of the softer vulcanite may be obtained by having the blades of a steel instrument coated with this material. For solid ivory plugs I have now substituted hollow plugs of vulcanite, which can be worn with greater comfort, as they allow the patient to breathe through them. Many forms of retentive apparatus for holding the lateral cartilages in position were used before I found one which fulfilled all the indications. At first the ordinary nose-truss, which is fastened to the forehead by a band round the head, was tried. This, however, proved of little service, inasmuch as it is liable to shift, and thus give no fixed point to work from. The same objection holds to the spectacle method of fixing the truss. At length this difficulty was overcome by having a mask accurately moulded to the face. A plaster-of-Paris cast is first taken of the face, and in this the leather for the mask is moulded, apertures being left for the mouth, eyes, and nose itself. The mask when thoroughly dry is lined with soft chamois leather, and fits accurately to the irregularities of the face, so that no movement can take place. It is secured by suitably arranged straps around the head. Having thus obtained a fixed point to work from in the mask, it is easy to bring pressure to bear upon the nose in any direction required by means of suitable screws, springs, &c., attached to the mask. The accompanying woodcut is an illustration of a mask made



for me by Messrs. Arnold for a gentleman with very marked deformity of the nose resulting from a bicycle accident. The nose was forcibly straightened and then maintained in position by means of the screw-apparatus shown in the woodcut. It consists of two small, well-padded steel plates shaped to the contour of the nose, and attached by a universal joint to a screw through a small upright fixed at a proper angle to the mask just external to the aperture for the nose. A slight modification is of course required to suit each individual case. If the patient has the leisure, the mask had better be at first worn night and day. In slight cases it need only be worn at night, especially if a plug be kept in the nostril during the day on the side towards which the septum was bent. The plug, if properly applied, is hardly visible and causes a minimum of inconvenience. Messrs. Arnold are now making for me plugs of a flesh colour.

When one or both cartilages have been separated from the nasal bones and depressed, it is much more difficult to overcome the deformity. Indeed, whether it can be overcome or not will then depend upon the condition of the septum nasi. If it be merely bent, it will often be found that on straightening it the depressed cartilage will be raised along with it into position; but if it be fractured or dislocated, it will be difficult, if not impossible, to replace and retain in position the displaced fragments, and hence the necessity to provide a natural support for the depressed lateral cartilages. Even when the septum has been only bent, and not fractured or dislocated, it is not always easy to keep the reposited cartilages in place. They may be readily restored to their natural position by the use of suitable levers and forceps; but after a few days, when the swelling due to manipulation subsides, they will often again sink to their former faulty position. As long as the patient keeps his bed they may be retained in place by making extension on the nose by strips of strapping fixed stirrup-wise on either side of the nose, and then attached through a cord to a weight working over a pulley at the foot of the bed. The objections to this, however, are obvious, and similar ends can be obtained by an apparatus in which the extension is made from the forehead—or better, from the frontal part of the mask. Another method of maintaining the cartilages in position is by levers attached to the mask and introduced into the nostrils—a method, I confess, somewhat objectionable on the score of the pain and irritation which a foreign body gives rise to in this part of the nose, and which can only be overcome by patience and frequent introductions of the levers for short intervals at a time until the mucous membrane becomes accustomed to the irritation. Great care must also be taken that only the gentlest pressure is made, otherwise there is danger of ulceration.

In many of the cases of depression of the cartilages with fracture and displacement of the septum, do what we will but little improvement of the deformity can be obtained; but we should not forget that even here the removal of the displaced fragment and consequent freeing of the obstructed nostril, though it may not much improve the appearance, will give great comfort and relief.

2. *The nasal bones.* — These, like the cartilages, may be merely bent to one or other side; or they may be variously fractured and depressed, often presenting from the sinking in of the fragments and heaping up of callus much deformity. A full account of their treatment space does not permit me to give here. I would only remark on the comparative use with which, even after many years, laterally displaced bones may be forced into position. Unlike the cartilages when once rectified, retentive apparatus to keep them straight is not generally necessary. All that is then usually required being to keep the septum in position by one of the methods that have already been described.

Weymouth-street, W.

ON SOME POINTS IN THE ETIOLOGY OF PNEUMONIA AND BRONCHITIS.

By JOHN WARD, M.D.,
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NIEMEYER says, the exciting causes of pneumonia are generally obscure, but that at times it becomes of frequent occurrence, together with other acute inflammatory disorders, attacking their victims without any obvious provocative, through the operation of unknown atmospheric and telluric influences. We particularly observe the epidemic occurrence of pneumonia in severe and protracted winters, during the prevalence of north-east winds, yet sometimes it arises under conditions the very reverse. The statistical statements as to the greater frequency of pneumonia in northerly and elevated localities have of late been regarded as untrustworthy. With regard to the influence of cold, it is difficult to decide in individual instances whether the attack has been preceded by an exposure to cold more severe than that to which the patient has repeatedly exposed himself with impunity. Opinions, therefore, are divided as to the effect of cold in producing pneumonia. Its secondary forms, he says, occur under the influence of an acute dyscrasia, just as catarrh, as we have learned, attacks the air-passages in measles, exanthematic typhus, &c.; and whilst full-blooded, vigorous subjects are not exempt, yet feeble and broken-down subjects, convalescents from grave diseases, and those who have repeatedly suffered, are, perhaps, more liable to be attacked; and that it often complicates diseases which have already effected an impoverishment of the blood with emaciation and constitutional exhaustion. The same author, when speaking of the etiology of *catarrhal* pneumonia, reminds us that in many cases it arises solely through extension of the morbid process from the bronchial mucous membrane into the air vesicles; that the disease is most commonly observed as a companion of measles and of whooping-cough, assigning as a reason of this that capillary bronchitis occurs much more frequently in the course of these complaints than in healthy children. Causes of catarrhal pneumonia other than those from which capillary bronchitis and collapse of the lung originate are unknown. Again, speaking of the causes of hyperæmia and

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catarrh of the air passages and bronchial mucous membrane, he says that in very many cases the exciting causes of catarrh are unknown; hence we have recourse to hypothetical statements, such as "an increased susceptibility of the skin to change of temperature," "an augmented vulnerability of the mucous membrane," because we have no other explanation at hand. Whilst admitting the presence of certain predisposing conditions, such as the period of dentition in children, and noticing the frequency with which the symptoms are increased as age creeps on, he remarks, very appositely, that "this predisposition probably depends on the feebler capacity for withstanding noxious influences," and, more noticeably, that "the liability to this affection is less among those who inure themselves to exposure."

The opportunity afforded for the careful investigation of the physical surroundings of many fatal cases of pneumonia and bronchitis, during a limited period of office in the Public Health Service, has forcibly impressed me with the truthfulness of these statements of the learned Professor at Tübingen; and I have been accordingly led to trace a seeming correspondence with defective renewal of the air within, during the night especially, and the fatality from bronchitis. Nay, even as if, given the constitutional vigour of the patient and the amount of departure from the health standard of air-supply, results might almost permit of calculation, with some degree of accuracy, especially if other depressing influences could have been estimated. Not less worthy of note is the statement of the same author, amid the obscurity involving the etiology of pneumonia, which, I doubt not, he would admit as alike applicable to both diseases under consideration, touching those noxious influences which, from their enfeebling effect, diminish the resisting power of the system against the attacks of disease.

Calling to mind how frequently this malady occurs during the progress of certain zymotic affections, and remembering how often this class of diseases is associated with a filth-contaminated atmosphere, we might be led even to infer a somewhat similar association of assignable causes; and, indeed, the results of observation would seem to give substantiality to the deduction. My observations are herein confined to an urban and rural district, in the north-west of England, where, moreover, there is a heavy rainfall, and where the houses, generally, are of a more substantial character than the brick structures of the Midlands; and, also, where the dense nature of the building material permits of but little interchange of air through its pores. Many of the houses are old-fashioned in style, containing bedrooms, cul-de-sac fashion, with door and window at one end, and not infrequently having no fireplace and chimney flue which would serve for ventilation. The urban districts, possessing the advantages of general sewerage, are nevertheless exposed to the prejudicial arrangements of waterclosets, with their unventilated drain-sections communicating therewith, placed within or immediately contiguous to the cottages, the atmosphere of which, from their smaller size, was proportionately the more polluted thereby, especially where the house sections were subject to deposit, as is unfortunately the case so frequently; a defect, by-the-bye, which I think might be largely avoided by increasing the distance of the open channel, which should intervene between the end of the discharge-pipe and the sewer inlet, so as to favour the deposit of greasy sediment on the surface, where it might be easily removed; not to speak of the advantage ensured by keeping the sewer a greater distance from the house-foundation, and thereby obviating the danger of fouling the air within.

The following examples are selected from a large number of fatal cases of disease, of a varied character, which I had learned would be likely amply to repay the trouble of investigation, if but suggested improvements could be effected, occurring during the last year of my tenure of office, the year 1880, the winter months of which year were very severe, and the cold of which would have tended rather to intensify sanitary, structural defects by favouring a determination towards the warmer air within doors from adjacent sewers, &c., as well as to favour the generally accepted idea of the increase of such diseases with the occurrence of cold. They are taken from notes which I made on the spot at the time of inspection, the cause of death being put down as reported on the duplicate certificate furnished by the local registrars; and it may be supposed their enumeration and careful study will have a tendency to convince the most sceptical that insanitary influences have a much wider and further extended causative relation to disease than is generally acknowledged, and, consequently, it is hoped, tend to strengthen the admission of the necessity of taking into consideration the surroundings of the patient more frequently by the medical attendant, as alike widening the field of etiological inquiry, according to therapeutical agents, their truer value, and more particularly affecting prognosis, ever bearing in mind the oft-repeated injunctions of the above-mentioned erudite professor, to seek to "fulfil the causal indications," not unmindful of the aphorism *sublata causâ tollit effectus*; our aim being ever to secure, as far as possible, the physical prerequisites of health, not merely wholesome food and good water but a pure house-atmosphere to breathe. Chemists have been able to detect comparatively little chemical difference between the amount of oxygen in the atmosphere of our towns and in pure mountain air; but far otherwise is it when the foul air within our tenements is subjected to their severer tests; and can the physiologist be slow to recognise the effect on the delicate human organism of being continuously subject to its direful operation? The earnest prosecution of sanitary work, it is greatly to be regretted, does not meet with the encouragement on the part of the several sanitary authorities which its importance demands; and already there is the danger, but too apparent, as Dr. B. W. Richardson has observed,[1] "of a most enlightened and useful service degenerating into that of the office of mere clerks or chroniclers of disease; suggestors of placebos; gentlemen of education engaged by money for incomplete service."

When we have boards of health impressed with the greatness of their beneficent duty, advised and served by men alike imbued with its importance, who are not, as now, subject to the fickle caprice of their employers, and treated too often as abject menials, we may hope to attack the strongholds of disease, one after another, with method and success, and win for the Public Health Service the laurels which a timorous administration has tended to keep back. Out of a population of about 50,000, I have notes of some sixty fatal cases of pneumonia and bronchitis, for the year which is at my disposal, some of the cases being complicated with other diseases, in all of which I observed tangible sanitary defects, which I have attempted to detail as follows:—

R. D——, aged forty-three; carter; pneumonia; cottage, the bedroom of which forms a cul-de-sac and has no fire place, adjoins the fever wards of the workhouse, the sanitary arrangements of which are defective, the sewer sections and soil pipes of the waterclosets in connexion therewith being unventilated. J. D——, aged fifty-six; pneumonia; drain, into which eaves spouting enters, close to back door, out of repair, emitting foul odour; watercloset, the sewer section leading to which is unventilated, immediately adjoins outer kitchen. J. G. C——, aged nineteen; stoker; congestion of lungs; sewer section, under the property, connected with imperfectly flushed main; chimney flue of bedroom papered over. W. T——, aged thirty-two; carter; pneumonia; drain from yard gully and watercloset placed very near back door, repeatedly blocked. The wife of deseased said, "He complained only on the Saturday before he was laid up that the smell was awful; he had suffered from his stomach ever since coming to reside at the house"; odour upstairs very offensive, when the air is not in free motion. J. H——, aged forty-one years; blacksmith; alcoholic intemperance; pneumonia; cottage or dwelling over shoeing shed; defective ventilation of bedrooms. T. K——, aged twenty-six years; steelworker; pneumonia; house damp and imperfectly ventilated. J. C. M——, aged forty-two years; nurseryman; erysipelas; pneumonia; slopstone waste-pipe in direct contact with town sewer; bedrooms small, some without fireplaces. J. G——, aged twenty-nine years; black-lead pencil maker; pneumonia; house overcrowded and damp; six slept in one small bedroom, the chimney flue of which was stopped up. W. P——, aged eighteen years; black-lead pencil maker; empyema two years and a half, albuminuria one year, dropsy six months; deceased occupied a small tenement at the rear of a block, the diminutive bedroom of which was placed over an offensive watercloset, the drain section of which was unventilated—a sad place. J. W——, aged forty-five years; painter; pneumonia; slopstone waste-pipe communicates with sewer; watercloset, with unventilated drain section, adjoins the dwelling. M. N. P——, aged nine months; whooping-cough; pneumonia; house large and commodious, but built by the side of a large stable, where a number

[1] Journal of the Society of Arts, March 28th, 1884.

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of houses are kept; the slopstone waste-pipe communicates directly with the sewer; watercloset with offensive "container" apparatus, and unventilated soil-fall-pipe in the centre of the house. The children, the offspring of healthy parents, had have suffered much in health, which greatly improved on their removal to a healthy house. S. D——, aged nine months; pneumonia; the drain passes under the house. Some time previously scarlet fever spread through the village from this house as a centre. J. B——, aged seventeen years; scarlet fever, pneumonia; the middenstead of a neighbouring farmer placed almost close to the dwelling. W. B——, aged three years; pneumonia; the village sewer courses under one corner of the cottage; bed placed in recess of small room. J. W. S——, aged three years; pneumonia; bed placed in corner of badly ventilated room; a cow-house adjoins the end of the row of cottages of which this forms a part. M. J. G——, aged thirty-six years, innkeeper; delirium tremens; drain passes under the premises, and filthy stable immediately adjacent to cottage, which intervenes; husband of deceased died some months previously from pneumonia. J. A. F——, aged fifteen months, son of a greengrocer; pneumonia; offensive drain adjacent to dwelling; bedroom without fireplace; quantity of decomposing onions in the house. A. B——, aged fifty-eight years, death not registered as to cause; on inquiry judged to be pneumonia; deceased, a farm servant, lived at the time of his death at a farmhouse which adjoined an offensive stable, close to the loft of which the bedroom in which he used to sleep was situated, the chimney flue of the same being stopped up. T. B——, aged sixty-five years; double pneumonia; watercloset with unventilated sewer section underneath living room. J. W——, aged eight years; scarlet fever, pneumonia; three slept in small cul-de-sac room, the air of which appeared stagnant and oppressive; pig kept within a few yards of the dwelling. R. B——, aged forty-three years, bookseller; heart disease, pneumonia; house with "container" watercloset apparatus, the soil-pipe being unventilated; the health of the deceased impaired by alcoholic excess. J. S——, aged two years; pneumonia; cottage has only one bedroom, which is destitute of fireplace or other means of permanent ventilation. H. H. Y——, aged one year; congestion of the lungs; house has "container" watercloset, with unventilated soil-fall-pipe. J. F. O——, aged one year and nine months; measles, pneumonia; old barn adjoins the house, in which a pig and fowls are kept; bedroom without fireplace or other suitable provision for permanent ventilation. M. M'O——, aged thirty-eight; labourer; pneumonia; three slept in a small bedroom which had no fireplace or other suitable provision for permanent ventilation. J. R——, aged one year and nine months; measles, pneumonia; six slept in a small bedroom without fireplace or other provision for continuous renewal of the air. W. E——, aged four; measles, pneumonia; slept with parents in cul-de-sac room, the chimney flue of which was stopped up. S. B——, aged fifty-three; broncho-pneumonia; house permeated with offensive odour from filthy stable, which immediately adjoins, and badly ventilated. J. T——, aged thirty-four; pneumonia; back-to-back house; cul-de-sac bedroom; chimney flue papered over. J. A. R——, aged nine months; congestion of lungs; no fireplace or permanent ventilation in bedroom. A. B——, aged thirty-nine; childbirth twelve days ago; broncho-pneumonia seven days; back-to-back house, built up against soil; cellar of same damp; bedrooms badly ventilated. M. J. L——, aged three years; pneumonia; back-to-back house; child slept between the parents, breathing the devitalised breath of both. E. J. H——, aged two years; morbilli, broncho-pneumonia; slept with parents in close corner of room. J. L——, aged sixty-one; broncho-pneumonia; slop-stone waste-pipe in direct contact with sewer; stench-trap at inlet out of repair. J. G. K——, aged two years and a half; pneumonia, phthisis; slept between parents; odour of small bedroom, the door of which was closed when occupied and chimney flue stopped up, offensive. E. T——, aged four years; pneumonia; bedroom insufficiently ventilated, forming cul-de-sac. H. J——, aged nine years; pneumonia and meningitis; house damp from soil at back and gable, and otherwise insanitary; an old pigstye adjoins, now used as a duck-coop. S. A. J——, aged twenty-two months; pneumonia, convulsions; no fireplace in bedroom. A. G——, aged fifty-nine years; pleuro-bronchitis; drain courses under property. R. A. D——, aged one year; broncho-pneumonia; watercloset, with unventilated sewer section, immediately adjacent to dwelling; unventilated drain passes up enclosed passage, contiguous. J. H——, aged three years; measles, broncho-pneumonia; watercloset, with unventilated sewer section, within the premises; drain at back, defective flush and obstructed. T. B. J——, aged eleven months; bronchitis; slept with parents in badly ventilated room, the chimney flue of which was stopped up. J. N——, aged one year; bronchitis; bedroom badly ventilated, chimney flue of same stopped up. F. L——, aged eight months; bronchitis; bedroom badly ventilated, forming cul-de-sac. T. B——, aged two months; capillary bronchitis; cottage adjoins house, at the further end of which is a stable; bed placed in close corner of room, the chimney flue of which is papered over. L. H——, aged eleven months; bronchitis; seven occupy one room; deceased slept with parents in bed placed in close corner. S. M. K——, aged eleven months; bronchitis; bedroom forms cul-de-sac, badly ventilated. J. S——, aged three months; bronchitis; house new, damp soil. M. A. R——, aged forty-seven years; bronchitis; watercloset, with "container" apparatus and D-trap, and unventilated soil-pipe, in centre of house; slopstone waste-pipe communicates direct with sewer; offensive odour at time of visit, the bell-trap being out of place on slopstone. J. M. C——, aged two years; bronchitis; slept with parents in cul-de-sac bedroom. A. G——, aged thirteen months; congestion of lungs, convulsions; bedroom close, chimney flue stopped up. J. B——, aged fifty-nine; pneumonia; watercloset, with unventilated sewer section, immediately adjacent to dwelling; bedrooms badly ventilated. E. S——, aged forty-six; bronchitis; bedroom, which has no fireplace, immediately over undrained stable and byre. B. J——, aged one year; bronchitis; drain courses up enclosed passage; watercloset, with unventilated sewer section, directly attached to dwelling. M. McM——, aged eight months; back-to-back house. L. B——, aged eighteen months; bronchitis; watercloset, with unventilated sewer section, adjoins back kitchen. H. J. F——, aged six months; bronchitis; overcrowding; five slept in one small room, the chimney flue of which was stopped up.

From this crude and yet momentous summary, which might have been indefinitely increased by bringing the experience of other years before the reader, will, I think, be apparent the immense importance of securing for all an in-door atmosphere uncontaminated with animal filth emanations; and, in fact, that there is greater danger in a deficiency of ventilation than in a moderate excess. It would be easy to show the relation of such a polluted atmosphere to the etiology of other acute diseases, such as peritonitis, &c., as I have endeavoured to trace with respect to inflammation of the brain (see THE LANCET of Jan. 19th, 1884); whilst more chronic so-called scrofulous and other diseases of denser structures might be shown to appear to have a more than fancied association with such causes. But there are always risks connected with hasty generalisations which the cautious would not expose themselves to the odium of, and which I should have felt backward to undertake were it not that all experience, technical and common-sense, alike points to the dangers which it has thus been my purpose to bring into more prominent relief.

Fully conscious of the frequency with which deposit of an offensive nature is apt to occur in the house sections of sewers, and of the evils which appear to be directly traceable to the placing of waterclosets, with their usually unventilated sewer connexions, in immediate contact with the dwelling-house—thereby favouring the direct determination towards the warmer air within, especially in cold weather, when the surface of the ground is sealed with frost—I have, when in office, urged my boards to enforce the placing of these structures when on the ground floor, and consequently presenting difficulties connected with the efficient ventilation of the sewer section in communication therewith, as in cottage houses, in a position *detached from the dwelling*, or from any outer structure immediately attached thereto.

BEQUESTS.—By the will of the late Mr. Edwin Cox £500 is bequeathed to each of the following institutions: the Royal Free Hospital, Earlswood Idiot Asylum, the Deaf and Dumb Asylum, Old Kent-road, the City of London Truss Society, the National Benovolent Institution, the Hospital for Consumption and Diseases of the Chest at Brompton, the Cancer Hospital, Middlesex Hospital, Westminster Hospital, Charing-cross Hospital, and St. Mary's Hospital.

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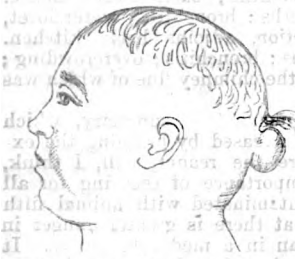
A NEW PLAN OF OPERATING UPON MENINGOCELE.

BY NOBLE SMITH, F.R.C.S. EDIN.,
SURGEON TO THE ALL SAINTS CHILDREN'S HOSPITAL, AND SURGEON TO THE ORTHOPÆDIC DEPARTMENT OF THE FARRINGDON DISPENSARY.

CONGENITAL hernia of the membranes of the brain has hitherto been a very unsatisfactory deformity to deal with. Almost every child so affected has died early, whether subjected to operative treatment or not. Injection of iodine into the sac has been the least unsuccessful operation tried, and Dr. Morton's iodo-glycerine fluid is doubtless the best form in which it can be used. The risk, however—one may almost say the certainty,—of any fluid thus used passing into the cavity of the skull is a serious objection to this means of treatment; and were it not for the fatal nature of the affection when left to itself, surgeons would probably seldom venture to operate upon the subjects of it at all. I have devised a plan by which the risk of the injected fluid passing beyond the sac is reduced to a minimum, and I will now describe the only case upon which I have yet operated in this manner.

C. H.——, aged fourteen days, was sent to me by Dr. Fancourt Barnes from the British Lying-in Hospital in January of the present year. Fig. 1 shows the size of the tumour. The sac was formed of healthy skin, and could be emptied by pressing its fluid contents into the cavity of the skull, a proceeding which caused the infant to cry. I exhibited the child at a meeting of the Medical Society on February 11th. With regard to the treatment, I tried in the first place the effect of pressure. I made a cast of the tumour, upon which was moulded a piece of gutta-percha. From February 1st the pressure was gradually increased until March 31st, when, finding no improvement had taken place, I resorted to the following operation. The sac was emptied by pressure and its two sides held together between my finger and thumb. My intention was not to inject into the cavity of the sac, from which the fluid would have free access into the ventricles of the brain, but if possible to inject into the wall of the sac close to the lining membrane. I used a hypodermic injection syringe and pierced the sac as it was held between my finger and thumb, directing the point *just to one side of the median line*. The latter line would, of course, represent the cavity of the sac which for the time being was obliterated. I must have penetrated very near to this cavity, but did not pierce it, for upon injecting the fluid there was considerable resistance to its entry, although I had ceased to hold the sac and the latter had refilled. If the needle had penetrated the sac, the resistance would have been certainly slight, and the after-effects might have been severe. I could only inject a few minims of iodo-glycerine (about eight); the child cried, and continued to evince symptoms of discomfort for the next two hours, when he fell asleep, and subsequently awoke seeming to be quite comfortable, and remaining so. Upon April 15th I injected the tumour again in the same way. On April 23rd the child's general health was good, the tumour felt firm, as if it was consolidating; I therefore ventured to pierce it to the centre with the needle and injected more iodo-glycerine. Upon May 1st I found that no bad symptoms had followed the last operation, the tumour was feeling firmer. I repeated the injection on May 14th, and again on June 15th; upon the last occasion I left at least twenty minims in the centre of the tumour, which was a larger quantity than I had hitherto used. On July 14th the child was quite well, the tumour was contracted to a flattened corrugated mass of skin, as shown in Fig. 2, and the case cured.

FIG. 1.



Before operation. The fluid contents of the sac could be pressed into the cavity of the skull. (Exhibited at a meeting of the Medical Society, Feb. 11th, 1884).

FIG. 2.



Five months after first operation (July, 1884). The remains of the tumour being hard cicatricial substance completely closing the opening into the skull.

By injecting into the walls of the sac we not only prevent the iodine from entering the cavity of the skull, but we also attack more directly the part which we wish to influence—namely, the sac, which we wish to contract.

Queen Anne-street, W.

BICYCLE RIDING AND PERINEAL PRESSURE, THEIR EFFECT ON THE YOUNG.

BY S. A. K. STRAHAN, M.D.,
ASSISTANT MEDICAL SUPERINTENDENT, COUNTY ASYLUM, NORTHAMPTON.

CYCLING is doubtless a very healthy and pleasant mode of exercise when used in moderation, but now that tens of thousands of our boys ride bicycles daily, and "get up records" of thousands of miles in the year, it may not be out of place to point out some alarming evils which are likely to arise from this abuse of an otherwise healthy pastime. Some time ago it was pointed out that obscure nervous complaints would probably be developed by the continual jarring—the succession of shocks conveyed to the spinal column in bicycle riding; and this, I believe, has proved correct in many instances, notwithstanding "Arab springs," and "rubber cushioned" machines. But it is to something much more serious than this that I would now call attention: it is to the amount of pressure brought to bear upon the perineum in growing boys, affecting directly the prostate, the muscles of the bulb, &c., and indirectly the whole generative system.

The bicycle saddle is now reduced to the smallest possible limit. It is just wide enough at its posterior part to cover the ischial tuberosities, and it tapers off quickly to a long, narrow horn in front, upon which the perineum rests. Let us consider the position of the body and limbs when the rider is mounted, and we can then appreciate the amount of body weight which must be thrown upon the perineum. In bicycle riding the legs are, when extended, vertical, and the pelvis is flexed upon the thighs or rolled forward. This rolling forward of the pelvis is slight in easy riding, and very marked in fast riding and hill climbing. Now, when the body and pelvis are bent forward, the ischial tuberosities are raised from the saddle, and the whole weight of the body, save what is transmitted to the pedal by the then extending leg, is thrown upon the perineum. It is not much of the body's weight that is conveyed to the pedals. In easy riding on the level the weight of the limb from the hip down is sufficient to move the machine, and in hard riding the extra pressure is gained not so much by throwing the body's weight upon the pedals as by pulling upward on the handle-bar, and so further increasing the pressure of the body upon the saddle. But even admitting that the pressure upon the perineum be only a few pounds, I hold that it must be injurious in the extreme, for were the pressure *nil* when riding upon a perfectly plane surface, it must at times be considerable when the machine is ridden over an unequal surface such as is afforded by our best country roads. Let those who talk of "the beautiful gliding motion of the bicycle" try to play a game of billiards after a ride of twenty miles, and then explain where all their "shakiness" comes from if their motion has been that of the skater. Now, this pressure on the perineum, whether it be continuous and increased at every jolt, or whether it be made up of jolts alone and be *nil* in the almost imperceptible and irregular intervals must be injurious, more especially to growing boys. It must cause irritation and congestion of the prostate and surrounding parts, tend to exhaust and atrophy the delicate muscles of the perineum, and also call attention to the organs of generation, and so lead to a great increase in masturbation in the timid, to early sexual indulgence in the more venturous, and ultimately to early impotence in both.

We all know that among the Tartars horse-riding causes complete impotence in many of their strongest and most daring men, with wasting of the testes, dropping of the beard,

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and change in the pitch of the voice; and we also know that the introduction of the horse into the western world had quite as much or more to do with the extermination of the red man than had the almost simultaneous introduction of the European. In a southern tribe of Indians—that is, a horse-riding tribe—it is a marvel to find a squaw with more than two or three children, though they—both men and women—marry young. Impotence is said to be common amongst them at thirty. The "disease of the Scythians" and its causes are sufficiently notorious.

If, then, these sad results are the outcome of immoderate equitation where there are an extensive seat and a stable foot rest, and where the adductor muscles of the thighs are used, what are we to look for, where our boys of ten and upwards spend the greater part of their own time riding bicycles, and get over thousands of miles in the year, perched upon a saddle no bigger than the hand which conveys every jolt of the machine to the body; where the jolts are ten times more numerous than those experienced by the equestrian and, occurring without any approach to rhythm, are conveyed unexpectedly to the person?

Some time ago Dr. B. W. Richardson when advocating cycling as a healthy exercise said, if I remember rightly, "that what made cycling so healthful an exercise was that in it you enjoyed all the muscular motion experienced in walking with this advantage, that the bodily weight was taken off the feet and legs." This, of course, would be an advantage if the bodily weight were better bestowed than it naturally is upon the feet; but as it is on the bicycle the transference of weight from the feet to the perineum cannot but be for the worse.

It must be understood that what is said in this article applies particularly to growing boys, who generally straddle the largest machine their length of leg permits, and so greatly increase the liability to perineal pressure. What cycling—for the saddle with the long, up-turned horn, is now almost universally used for the tricycle too—will do towards the advance of those prostatic affections which so often render the closing years of life miserable, time alone will tell.

Barry Wood, near Northampton.

TREATMENT OF

THE HABIT OF INJECTING MORPHIA BY SUDDENLY DISCONTINUING THE DRUG.

BY J. ST. THOMAS CLARKE, M.B. LOND., F.R.C.S. ENG.

THE following case is one of several similarly treated at Mrs. Theobald's Institution, Leicester.

A lady, aged twenty-nine, the wife of a medical man, was admitted to the above institution on March 25th, 1884. She was in the habit of injecting herself with morphia subcutaneously three or four times a day, always in the arms, and injecting three or four syringefuls at a time, each syringeful containing about twenty minims of a solution of acetate of morphia of the reported strength of twenty-five grains to the so-called ounce bottle of water. The bottle I found held nearly nine drachms and a half of fluid. The solution so made contained, therefore, quite two grains and a half in the drachm, which made up her usual dose, though at times this was exceeded; and probably in the day she would thus absorb from eight to ten grains of morphia—perhaps more. The first dose was usually in the morning, before or after breakfast, the second one later on in the morning or afternoon, and the last about 11 at night. The habit was of nine years' duration, and had not been associated, as is frequently the case, with a fondness for intoxicating drinks. The drug was first used hypodermically for gastrodynia and sickness during pregnancy, the quantity being increased gradually the last few years. The patient was a tall stout woman, five feet eight inches in height, weighing about thirteen stones, with a somewhat leaden complexion. The pupils were rather contracted but not unduly so. Her appetite was fairly good. She had had two children, the last in 1878. The catamenia were regular. She had had diarrhœa at times. Her arms were bulbous and pitted, with red indolent swellings here and there from irritation or suppuration following the injections, and altogether they presented an unseemly sight from shoulder to wrist, with blue and white indented scars, the results of former abscesses. She expressed herself anxious to get rid of her slavery, and voluntarily handed me her apparatus and solution on March 25th. She kept up bravely till the evening, when she began to feel the want of the morphia, and passed a restless night with gradual development of intense gastric pain. The treatment followed during the progress of the case included resting the stomach, the administration of bicarbonate of soda and bromide of potassium, effervescing medicines with prussic acid, chloroform, and opium liniment to the pit of the stomach, then bismuth, bicarbonate of soda, prussic acid with barley-water, arrowroot, gruel, &c., and skilled nursing. Ice was not given, as it was objected to. Her condition the second day was one of great restlessness, tossing about the bed, incessant vomiting of green bile, great gastric pain, no sleep, bowels free, with an evening temperature of 100·5°. On the 27th (the third day of treatment) the general symptoms and temperature were the same, though scarcely so marked, but the pupils were dilating. On the 28th they were much the same, with a temperature of 101°. The vomiting of green bile was still very obstinate, but the patient stated that she had had about three hours' sleep during the preceding night. She also looked better, and had become cheerful and much less restless. On the 29th she stated that she was sick only once during the preceding night, and was then having simply barley-water in small doses. On the 30th she was progressing favourably; the sickness had ceased, and the patient experienced a feeling of hunger. Chicken broth, milk and barley-water, and tapioca pudding were ordered. On the 31st she was still progressing; the slop diet had agreed with the patient; sleep was obtained, but only half an hour at a time. On April 1st the temperature was 100°, but she was doing remarkably well, and sat up for a while. On the 2nd the patient was sick once, but she sat up longer. On the 3rd she was allowed to go downstairs to dinner. On the 5th she was gaining strength rapidly. The further progress of the case was onwards to complete convalescence and restoration to health.

At the end of June her husband stated that the improvement had been progressive. He says she sleeps all night, has lost the fits of sneezing and slight diarrhœa with which she was troubled after leaving, and the dysmenorrhœa from which she suffered prior to the morphia habit is now much less than before. She is less stout, has never asked for or suggested a return to morphia, and has no special desire for any stimulants. Though advised by us to become a teetotaller, she takes about a pint of ale and half a pint of ginger beer a day, with no bad tendencies so far. She never asks for wines or spirits, and has no mental worry or depression. Her temperament is quite light-hearted, and she is about to make a long sea voyage.

Remarks.—The above case presents some peculiarities, among which the absence of any alcoholic craving and the restriction of the case to chronic morphia poisoning are to be noted. This quality, as observed by her husband, is probably the fact to which may be attributed the rapid and unique completeness of her cure, and is a point of considerable importance. Another point is the success of the abrupt discontinuance of the drug as a method of treatment. Dr. Benjamin Ward Richardson, in the *Asclepiad* of January, 1884, has a very able paper on "Morphia Habitués and their Treatment," and after weighing the evidence in support of three different modes of treatment—viz., (1) the substitution of some other drug, such as chloral, or some alcoholic drink; (2) the abrupt method; and (3) the tapering off plan—insists on the last method, carried out in a systematic form and gradual manner, as being the right and most trustworthy one. From experience of the tapering off plan in several severe cases I am forced to confess my disappointment in it, and a disbelief of its value. I contend that the method of sudden and absolute withdrawal has greater advantages in the end for patient, doctor, and nurse. It is only of late that this plan has become more recognised in the profession in the treatment of delirium tremens and dipsomania; but it is a fact that this plan has been carried out at Mrs. Theobald's Institution for many years with most signal success, and so far I have seen no bad results. In the morphia cases the patient is infinitely more manageable on the sudden withdrawal plan than on the others. I may note that in this case the catamenia had never been checked by the morphia; though I had a case some time ago where they were in abeyance for five years under morphia injections, and the habit being suddenly broken they became re-established, and pregnancy followed.

Leicester.

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ETHER AS AN ANÆSTHETIC IN CASES WHERE THERE IS OBSTRUCTIVE DISEASE OF THE LEFT SIDE OF THE HEART.

BY ARTHUR JEFFERSON, M.R.C.S.,
HOUSE-SURGEON, YORK COUNTY HOSPITAL.

UNTIL the following case came under my observation I never thought it necessary to examine the heart before administering ether. In all cases, provided the patient was neither a young child nor an old person, I was in the habit of giving ether without making any further examination than glancing at the chest walls, to see that they were not too rigid, and asking the question, "Have you a cough?" Both these points being settled in the negative, the anæsthetic was given without further delay. Having given the anæsthetic in several cases of regurgitant valvular affection, and having noticed its great stimulating effect in this form of cardiac derangement—so great that in three cases the murmur has been found to disappear under the ether, reappearing gradually as the effects of the drug wore off,—and also in the almost pulseless heart of collapse; the conclusion was somewhat hastily arrived at that the state of the heart did not matter in ether giving. However, last year a male patient, aged fifty-two, was admitted to the hospital under the care of Mr. Jalland, who decided to perform an operation upon him. Accordingly, the man not being emphysematous and not having a cough, the administration of ether was commenced. The patient took the anæsthetic badly, and there was a good deal of struggling, some minutes elapsing before conjunctival insensibility was arrived at. Just at this stage the patient's breathing began to excite attention; it became somewhat hurried and very shallow. The pulse, however, continued regular and strong; in a very few seconds the face commenced to turn blue, and the respiration became so shallow as to be purely laryngeal, no movement of the abdomen or chest-wall being perceptible. The ether was at once discontinued, and artificial respiration commenced. After a few minutes the blueness of the face had disappeared, and the respiration had become fairly normal. As it was important that the operation should be at once performed, the patient was allowed to partially come round, and then, his heart having been stethoscoped and found to be apparently healthy, chloroform was administered. Up to this time, even when he appeared to be on the verge of death from the first anæsthetic, his pulse had remained good, but now, after a couple of minutes of chloroform inhalation, it rapidly failed, becoming irregular. By means of the cold water towel and brandy the patient was brought round and the operation postponed. In the evening of the same day the man's heart was again examined, this time more carefully; there was now found a slight thrill at the apex and a somewhat presystolic murmur in the same situation, which murmur could only be heard over about half a square inch of chest surface. These symptoms evidently indicated mitral stenosis. A week after the patient was again brought into the operating room and kept under the influence of unmixed chloroform for about forty-five minutes, without at any time showing any alarming symptom.

Remarks.—In this case what would appear to have happened is somewhat as follows. The heart, under the influence of the ether, commenced as usual to contract more vigorously, the consequence of this being that while its right side was urging on an increased quantity of blood into the lungs, this same surplus was prevented from escaping thence by reason of the contracted mitral orifice. Hence the lungs became more and more congested; this congestion, added to the peculiar respiratory effects of the ether itself, caused the patient to assume, little by little, the appearance of one about to die of asphyxia. No lung complication being suspected at that time, it was inferred that the patient's condition was caused by some susceptibility of his respiratory centre; it was not thought that chloroform could have any direct influence on this, and therefore the heart being seemingly healthy, this anæsthetic was given. It can easily be imagined that this drug, acting on a diseased heart struggling with still congested lungs, would cause the irregularity of the pulse which ensued. Finally, it was demonstrated in the following week that chloroform could be given, in the absence of the congestion of the lungs, with perfect safety. This case would seem to show that the heart should always be examined before ether is given; and that the giving of this anæsthetic is, at any rate, a very questionable practice in cases where there is obstructive valvular disease on the left side.

York.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia præcepta accurati visitandi ratio, nisi quam multarum et variarum et dissectionum historias, tum aliorum tum propriis collectas habere, eas inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

WEST LONDON HOSPITAL.

ACUTE TRAUMATIC (?) TETANUS; DEATH ON SEVENTH DAY OF ILLNESS; AUTOPSY; REMARKS.

FOR the following notes we are indebted to Mr. J. P. Glover, house-physician.

J. M——, aged twenty-six, was admitted on August 4th, 1884. He was in his usual health until about four days previously, when he began to suffer from pain in the lower part of the back and between the shoulders. On the following day the pains became worse, especially on movement, and they radiated from the spine round the lower part of the chest and the upper part of the abdomen. Stiffness of the lower jaw followed, and spasmodic contractions of the extensor muscles of the thighs.

On admission his face was pallid and wore an expression of suffering, the skin was hot and perspiring freely. The lower jaw was firmly closed and almost immovable; the speech, except for this, was not affected, and fluids were taken and swallowed without difficulty or resulting spasm. The chest muscles were not much affected, and the diaphragm moved freely. The arms were unaffected, both as regards motion and sensation. The extensor muscles of the thigh, the muscles of the back, and, to a less extent, those of the abdomen, were affected with tonic spasms of momentary duration, and but slight severity, occurring once or twice in a minute. Risus sardonicus was observable during each spasm, but the spine was not noticeably arched. The patient complained of pain in the back and in the affected muscles, especially the thighs, which was worse during the spasms. Turning in bed or movement of the legs was painful, and produced the painful contractions mentioned above. The back was reddened and slightly blistered by the fomentations and turpentine stupes which had been applied before his admission, but there did not appear to be any especially tender spot elicited either by pressure or the hot sponge. There was no priapism, nor loss of sensation or motor power. Urination was normal; bowels confined. The patient was quite sensible, and remained so to the moment of death. The temperature was 101°; pulse 90, quickened with each spasm; heart sounds normal.

No history of wound or injury was given on admission, but he had a small healed-up scratch on the hypothenar eminence of one hand, which was said to have been done by a rusty nail about a fortnight previously. He said he had got wet through a week or so before admission, and thought he might have taken cold.

Aug. 5th.—The patient's condition was substantially unchanged; the spasms, if anything, were less severe. At no time was there any noticeable retraction of the head or approach to opisthotonos. The breathing was more shallow and chiefly diaphragmatic, the chest walls moving but slightly. There was little pain, except during the spasms, which continued to be several to the minute and lasting two or three seconds. At 7 P.M. he was suddenly attacked with a very severe convulsive spasm, engaging all the muscles of the body and arching the body to one side, stopping respiration and apparently the heart's action. For a minute or so he lay motionless and apparently moribund. Breathing, however, returned in short gasps, drawn through the clenched

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teeth, and respiration became gradually quiet and natural. A second, but not quite so severe, attack occurred an hour later, after which he had a pretty quiet night and some sleep. He could still swallow fluids without difficulty.

6th.—The general symptoms became rather more pronounced during the day. The spasms rather more severe and painful; swallowing became difficult, and excited spasms when attempted. The evening temperature was 102·8°; the pulse 152 (feeble); respiration shallow and diaphragmatic (68). Voluntary power was distinctly impaired, and the patient said he felt weaker all over. Urination was very frequent, but voluntary.

7th.—The patient was in less pain, but evidently weaker. The spasms but slight; temperature 104·8°; skin pallid and perspiring profusely. About noon, without any general spasm, he suddenly turned livid, respiration and the heart's action stopped together, and he was dead in a few seconds. He was quite sensible to the last, and spoke just before the final seizure. The case thus lasted just a week from the onset of definite symptoms, and about a fortnight from the receipt of the scratch on the hand.

The treatment consisted of ice to the head and spine, with an initiatory purge of calomel and jalap, chloral hydrate, and hypodermic injections of morphia.

At the necropsy, made twenty-four hours after death, the brain and spinal cord were carefully examined, but nothing abnormal could be found in either by naked-eye inspection.

Remarks.—This case is considered an interesting one from its departure in many particulars from the ordinary courses of tetanus; indeed, for some time it appeared doubtful whether it might not be one of spinal meningitis. The recurrence throughout the attack of spasms of but little, and scarcely at all increasing, intensity, the two isolated severe convulsive seizures, the free action of the diaphragm, the late appearance of any difficulty of swallowing, and the very slight opisthotonos, combined to render the case an anything but typical one.

CUMBERLAND INFIRMARY, CARLISLE.

PYO-SALPINX; LEAKAGE INTO THE UTERINE CAVITY; ABDOMINAL SECTION; DRAINAGE; RECOVERY.

(Under the care of Dr. LEDIARD.)

ISABELLA C——, aged twenty-seven years, residing at Flimby, came in on April 30th, 1884. She stated she had been married for six years, having a healthy child aged three years. Before and after marriage her periods were irregular and attended with more or less uneasiness; but fifteen months ago she first noticed a thick, yellowish, acrid vaginal discharge, which was offensive and excoriating; at the same time a dull heavy pain was felt in the right iliac region and above the pubes, for which she was treated as an out-patient at the Newcastle Infirmary.

The patient was thin and sallow, and her spirits were much depressed. Careful palpation over the painful area revealed a swelling the size of a small orange about the brim of the pelvis on the right side; there was considerable tenderness on pressure and a sense of elasticity conveyed to the finger. Per vaginam the uterus was rather fixed and pushed over to the left side of the pelvis, whilst high up to the right of the uterus was an elastic swelling which was continuous with the swelling felt through the abdominal wall. The discharge, as it issued from the vulva, was ascertained to be purulent, and when the patient was examined with a speculum a thick tenacious fluid was seen issuing from the os. (The notes unfortunately do not state if it was pus-like.)

On May 24th, the intestines being carefully pressed away from the tumour, Hensley's exploring aspirator was used just above Poupart's ligament, and some thick offensive pus was drawn off.

On the following day the patient was subjected to median abdominal section, with a view to draining or removing the disease. Upon pushing the bowels aside the tumour was with some trouble exposed, lying deeply, and found to occupy the right side and upper portion of the pelvis; adhesions to uterus, intestine, and pelvic brim entirely negatived the idea of removal, accordingly the tumour was incised, and found to possess walls of great thickness, as had been conjectured at the time of aspiration. Some two ounces of stinking pus were sponged away as it oozed out; the incision was then enlarged, and the finger searched the soft interior of the abscess. The abdominal wall was then depressed and stitched firmly to the margins of the sac; a drainage-tube and some wood-wool completed the dressing.

Two days after operation the offensive discharge disappeared from the vagina; the temperature, normal for the first four days, rose on account of some pus shut up by the stitches, and fell when these were cut. The cavity of the tumour was kept constantly drained until obliteration was completed; and the patient left the Infirmary in good health and capital spirits on July 16th, having had a painless "period" since operation.

Remarks by Dr. LEDIARD.—The interest of the case lies very much in the fact that we had to deal with a pyo-salpinx or collection of purulent fluid within the right Fallopian tube, which leaked from time to time into the uterus—a circumstance which has not hitherto been noted in connexion with this disease. Mr. Lawson Tait informs me that he has often expected to find a hydro- or pyo-salpinx communicating with the uterine cavity, but has never done so. I was much struck with the thickness of the walls of the tumour, which would be understated if put at half an inch; and it seems reasonable to suppose that the density of the walls prevented that increase of size in the tumour which might have occurred, thereby forcing open the uterine end of the Fallopian tube and establishing leakage rather than drainage. The question of draining the tumour from the uterine cavity we did not care to entertain, and were fortunate enough, by the recovery of the patient, to be unable to say how far such idea could have been realised. One other point which seems to confirm the diagnosis, and one which may be of diagnostic value in the future, is the statement of the patient that the yellow discharge was mixed with the menstrual fluid.

KASHMIR MISSION HOSPITAL.

DISEASE OF MASTOID CELLS; OPERATION BY INCISION AND GOUGING; RECOVERY; REMARKS.

(Under the care of Mr. ARTHUR NEVE.)

BULAND K——, a Pathan, was admitted for very extensive syphilitic ulceration of the palate. When about to be discharged after successful treatment, he complained of much pain in the ear. Examination showed the membrana tympani bulged forward by pus. A free incision was made in the tympanum, and pus escaped. A considerable quantity exuded daily, and for a time he had relief. The escape became, however, intermittent, and the pain very intense, affecting one side of the head. To pressure there was some tenderness over the mastoid process. After two or three weeks' treatment without material benefit an operation was resolved on.

Operation.—Under chloroform a crucial incision was made, freely exposing the bone, into which, by means of a narrow gouge, a hole was drilled. At a depth of half an inch pus was reached, and a cavity containing perhaps half a drachm exposed. This was syringed out, and powdered with iodoform.

Progress.—The progress was very satisfactory. There was complete relief of pain. The operation wound closed in the course of a few weeks, and shortly after the discharge from the ear ceased altogether. The patient was discharged cured, and when last seen, a year having elapsed since the operation, was in good health, and had suffered no relapse of the ear disease.

Remarks.—Many successful cases of this operation have been recorded. In this case the marked syphilitic taint, and the acute course of the symptoms, both indicated the necessity of active treatment, and afforded a healthy prognosis. If the symptoms had been far less marked, it is probable I should have resorted to operation. There is no reason why the principles of ordinary bone surgery should not be applied to the mastoid process; with proper care no harm can result. In the more dubious cases good will frequently result. The disease, if allowed to continue uncured, is of serious import, and an operation affording any reasonable hope, and with little attendant risk, might probably be resorted to with advantage far oftener than is at present the case. I examined the ear on July 18th, 1884. The patient's hearing was normally acute, and the tympanum appeared quite healthy.

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Reviews and Notices of Books.

Report on the Scientific Results of the Voyage of H.M.S. "Challenger" during the years 1873 to 1876, under the command of Captains Nares and Thomson. Prepared under the superintendence of the late Sir C. WYVILLE THOMSON, Knt., F.R.S., and now of JOHN MURRAY, F.R.S.E., one of the Naturalists of the Expedition. Zoology, Vol. VII. Published by order of Her Majesty's Government. London: Longmans and Macmillan. Edinburgh: Adam Black and Douglas and Foulis. Dublin: A. Thom & Co. 1883.

THE contents of this volume are:—1. Report on the Anatomy of the Spheniscidæ collected by H.M.S. *Challenger*, by Morrison Watson, M.D. 2. Report on the Pelagic Hemiptera collected by H.M.S. *Challenger*, by F. Buchanan White, M.D. 3. Report on the Hydroida dredged by H.M.S. *Challenger*. First part, Plumularidæ, by G. J. Allmann, LL.D. 4. Report on the Specimens of the Genus Orbitolites collected by H.M.S. *Challenger*, by W. B. Carpenter, C.B., M.D.

The Report on the Spheniscidæ, or Penguins, by Dr. Watson, extends over 242 pages, and the letterpress is illustrated by no less than nineteen plates showing the anatomy of this remarkable group of birds. The plan Dr. Watson adopted has been to select a typical specimen—the Eudyptes chrysocome obtained from the island of Tristan d'Acunha,—and to make a thorough and complete dissection of it; the variations met with in dissecting other species are carefully noted and compared with the characters of the typical form. On the whole it proved that the variations were slight.

The penguins have received a considerable amount of attention at the hands of naturalists. Cuvier, Meckel, and Owen have each given good descriptions of their osteology; Reid, Coves and Gervais, and Alix have published monographs upon one or more species, but none of these compare in fulness to the present memoir. The vertebral column in the dorsal region is remarkable for the resemblance of the vertebræ to those of reptiles in being opisthocælous—that is in the anterior surface of the bodies being globular and rounded, whilst the posterior are deeply concave, so that the convexity of each vertebra is received into the concavity of the vertebra next preceding. Dr. Watson finds this peculiarity confined in birds to the auks and penguins. He finds that there are ten vertebral ribs, the last being very slender and buried in the abdominal parietes, so that it is apt to be overlooked. The sternal ribs are eight in number. The scapula is of relatively larger size than in any other group of birds. He notices that the characteristic feature of the wing of the penguin as a whole is to be found in the great amount of compression exhibited by all the bones of which it is composed—a flattening that is probably due to the alteration of its functions, for in these birds the power of flight is lost, but the wing is converted into a paddle, which serves the purpose of propelling the bird through the water.

"In accordance with this alteration of function, the bones of the wing are so modified in form that that organ may be carried forwards, while its sharp anterior margin offers the minimum resistance to the surrounding fluid. In the backward or effective stroke, on the other hand, a broad surface is presented to the water, and instead of the wing being carried backwards, the bird is propelled forwards in accordance with the requirements of the animal. Moreover, the movements permissible between the separate segments of the limbs are much more limited than in other birds; so much so that movements of pure flexion and extension in the joints beyond the shoulder can scarcely be said to be possible. These articulations, however, admit of a very considerable amount of rotation, and consequently, instead of the limb being converted into an absolutely rigid paddle or oar, the rotation in question converts the wing into a screw-like blade, the curvatures of which are constantly varying in accordance with the amount of rotation, which the forms of the different joints permit."

On observing the movements of the wing of an Aptenodytes which recently formed part of the collection of the Zoological Society, he found that the—

"wing of the penguin is never used in the manner of a rigid oar, which would imply the *simultaneous* movement of both wings in the same direction, in order to propel the bird. On the contrary, the wings are often and, indeed, usually, brought into use *alternately*, much in the same manner as the pectoral fins of a fish, and in every movement of the wing screw-like curvatures, which are due to the rotation of the different segments of the limb upon one another, are strongly developed. In fact, a constant screwing and unscrewing of the separate alar segments upon one another take place simultaneously with the forward or backward movement of the organ as a whole."

We purpose to notice the other sections in a future number.

Principes Techniques d'Assainissement des Villes et Habitations. By A. WAZAN, Civil Engineer. Paris: Baudry and Co.

AT this moment, when the prevalence of cholera renders the necessity of sanitary improvement most urgent, our neighbours are to be congratulated on the publication of a work on the technical principles of sanitation by M. A. Wazan. This eminent engineer is one of the few persons in France who has thoroughly studied the question of domestic and public drainage. It is singular how ignorant French engineers, architects, and medical men are of the practical details of drainage. They seem to have assisted at none of the long discussions held for so many years in England on the difficulties of resisting the ingress of sewer-gas into dwellings. The great majority do not even recognise the necessity of trapping a soil-pipe. M. Wazan opens the subject by dealing with the water-supply, taking as his model town Marseilles, which has a cubic metre of water per head per day, while Paris receives only 168 litres, and this to a great extent is wasted in the streets. By engineering works of no very difficult description the water-supply of Paris could be raised to a metre per day, and M. Wazan warmly advocates this increase. With regard to water-distribution, the author is in favour of constant supply, points out all the dangers of cisterns, and urges their employment solely for flushing drains and disconnecting the water-supply from the closets.

On the all-important question of house-drainage M. Wazan has thoroughly adopted English ideas. He believes in water drainage, and, quoting Dr. Carmichael's experiments, argues that the syphon-trap is an efficient protection against the introduction of germs, which he maintains are retained in the water. We have then set before us illustrations of all the well-known traps and syphons in use in England; but in every instance the author advocates the necessity of soil-pipe ventilation. The mere outlet on the roof of the house is not sufficient, and he maintains that there should always be an inlet below, and a ventilator on the soil-pipe side of every closet syphon. Imbued by such principles, it naturally follows that all French sanitary work is condemned. Those few houses in Paris where the drainage is direct to the sewer, and an attempt is made to imitate the English system, are loudly denounced for their sanitary imperfections. Under these circumstances, and considering that everything that has been done in France has been performed badly, it is somewhat surprising to find M. Wazan quite hopeful as to the practicability of carrying out in Paris our most advanced theories on water drainage. Certainly his work will contribute greatly to this result, but one book will not suffice to educate an entire people. In England we are far behind M. Wazan's ideal. His book, it is true, is a most complimentary epitome of the best work done in this country;

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but the best work is the exception to the rule, and it is doubtful whether the French can be made to at once appreciate what is scarce, even in England. If they follow English example, it will be, we fear, much in the sense already denounced by M. Wazan himself. Our blunders will be repeated, and it will take a long experience before anything like perfection is attained. Nevertheless, if this pessimist view should unfortunately prove correct, it will not be M. Wazan's fault.

A Practical Treatise on Materia Medica and Therapeutics. By ROBERTS BARTHOLOW, M.A., M.D., LL.D., Professor of Materia Medica and General Therapeutics in the Jefferson Medical College of Philadelphia, &c. Fifth Edition, revised and enlarged. New York: D. Appleton and Co.

THE revision of the United States Pharmacopœia has necessitated the publication of a new edition of this work; in it we therefore find numerous alterations and additions in that part of the volume devoted to materia medica, but the author has at the same time spared no pains to bring it up to date in all respects. Besides other new matter, we note the addition of an article on the Convallaria Majalis. Dr. Bartholow states that "the signal advantage which it offers over digitalis" in heart disease "is the absence of danger from its administration and the freedom of the cerebro-spinal axis and the digestive organs from disturbance." He points out, however, that the reports on its use "are not uniformly favourable." The article on Electricity has been much extended and improved; a section having been added on Magneto-therapy, and that on Galvanism rewritten. In this edition, too, are plates which have not appeared in previous ones. In the article on Lead we read, "Paralysis of the common extensors of the fingers and supinators, while the power of the flexors and pronators is much less diminished, constitutes the very striking phenomena of lead poisoning or wrist-drop." This is scarcely correct, the supinator longus as a rule escapes the paralysis. We are surprised to find in the section on Phosphorus no reference to its use in leucocythæmia and Hodgkin's disease; cases in which it appears to have been of undoubted benefit have been recorded by Wilson Fox, Broadbent, and others. Possibly this is an accidental omission only, as we find a reference to leucocythæmia in the index under the head Phosphorus, though there is none in the text. Some words in this volume—e.g., "fiber" for fibre, "hypodermatic" for hypodermic, appear strange to the English eye. The large circulation and the rapid succession of new editions of Dr. Bartholow's work prove its appreciation by the profession; and the admirably complete and systematic arrangement of the contents, together with the scientific way in which the subject is treated, amply justify its reputation and reception.

OUR LIBRARY TABLE.

Lehrbuch der Physiologie. Dr. A. GRUENHAGEN. Leipzig: Leopold Voss.—We have received the first two parts of this text-book, which is the seventh edition of Wagner's well-known work, two or three editions of which were published by Otto Funke; and which has now been thoroughly worked up to the present date by the learned professor of physiology at Königsberg. The treatise has always held a high place amongst works on physiology from the clearness with which it is written, the absence of unnecessary details, and the full references it gives to the principal and most trustworthy sources of information. It is by no means a mere compilation of facts strung together to aid a student in passing his examination, but a thoughtful exposition of the principles on which modern physiology rests. The two parts now issued deal with the blood and circulation and with digestion, and the whole work will appear, it is stated, in three volumes. The only previous edition we have to hand with which to compare the present is the fourth, published in 1863. We notice that the type is larger, and that whilst some judicious pruning has been practised, much new matter has been introduced. Thus, under the head of the Microscopical Relations of the Blood, the section has been much enlarged by an account of the instruments devised by Malassez, Hayem, Gowers, Abbe and Thoma, and Zeiss, and the results obtained by their use; the red and white corpuscles are more fully described, and the action of reagents upon them is better given. The theory of the coagulation of the blood, with the experiments of Schmidt and Hammarsten is discussed at considerable length, and a full description is given of the gases of the blood, yet the whole section is only augmented by a page or two. The entire work seems to have undergone careful revision, and it may be recommended as one of the best treatises on physiology extant.

German-English Medical Dictionary. By JOSEPH R. WALLER, M.D. Vienna: Toeplitz and Deuticke. 1884.—Dr. Waller states in the preface that his dictionary is founded on Cutter's Dictionary, with the addition of many descriptive terms and the omission of obsolete and unused words. It contains about nine or ten thousand words; the rendering of the English equivalents are concise, correct, and appropriate. For example, *Brand* is given as scald, scalding, burn; gangrene, mortification; caries, necrosis; *Brand in den Zähnen*, caries; *neissen Brand*, gangrene; *feuchter Brand*, humid gangrene; *trockener Brand*, mummification; *erweichter Brand*, colliquation. This is very well done. There are, however, some terms that we miss. Why are *Wagrecht* and *Schwerpunnkt* omitted?

Students' Manual of Electro-Therapeutics. By R. W. AMIDON, M.D. London: G. P. Putnam's Sons, Henrietta-street, Covent-garden.—This little book, the author says, is presented to the medical public chiefly as a protest against the mysticism and charlatanry which have ever hung around the literature and practice of electro-therapeutics. The aim of the writer has been to present that amount of knowledge of electro-physics necessary to the comprehension of the construction and use of medical batteries, to point out the chief physiological effects of electricity, to sketch the methods of electro-diagnosis, and to show the general lines of treatment. In all these respects the author has faithfully kept his word. We can strongly recommend the book to students as a good introduction to a study of the subject.

Zeitschrift für Biologie. By KÜHNE and VOIT. Band 20, Heft 3. 1884.—This part contains the following articles:—1. On the Influence of the Extractions of Meat on the Development of Animal Heat, by Dr. Max Rubner. 2. Researches on the Relation of various Amides in the Animal Organism, by Dr. H. Weiske and B. Schulze. 3. On the Quantitative Estimation of Urea by means of Bromin Solution, by H. J. Hamburger. 4. The Chemical Composition of Cartilage, by Dr. W. Krukenberg. 5. On the Normal Fæces of Carnivorous Animals, by Dr. Friedrich Müller. 6. Estimation of the amount of Nitrogen found in the Fæces which does not proceed from the Food, by Hermann Rieder. 7. The Food of Labourers in Siebenbürgen.

Public Health Tracts.—Dr. Cornelius Fox, formerly medical officer of health for a combined district in Essex, has reissued in a stout pamphlet twelve of the health tracts which he prepared during his term of official work. They relate to many important points on which the views of a skilled officer of health are especially valuable; such as the question whether enteric fever is ever spontaneously generated, the supply of rainwater to cottages in rural districts, and the principles on which legislation respecting the pollution of rivers should be based. The work is pub

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lished and illustrated by Messrs. Churchill, and it will prove useful to students and others who take an interest in public health work.

New Inventions.

POCKET URINE TEST-CASE.

MR. ERNST JAHNCKE, Canonbury Works, Dorset-street, London, N., has at the suggestion of several medical practitioners introduced a useful and convenient pocket urine-testing case to the notice of the profession. It consists of a nickel-plated box of very simple construction measuring four inches in length by three in breadth, and three-quarters of an inch in depth, lined with velvet and divided into suitable compartments. The length of the box at one side is occupied by two test-tubes one within the other. When not in use a small urinometer in a satin sheath rests inside the smaller. The outer and larger is flat-bottomed and is intended to hold the urine when the specific gravity is taken. The remaining area of the case is divided transversely by a hollow partition which is ingeniously contrived to hold two books of red and blue litmus paper, while at the same time it keeps in position the other articles in the case. These are three small glass-stoppered bottles and a spirit-lamp, arranged as shown in the figure. The bottles are intended



to contain the appropriate tests for chlorides, sugar, and albumen. For the last named picric acid or other solid test is preferable from its emitting no fumes. Two other plain tube-bottles designed for Dr. Pavy's test-pellets for sugar and albumen accompany the case. They are tastefully fitted with capped corks, and their size admits of their being used to replace two of the bottles contained in the case, or *vice versâ*, at the wish of the purchaser. The fact that this is eminently a pocket case, small, neat, and sufficient, with its ease of adaptation to different methods in testing, renders it a most useful article. Not the least of its recommendations is its very moderate price.

SEIZURE OF UNSOUND MEAT.—The whole of the cargo of frozen beef on s.s. *Duke of Westminster*, amounting to about 150 tons, has been seized and destroyed by the order of the Medical Officer of Health for the Port of London. The reason for its seizure was that the meat was unfit for food on account of its being in a state of incipient decomposition.

THE THIRTY-EIGHTH REPORT OF THE COMMISSIONERS IN LUNACY.

PUBLIC attention has been so strongly directed of late to the consideration of the Lunacy Laws, and professional interest in mental diseases is so rapidly developing, that this report should obtain more consideration than falls to the lot of most Blue Books. Throughout the report no allusion can be found to any case of wrongful admission or detention in private asylums, a fact which will probably surprise those who have studied the popular lunacy literature of recent years, and will be held to be satisfactory or the reverse according to the views entertained on these subjects. To the profession it will be of interest to learn that the total of persons recognised by the Commissioners as of unsound mind was 78,598 at the end of 1883, being an excess of 1763 during the year. Satisfaction must be felt that this is not really increase, but accumulation; the ratio of first admissions into asylums during the year having been 5·15 per 10,000, when allowance has been made for the transfer of a large number of chronic imbeciles from workhouses to asylums. It is still more satisfactory to observe from Table III. that this ratio of admissions (5·15 per 10,000) is about the average for the last five years, and is decidedly less than the ratio attained during the first years of the action of the Government grant to lunatics in 1874. Private lunatics have increased in number from 7023 in 1873 to 8958 in 1883, the ratio to population having slightly diminished. The recovery rate for the year has been 38·5 per cent. on the admissions, being below the average (39·53) of the last ten years. The most valuable table in the report is that (No. XIV.) which shows the professions or occupations of the patients admitted into asylums during the year. These are grouped in accordance with the census reports of 1871 and 1881. The professional and commercial groups yield by far the largest proportions, varying from 5 per 1000 in soldiers to 3·4 in civil engineers, and 2·4 in artists to 1·0 in the teaching and lecturing class. In the commercial group travellers stand high (1·3 per thousand). In the agricultural, farriers and veterinary surgeons head the list (1·3), while shepherds and gamekeepers are lowest (·5). Of manufacturers, paper-makers are lowest (·3), while of handicrafts, plumbers, painters, and glaziers are highest (1·0). The group of persons employed in the heavier kinds of manual labour yields a lower proportion than any other (·48), miners being the lowest of its constituent classes (·3). All these proportions require correction by the ages of the persons included in the various classes and groups, and by other considerations. General paralysis was present in 13·1 per cent. of the male admissions, and in 3·2 of the females, the corresponding figures for epilepsy being 11·1 and 7·8; the latter disease existed to a much greater extent among the paupers than in the private patients, the proportions being 10·4 to 3·9. The suicides were eighteen in number, including four who were absent from asylums on trial. It would be desirable that some record should be made of suicides by insane persons not under certificates. If such cases were reported by the coroners to the Commissioners, the latter, it may be predicted, would, by investigation, obtain some valuable information in regard to the action of the present law of certification in preventing insane persons being placed under proper care. The long list of additions to existing asylums testifies to the willingness throughout the country to provide the accommodation required, and regret must be expressed that this is so often in the form of annexes for chronic cases.

The year's retrospect cannot but be considered as satisfactory, and although it might be desirable that the functions of the Commission should be extended, yet from the amount of work recorded in the report this would not appear possible without an increase in the *personnel* of the present Commission.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 20, 1884.

THROUGH the courtesy of Director-General Dr. CRAWFORD we are enabled to reproduce a very important memorandum by Dr. TIMOTHY LEWIS on the comma-shaped bacillus, stated by Dr. ROBERT KOCH to be the essential cause of cholera. The memorandum gives evidence of having been the result of much labour, and has manifestly been prepared with great care as befitting the importance of the subject brought under review. We will not attempt to epitomise what is already limited to the briefest statement of facts, and we only point out the salient features of the memorandum for the purpose of directing our readers' attention to the document itself. As might have been expected, Dr. LEWIS has taken a deep interest in the recent investigations in which the German and French cholera commissions have been engaged, seeing that, in conjunction with Dr. D. CUNNINGHAM, he had been for several years occupied with like inquiries in India. Profiting by the present vacation at the Army Medical School, he devoted a portion of his holiday to proceeding to the south of France for the purpose, as he states, of renewing his acquaintance with the disease, and of studying afresh the microscopy of the alvine discharges. As a preliminary to his reference to the results of this visit, he submits the history of the German Commission to a brief review, and the results to such criticism as has not hitherto been attempted either in England or on the Continent; indeed, thus far the history of Dr. KOCH'S progress from Berlin to Egypt, a little more than a year ago, and from Egypt to India and back to Berlin, has been a series of apparent triumphs along the whole line. The time has come, however, to submit the results of his inquiries to the test, and the full details of them which have recently been placed before the world are practically an invitation to the profession to weigh them in the scales. This Dr. LEWIS has done, and we think that our readers will be as much surprised when they reach his paper as we ourselves were.

In the first place, it is pointed out that the specific organism which Dr. KOCH believed he had discovered in Egypt was a straight bacillus, like the so-called specific bacillus of glanders; that he had, in fact, already discovered them in specimens of intestine from four natives of India which had some time previously come into his hands; but that he had looked upon their presence in the mucous membrane as due to post-mortem changes, until he again found them in connexion with cholera in Egypt, when he felt that they were sufficiently characteristic to afford material assistance in pronouncing on the identity of the disease in both countries. In the course of a few months, however, it was announced that the specific organism of cholera was not straight, but curved or comma-shaped; so that, apparently, as Dr. LEWIS remarks, the microbe first fixed upon had to be abandoned. The culminating point of importance in the memorandum is the announcement that curved or comma-shaped bacilli, identical in size, form, and in their reaction to aniline dyes with those found in cholera, are ordinarily present, to a greater or less extent, in the secretions of the mouths of perfectly healthy persons.

Seeing that as yet the sole argument of any real value which Dr. KOCH has adduced as to such organisms being the cause of the disease, is his assertion of their entire absence from the alimentary canal in any condition save that of cholera, Dr. LEWIS' discovery is one of great moment, for so widespread has the doctrine that such "commas" are the cause of cholera become, that regulations are now said to be in process of formation which shall govern the mutual intercourse of nations during periods of cholera epidemics, based mainly on the results and inferences of the Berlin Cholera Commission in India. To the correctness of the statement that "commas" of this character may be found in the saliva in health we ourselves can testify, having had an opportunity of seeing the preparations to which Dr. LEWIS refers in the table which he gives of the comparative dimensions of the "commas" found in cholera and in the secretions of the mouth. So far as could be judged by passing one slide after another through the microscope (under a sixteenth of an inch oil-immersion objective), we could detect no difference between the curved bacilli in the several slides, and, indeed, in some instances, it appeared to us that it was even easier to demonstrate their existence in the saliva preparations than in those of choleraic alvine discharges. It must be borne in mind that ordinary preparations of the latter present a very different appearance as regards the number of "commas" in the field of the microscope from that presented by "pure cultivation" of them.

Dr. LEWIS does not enter into the question of the possible existence of choleraic, as contrasted with salivary "commas," but simply takes his stand on the common-sense ground that organisms found at the termination of the alimentary canal which are of the same form and size as others found at its commencement are probably one and the same kind. Consequently the *onus probandi* that they are different lies with those who may declare such to be the case.

MR. MUNDELLA'S instruction to Mr. FITCH, when that officially-minded gentleman was directed to append a memorandum to Dr. CRICHTON BROWNE'S report, must have been substantially, if not in so many words, "No case—abuse the plaintiff's attorney." In the very endorsement of the paper to be traversed a most damaging admission is made. The plea that Dr. CRICHTON BROWNE "fired off a letter" at the department over which Mr. MUNDELLA presides is not simply abandoned, but refuted, for "Dr. CRICHTON BROWNE'S *Report*" is thus designated. It was, of course, inevitable that this admission should be made, because the opening sentence of the communication which the Vice-President has so reluctantly given to Parliament and the public cites the terms of the invitation "to inspect a few public elementary schools, and *report* to you my impression as to the effects of their work on the health of the children attending them." Moreover, it transpires that this very Mr. FITCH, who is now commissioned to pour contempt on Dr. CRICHTON BROWNE and his report, was specially instructed or requested to accompany the doctor in his tour of inspection, and, curiously enough, the doctor pointedly

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thanks Mr. FITCH for his "courtesy and helpfulness." In fact the whole story lies in a nutshell. Either mistaking his man—and a remarkable passage in Dr. CRICHTON BROWNE'S letter to *The Times* on Thursday lends countenance to this conjecture—or in a moment of overweening confidence in his Department, Mr. MUNDELLA requested Dr. CRICHTON BROWNE to inspect and report on the schools under the Vice-President's official protectorate, doubtless expecting that the report would be favourable, and help to support his policy of inordinate "forcing." When, instead of support, he encountered a crushing and ruinous opposition, Mr. MUNDELLA resorted to the not very dignified or ingenuous artifice of throwing over both the report and the reporter. Had no special pressure been brought to bear on the Department, nothing would have been heard of either; but as BALAAM cursed instead of blessing, and the *contretemps* could not be kept quiet, the Vice-President has called upon his official subordinate to controvert the arguments of his quondam colleague. The manner in which Mr. FITCH has discharged his obligation in this matter *may* be satisfactory to his chief. For the sake of that gentleman we trust it has proved to be so. So far as public opinion is concerned we do not think it is satisfactory, nor can we believe that Mr. FITCH himself so regards it.

The allegations by which Mr. FITCH endeavours to discredit the report of Dr. CRICHTON BROWNE are briefly these:—1. That when he commenced his itinerary "he had no personal knowledge of the working of an educational system; that he had not, as school manager or otherwise, being concerned with the administration of schools; that he had not even been engaged in the ordinary practice which enables a doctor to know something of the children of the poor, their pursuits, and their ailments; and that he had never visited an elementary school." These allegations are probably well founded to a certain extent, though Dr. CRICHTON BROWNE does not admit the whole impeachment. It is true that the critic was not committed to an approval of the educational system he was called upon to criticise, either as school manager or as medical officer retained by authority, and therefore he *was* open to that fatal objection of the official mind—namely, that he could not approach the system on which he was to report with any traditional *penchant* in its favour. Outside the circle of "authority" these very disabilities will, if we mistake not, be held to constitute special qualifications for the formation of an independent judgment; but to Mr. FITCH—more clear-sighted than the Vice-President, who, after all, is only the parliamentary chief—they were absolute bars to the fitness of the inspector. Mr. FITCH did not unfortunately know so much as he has since learned of Dr. CRICHTON BROWNE'S disqualifications when he commenced the itinerary, or he would have put him through a little preparatory training. No inconsiderable, but a very suggestive, part of Mr. FITCH'S memorandum is occupied with an elaborate statement of the precautions he would have taken to prepare the mind of Dr. CRICHTON BROWNE—or, in other words, to have secured a favourable report,—if he had only been better acquainted with the shortcomings of the critic confided to his pilotage. We can fancy how in the [illegible] Mr. FITCH [illegible] pointed out to [illegible] so dangerous [illegible] of the [illegible]

much trouble and difficulty the undisciplined zeal and thoughtlessness of a party chief may bring down on the authority of a Government bureau! The same sort of thing has happened in other Departments, but for the most part they are both controlled, and the closure and the gag are more readily administered. So much for the preliminary objection; let us pass on to the others. 2. The schools inspected by Dr. CRICHTON BROWNE were not fair—i.e., favourable—specimens. In the amplitude of his courtesy and ignorance of his *protégé* Mr. FITCH took Dr. CRICHTON BROWNE to the very schools to which he would *not* have introduced him if he had only known the facts. In short, he showed the nakedness of the land to the man he mistook for a friend, but has since discovered to have been a spy. In his letter to *The Times* the critic directly contradicts this statement. 3. Dr. CRICHTON BROWNE'S method of investigation is "neither prudent nor trustworthy." He stands before a class, say of sixty boys, asks all who ever have headache to hold up their hands." He even does worse than this in the opinion of Mr. FITCH, for "he proceeds to ask all who feel it at the back of their heads, at the top, on the forehead, all those who suffer from it in the morning, in the afternoon, in the evening, successively to hold up their hands." We do not like to hint at the bare possibility that there can be any subject of which Mr. FITCH is ignorant, or we might venture to suggest that perhaps this injudicious and untrustworthy proceeding on the part of Dr. CRICHTON BROWNE was really intended as a crucial test of the accuracy of the statement made by the boys. It may be—we merely say it may be—that a headache is a sort of thing that can only be investigated by asking questions of the sufferer, and that the best possible means of forming a judgment as to its nature and cause would be to ascertain the precise point to which it was referred, so that if a boy complaining of a headache said it was in the front when it ought to be in the back, or *vice versâ*, he would stand confessed as an impostor, or his pain would be shown to arise from some irrelevant cause. We offer this suggestion to Mr. FITCH with much deference, because obviously unless one has been a school doctor under the Educational Department, it is impossible to form any trustworthy opinion. At this point, however, there is one incident which we really must take leave to press on Mr. FITCH'S attention. Granted that he started—as he says he did—in ignorance of Dr. CRICHTON BROWNE'S want of judgment and untrustworthiness and of the badness of his method, how came it to pass that when these defects became apparent, as they must have been after Mr. FITCH had observed his procedure at two or three schools, he did not take him to some of those better establishments where the boys and girls have no headaches, or in official disgust throw up the business? By going on with the inquiry in spite of his discovery that the investigator was incompetent, Mr. FITCH has left it open to ill-natured people to say that he waited until the report was sent in to see the conclusion arrived at, and that if this had only been favourable, the badness of Dr. CRICHTON BROWNE'S method would not have been exposed. As it is, Mr. FITCH contents himself with denouncing the method, and seems to feel aggrieved that Dr. CRICHTON BROWNE did not adopt the plan which proved so successful at Do-the-Boys Hall, and introduce the subject of headaches with a flourish of the [illegible]

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children who, as it happened, alleged headaches, might be induced to consider whether these maladies did really exist.

For the rest, Mr. FITCH simply contradicts Dr. CRICHTON BROWNE'S assertions, and pours contempt on his conclusions. This is how he disposes of them:—"I do not hesitate to say that every one of the judgments which purports to have been formed from Dr. BROWNE'S visits to schools appear to me to be hasty and inaccurate, and to have been arrived at by a loose and partial method of inquiry." This is a tolerably bold and strong statement of opinion, and we are not surprised to find its author moved to avow that he makes it "under a considerable sense of responsibility." Had Mr. FITCH considered the matter a little further, he would probably have found the sense of responsibility increase until it reached a degree of tension that caused him to refrain from making the statement at all. Dr. CRICHTON BROWNE in his letter alleges that in the haste of his rejoinder Mr. FITCH has fallen into many mistakes of fact. Notwithstanding the memorandum of Mr. FITCH, Dr. CRICHTON BROWNE'S report will be accepted by the medical profession and, we believe, by the community at large, as the expression of a carefully formed and clear judgment by an exceptionally competent and candid critic. The fact that the conclusion arrived at is not in consonance with the judgment which the Educational Department has formed of its own work, but directly opposed to and strongly condemnatory of the policy of indiscriminate brain-forcing, which has found favour with Mr. MUNDELLA and his subordinates, will not be considered a proof that the Department must be right and its critics wrong; nor unless we misjudge and under-estimate the power of public opinion, will it be allowed to bolster up the system of "grinding tyranny" which not only Dr. CRICHTON BROWNE, but the majority of competent observers, condemn.

THE principal interest as to the present cholera epidemic in Southern Europe centres in Naples, where the intensity of the disease exceeds anything that was experienced in either Toulon or Marseilles. Following upon occasional rumours as to suspected or well authenticted cases of the disease, two definite cholera deaths were admitted to have occurred in Naples on August 27th last. With the exception of one day on which no death took place, the daily deaths varied from one to three up to September 2nd, when a sudden increase occurred, and 67 fatal attacks were registered. A slight abatement then ensued, but within a few days the mortality rose first to 113 on September 7th, then to 275 the next day, and on September 9th the highest mortality of the epidemic was recorded, no less than 493 fatal attacks being returned by the authorities. This terrible severity was maintained for several days, but since the 12th inst. there has been a tendency to abatement. The daily number of deaths, however, still exceeds 250. Unfortunately for its future prospects, Naples is in a thoroughly bad sanitary state, and it is evident that cholera, once imported into the city, found amidst its filth a soil congenial to its further development and spread. The state of panic and confusion which have reigned there, and in other parts of Italy, is lamentable. At Naples the food-supplies ran short, the hospitals became overcrowded to an extent that is almost incredible, and which removed almost the only chance of recovery remaining to many of the patients, and the burial of the dead became partially suspended for lack of the needed materials and labour. The visit of the King of Italy and of Prince AMADEUS to the stricken city, the calm heroism which accompanied that visit, and the improvements which were effected in consequence of the KING'S orders and advice, tended materially to raise the hope of the population. But no such visit can clear away the results of generations of sanitary neglect, and the prospect is one which must still be regarded as of considerable gravity. Fortunately for Italy, which needs to be spared any further calamity, the period which has now elapsed since the KING left Naples enables us to speak with confidence as to his having escaped infection; and we are glad that in a city where he was necessarily exposed to conditions of excremental contamination of air of a peculiarly dangerous sort, the precautions adopted of securing all his food supplies and water from Rome have been successful.

From the public health point of view, the contrast so far exhibited between Rome and Naples is very striking. Cholera was imported into both cities. In Naples, it was met by the very conditions known to favour its diffusion, and a terrible epidemic has resulted; in Rome it found a city prepared with means for the immediate isolation of the earliest attacks, an improved system of sewerage and water-supply, and a state of substantial advance in matters affecting the health of the people; and though more than once imported, the disease has on each occasion been stamped out. In the interests of sanitary progress it is sincerely to be hoped that the improvements effected in the Eternal City may still stand its population in good stead.

At Spezzia and several other places a serious mortality is still maintained, but there are at last some indications of abatement. The news from France is to the effect that occasional deaths still occur in and about the previously infected cities, towns, and villages, and that in some of the smaller places fresh outbursts from time to time take place. On the whole, however, it may somewhat confidently be anticipated that no serious aggravation of the epidemic is now likely to recur. The news from Spain is both contradictory and very uncertain, but although the disease still remains prevalent in such places as Elche and Novelda in the province of Alicante, it does not appear to have made any material headway; and this gives hope for believing that serious extension may, after all, be avoided this year. The lessons of the epidemic have, even at this stage, not been altogether thrown away. Thus, both in France and Italy, the folly of putting any trust in land quarantine, a system which received nothing but condemnation at the Vienna Conference of 1874, appears now to be recognised, and it may be hoped that this false prop being removed, measures will be adopted for replacing it by something more trustworthy; that the abounding filth conditions of so many towns and villages in Southern Europe will be removed; and that means for proper isolation will be prepared, and so held in readiness as to be capable of immediate application whenever they are necessary. The present epidemic has shown the costliness of preventable disease in more ways than one. Tourists have avoided the infected countries, and already inquiry is being made as to how far it may be safe for invalids to visit the Riviera and the other

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southern resorts to which so many English flock during the period which commences with our November fogs and continues till our cutting March winds have ceased. We regret to say that the history of former epidemics in Southern Europe supplies a by no means favourable answer. Thus, when cholera was epidemic in France, fresh invasions of districts and departments continued right up to the end of December; and again in 1873 cholera maintained itself in certain towns up to December 11th, and appearing in Paris on September 5th, it continued there three months, causing 855 deaths. So also as regards Italy; cholera breaking out in 1865 continued through the winter of 1865–66, and it had not ceased in the following spring. That cholera will necessarily be maintained or recur in the districts hitherto affected we do not wish to imply, but where the disease has prevailed in connexion with sanitary circumstances favourable to excremental contamination of air and water, the chances of a renewed or maintained diffusion, owing to retention of the poison, will probably not be inconsiderable; therefore we would advise intending visitors to warmer climates to seek those towns and watering-places which lie at some considerable distance from the infected localities, and to which the disease shall not have extended when the time for migration arrives. So far as we can judge at this date, the south-western coast of France and a very large portion of the coast of Spain, together with Algiers, will be far safer places of residence than many localities along the Riviera. The lapse of another month will, however, tend to clear up doubts that may now exist on this point.

IN the new Royal Warrant of June 10th for "the pay, promotion, and non-effective pay of the army," which has just been issued from the War Office, a clause of great importance has been inserted, regulating the tenure of the professorships in the Medical School at Netley. Hitherto there has been no rule laid down respecting these appointments, which, with the exception of the chair of Military Hygiene which became vacant in 1876 by the lamented death of Professor PARKES, have been filled by their present occupants for the last twenty-five years. While stringent rules have been made and enforced for the retirement of officers of all grades and departments in the army after certain periods of service, or on attaining a specified age, the appointments of the professors entrusted with the special instruction of all medical officers entering the Department have been left untouched, and superannuation has been a term unknown to them. The War Office authorities appear at last to have awakened to the necessity of adopting some measure to ensure the teaching power being kept up to the mark, and provision being made, by the renovation of its staff, to prevent the school becoming a Sleepy Hollow. ARNOLD was of opinion that fifteen years was a sufficient limit for the tenure of the head mastership of a school by any teacher, and the War Office seems to have recognised the practical value of such a rule as applied to the professors, masters, and instructors in the various educational establishments for officers of the Army. As regards the Medical School, the regulation adopted is as follows:—"The [illegible] office of the [illegible] Military Medical [illegible] India, [illegible] shall not be extended beyond fourteen years, or beyond the attainment by the officer of the age fixed for his retirement from his rank, whichever may happen first. In the case of a civilian being appointed a Professor of the Army Medical School, the term of office shall not continue after the age of sixty-five years."

Under this regulation two of the Professorships will at once become vacant, the chairs of Military Medicine and of Military Surgery. Dr. DE CHAUMONT, who occupies the chair of Military Hygiene, having entered upon his second septennial period, will doubtless be retained till he has completed fourteen years; while Dr. AITKEN, the Professor of Pathology, will continue to hold his appointment till he attains the age of sixty-five. We consider this move on the part of the War Office to be most judicious, and likely to promote the efficiency of the important medical school at Netley. However much we may regret the retirement of individual professors, we cannot doubt that their place may be efficiently filled up, and that the infusion of young blood into the establishment will promote its utility and, we trust, remove the charge against it that the splendid opportunities afforded by Netley Hospital have not been more fully utilised in the interests of the profession, and especially of the army medical officers. But while we thus approve of the step taken by the War Office, we cannot but regret that no similar provision has been made in the case of another very important body connected with the medical department—the Army Sanitary Committee. From the Army List it appears that Dr. SUTHERLAND has held an appointment on it for upwards of twenty-two years, and from his professional standing he must have considerably exceeded the age laid down as the limit of all army service. We are well aware that he has rendered very good service in that capacity, but the same reasons which have called for the regulation as regards civilian professors in the school apply to him. A period must arrive in every long life when the powers of mind and body become unequal to the amount of work demanded of them in performing important duties, and it is manifest that the question of when that period has arrived cannot be left to the individual most personally interested. Few, very few, men are willing to acknowledge that their day is gone for active work, and hence the necessity for an official limit to an official career. We believe the subject has only to be brought to Lord HARTINGTON'S notice to ensure in the interests of the Service some such regulation being extended to the Army Sanitary Commission.

IT was rightly stated by Lord RAYLEIGH in his Presidential address to the British Association that it is remarkable how many of the playthings of our childhood give rise to questions of the deepest scientific interest. "The truth, or may be understood," he continued, "but a complete comprehension of the kite and of the soapbubble would carry us far beyond our present stage of knowledge." Similar language to that used by the physicist might be held by the biologist, and we might well say if we possessed a thorough knowledge of the simplest mass of protoplasm that can present itself to our observation, we should occupy a more advanced standpoint than that on which we are at present compelled to rest. Great credit is [illegible] to

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those who by the study of some elementary subject seek to obtain general principles which are of far-reaching importance. Such work was done by GRAHAM in his admirable researches on the phosphates, and on the process of osmosis, and such work has lately been done by ENGELMANN, who has contributed an excellent memoir on protoplasm movement to the "Handbuch der Physiologie," of HERMANN, which has just been translated by Mr. BOURNE, and published in the *Quarterly Journal of Microscopical Science*. In this memoir Professor ENGELMANN points out that protoplasm possesses not only contractility indicated by the movements it can effect, but irritability indicated by its response to external stimuli and automatism, or the power of initiating movement without any apparent excitation from without. The movements of protoplasm are to be distinguished from the movements which occur during the growth and reparation, and the segmentation and fertilisation of cells, principally by its greater rapidity and the absence of any relation to growth and reproduction, though the limits between the two cannot be sharply drawn. The characters of protoplasm are that it is homogeneous and transparent, almost always colourless, with a refraction index that is higher than water but lower than oil. It is, at least in some instances, doubly refracting in regard to light; it does not mix with water, but can imbibe it; is cohesive and extensile, with but little elasticity. As a rule there is no investing membrane, so that solid particles can be ingested by the outer layer of the body at any chosen spot. It generally presents granules and vacuoles. The granules may be albuminous or fatty, or consist of calcium carbonate, and often present Brownian movements. The vacuoles result from the separation of the fluid in the form of small droplets. In life the reaction of protoplasm is alkaline. ENGELMANN describes three kinds of movement, which he names respectively amœboid, streaming, and gliding. These movements only take place within certain limits of temperature below 0° C. and above 40° C. They are arrested at once and always above and below these limits, the protoplasmic mass usually assuming a rounded form and passing either into a state of cold or heat rigor. The withdrawal of water sends it into a state of dry rigor; but it is remarkable that saline solutions which prove fatal when added suddenly to protoplasm can be borne when the concentration is gradually effected, the organism appearing to be able gradually to accommodate itself to the unusual conditions. The presence of oxygen, though not necessary for the manifestation of movement, is necessary for its maintenance. Pressures of oxygen gas equal to from three to six atmospheres kill protoplasm. Stimuli of various kinds, mechanical, chemical, thermic, or electrical, all seem to impede the movement and to tend to cause retraction of processes and the gathering up of the mass into a compact ball. From the consideration of the various phenomena presented by the different kinds of protoplasm, ENGELMANN believes that we may regard it as an aggregate of most minute contractile excitable form elements, and that the movement as a whole is the result of changes of form of these very small elements. The nature, however, as well as the causes of the changes of form of these elements, remain for the present undetermined. Perhaps with improvements in the microscope, perhaps with the aid of colouring agents, some further insight into the actions and processes taking place in protoplasm may be ascertained.

No one can fail to be struck by the apparently increasing number of suicides. It may be that the total percentage of these distressing deaths upon the increment of the population has not increased, but it is beyond question that suicide, as a social calamity, has been thrust on our notice of late more than in remoter years. Until the statistical facts are made clear it would be idle to speculate as to the probable cause of this increase, if there be one. It is, however, not merely permissible, but politic, to bestow a passing glance on the subject as a whole. Suicides may be divided roughly into two great classes: those in which the self-slayers are intentionally conscious of what they are doing, and those in which they are either unconscious of their acts or perform them under distinct hallucinations or delusions of idea. This last class—which if not technically definitive will serve for our immediate purpose—is not, we think, a large one. Without hair-splitting, it may roughly be said that the great majority of those who kill, or try to kill, themselves in these modern times and in civilised communities are perfectly well aware of the nature of the act they are performing or attempting, and do the deed with a, so far, intelligent purpose of escaping from misery which seems unendurable, or because of some terror or shame that for the time overwhelms them. The law is mercifully interpreted for the sake of survivors; but, as a matter of fact, scarcely one in a hundred of the so-called cases of "temporary insanity" are correctly so described. It is heart-breaking or brain-tearing trouble that makes men and women long to die or impetuously seek refuge in death, either in the belief that in dying they will sleep or that consciousness will end in eternal oblivion. We do not say that there is a clearly defined process of reasoning in all these cases, though in the majority we believe there is; but in very few instances indeed is the real inner feeling one which differs greatly from the yearning to escape—anywhere, anywhere out of this misery. The rate at which men and women live nowadays has something to do with this feeling. Boys and girls are men and women in their acquaintance with, and experiences of, life and its so-called pleasures and sorrows, at an age when our grandparents were innocent children in the nursery. The young men of the day are *blasé* at two- or three-and-twenty, the young women *ennuyée*. Life is played out before its meridian is reached, or the burden of responsibility is thrust upon the consciousness at a period when the mind cannot in the nature of things be competent to cope with its weight and attendant difficulties. All this has been said before. There is not a new word or a new thought in it, and yet it is a very terrible and pressing subject. We cannot give it the go-by. "Forced" education commenced too early in life and pressed on too fast is helping to make existence increasingly difficult. We are running the two-year-olds, colts in a crippling race, and ruining the stock. If able and impartial observers would make it their business to ascertain the facts about suicide, they would be doing a good and useful work. We believe, not without some data upon which to base our speculations, that suicide *is* increasing, and that the active cause of the evil is mind-weakness the result of forced development and premature responsibility. Hasty

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and too early marriages, too anxious struggles for success in life, too hazardous ventures in business enterprise, the rush of undisciplined and untrained minds into the arena of intellectual strife, and, above all, that swinging of the self-consciousness—pendulum-like—between excess in rigor of self-control and untempered licence, which constitutes the inner experience of too many, are proximate causes of the breakdown or agony of distress which ends in suicide. The underlying cause is impatience, social, domestic, and personal, of the period of preparation which nature has ordained to stand on the threshold of life, but which the haste of "progress" treats as delay. It is not delay, but development; albeit this is a lesson rash energy has yet to learn from sober science.

Annotations.

"Ne quid nimis."

JOHN NETTEN RADCLIFFE.—IN MEMORIAM.

THE death of John Netten Radcliffe not only leaves a widow and her children in mourning, but sensibly depresses a great many members of the medical profession, and would have depressed them much more had not his death been preceded by a long and sad illness that almost reconciled even his friends to parting with him. For nearly two years, under the strain of work of the very best sort, all that was most precious in our friend in mind and body had failed. We try to forget how completely. In another column the nature and bearings of his work are set forth. Here we only give ourselves up to mourn over all that we have lost. To this journal he was no casual contributor, but a guide whose judgment was invaluable in crises and panics when the judgment of most men is apt to be at fault. Under his view the march of epidemics seemed regulated, they were bereft of half their terror, and the true line of duty and safety became clear. In 1866 his prompt and clear investigations put sharp limits to the cholera, and have secured comparative immunity and serenity since. Nor was the value of his judgment confined to questions of public and preventive medicine. He was a wise and experienced practitioner, and choice and a classical in his general and medical reading. There was a wonderful mixture of gravity and humour in his mood. The humour generally prevailed, and though often deep and keen, was always good natured and kind. Only those who had the advantage of knowing him somewhat intimately can tell how kind Radcliffe was, or how deep and practical was his sympathy. It amounted to a strong human affection extremely precious in all the great circumstances of life, and always most reliable when it was most needed, no matter what the trouble, or even the cost, to himself. If there was one part of his nature not sufficiently controlled by his good judgment it was this part. We have not yet heard the last of John Netten Radcliffe. He will be long remembered as one of the men who, under Mr. Simon's masterful lead, has placed the sanitary condition and organisation of this country high in the respect of civilised nations, though still far from realising their ideal. Not the least noticeable feature in Radcliffe was his patience with vestry and board of guardians' human nature. There was so much human nature and common sense in himself, that he could be tolerant even with sanitary authorities and with those who were "out" of sanitary ways. Such is the friend we have lost, such the man lost to the public service all too soon and at a comparatively early age. The work of the public service is very exacting and the remuneration inadequate. The death of Radcliffe, and all its circumstances, may raise the question how best to reward such lives as his and such services as he rendered. Our object here is more limited—we had almost said personal.

DISINFECTING THE SPUTA OF PHTHISIS.

DR. J. SORMANI, Professor of Hygiene at the University of Pavia, gave some interesting details at the Hygienic Congress of the Hague concerning experiments made this year on 150 guinea-pigs with the sputa from phthisis. The object in each case was to ascertain what chemical or other methods would neutralise the bacillus, which it was previously ascertained existed in large numbers in the sputa. The results of these experiments were summarised in the following manner:—1. The bacilli of tuberculosis were generally very difficult to destroy; dryness, exposure to oxygen, putrefaction, and most disinfectants failed to produce any effect. 2. A temperature of 100° C. only killed the bacilli after at least five minutes of ebullition. 3. The artificial digestion of bacilli showed that they were the last of all living organisms to be destroyed by the gastric juices or chloridric acid. A very active digestion is necessary to kill this microbe. A healthy man may destroy the bacilli in his stomach, but an infant or an adult with his digestive faculties impaired would easily allow the germ to pass the stomach intact, and retain its virulence in the intestinal tube. This determined enteric ulcerations &c. 4. The bacillus of tuberculosis can be preserved intact for a whole year when mixed with water. It is probable, though not proved, that it has retained its virulence during that time. Thus drinking water may become the means of propagating tuberculosis. It is probable that contaminated linen retains its virulence for five or six months. 5. Alcohol does not destroy the germ, and hard drinkers often suffer from tuberculosis. 6. Cod-liver oil, ozone, oxygenated preparations, and other similar remedies, have no effect in killing the bacillus, nor are benzoate of soda, salicylate of soda, sulphate of zinc and carbolic acid, iodide of silver, bromide, camphor, &c., of much greater use. They injure perhaps, but do not absolutely destroy the bacillus, at least not in the doses that can be taken without danger. 7. A more decisive action may be attributed to creasote, eucalyptol, pure carbolic acid, the naphthols, and bichloride of mercury. 8. For disinfecting spittoons, carbolic acid solution at 5 per cent. is thought sufficient, and Dr. Sormani asserts that the breath never contains any bacillus. He also suggested that essences of turpentine or eucalyptol should be diffused in the houses as an agent for the destruction of this special germ.

THE FRANKLIN BAY EXPEDITION.

THE account of the medical history of the survivors of the Lady Franklin Bay expedition just given by Dr. Green in the *Medical Record* of New York is full of interest. The unfortunate men who composed the expedition having subsisted on starvation rations for nine months, having nothing but brackish water to drink, no artificial warmth, and living almost continuously in a hut which gave only seventy cubic feet of space per man, were reduced in number from twenty-five to seven, whilst the survivors when rescued were *in extremis*, and were only restored by the greatest care and attention. During the first four months each man received a daily allowance of 14·88 ounces, composed as follows: Meat and blubber, 4·33 ounces; bread biscuit, 6·5 ounces; canned vegetables and rice, 1·4 ounce; butter or lard, 0·75 ounce; soup or beef extract, 0·90 ounce; berries, pickles, raisins, and condensed milk 1 ounce; in addition, the following casual contribution to their larder was made—two seals, one bear, eight foxes, and sixty dovekies. Such was their diet from Nov. 1st to March 1st,

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during the cruel winter months, considerably less than one-half the amount required for healthy nutrition, and a bad preparation for the further reduction that followed. During this period, however, only one death occurred, and that from scurvy, the only case that exhibited decided symptoms of that disease among the crew. On March 1st the ration was reduced to meat 6·8 ounces, dry biscuit 3·2 ounces, and an allowance ranging from 1 ounce to 3 ounces of a small crustacean, consisting of four-fifths shell and one-fifth meat; after May 12th, however, no regular ration was served out, and they subsisted entirely on the shrimp, reindeer moss, and the gelatin obtained by boiling the sealskin lining of their sleeping bags. With a view of approaching a state of hibernation, the men, except those told off to collect food, remained in their sleeping bags for sixteen or eighteen hours at a stretch. The men rapidly died, and on June 22nd only seven survived. Those who succumbed died with symptoms of hydrops pericardii. The survivors were found emaciated and anæmic to the highest degree, their bodies emitting a sickly odour of stale urine, and their face, hands, and scalp blackened with soot and dirt; they were excitable and irritable, almost irrational, and ravenously hungry; respiratory movement 12 per minute; pulse 52, soft and compressible; hæmic murmurs over base of heart; bowels obstinately constipated; urine almost suppressed. Temperature 97° F. under tongue. On giving food the urine discharged in the first twenty-four hours became more abundant, but was highly albuminous, and continued so for some time. The account of the sufferings of these men and the symptoms exhibited by the survivors correspond to those detailed by Dr. Richardson in the Franklin Expedition of 1821. Some surprise has been expressed with regard to the absence of scurvy, only one of the men exhibiting decided scorbutic symptoms; but the conditions which bring about this disease were fortunately absent. It is true they had no lime-juice; but during the earlier period the dietary was not of a scorbutic character, as they had berries, pickles, and blubber, which the experience of the Eira Expedition shows possess antiscorbutic properties. In the later stage they were able to collect a sufficient quantity of reindeer moss, which has been abundantly proved by the records of numerous Polar expeditions to be an effectual antiscorbutic. There is, therefore, no reason to think that the experience of Lieutenant Greely's Expedition will modify existing theories regarding the cause and prevention of scurvy. That disease, as has been abundantly demonstrated, is not produced by mere starvation, for so long as in the most scanty dietary there is present an antiscorbutic element, scurvy will not make its appearance.

IMMUNITY FROM CHOLERA AT HYERES.

IN the study of the present cholera epidemic, the position of Hyères is destined to attract a large share of public attention, for the experience acquired in this town offers a twofold interest. First, it is the most ancient, the nearest, and one of the most economical of all the winter stations on the Riviera. It is extensively patronised by the English, and possesses a great variety of climatic advantages which are not easily found even in this favoured region. Secondly, Hyères is within walking distance of Toulon. Eleven miles of orange, olive, and almond groves, of market gardens, strawberry fields, and vineyards, separate this little town, with its 12,000 inhabitants, from the original centre of the cholera epidemic. Naturally, a large number of fugitives, estimated, we are informed, at about fifteen hundred in all, took refuge at Hyères. Of course, out of so large a number there were some who had already contracted the disease at Toulon, and fell ill on reaching Hyères. Dr. E. Vidal, however, whose eminent services were recently rewarded with the Legion of Honour, writes to assure us that none of these cases determined a local outbreak. Hyères, like all the other towns of the Riviera, is still in an insanitary condition—that is to say, most houses have cesspools, pipes remain untrapped, and such sewers as exist are for the greater part defective. But the same may be said of every other town on the Riviera, indeed of every town in France, including Paris. On the other hand, the Municipality of Hyères deserve the warmest praise for their energetic efforts to minimise the evil effects of this state of things. Every watercourse, gutter, and sewer has been carefully and frequently disinfected, and the streets washed three times a day. After each case imported from Toulon the room of the patient was disinfected by the burning of sulphur. This procedure will, we trust, be continued long after the cholera epidemic has ceased, and be applied in all cases of eruptive fever. But something more than this is requisite to account for the remarkable immunity of Hyères. Nearly all the vegetables consumed at Toulon are supplied by the market gardeners of the former town; in fact, the relations between the two towns are those of a suburb to a metropolis. Refugees from Toulon have determined the outbreak of cholera in a number of villages and towns; yet, though Hyères was the nearest town and harboured the largest proportion of refugees, no harm has accrued to its inhabitants. The probable explanation of this phenomenon lies in the granitic nature of the soil. The town, in fact, is built on a rock, an offshoot of the Maure mountains. It has also an excellent water-supply, pumped up from a considerable distance, and not likely to be contaminated. The non-porous nature of the soil, the pure water-supply, and the exceptional cleanliness and rigorous disinfection have so far saved Hyères; but for these fortunate circumstances, it seemed inevitably condemned to share with its neighbour all the horrors of the Toulon epidemic.

COHNHEIM'S LIFE-WORK.

THE subjoined is a list of the literary labours of the late Professor Cohnheim. It is appended to a lengthy and appreciative memoir of his late friend by Dr. Weigert of Leipsic (*Berl. Klin. Wochenschr.*, Sept. 1st), which we should have been glad to reproduce did space permit. This catalogue, however, serves to show how actively and laboriously, and with what profit, Cohnheim worked within the comparatively brief space of twenty years. Were all the writings done by his pupils in the laboratory under his direction added, the list would be far more extended. Weigert gives many of these, but admits that his list of them is incomplete:—Dissertatio de Pyogenesi in Tunicis Serosis, Berlin, 1861; on Inflammation of Serous Membranes, Virchow's *Archiv*, Bd. 22; on Sugar-forming Ferments, ibid., Bd. 23; a Case of Abscesses in Amyloid Organs, ibid., Bd. 33; Two Cases of Mycosis of the Lungs, ibid., Bd. 33; Fatal Trichinosis with Parenchymatous Degeneration of Liver, Heart, and Kidneys, ibid., Bd. 33; on the Terminations of Muscular Nerves, ibid., Bd. 34, and *Centralblatt für Med. Wissensch.*, 1863; on the Minute Structure of Striated Muscle Fibre, Virchow's *Archiv*, Bd. 35; the Pathological Anatomy of Trichinosis, ibid., Bd. 36; Results of an Anatomical Examination of a case of so-called Muscular Hypertrophy (with Eulenberg), Transactions of the Berlin Medical Society, Bd. 1, 1866; Death from Rupture of Varices of the Spleen, Virchow's *Archiv*, Bd. 37; a case of Ileus due to a Gallstone, ibid., Bd. 37, 1866; Metastasis in Cancer of the Stomach, ibid., Bd. 38, 1867; on the Terminations of Sensory Nerves in the Cornea, ibid., Bd. 38, 1867; a Case of Multiple Exostosis, ibid., Bd. 38; on Tuberculosis of the Choroid, ibid., Bd. 39, 1867; on Inflammation and Suppuration, ibid., Bd. 40, 1867; on

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Venous Stasis, ibid., Bd. 41, 1867; Experimental Researches on the Communicability of Tuberculosis to Animals (with Bernh. Fränkel), ibid., Bd. 45, 1868; on the Behaviour of Fixed Connective Tissue Corpuscles in Inflammation, ibid., Bd. 45, 1868; on Amyloid Degeneration, ibid., Bd. 54, 1871; Researches on the Embolic Process, Berlin, 1872, Hirschwald; on Keratitis, Virchow's *Archiv*, Bd. 61, 1874; Congenital Striated Muscle-Sarcoma of the Kidneys, ibid., Bd. 65, 1875; on the Results of Embolism of the Pulmonary Arteries (with Litten), ibid., Bd. 65, 1875; on Derangements of Circulation in the Liver (with Litten), ibid., Bd. 67, 1876; Simple Colloid Goitre with Metastasis, ibid., Bd. 68, 1876; Disease of Bone-marrow in Pernicious Anæmia, ibid., Bd. 68, 1876; on Hydræmia and Hydræmic Œdema (with Lichtheim), ibid., Bd. 69, 1877; on Artificial Tuberculosis—Inoculation in the Anterior Chamber of the Eye (with Salomonsen), Reports of the Schleswig Society, 1877; on Acute Pulmonary Œdema (with Welch), ibid.; on the Theory of Tumour Metastasis (with Maas), Virchow's *Archiv*, Bd. 70, 1877; on the Sphere of Pathological Anatomy, Leipsic, F. C. W. Vogel, 1878; on the Effect on the Heart of Obstruction of the Coronary Arteries (with v. Schulthess-Rechberg), Virchow's *Archiv*, Bd. 85, 1881; Tuberculosis as an Infective Disease, Programme of the Medical Faculty of Leipsic, 1879, and by Edelmann, Leipsic, 1879 and 1881; Researches on the Renal Circulation (with Charles Roy); Lectures on General Pathology, Berlin, Hirschwald (1st Edition, Bd. 1, 1877; Bd. 2, 1880; 2nd Edition, 1882).

WATER CISTERNS.

WITH the knowledge that cholera is active in several countries having direct commercial intercourse with England, the state of the water-supply in certain parts of our large towns is not pleasant to think of. Where nothing can be said against the quality of the water itself, the manner in which the house-supply is contrived—the single cistern method—leaves much to be desired. Certain points must be attended to in order that any cistern should meet its requirements satisfactorily. It must be well constructed, well placed, well covered, and well kept. The days of faulty construction are not yet over, but errors in this respect are becoming less and less frequent. The general adoption of zinc lining has removed one source of danger. Pipe connexions, however, are still far from perfect. The overflow, it is true, in many cases finds its outlet above ground, instead of into the sewer as formerly, but the cistern still continues to furnish one common supply for waterclosets and for drinking purposes. The use of water-waste preventers in some districts has indeed placed an efficient trap on the closet communication, but the value of this improvement is limited by its sparing application. A still further stage in sanitation is reached, and that but rarely, where a house is fortunate enough to possess a separate cistern for either purpose. Easiness of access, seclusion from light, and from extremes of heat and cold are important in reference to the position of every such reservoir. One finds, nevertheless, that it is often placed outside the house altogether, high above the ground, and sometimes inaccessible by any door or window. Hence it is exposed to frost and flying dust, and is but rarely cleansed out. If due regard be had to ventilation, it were in every respect much better indoors. A well-fitting lid, not a mere lath sheeting, forms the most suitable cover. Cisterns which fulfil the necessary conditions of structure and relation should not be difficult to keep in order. Whether they shall be so kept must depend upon the industry of their owners. Among rich and poor cases of neglect occur, be the arrangements what they may, and if this be so it is not surprising that the slums should show many instances of gross and filthy carelessness. In them the water-supply is most sparing and the means for its provision unscrupulously economical. Undoubtedly the fittest remedy in their case would be the introduction of a constant service system. The trouble of large cisterns would thus be done away with, and with them one source of danger would be abolished. Wilful waste need hardly be feared, nor perhaps need one expect so poor a population to be carelessly lavish in their use of water for drinking or for personal cleanliness. Plain fittings, their practical purpose once appreciated, would offer no great inducement for theft. This system has been successfully employed in many parts of the country. Its introduction amongst the poorest classes of large towns is little short of a necessity.

SMALL-POX IN LEICESTER.

THE anti-vaccinationists in Leicester now awaiting summons are said to number three thousand. In view of the magnitude of the necessary legal proceedings, application has been made by the local authorities to the Local Government Board for advice in the matter. In the meantime small-pox has made its appearance, and it is singular to learn, yet after all natural, and, we may add, creditable to the common sense of the townspeople, that vaccination has been resorted to in order to prevent it spreading. The precaution comes late, but it may be hoped not too late, to interfere with the experiment on a large scale to which so many inhabitants of the town have rashly devoted their children. The mildness of the present epidemic and its comparative limitation, results almost exclusively due to efficient vaccination in other parts of the country, have much to do with the immunity hitherto enjoyed by Leicester. But it is remarkably true in the experience of every medical practitioner that wherever there are susceptible, that is practically unvaccinated, persons, there, if anywhere, the pestilence will strike. We are not, therefore, surprised that the period of immunity has ended. We do not doubt that the Local Government Board will know how to uphold a sanitary measure as right as it is necessary, even while using such consideration as may be due towards offenders who are possibly misled rather than perverse. The fear is not vain that if their opposition should continue, another monitor—adversity—may yet lead them roughly, if well, to sanction views in the prevention of disease which their fellow-countrymen have long since accepted.

THE CHOLERA EXPERIMENTS UPON ANIMALS.

THE following interesting account of some experiments which two Swiss physicians, Rietsch and Nicati, have been making in the laboratory of the Pharo Hospital at Marseilles, by instructions from the French Government, has been forwarded to us by a correspondent in Paris. They have, in addition to cultivating the cholera microbe as Dr. Koch had done in the same laboratory two months ago, and obtained thousands of microbes from the intestines of cholera patients immediately after death, inoculated a number of guinea-pigs, dogs, and rats, with the deadly disease. The success of these experiments is described by the *Journal de Genève* as complete. The guinea-pigs all died at a minimum interval of forty hours, after symptoms of diarrhœa and cramp, the same as with human beings, while the dogs mostly died four days after inoculation. The guinea-pigs were much more susceptible to the disease than any other kind of animal, and when Drs. Rietsch and Nicati injected some of the contents of a human intestine into their stomachs, they died from the self-same causes which in a similar case would kill a human being. To make the inoculation more effectual, they injected the choleraic secretions right into the duodenum, as they had observed that the bile has the effect

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of checking the development of the microbe. The conclusion which they draw from these experiments is that there is a practical mode of diagnosis in all doubtful cases of cholera, and that in such cases it will be sufficient to repeat with the contents of the patient's intestine the direct inoculation into the duodenum of a guinea-pig to ascertain within a few hours whether it is a case of cholera or not. The second conclusion which they draw is a prophylactic one, and it is that the gastric juice and the bile digest the microbes very thoroughly. These two juices are excreted in large quantities during the digestion which follows a meal, whereas they are scarcely excreted at all when it is merely liquid which passes through the canal. This is equivalent to saying that impure water is less dangerous when taken with food than when drunk by itself. The mutual relations of indigestion to diarrhœa are of the same order, and they confirm in every particular the connexion between the cholera and the microbe discovered by Dr. Koch. The Swiss physicians have repeated their experiments two or three times before the staff and students of the hospital, and before several medical men from Barcelona, who had come to Marseilles for the purpose of witnessing the experiments.

HÆMORRHAGE INTO THE CORPUS CALLOSUM.

PROFESSOR W. ERB of Heidelberg records a case in which the rare event of hæmorrhage into the corpus callosum occurred (Virchow *Archiv.*, 97, 2). He remarks that physiology teaches nothing concerning the functions of this structure, and that pathological data concerning it are very scanty. For the most part these latter comprise observations of developmental defects, with corresponding psychical deficiency (Hitzig), but others (Paget, Jolly, Malinverni) have recorded cases in which the corpus callosum has been absent without any manifest mental derangement. Cases of tumours of the corpus callosum are evidenced more by the pressure signs exerted on the hemispheres than on the body itself, and instances of hæmorrhage and softening have very rarely been met with. Gintrac, among 560 cases of cerebral hæmorrhage, gives one involving the corpus callosum, but not a single case is to be found in Canstatt's Year Book from 1851 to 1882. Erb's patient was a man sixty-one years of age, who was found in a wood near Heidelberg in a state of somnolence. He had been attacked six days previously with headache, giddiness, vomiting, stiffness of the neck, and pains in the neck and legs. There was no paralysis nor ataxy; the pupils were small; vision normal; optic discs natural; the urine was albuminous. A few days after admission the rigidity of the neck became more marked, speech difficult and jerking; he moved the limbs slowly, but without tremor, and there was still no evidence of paralysis. In the absence of definite symptoms the idea of cerebral hæmorrhage was discarded, and a diagnosis of subacute cerebro-spinal meningitis suggested. As the case progressed this idea appeared confirmed by the increasing and persistent cervical rigidity, the occurrence of slight spasm of both arms and both sides of the face, frequent vomiting, delirium, and death. The post-mortem examination revealed hæmorrhage with inflammation of the pia mater over the frontal lobes, both on convexity and base, and on the temporo-sphenoidal lobe near the Sylvian fissure. There was a like hæmorrhagic infiltration of the pia mater on the posterior surface of the spinal cord, especially in the lumbar region. So that to a certain extent the diagnosis was confirmed. But in addition to these lesions the corpus callosum was found in almost its whole extent (the anterior extremity alone excepted) to be destroyed by hæmorrhagic effusion, and the lateral ventricles contained sanguinolent fluid. The fornix had disappeared, and the hæmorrhage extended into the gyrus fornicatus. There was also some extravasation into the ascending meso-colon, lobular pneumonia, cystitis and nephritis dependent on a stricture of some standing. Remarking on the occurrence of the callosal hæmorrhage, Professor Erb says it is difficult to say if it were the main cause of death, but it also cannot be said to have had no share in the issue. The corpus callosum was almost wholly destroyed, and yet the case presented no symptoms directly referable to the lesion, all the symptoms which occurred being explicable by the meningeal affection. Even if the slight dulness of intellect and slowness of speech were due to the former, these are but slight grounds from which to diagnose a lesion of the corpus callosum. The case is of value as showing that this structure may be destroyed without producing any disorder of motility, of coördination, of sensibility, of reflex action, or of the special senses, and no appreciable impairment of intelligence. It therefore tells nothing concerning the function of the main commissure of the brain, save that its integrity is not essential to those prime functions of the nervous system.

FORMIC ACID AS A GERMICIDE.

THE conditions of animal life vary immensely; the introduction of a single influence, not apparently of a powerful nature, may determine the death of some organisms. M. Schnetzler, a few weeks ago, communicated some observations to the Académie des Sciences, which serve to illustrate the above general principle. He has found that *bacterium subtile*, one of the most difficult micro-parasites to kill, dies when in the presence of formic acid. Even when this bacterium has resisted the action of boiling-water for one hour, it may be instantaneously killed by formic acid; a drop of water containing $\frac{1}{1000}$th part of formic acid, added to a drop of water teeming with thousands of the bacteria, is sufficient to effect the purpose. The swarming fluid so treated may be introduced into the digestive tract with impunity. The author recommends the trial of formic acid on the cholera bacillus, and it may be suggested that its action on bacillus anthracis is equally deserving of experiment. If formic acid should be found to be capable of destroying the dried virus of charbon, provided this chemical agent does not injure imported wool, and in such a diluted state injury seems impossible, the suggestion that all imported wool be washed in a weak solution of formic acid might be of value in preventing the occurrence of so fatal a disease as malignant pustule and its allies.

MODE OF ACTION OF VACCINATION.

PERHAPS there is no subject which presents a broader field for speculation than the question of the explanation of the effect exercised by vaccination. How does vaccination protect from small-pox? The problem is obviously equivalent to the question, How does typhus protect from typhus? Mr. F. J. Faraday read an interesting paper before the Manchester Literary and Philosophical Society dealing with this matter. It has been suggested that a certain material which is necessary for the development of the vaccine virus is elaborated in the body only rarely or at long intervals. This view is dismissed by Mr. Faraday as being too crude. Without giving our adhesion to this view we may venture to say that the mere crudeness of a theory is not in itself sufficient reason for rejecting it. The gentleman referred to appears to prefer to search for an explanation in some ill-defined "educational influence," developed in a struggle for existence between the causes of vaccinia and the living cells of the body. If we inquire into the nature of this "educational influence," we perceive that it may be expressed in terms of physiological chemistry as an altered molecular condition of protoplasm. The living cells have, so to speak, changed their front, and now are able to

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resist an attack from the vaccine virus. The "resisting vigour" resulting from this education Mr. Faraday compares to the apparently instinctive movements observed by Darwin in the tips of the radicles of plants, which Mr. Faraday attributes to an "apparently muscular memory," perfected by practice. There is much foundation for the belief that in nature no experience fails to leave its impress and its influence behind. Were it not so, the difficulty of explaining the phenomena of nature would be almost insurmountable. It is true that many alterations are brought about only after repeated influences, but even then the law holds good; for it is probable that every separate influence exerts some action and produces some alteration, though we may not be able to perceive the minute change. Mr. Faraday pointed, as an illustration of his argument, to the education of smokers, who overcome the nausea caused by the first mild cigar, and educate the cells of which the smoker consists into the enjoyment of even strong Havanas. He concluded by saying that "reduced to its ultimate expression, animated nature would appear to consist of Buffon's organic (organised) molecules *plus* the principle of organic memory, as inorganic nature is inert matter *plus* the principle of motion." Viewed in the light of the principle of evolution, there can be no doubt that protoplasm can register changes which occur in its environment; indeed, this statement involves the whole doctrine of life as enunciated by Herbert Spencer. Protoplasm may be regarded as nothing more than the adjustment of internal to external relations. A living cell is an impressionable epitome of its whole past experience.

TRANSPOSITION OF VISCERA.

A CASE of transposition of the viscera, with details of the post-mortem examination, is recorded by Dr. Alfr. Richter of Dalldorf (Vichow's *Archiv*, 97, 2). The subject was a man born in 1862, who had been thrice treated in La Charité, once for syphilis, once for lung affection, when the "heterotaxy" was discovered, and on the third occasion in April, 1884, for mania, for which he was transferred to the Dalldorf Asylum, where he died. It was observed during life that the heart's impulse was in the fifth right intercostal space, between the mammillary and parasternal lines; the heart sounds were normal. On the left side hepatic dulness extended from the sixth rib to the margin of the thorax. The conditions found after death were as follows:—On opening the abdominal cavity the liver was found lying on the left side, and the heart, which was well developed, lay on the right. The right cavities contained arterial blood and were thick-walled, the auricle receiving the pulmonary veins and the auriculo-ventricular orifice being furnished with a bicuspid valve. The aorta which sprang from the right ventricle passed with the pulmonary artery over the right bronchus, and descended to the right of the spine. The venæ cavæ opened into the left auricle, which was furnished with a tricuspid valve. The right innominate vein was larger than the left; the vena azygos was on the left side; the thoracic duct opened into the right subclavian vein. The right lung had two lobes, the left three; and the right bronchus was smaller than the left. The œsophagus passed from right to left across the aorta; the stomach lay to the right, the pylorus and duodenum to the left, and the spleen to the right. The cæcum lay on the left side, the sigmoid flexure on the right. The right testicle was lower than the left; the right kidney lower than the left. The spermatic artery on each side was given off from the aorta. The writer has collected details of forty cases of transposition of organs, nineteen in the male and sixteen in the female, in five the sex not being stated. In twenty-four of these cases there are records of post-mortem examination. Nine died shortly after birth; but among twenty-two the average age attained was thirty-five years. Of the twenty-four examined after death, seventeen exhibited a complete heterotaxy, and six had further cardiac abnormalities. Among other facts he notes that left-handedness was only observed in one case. Another case of complete transposition of the viscera is recorded in *Le Progrès Médical* (Sept. 13th, 1883) by M. Leveque. The subject was a young woman, nineteen years old, who died from acute meningitis, and the condition was first observed post mortem. In every respect this case tallies with the foregoing, except as regards the pancreas and spleen. The pancreas was reduced to the size of a chestnut, and occupied the usual position of the head of this organ, but on the left side according to the altered position of the duodenum. The spleen was in two portions, each not larger than a nut. The arch of the colon lay behind the coils of small intestines, and terminated on the right in the sigmoid flexure. The renal veins passed behind the aorta, and the spinal column had a marked lateral curvature, the concavity being to the left.

DR. VANDYKE CARTER AND THE SANITARY COMMISSION OF BOMBAY.

IT is with great regret that we learn that the Government of Bombay have taken the exceptional course of reappointing their late Sanitary Commissioner for a further period of four years. The office is one of importance, and it is natural that promotion to it should be looked forward to as the legitimate reward for services rendered to sanitary science and medicine by officers in the Indian Medical Service. There is no one who has more thoroughly earned a claim to such a consideration from the hands of Government than Dr. Vandyke Carter, who has spent the best part of his life in arduous and important scientific research. Our readers may remember his contributions to such subjects as elephantiasis, chyluria, leprosy, and mycetoma, in which he ranks as a discoverer; but, perhaps, the most important and the most fruitful of all was his inquiry into the famine fever, which he proved to be identical with the relapsing fever of Europe, and the studies of the spirillum which he made in this connexion. Everyone must have felt that the British Medical Association did rightly in awarding him in 1882 the Stewart Medal for his researches in these subjects. We trust it is not too late for an act of bare justice to be rendered to Dr. Carter by nominating him to an office for which he is so thoroughly fitted. England is as well able to recognise scientific merit as Germany; but we venture to say that in that country no man of Dr. Vandyke Carter's calibre would be denied the opportunity of serving his country and enhancing his scientific reputation by a promotion, which is not only due to him for his work, but is his by right of seniority.

CHOLERA NOSTRAS.

BY no means the last word has been said respecting the organism which Dr. Koch regards as the essential factor in cholera, and doubtless the main contention will be held over its alleged pathognomonic character. Some researches lately conducted by Drs. Finkler and Prior of Bonn have been published (*Deutsch. Med. Wochenschrift*, Sept. 4th) upon cases of so-called cholera nostras which contravene the statement of Koch that the comma bacillus is not met with in that disease. The observers had taken pains to prepare themselves for the contingency of cholera coming under their notice by examining stools in dysentery, tuberculosis, and other diseases from the bacteriological standpoint. At last, in July, the opportunity arrived; a small epidemic of choleraic diarrhœa occurred in Bonn—twenty-nine cases in all, many occupying the same house. The symptoms were severe, hardly to be distinguished from those of Asiatic cholera, the stools passed in the later stages being almost colourless; but

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every patient recovered. In the later evacuations large numbers of micrococci abounded, similar to those found in any case of diarrhœa from whatever cause arising. But when the stools passed in the early stages of the attack were examined, there were found, in addition to small and large micrococci and bacilli of various kinds, some comma-shaped bacilli which accorded in every particular with those described and figured by Koch. They were often found collected in small nests, and mingled with them were a large number of spirilla, which could be best detected in the dried specimens in which the bacilli took the aniline stain less markedly. No such forms were detected in normal fæces, nor in the stools from cases of typhoid, tubercular and dysenteric ulceration, infantile diarrhœa, nor in decomposing urine, mucus and other products; so that a certain specific character was imposed on them. But cultivation experiments (made on linen and on potato) were not successful in discriminating these bacilli; on the contrary, amongst all the forms which appeared in the cultures, the micrococci largely predominated. Feeding experiments upon dogs, previously given croton oil, and upon rabbits, were negative in result. The writers point out the difficulty alluded to at the Berlin Conference by Hirsch, Skreczka, and others in distinguishing clinically between endemic cholera and Asiatic, and aver that the only distinctive feature of this Bonn epidemic was its circumscribed limitation and non-fatal character. Dr. Koch had laid stress upon the detection of the comma bacillus as a means of diagnosis, for he had failed to find this organism in cholera nostras; but Drs. Finkler and Prior point out that the bacillus was only to be found in the early stages, the subsequent watery evacuations, although full of bacterial life, containing none of these special forms. It is, however, possible, they admit, that in spite of the resemblance in form between the bacillus they met with and that described by Koch, their failure to cultivate it may point to an essential biological difference.

THE DRAINAGE OF CAMBRIDGE.

THE filthy condition of the river Cam has at length drawn forth an expression of public indignation. That being the case, we may now hope that steps will be taken to remedy the disgraceful state of things that has been so long permitted to endanger the health of the undergraduates and the inhabitants. The local authorities have endeavoured to shield themselves for their past neglect by the excuse that they were unable to agree with the university authorities with regard to the rates to be paid by the town and university respectively. In 1874, when our commissioner visited the town, on the occasion of the outbreak of typhoid fever at Caius College, it was stated that an Act was in preparation applying for powers to settle this question and proceed with a drainage the ensuing year. Ten years, however, have elapsed since then, and still matters remain *in statu quo*. We are pleased to see, however, that the Local Government Board have at length expressed an opinion that the authorities are not justified in postponing the necessary works pending the settlement of the rating question between the university and the town. There, is, however, another question connected with the sanitary arrangements of the university, and that is the more efficient inspection of the undergraduate lodging-houses. Many of these are in a very unsatisfactory state as regards their interior sanitary arrangements and house drainage; whilst, owing to the imperfect discharge from the main sewers, dangerous accumulations of sewer-gas and even sewage are apt to occur. To guard against the ill-effects of this, special attention ought to be paid to domestic sanitation; yet at Cambridge, now one of the largest medical schools in the kingdom and a university granting a special certificate in sanitary science, the sanitary inspection of the lodging-houses is conducted by a clergyman! Certainly in this respect they manage things better at Oxford, where all the lodging-houses are inspected by a properly qualified sanitary official before being licensed, and are visited during term time to see that all is working efficiently.

EVENING RISE OF BODY TEMPERATURE.

THE daily variation of the temperature of the body is a fact which has not yet been satisfactorily accounted for. Dr. Ringer has observed (*Proc. Roy. Soc.*, xvii., p. 287) a diurnal variation, independent of food or other circumstances, the maximum temperature ranging from 9 A.M. to 6 P.M., and the minimum from 11 P.M. to 3 A.M. M. Maurel recently read a paper before the Académie de Médecine, in which he sought to establish the dominant influence of food in the production of the evening rise of temperature. Light, motion, and alimentation have been investigated in this connexion. By feeding animals during the night and causing them to fast during the day, M. Maurel states he has been able to make the maximum temperature appear at any hour he chooses. The experiments must be prolonged over several days in order to obtain the results. This condition would probably be explained on the principle of habit; and although the term "habit" may be classed as a question-begging epithet, there yet does appear to be something of a true explanation in it. For instance, a patient becomes the subject of a catarrhal affection of the bowels attended with diarrhœa; it is well known that after the disappearance of the signs of catarrh there is a looseness of the bowels to be dealt with, which looseness may perhaps be best explained on the hypothesis of a "habit" of the musculo-nervous apparatus of the intestines. Many other examples readily suggest themselves. The influence of light and movement were found by M. Maurel to have an altogether secondary influence on the temperature of the body.

INSECT LIFE AS A CAUSE OF DISEASE.

THE defenders of the germ theory of cholera may be interested to refer to the able essay "On the Hypothesis of Insect Life as a Cause of Disease," which was published by Dr. (afterwards Sir Henry) Holland in 1839, in his "Medical Notes and Reflections." After recalling the researches of Nyander on the exanthemata viva, the author proceeds to discuss the question, "What weight may we attach to the opinion that certain diseases, and especially some of epidemic and contagious kind, are derived from minute forms of animal life existing in the atmosphere under particular circumstances, and capable, by application to the lining membranes, or other parts, of acting as a virus on the human body?" The arguments, which Dr. Holland advanced in reply, led him to the conclusion that Asiatic or epidemic cholera is a disorder so peculiar in its nature, and spread over the globe in a manner so remarkable, as not to be referable to gaseous, mineral, or vegetable matter diffused in the atmosphere or exhaling from the earth. He deemed equally inapplicable every theory of causation founded on the temperaments, habits, food, or other conditions of particular communities. The hypothesis, which found most favour with Dr. Holland, is that "which looks to animalcule life, diffused by the atmosphere or by man, as the source of the disease;—a form of life not recognisable by our senses, or other direct means of research, but nevertheless subject to some similar laws of propagation and diffusion as species more obvious to us, and producing a virus which acts noxiously on the human body." The author foresaw that his theory, if justified by experience, must of necessity extend to certain other contagia; and the able essay not only foreshadows, on the basis of analogy and circumstantial

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evidence, the researches of Pacini and Koch on the cholera bacillus, but is rich in suggestiveness on the wider subject—the germ theory of disease.

TETANUS PRODUCED BY HYPODERMIC INJECTIONS.

DR. PIETRO ROSSI reports in the *Gazzetta degli Ospitali* (7th inst.) a case in which tetanus followed repeated injections of hydrochlorate of quinine. The patient was a youth aged eighteen, of lymphatic temperament, affected with incipient pulmonary tuberculosis. Hydrochlorate of quinine was injected every other day, sometimes twice a day, with much constitutional benefit; but each puncture was followed by slight local irritation, with circumscribed redness and pain under pressure. These symptoms only lasted a day or two. In consequence of febrile exacerbation, the injections were repeated twice a day for three days, alternately in the arm and forearm of the same side. Each time the solution of hydrochlorate of quinine was the same in strength, bulk, and temperature. Four days after the last injection the pain increased at one of the punctures, which became red and turgid. These symptoms were allayed by repeated poultices, and no fever supervened; but the patient complained of great weakness, and of difficulty in moving the jaws when eating. Chloral was at once freely administered by the mouth; but in the course of a few hours all the symptoms of tetanus were developed—trismus, opisthotonos, and pharyngeal constriction, preventing deglutition. Chloral clysters in large doses proved unavailing. Muscular spasms of the trunk increased in frequency and violence, and death occurred suddenly, thirty hours after the appearance of the first tetanic symptoms.

THE RECENT ILLNESS OF MISS ELLEN TERRY.

MISS TERRY is on the eve of departure for a second American tour with Mr. Irving and his company. While we are pleased to be able to state that she is now on a fair way to complete recovery, it may be well to explain that her illness was not due to vaccination, as was popularly supposed. She had been successfully vaccinated on the *left* arm by Mr. George Stoker ten days previously to the appearance of a whitlow on the right thumb. In spite of this, and the warnings of Dr. Fenton Jones, who attended her in this illness, she persisted in going through the fencing scene in Twelfth Night. The inflammation, however, crept up into the forearm, all the flexor tendons becoming very rapidly involved. The thumb was twice lanced and deep suppuration for some time threatened about the wrist-joint. Mr. Jonathan Hutchinson saw the case several times in consultion with Dr. Fenton Jones.

MELANURIA.

AMONGST some of the most interesting phenomena of physiological chemistry are the conditions of the urine as regards its coloured constituents. As is well known, the pigments of urine are not all visible when that fluid is first passed—e.g., the presence of indican requires chemical manipulation for its detection. Zeller has recently observed a rare case of melanuria in a man aged forty-three, who was the subject of multiple melanotic sarcomata of the skin, and who died six weeks after he was admitted to the hospital, of cerebral complications. The urine was of a brownish-yellow colour, absolutely clear, of a density of 1020-1030, free from sugar or albumen. Chemical analysis showed a slight increase in the amount of sulphuric acid discharged; phenol and indican were of normal proportions, but the quantity of hydrobilirubin was largely augmented. There existed a constant relation between the black colouring matter and the bilirubin in the sense that when the urine was light coloured the more urobilin it contained, and the less melanin it had; the darker the urine the more melanin it yielded, and the less urobilin. Bromine water gave an abundant precipitate, yellowish and amorphous, but on resting this changed spontaneously to black. The test with bromine proved to be more sensitive than that obtained with nitric acid or chromate of potash. The precipitate of bromomelanin appeared in the dry state as a brilliant black solid which became a brown powder when triturated. The bromine reaction distinguishes melanin from urobilin, which gives with bromine water a yellow precipitate, not, however, passing into black when left to stand; so that normal and febrile urines do not give the black precipitate when treated with bromine water. Zeller believes that the urinary pigments proceed from two sources, the one being the colouring matter of the bile or blood, and the other aromatic substances developed in the intestine during the process of digestion of albuminoids. It is probable from his observations that melanin is derived from the latter source, though the want of further investigation is admitted.

EXPERIMENTAL TYPHOID FEVER.

SOME interesting observations on the natural history of the typhoid fever poison have been made by M. Tayon and communicated by him to the French Academy. It appears that neither blood nor excreta when taken from a typhoid patient is capable of conveying the infection of that disease when directly injected into one of the lower animals. But if the blood be added to sterilised broth, a turbidity results in about twenty-four hours, due to the development of multitudes of microbes, and the liquid is then capable of inducing typhoid lesions in a guinea-pig, causing death in periods ranging between twenty-five minutes and forty-five hours, and to a less virulent degree in sheep, dogs, and cats. Pigeons, doves, rabbits, and white rats, however, are refractory to this liquid, though in transmission through a guinea-pig the microbes appear to acquire an increased virulence, and are then capable of producing fatal typhoid in cats, sheep, and chickens, after which stage rabbits also are susceptible to the influence of the poison; but in every case an intermediate cultivation is necessary. A guinea-pig inoculated from another guinea-pig produces nothing; whereas if the inoculating fluid be artificially cultivated for twenty-four hours the inoculation is successful. It would appear, therefore, that typhoid germs, which when magnified one thousand diameters appear as small granules or very mobile short rods, unlike the organisms peculiar to charbon, require an alternation of surrounding conditions for their development, resembling in this respect certain intestinal worms.

THE ETHICS OF CANNIBALISM.

THE *New York Medical Record* of Aug. 23rd contains an article on the rescue of Lieut. Greely, and all the questions raised by the ill-fated expedition of which he was the chief. The article has the more interest for being written by one who has had an interview with Lieut. Greely. Alcohol, in the form of whisky, rum, &c., was regarded as of little benefit against cold, or for bracing the system for forced marches. According to the lieutenant, the healthy European or American, with plenty of food, can resist the cold of the Polar regions for a limited time; but each successive winter would witness a rapid deterioration of nervous and muscular energy. With inadequate supplies of food, inducing the condition of *chronic* starvation, the dilapidation of the mental and moral functions comes on apace, involving irresponsibility, in the writer's opinion, and the excuse, if not even the justification, of cannibalism. It is important to remember that he assumes the death of the persons whose

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flesh was eaten. When this is assumed, and the practical insanity and consequent irresponsibility of the cannibal is further assumed, there is not much to debate; but the multiplying adventures of an age of quickened activity remind us that it is no light matter in a journal of any authority to find excuses for a practice that has been hitherto the monopoly of the lowest savages. The courts of England will soon have to decide on the conduct of those who, in any extremity, tamper with the feeblest or meanest human life to save their own.

NON-PAYING PATIENTS AT ST. THOMAS'S HOSPITAL.

No ingenuity of statement ought to blind the public to the fact that hospitals, especially endowed hospitals, are for the poor, and for the gratuitous treatment of the poor in the day of their trouble. That St. Thomas's Hospital is obliged to receive pay-patients into some of its wards is true. The more is the pity, and the more the discredit to its past governors. We have no sympathy with the notion that those who live on small wages and in straitened homes ought to pay petty sums for lodging and treatment in our great hospitals. The rich and the poor need to cultivate each other's affection and respect. It will be hard on the rich to deny them the pleasure of providing for the poor man a bed in a hospital when laid aside from work by a grave accident or a graver disease; it will be harder on the poor to make them pay. We are quite of opinion that the working classes *en masse* should give much more to the hospitals than they do. They are rapidly coming to see that they have not done what they might have accomplished by a little systematic contribution at their places of employment. Witness the instance of Messrs. J. S. Fry and Sons, whose employés readily agreed to the deduction of 1*d.* per week from their wages, resulting in a subscription for the half-year of £106 13*s.* 11*d.* But we protest against petty charges to poor people for hospital accommodation. By all means let them pay systematically and in a provident way for ordinary sickness, but for great calamities—and nobody knows but the uncomplaining poor what dire calamities, great accidents, and great diseases are—we hope the day is far distant when English charity will refuse to provide hospitals and dispensaries. They must be either destitute of heart or of imagination who cannot see, that even with 20*s.* or 30*s.* a week, and where work is pretty constant, there is nothing to raise a man above the need of the pity and the help of his richer and more fortunate neighbours.

ELECTROLYSIS OF THE EUSTACHIAN TUBE.

DR. BARTOUX (*Progrès Médical*, August 30th), writing on electrolysis of the Eustachian tubes, commences by enunciating the general principle of chemical galvano-caustics. When an imperfect conductor in conditions of cohesion facilitating its decomposition is placed in the circuit of a pile with sufficient electro-motor power, that body is decomposed; the acid goes to the positive, the alkali to the negative electrode. When the electrodes cannot be attacked, and the interfering substance is of organic nature, the nascent acids and alkalies act on the tissues as potential caustics, and produce an eschar exactly coextensive with the points of contact of the electrodes. In the majority of contractions of the Eustachian tube, due to swelling of the mucous membrane, the author admits that dilatation with elastic bougies is sufficient. But when it fails after being employed a sufficient length of time, he advises resort to chemical galvano-cauterisation. He likewise recommends it when the entrance to the tube is obstructed by hypertrophied lymphatic follicles, and in the comparatively rare cases of membranous bands. He adds that when it is desired to perforate the tympanum, this may be done by affixing one or more needles to the negative pole, and placing the positive one as a metallic plate on the mastoid process, or as a roll of carbon covered with chamois leather held in the hand.

THE INDIAN CHOLERA COMMISSION.

THE recent appointment of Dr. D. D. Cunningham to the important Indian Cholera Commission does not seem to have given entire satisfaction to the officers of the Indian Medical Service. It appears that Dr. D. D. Cunningham has expressed strong anti-contagionist views, and, moreover, by having caused certain sanitary commissioners and medical officers who have ventured to express views contrary to this doctrine to feel the weight of departmental displeasure; it is therefore thought that one so strongly biased can hardly approach the question in a scientific spirit. However that may be, we are somewhat surprised that the Commission contains no other names that would have weight at home. We do not speak of the younger men, those who have distinguished themselves recently at home, who have left England with a high prestige, and whose knowledge of recent pathological methods of research under the guidance of some well-known senior would have proved invaluable, but we speak of men who are of European as well as Indian reputation; for instance, Dr. Vandyke Carter or Surgeon-General Cornish. Certainly, whoever is appointed ought to be free from all previously expressed bias; and although Dr. D. D. Cunningham undoubtedly holds a distinguished position in India, still the reports he has issued, make it doubtful in the opinion of many of the Indian medical officers whether he is the best fitted for the appointment, or, if appointed, whether he should not have been associated with others whose views have been less strongly expressed.

WHY TROPICAL MAN IS DARK.

AN interesting communication has been made to *Nature* by Surgeon-Major Alcock on the reason why tropical man is black. The eyes of many of the lowest animals are generally to be descried by means of the patches of pigment which form their most conspicuous element. It is suggested that pigment placed behind a transparent sensory surface, such as the eye, increases the stimulating effect of rays of light. The well-known absorbent power of dull black things for heat, and the increased activity of all living matter under the influence of warmth, are points bearing on this question. In the negro the pigment-cells are placed in front of the nerve terminations, and here the black pigment in the skin serves to lessen the intensity of the nerve-vibrations that would be caused in a naked human body by exposure to a tropical sun; so that the pigment plays the same part as a piece of smoked glass held between the sun and the eye. The reasoning by which pigment, like the breath in the fable, is made to play the part of hot and cold, does not seem to be perfectly free from objection; but the speculation must be admitted to be interesting.

"TEXAN FEVER" IN BIRKENHEAD.

AN interesting question in regard to cattle disease has been left undecided in the Birkenhead police-court. Two American cattle suffering from Texan fever were slaughtered, and an application to have them destroyed was disputed by the owners. The post-mortem appearances were the following:—The meat was dark-coloured, and, according to one witness, jaundiced; the spleen was tumid and engorged, and weighed about seven pounds; the liver in one case was considerably enlarged, and the heart in both showed patches of extravasated blood upon the surface; the lungs were engorged, and the kidneys of a dark copper colour. The de-

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fence rested mainly on the fact that the muscular substance itself could not be said to be decidedly altered, and on the absence of gross lesions in the viscera. It was alleged that such meat, if properly cooked, might be eaten with impunity. The evidence as a whole clearly indicates the presence of disease, and the lesions, both in position and in character, are those of a general fever which has not reached the stage of advanced inflammation. Some of the features are strongly suggestive of anthrax, and the association of high temperature with local extravasation of blood reminds one forcibly of the similar connexion which has been demonstrated of late in the pathology of various septic fevers. It is to be hoped that the present uncertainty will be conclusively settled by the impartial investigation which it is proposed to institute in the next similar case which may present itself, and that skilled experimenters may be obtained for this purpose. Meantime, it certainly seems unwise to expose the meat of such animals for sale, protected only by the doubtful safeguard of a recommendation to cook it well.

THE DISUSED BURIAL-GROUND OF PADDINGTON GREEN.

THE action of the parish authorities at Paddington, in laying out the long-disused burial-ground of Paddington-green for purposes of recreation, appears to be in itself a movement in the right direction. Unfortunately its value as a sanitary measure is greatly marred by other plans and circumstances which are associated with it. A part of the same ground is already occupied by a mortuary, the position of which, even as it now stands, is not entirely free from objection, since it is in close proximity to an iron church, and abuts upon houses in the most populous part of the district. It is proposed, moreover, to enlarge the mortuary, and also to erect an additional building for the reception of infectious cases which may be subject to inquest. This, taken by itself, is no doubt an excellent measure. It evidently aims at obtaining for certain dangerous diseases, as distinguished from other causes of death, especial care in isolation and disinfection. No complaint could be brought against it if the surroundings were appropriate; but they are not. One readily sees that at any time when such diseases were prevalent, frequenters of the adjacent pleasure garden who might be near the mortuary would run considerable risk from infection. In fact, the piece work of the vestry's plan is good, but its combination into a whole, and the relations of that whole, constitute its danger. The difficulty can only be met by either surrendering the project of a recreation ground or of the mortuary additions, or, on the other hand, by enclosing with the latter a piece of vacant land sufficient for their complete isolation, and having no communication by common entrance or otherwise with the area devoted to the enjoyment of the public.

COMPULSORY NOTIFICATION AT DUNDEE.

ACCORDING to Dr. Anderson, medical officer of health for Dundee, the system of notification of infectious diseases in that burgh has proved an unqualified success. The Local Act requires notification both by the householder and the medical attendant. Where that is the case in England, sanitary authorities rarely take any steps to enforce it in so far as the householder is concerned, provided they get the information from the medical attendant. In Dundee, the absence of all friction and complaint, and the almost total absence of concealment, is stated to be due to the fact that the sanitary department strictly exact from every householder the fulfilment of his legal obligation to report, and that often independently of the medical attendant's report; and it is consequently felt that when the householder himself is bound to notify the presence of infection in his household, he can have no ground of complaint because his medical attendant does so also. During 1883 the system of notification revealed two outbreaks of infectious disease in connexion with milk distribution. One was scarlet fever among the customers of a dairyman who did not at the first onset report the disease in his house, but the information came soon enough to prevent a wide outbreak. The next was a wide diffusion of enteric fever, and the magnitude which the outbreak might have assumed may be judged of by the fact that, although, owing to the system of notification, it was absolutely stamped out in twenty-two days, yet it occasioned 132 cases. But for some obscurity as to its origin it would not have lasted even twenty-two days.

DEATH FROM STARVATION IN LONDON.

THE circumstances of the death of Elizabeth Blackwell, investigated by Mr. A. Braxton Hicks, the deputy coroner for Westminster, are very painful reading. Of course she should have gone into the workhouse before starvation did its deadly business and produced that pitiful picture of a woman, sixty years old, too self-respectful to admit her want, honest in paying her way, and then found lying dead on her back on the floor, perfectly naked, with the exception of an old boot on the right foot, in a room which contained not a piece of furniture, but an old jacket, a shirt, and a few pieces of stale bread, fragments of meat and potatoes, "which had evidently been picked up in the gutter," and close by her head an old Bible. No doubt she died dreaming of the City where "they hunger no more." Who is to blame that she did not find this in London with its four millions of Christians? We commend the picture to Mr. Arthur Stocks or some other man in whom Art and human pitifulness meet, that it may stare us in the face till London answers to the description of the Apocalypse.

THE HOSPITALS AND THE HEALTH EXHIBITION.

IT is gratifying to know that his Royal Highness the Prince of Wales has been able to hand over £4000 to the Lord Mayor for distribution among the hospitals of London. The Lord Mayor is, *ex officio*, President of the Hospital Sunday Fund, and it is not unlikely that his Lordship may hand over the amount to be dealt with at the discretion of the Council of that fund. We are still more concerned to know how the Council of the Health Exhibition will deal with the considerable surplus of profit that is likely to accrue to them, and we repeat the expression of our strong conviction that amongst the main purposes to which it should be applied is the foundation of a bacteriological museum and the further assistance of our noble but starved hospitals.

ANILINE COLOURS.

THE prominence which has lately been given in the daily papers to the hurtful properties of aniline dyes in many of their applications is not due to the fact that those properties have now for the first time been demonstrated. Ever since the name of magenta has been known to commerce there have been cases of local inflammation from wearing it or one of its allied colours on clothing next the skin. Distrust of all textile materials stained in this way has consequently long existed among intelligent people. The position in the market which goods thus coloured still hold must be greatly due to the diversity of aniline hues, which enables the compounds of that substance to mimic, while they seem to surpass in finish, the stable and innocuous dyes obtained from various vegetable juices. Fortunately public taste is shrewd enough to perceive that permanence is a point of value in respect of colours as of other things. The same quality affords the most reliable common test that any given

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colour is a safe one for daily wear. Those whose means and education enable them to discriminate, and purchase accordingly, run comparatively little risk. Many of the poor are less happily circumstanced in both these particulars. Upon their children it is not unusual to meet with some highly-coloured garment, and to find that the dye disappears in a washing or two. Aniline stained confectionery forms another of their inexpensive pleasures. It cannot be too strongly insisted on that indulgence in either form is purchased at the risk, and often at the price of health, and it may be hoped that recent cases of aniline poisoning will impress this truth.

MACARONI AND CHOLERA.

ITALIAN macaroni, which is largely manufactured at Naples among other places, has become a subject of some animadversion since the marked prevalence of cholera in that city. The alarm of infection is probably in this case not very well founded. Macaroni is in a great measure prevented from acting as a vehicle of this disease by certain valid considerations. The simplicity of its composition is one of its safeguards. Consisting essentially of flour and water, it is open to infection only through the latter of these ingredients, and that under the special condition of a cholera-tainted water-supply, which, so far as we know, has not been shown to exist in Naples. Again, the dryness of this article of diet is sufficient to secure it against acting as an infective agent. The researches of Dr. Koch have proved one point in particular in regard to the causation of cholera—namely, the ease with which the germ which produces it can be destroyed by the mere drying up of its surrounding medium. Without moisture there can be no cholera. Add to these considerations the fact that every choleraic symptom receives in Naples a degree of attention amounting to scare, and that port officials in other countries are on the alert with regard to all Italian produce, and there does not seem to be much reason to fear the transmission of cholera in the way which has been suggested.

THE IRISH PRISONS.

THOUGH the more abundantly Mr. Gladstone labours for Ireland the less he seems to be thanked by her, we are sure that he will find a case in the report of the Royal Commission on Irish Prisons for his strong personal attention. The chiefs of the prison department are on such bad terms as to have no communication with each other except in writing. The prisons are not up to the modern standard; their cost is very great; large numbers of prisoners become insane; inspection is mainly imaginary, &c. These are grave charges, and must be immediately regarded or refuted by the Irish government. But Mr. Gladstone is sure to concern himself about a state of affairs so unsatisfactory.

CRICKET AND SMOKE.

AMONG the defunct clubs of London were some constituted on a curious application of the principle that birds of a feather flock together. There were clubs for men with bald heads, without noses, and with wooden legs. This idea seems to be in process of revival with a new and strange purpose. Cricket is played by smokers against non-smokers, as the war of tennis is wont to be waged by the married against the single. Obviously no more significance attaches to these groupings than would belong to matches in which players with three hundred a year were pitted against players with incomes below a hundred. The notion that tobacco smoking—unless it be in such excess as to produce toxic effects—can affect the power to play cricket is absurd on the face of it. At the same time, the "movement" will not be without its value if it should act as an incentive to boys to postpone the indulgence in tobacco-smoking until they attain to years of discretion. There is nothing more ridiculous than to see mere children with pipes in their mouths. If boys must smoke, let it be short lengths of cane, as was the wont—albeit with great self-sacrifice in the matter of nausea—among youths of the last generation. Tobacco smoking has its uses, as all but its most reckless censors must concede, but to growing boys it is not useful; indeed, in the majority of instances, it is injurious.

INTERMITTENT PULSE.

THE July number of the *Asclepiad* contains a paper by the editor, Dr. B. W. Richardson, on Intermittent Pulse as a Sign of Disease, and its Treatment. The paper is most interesting and practical—in many respects a model paper in practical medicine,—written in way of supplement to a former essay on this subject by the author in 1868. Dr. Richardson, in charging our predecessors with ignoring this symptom and its significance, has forgotten one classical paper, that of Heberden, "Remarks on the Pulse," read at the College of Physicians on July 7th, 1768, in which very much the same views of the significance of this symptom are expressed as those so ably and lucidly set forth by Dr. Richardson. Dr. Richardson's great contentions are that this symptom, in moderate degree, is not of grave import, and may continue over many years without much harm; and that it is purely of nervous origin, "always induced, where it is not inherited, by shocks upon the vital or sympathetic nervous system. Though sometimes associated with organic disease of the heart, it has no necessary connexion with such disease." Most practitioners of experience will agree that in its milder developments this symptom by itself is neither infrequent nor of very grave import. We have known it to be noticeable over nearly thirty years of advanced life without harm. Heberden says: "Some books speak of intermitting pulses as dangerous signs, but, I think, without reason, for such trivial causes will occasion them that they are not worth regarding in any illness, unless joined with other bad signs of more moment." Dr. Richardson's views of treatment should be read with care, and are in the main to be approved. He commends rest, sleep, and good food. The main treatment should be of a supporting character. He tries to be just to the use of alcohol in such states, and he is actually generous in his attitude towards tobacco. Moreover, he lauds opium in extreme forms of intermittency to allay nervous excitement, &c. We are not quite so convinced as he as to the fitness of opium in cases of intermittency where pain has not to be considered; but his views on this point and on the whole question should be studied by every practitioner.

A MANSION HOUSE CHOLERA FUND FOR NAPLES.

WE are glad to read that the Lord Mayor has issued a timely appeal to the charitable on behalf of cholera-stricken Naples. We have no doubt but that it will be speedily and adequately responded to, for in truth it is greatly to the credit of much-maligned human nature that whenever any grievous calamity or catastrophe occurs, willing and immediate help is always forthcoming. In this particular case the claims of sympathy are strengthened by admiration of a king's courage and devotion to his distressed people. It is difficult to limit the amount of good effected by the magnificent example of calm courage shown by his Majesty the King of Italy. When the history of our day comes to be written, the name of King Humbert will assuredly occupy a niche in the temple of fame as that of a hero who did his duty promptly and fearlessly, and was truly the father of his country.

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SCURVY FROM ALCOHOLISM.

THE usual conditions under which the scorbutic diathesis is developed are amongst the commonplace knowledge of medicine. Not so, however, is it when we come to consider the intimate pathology of this affection. What the precise antecedents are has up to the present remained obscure. We think it will be granted that some constitutions are more prone to scurvy than others; but whether these constitutions are simply feeble, or more peculiarly altered from what may be termed the normal, is open to doubt. M. Masy, writing recently in the *Journal de Médecine de Bruxelles*, has put on record a sporadic case of scurvy which is alleged to have been due to the abuse of alcohol. The patient was a boy aged thirteen, living under excellent hygienic and dietetic conditions. All the signs of scorbutus were present: the gums were swollen and ulcerated, there were ecchymoses in the limbs and trunk, frequent epistaxis, hæmoptysis, cephalalgia, pains in the limbs and cachexia, leading to death in about three months from the onset of the first symptoms. The youth had early acquired the habit of drinking, and had, on first being seen, just finished a voyage of fifteen days, during which, it is said, he lived on nothing but alcoholic liquors. According to Masy, the alcohol had determined a general "steatosis" of the circulatory system, which fatty degeneration had led to all the symptoms of scurvy. In considering this case, it appears to us that while assigning a significant part in the disease to alcohol, M. Masy has overlooked the negative antecedents—viz., the absence of proper food during, on his own showing, at least fifteen days.

PUTRID FISH.

IT is not surprising that so delicate a food as fish should sometimes become stale in warm weather before any change is noticed, and in spite of care. No such excuse can be urged in the case of a dealer recently convicted at Sheffield of keeping for sale a large quantity of kippered herrings in an utterly putrid condition. Matters were so bad that the shop itself was becoming a nuisance. The fine of £25 which was inflicted may help to persuade all like-minded salesmen that honest profits, if moderate, are still the safest. The judgment in this case is the more important because of the comparative difficulty which attends the detection of fraud on the part of small dealers on their own premises and away from the regular inspection of the market officials. It is also noteworthy, in connexion with a recent prevalence of diarrhœa in Sheffield. The share of fish and, generally, of other than vegetable substances in a putrescent state, in producing diarrhœa, is apt to be underrated. It should not be forgotten, particularly by the poor, who consume large quantities of fish as a cheap form of solid nourishment, that whether cured or "wet," it requires as careful selection as more perishable fruit and vegetables.

ANOMALIES OF DEVELOPMENT AND TUMOURS.

THE interest attaching to any of the relationships of tumours has been well exemplified in an excellent paper contributed to the current number of the *Lyon Médical*. M. Pollosson has recorded four examples of the co-existence of tumours with congenital malformations. The first instance related to a cystic tumour, associated with incomplete development of the structures formed by the branchial arches, the malformations being excentric hypertrophy of the lower jaw and atrophy of the tongue. The second and third cases present the coincidence of arrest in the growth of the long bones and the development of cartilaginous tumours of the digits. These examples furnish an argument in favour of the hypothesis that enchondromata of the extremities are due to a vice in the development of osseous tissue. The fourth case consisted in the co-existence of a congenital lesion of the lymphatic tissues and lymphadenosis, which led to the death of the patient. The congenital lesion of the lymphatics was inferred from the presence of elephantiasis of the right half of the body dating from birth; at the age of twenty-one the malignant lymphadenomatous tumours made their appearance. The details of the case are promised for a later publication.

ENTERIC FEVER AT KIDDERMINSTER.

A SERIOUS epidemic of enteric fever has occurred at Kidderminster, the attacks already falling not far short of 200. By some it is attributed to defective sewer ventilation. This is denied by the borough engineer, who assails the filthy midden system. But a sudden outbreak such as this has been, and one attacking all classes of the community irrespective of social status and locality, has a strong resemblance to a water or milk epidemic. With regard to water we are assured that the town water has successfully stood the test of chemical analysis. Unfortunately the negative evidence of a chemical analysis goes for little, or nothing, when the question of infection is under investigation, and, as is now well known, water to which the medical officer of the Local Government Board had deliberately added a filtrate of typhoid stools was returned by the chemist as ranking amongst those which are of the highest organic purity. Besides which, a pollution which ten days ago might have been responsible for an epidemic may no longer be in operation when the disease appears. What is wanted to be known is whether the wells from which the town supply is derived are in any way subject to the risk of pollution.

THE ANTI-VACCINATION DEMONSTRATION.

THE foolish will do foolishly, and anti-vaccinationists will glory in their shame. It is one of the inconveniences of a free country that people are allowed to make a public display of the fact that nature has not endowed them with sense. The liberty to have small-pox is a form of liberty that we do not care for, and that we object to people possessing as being highly dangerous to their neighbours. The anti-vaccination orator entirely misses the mark when he abuses the medical profession on account of the Vaccination Laws, as if they were made for the good of medical men. The interests of the profession would be best served by the abolition of vaccination, which would ensure 90 per cent. of the population having long illnesses from small-pox.

THE POLITICAL ATHLETE.

CRICKETERS and bicyclists and boatmen may flatter themselves that they are the athletes of the day, but they are merely rejoicing in their youth. The true athlete of the time is Mr. Gladstone. Whether we regard the physical labour through which he passes, the mental strain which he bears so bravely, or the easy way in which he holds the prize of the first place against all assaults, we must accord him the first place in pure athleticism. The nation has seen nothing like it since the days of Palmerston, whose octogenarian youthfulness excited its admiration. Mr. Gladstone "has fewer years" than Palmerston had when he reached the height of his popularity and power, but his energy is faster and more remarkable. He has not the gay and light mind, the *bonhomie*, that was so characteristic of Palmerston. He is a grave man; he works harder at the great problems of State, of political and international morals, of economics, than Palmerston ever did. Twenty years ago his gravity of nature furrowed his face with care, and

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thought in a way that made men doubt whether he would ever succeed to the highest place. And what things have happened since then! What responsibilities he has accepted! What must be the strength of a man who at seventy-five, in spite of such foes and forces and even failures, can hold the prize of the political game as he holds it! We are speaking apart from all political questions and issues; we are speaking from a physiological standpoint, and we pronounce the physical and mental power displayed by Mr. Gladstone in the last fortnight in Scotland, after five years of scarcely paralleled labour, to be a piece of veritable athleticism worthy the study of young men, and a fit subject of pride to the nation.

PERFECT FILTERS.

THE excellent idea of turning to account for sanitary purposes the simple method used by M. Pasteur for separating microbes from their medium of culture has suggested itself to M. Chamberlan. He finds that even the most impure water, after filtration through a porous porcelain tube, is perfectly freed from germs and microbes. Under a pressure of two atmospheres twenty litres of water per day can be obtained from a tube ·20 metre in length and ·025 metre in diameter. Tubes so used can be cleaned by plunging them in boiling water or heating them in a flame till the organic matter coating the exterior is destroyed. He proposes, therefore, that porous porcelain vessels should be used as filtering media, the external surface being exposed to the impure water.

OSSEOUS SUTURE FOR FRACTURED PATELLA.

ON this subject, Professor L. Gosselin expresses himself, in the August number of the *Archives Générales de Médecine*, in the following terms:—"In his thesis on the treatment of transverse fractures of the patella, by arthrotomy and osseous suture, M. Diverneresse has published the following statistics: Eighty-eight cases, with five deaths; two suppurations, followed by amputation of the thigh; fifteen suppurations, followed by anchylosis. It is irrational to follow a plan yielding such results in treating an injury which, under good and patient management, is unattended with any such consequences."

OPEN SPACES IN LONDON.

IT is, perhaps, not yet too late to remind both the Ecclesiastical Commissioners and the Metropolitan Board of Works that one of their most urgent duties, considering the present portentous growth of London, is to preserve, and, if necessary, to restore, at whatever cost, open spaces. Both of these authorities will deserve the gratitude of their contemporaries and of posterity by realising this part of their duty, which we take leave to say is in the greatest danger of being overlooked, with disastrous consequences.

THE HOSPITAL SATURDAY FUND.

IT is too soon to know the success of the present collection as a whole, but we may express our satisfaction at the street collection, exceeding by £500—£2800 against £2300—that of last year, in spite of the wetness of the weather. With the exception of a systematised weekly contribution, noticed elsewhere, the sums from manufactories, &c., seem to us still inadequate.

ACCORDING to MM. Treille and Straus, the comma bacillus is not special to cholera, for they have found the same bacillus in the dejecta of patients suffering from the diarrhœa of Cochinchina, or, rather, the diarrhœa of hot countries.

THE Local Government Board have issued fresh orders as to the importation of rags. One renews the previous order for France, and makes it applicable to the end of this month, and an order for Italy applies for the same period. As yet no such order has been issued as regards Spain. Under these orders sanitary authorities or their authorised officers can require the disinfection or destruction of any rags which it is desired to land, unless satisfactory evidence is forthcoming that they have not arrived from an infected locality. They can also refuse to allow the rags to be landed at all.

MESSRS. CROOKES, ODLING, and TIDY, reporting to Colonel Sir Francis Bolton, official water examiner for the metropolis, on the composition and quality of daily samples of the water supplied to London during August, state that of the 168 samples derived from the seven mains of the metropolitan water companies taking their supply from the Thames and the Lea "the whole were, without exception, clear, bright, and well filtered."

THE Ophthalmological Congress, which had been appointed to meet in Turin from the 15th to the 20th inst., has been deferred for the present, in consequence of the deplorable insanitary conditions of the Italian peninsula.

THE death is announced of Mr. J. J. Woodward, Surgeon, United States Army, the well-known microscopist.

A MEMORANDUM ON THE

"COMMA-SHAPED BACILLUS," ALLEGED TO BE THE CAUSE OF CHOLERA.

BY SURGEON-MAJOR TIMOTHY RICHARDS LEWIS, M.B.,
ASSISTANT PROFESSOR OF PATHOLOGY, ARMY MEDICAL SCHOOL.

WITH a view of studying the phase which the cholera question has now entered upon, in consequence of the publication of the results of the investigations of the German Cholera Commission in Egypt and India, I availed myself of the opportunity which the present vacation at the Army Medical School afforded of proceeding to Marseilles, where the disease has been prevalent since the end of June. Sir Joseph Fayrer was so kind as to enlist for me the valuable assistance of Dr. Le Roy de Méricourt, Médecin en Chef of the French Navy, who, in various ways, did his utmost to further my wishes. Dr. Marroin, the Chief of the Sanitary Department in Marseilles, was so good as to introduce me to the authorities of the Pharo Hospital, where the cholera cases are treated, and where, with the permission of the principal medical officer, Dr. Trastour, I was able to renew my acquaintance with the disease, and to collect material for studying afresh the microscopy of the intestinal discharges.

Before, however, referring to the results of my own observations, it will be convenient to epitomise the published history of the German Commission; to point out the salient features of the results of their investigations in Egypt and in India; and to make a few brief comments on such of the circumstances and conclusions as appear to call for notice. Shortly after the arrival of the Commission in Egypt, Dr. Robert Koch reported, on behalf of himself and his colleagues, that no special micro-parasites had been discovered in the blood, the lungs, the spleen, the kidneys, or in the liver in cholera, but that the intestinal mucous membrane was permeated by certain bacilli which nearly resembled in size and form the bacilli found in glanders. As is well known these bacilli are straight, and are, in fact, uncommonly like the ordinary microphytes associated with decay. Dr. Koch also states in connexion with this subject that he had, previous to proceeding to Egypt, found similar bacilli in the intestinal mucous membrane of four natives of India, but that he had then looked upon them as due to merely post-mortem changes. When he came to Egypt,

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however, and found these same bacilli in the intestines of perfectly fresh cases, he felt that an important link was furnished towards establishing the identity of the disease in Egypt with Indian cholera.

It is highly probable that the specimens from India which Dr. Koch had examined were those which were sent, at the request of the Imperial Health Department in Berlin, by the Sanitary Commissioner with the Government of India. These consisted of numerous dry-cover glass specimens of blood which I had collected from several cholera patients, and of portions of the viscera of four natives who had died of the disease. All these were examined by me before they were despatched, and portions of each were reserved for further study. I had heard nothing further of them, but the publication of the remarks above referred to in Dr. Koch's Report of September 17th, 1883, from Alexandria, recalled them to my mind, and I was glad to infer that my own negative results had been confirmed in Berlin. As already observed, no importance had been originally attached to the organisms which were present in the intestinal mucosa. During the last six months I have examined hundreds of stained microtome-sections of these four, and of other specimens of cholera intestines in my possession, and have found that when the mucosa is infiltrated with microphytes at all they are either micrococci, bacteria, or long-oval, and straight bacilli.

In the report of the Commission, dated Calcutta, February 2nd, 1884, Dr. Koch, however, announces for the first time that the specific bacillus of cholera is curved or comma-shaped, and not straight, so that apparently it had become necessary to abandon the microbe first fixed upon. Assuming that the four specimens from natives of India which had been examined by Dr. Koch were those which passed through my hands, the evidence they furnish seems to be in accordance with this view, as in not one of them have I been able to detect any invasion by unmistakable "commas," though at least one of the specimens may fairly be characterised as abundantly infiltrated (in the manner described by Dr. Koch) by straight (and as I prefer to call them) putrefactive bacilli. Judging from my own experience, therefore, any extensive infiltration of the intestinal mucous membrane in cholera by comma-shaped bacilli must be exceedingly rare; and this, I believe, is likewise the experience of the members of the late French Cholera Commission, MM. Straus, Roux, and Nocard, whose acquaintance I had the pleasure of making at M. Pasteur's laboratory on my return through Paris.

Whilst at Marseilles I had, as already stated, opportunities of observing numerous specimens of choleraic excreta, and found that comma-shaped bacilli were, more or less conspicuously, present in all of them, though in some instances more than one slide had to be examined before any could be satisfactorily detected. It may also be mentioned that some of the discharges in which these organisms were present manifested an acid reaction when tested with litmus paper. As Dr. Koch himself remarks, the proportion which the comma-shaped bacilli bear to other organisms in the dejecta varies greatly. In some instances only one or two specimens are to be found in the field of the microscope, while in others they are very numerous, and Drs. Nicati and Rietsch (who are at present engaged in the study of the disease at Marseilles) were so kind as to show me a specimen of choleraic material they had obtained from the small intestine, in which the "commas" existed almost to the exclusion of all other organisms. This is a condition, however, which, I understand, is exceedingly rare. On the other hand, I have seen samples of choleraic dejecta in which totally different organisms prevailed to a like exclusion of others; and in one instance at Marseilles spirilla of various sizes and forms were the most conspicuous of the micro-organisms present. So far, therefore, the selection of the comma-shaped bacilli as the *materies morbi* of cholera appears to be entirely arbitrary.

Dr. Koch and his colleagues have adduced no evidence to show that they are more pernicious than any other microbe; indeed, as a matter of fact, the sole argument of any weight which has been brought forward in favour of the comma-shaped bacillus being the cause of cholera is the circumstance that it is more or less prevalent in every case of the disease, and that the German Commission had not succeeded in finding it in any other. With regard to the suggestion that the cholera process may in some way favour the growth of these bacilli, and that these are not necessarily the cause of the disease, Dr. Koch remarks, in the report from Calcutta above cited, that such a view is untenable, inasmuch as it would have to be assumed "that the alimentary canal of a person stricken with cholera must have already contained these particular bacteria; and, seeing that they have invariably been found in a comparatively large number of cases of the disease both in Egypt and India—two wholly separate countries,—it would be necessary to assume, further, that every individual must harbour them in his system. This, however, cannot be the case, because, as already stated, the comma-like bacilli are never found except in cases of cholera."

LENGTH AND WIDTH (IN MICRO-MILLIMETRES*) OF COMMA-SHAPED BACILLI IN CHOLERAIC MATERIAL AND SECRETIONS OF THE MOUTH IN HEALTH.

Numbers.	Choleraic Material.					Secretions of the Mouth in Health.		
	Alvine discharges.			Intestinal contents. [autopsy.]	Cultivation in agar-agar jelly.			
	I.	II.	III.			I.	II.	III.
	μ	μ	μ	μ	μ	μ	μ	μ
1	2·4 × 0·40	2·0 × 0·60	1·1 × 0·25	2·0 × 0·40	1·6 × 0·40	2·0 × 0·50	1·4 × 0·35	1·5 × 0·50
2	2·6 × 0·40	2·5 × 0·65	1·8 × 0·35	1·2 × 0·40	1·4 × 0·60	1·3 × 0·35	2·0 × 0·40	1·3 × 0·50
3	2·0 × 0·50	3·2 × 0·70	2·0 × 0·60	1·5 × 0·45	1·8 × 0·50	1·6 × 0·40	1·7 × 0·40	1·0 × 0·30
4	2·2 × 0·45	3·0 × 0·70	3·0 × 0·70	1·3 × 0·60	2·0 × 0·50	1·2 × 0·35†	1·3 × 0·45	1·2 × 0·40
5	2·8 × 0·35†	2·5 × 0·60	2·2 × 0·50	2·1 × 0·50†	2·6 × 0·45†	2·2 × 0·65	2·1 × 0·50	2·7 × 0·50
6	1·5 × 0·35	2·0 × 0·50	1·6 × 0·40	1·2 × 0·50	1·1 × 0·35	2·0 × 0·40	2·8 × 0·40†	1·4 × 0·55

* One Micro-millimetre (μ) = ·001 millimetre [= $\frac{1}{25400}$"]

† S-shaped comma bacilli.

Had Dr. Koch and his colleagues submitted the secretions of the mouth and fauces—the very commencement of the alimentary canal—to a careful microscopic examination of the same kind as that to which they have submitted the alvine discharges, I feel persuaded that such a sentence as the foregoing would not have been written, seeing that comma-like bacilli identical in size, form, and in their reaction with aniline dyes, with those found in choleraic dejecta, are ordinarily present in the mouth of perfectly healthy persons.

[Since this memorandum was submitted I have observed that Dr. Koch states, in his recent address on the subject, that after his return to Berlin he had examined, amongst other things, the secretions of the mouth for comma-shaped bacilli, but had found none; and, further, that he had consulted persons of much experience in bacterial researches as to whether they had ever seen such organisms, and was told that they had not. It may be of assistance to future observers if I give the dimensions of half-a-dozen comma-shaped bacilli, as found in each of the following: (*a*) In the alvine discharges of three cholera-affected persons; (*b*) in the small intestine of a person who had died of the disease, and in whom they existed almost to the exclusion of other organisms; (*c*) in a cultivation of them in agar-agar jelly; and (*d*) in the secretions of the mouth of three healthy persons, ranging from four to fifty years of age. The measurements were made (with the valuable assistance of Mr. Arthur E. Brown, B.Sc. Lond., under a magnifying power of 1000 diameters, a Powell and Lealand's $\frac{1}{25}$th of an inch oil-immersion lens, with a wide angle condenser, being used.] See Table, *supra*.

There is no difficulty in putting this statement to the test; and to any one acquainted with the methods ordinarily

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adopted for staining and mounting fungal organisms of this character, no special directions need be given. The procedure followed by me to demonstrate these "commas" in the saliva is precisely that adopted for finding them in the dejections. A little saliva should be placed on a cover-glass (preferably in the morning before the teeth are brushed), and allowed to dry thoroughly, either spontaneously or aided by a gentle heat. The dry film thus obtained should be floated for a minute or two with one or other of the ordinary solutions of aniline dyes adopted for such purposes, such, for example, as fuchsine, gentian-violet, or methylene blue. The cover should then be gently rinsed with distilled water, and the film re-dried thoroughly. The preparation may now be mounted in dammar varnish or Canada balsam dissolved in benzol, and should be examined under a $\frac{1}{12}$th or $\frac{1}{18}$th of an inch oil-immersion lens.

As in choleraic discharges so in the saliva, the number of comma-shaped bacilli will be found to vary greatly in different persons, and at different times in the same person. Sometimes only one or two "commas" will be seen in the field, at others a dozen may be counted, and, occasionally, little colony-groups of them may be found scattered here and there throughout the slide.

It may be remarked in passing, and as bearing upon what has been already said regarding the general absence of comma-shaped bacteria from the intestinal mucosa itself, that they do not appear to manifest any special tendency for attacking the decaying epithelial scales of the mouth, but that, on the contrary, they are for the most part found free in the fluid, the epithelium being studded with other bacterial forms.

Persons who have not been in the habit of examining dried saliva-films will probably be surprised at the number and variety of the organisms which are, more or less, constantly to be found in the mouth, and especially at the number of spirilla with which the fluid is generally crowded.

The alvine discharges in cholera sometimes swarm with precisely similar spiral organisms, and, indeed, as has long been known, the fluid exuded into the intestines in this disease is peculiarly suitable for the growth of these and allied microbes. But, so far as my own experience—dating from 1869—of the microscopic examination of such a fluid goes, all the microphytes ordinarily found in it are likewise to be found, to a greater or less extent, in the secretions of the mouth and fauces of unaffected persons. And with reference to the comma-like bacilli found in cholera, to which such virulent properties have been ascribed, I shall continue to regard them as identical in their nature with those ordinarily present in the saliva until it has been clearly demonstrated that they are physiologically different.

INSANITY IN NEW SOUTH WALES.

IN his report for the year 1883, Dr. Norton Manning, the Inspector-General of the Insane for New South Wales, gives the number of insane persons in the colony on Dec. 31st as 2403—viz., 1474 male and 929 female. This is an actual increase, as compared with the same date in 1882, of 96—44 males and 52 females; but the rate of increase among the insane in proportion to the general population is stated to be somewhat less than usual. The returns given show that, "though during the ten years from 1864 to 1873 there was a considerable increase in the proportion of insane persons under care, and in the number admitted, there has been little or no increase during the last ten years either in the accumulated cases or in the admissions or 'occurring cases' in proportion to the general population, and that the 'burden,' as it is fitly called, of insanity, is at a standstill." A comparative statement is made as regards the proportion of insane to population in the colony and in England. From this it appears that in England there has been a steady increase in the proportion from the year 1864, when it was 1 insane person in 457 of the population, down to the year 1882, when it was 1 in 348. It also appears that a general, though less steady, increase has taken place in the colony from 1 in 399 in the year 1864, to 1 in 354 in the year 1882. At the end of the year 1881 the proportion stood at 1 in 352 both in the colony and in the mother country, a point which cannot fail to give interest to the comparative statistics in years to come. The insane in New South Wales are distributed in varying proportions through five hospitals for the insane and one licensed house. The hospitals are overcrowded, and they contain as many as 232 in excess of the 2025 for whom accommodation is provided. The inspector-general is taking measures to remedy this unwholesome state of affairs, which is in a great measure due to the accumulation of aged and quiet patients, who in Great Britain are ordinarily provided for in workhouses. The percentage of recoveries on admissions and readmissions for the year was 40·7, and the percentage of deaths on the average number resident was 6·6—males, 7·7; females, 5·0.

There were 476 admissions and readmissions during the year; and in only ten, or a little over 2 per cent., of these was hereditary influence ascertained. This is a small proportion, and if an explanation were looked for, it might be found in the absence of relatives who could give information regarding individual waifs and strays who wander "far from their home," and are unable to give any reliable account of themselves or of their belongings. And, indeed, a reference to Table 9 seems to bear out this idea, for, from figures there given, only 23 per cent. of the entire insane population were natives of New South Wales, leaving a burdensome margin for the immigrant population, largely drafted from the restless and wandering element of humanity, and represented by individuals who too often, apparently, arrive by sea, if they are not actually shipped, in a state of positive insanity. The report states that after a lengthy correspondence the French Government have agreed to retain and provide for the insane persons of British nationality who become insane in New Caledonia, in the same way as has been done for years past by the Government of New South Wales in regard to persons of French nationality who are thrown upon their hands. During the year, thirty patients had been discharged as relieved to the care of friends; but it has not yet been found practicable to take any steps towards "boarding out" patients, or placing them with strangers paid for their maintenance. The circumstances of colonial life, especially when of the "bush" type, the absence of suitable village homes, and the relations of labour and wages, combine to form a group of obstacles to the adoption of the system, and these obstacles are not likely to be readily overcome. The number of escapes was thirty-one, and all, with one exception, were recaptured within fourteen days, the great majority having had a run of less than twenty-four hours.

The accidents and injuries do not appear to have been numerous and none of them were fatal. There was only one suicide; in the case of a male patient who cut his throat with a piece of glass bottle. With regard to restraint, we are informed that it is never used without the direct order of a medical officer, except in institutions without a resident medical officer, where the superintendent may place a patient in restraint with the subsequent sanction of the visiting medical officer. The propriety of permitting any layman to place a sick person, or an individual under medical treatment, in a camisole or strait-jacket cannot be upheld, and it would be well that such an anomalous exception were done away with. Restraint is not, however, very largely used, for the returns sent to the inspector-general show that the amount never exceeds one patient in restraint out of every 400, and is frequently much less, and that in half of the cases it is employed for surgical reasons. The inspector-general sums up his experience of restraint in the following terms: "Under proper regulations it has a useful place in the treatment of insanity, and I hold that the position taken by the physicians of American hospitals is in this respect more philosophical and more humane than the extreme views held by some alienists in Great Britain." No general statement is given of the amount of seclusion that was had recourse to, although it may be gleaned that in some of the asylums, at least, it is not extensively made use of. The average weekly cost per patient in hospitals for the insane in New South Wales is 12*s.* 5¾*d.*, being 2*s.* greater than that in English borough asylums, which is 10*s.* 5½*d.* The main difference in cost is due to the amount for salaries and wages of attendants, nurses, and servants being larger in this colony than in England. It could have been a useful piece of information if the report, dealing as it does with so many attractive points of detail and management, had given the relative proportion of attendants, nurses, &c., to the insane population, for this is an important factor in the safe and successful administration of asylums.

Altogether, the report is highly interesting and instructive, and shows excellent results. It appears, on the face of it, to be an honest record of good and useful administrative and inspectorial work among the insane of New South Wales.

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INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

SECTION OF MEDICINE.

Chronic Diarrhœa and Dysentery in Persons returned from Hospital to Temperate Climates.—Sir Joseph Fayrer (London) and Dr. Joseph Ewart (Brighton), after summarising the pathology, etiology, and symptoms of these dangerous affections, strongly recommended a pure milk diet to the exclusion of all medicine, excepting, occasionally, lime-water, five minim doses of laudanum and fresh bark, and a saline aperient to overcome any troublesome portal congestion that may be found to interfere with digestion and assimilation. They have found "that by absolute rest, the maintenance of the surface at an even temperature in an airy well-ventilated room, and milk alone, either pure or diluted if necessary, given at first in small quantities every half hour or every hour, suitable to the digestive powers of the patient, gradually increased as these and the diarrhœa improve, until three or four quarts for an adult are consumed in twenty-four hours, recovery is rapidly effected in a vast majority of cases." Their views are backed by a record of ten cases illustrating the advantages of this mode of treatment.

SECTION OF MILITARY MEDICINE.

Sunstroke and Thermic Fever.—Sir Joseph Fayrer, in a paper on this subject, devoted much attention to the general effects of heat in causing impaired health in hot climates. He then summarised the three forms in which the direct or indirect application of heat may be emphasised and expressed: 1, in syncope from exhaustion; 2, an analogous condition in which the respiratory centre is involved; 3, overheating of the whole body with thermic fever of great intensity. The treatment of each of these conditions was carefully elaborated, with a view to reduce temperature without undue lowering of vital power; and caution was enjoined in not lightly sanctioning a return to hot climates of those who had once suffered from insolation. This is the rule that should be observed.

Typhoid or Enteric Fever among Soldiers in the Tropics.—Dr. Joseph Ewart (Brighton) dealt with this important subject. He pointed out that until it was recognised by Scriven among Europeans, and himself among natives, thirty years ago, it had been grouped among continued and remittent fevers. The returns now show that it causes more deaths among the troops in India than cholera. Facts are given which go to show, first, that its prevalence is altogether independent of malaria, and, secondly, that it is intimately related to rise of temperature. He does not encourage the use of the term "typho-malarial" for cases complicated with malarial poisoning. "It would be as reasonable to call a case of small-pox ushered in by ague, liable to recur and modify the course and character of the exanthem, if not controlled and checked by quinine, variolo-malarial fever." The etiology is exhaustively dealt with, and it is pointed out that, as contended by Sir Joseph Fayrer and others, "it is quite possible that the fæcal-filth theory of causation may not cover the whole ground, and that the poison may perhaps thrive and propagate in other kinds of filth."

THE CHOLERA EPIDEMIC—ROME, MADRID, THE PYRENEES.

THE official bulletin in reference to the cholera issued at Rome on the 17th inst. reported from the provinces as follows:—Benevento, 1 case; Bergamo, 12 cases, 3 deaths; Caserta, 4 cases, 2 deaths; Chieti, 1 fatal case; Cremona, 5 cases, 1 death; Como, 17 cases, 12 deaths; Genoa, 24 cases, of which 11 were at Spezia, and 12 deaths, 10 being at Spezia; Reggio d'Emilia, 2 cases; and Turin, 2 cases. In the city of Naples the bulletin shows that from midnight of the 15th inst. to midnight of the 16th inst. there were 463 cases and 158 deaths. In addition, 107 of the patients previously under treatment succumbed. In the remainder of the province of Naples there have been 51 cases and 25 deaths.

The bulletin issued at Madrid states that on the 16th inst. 9 cases of cholera and 7 deaths occurred at Elche, 1 death at Novelda, and 3 cases and 3 deaths at Monforte. In the province of Lerida 3 cases have occurred at Torres de Segre. In the province of Tarragona there have been several cases, and 6 deaths during the last few days at Borjasdel campo. At Benifallet there were 30 cases on the 16th, and 8 deaths occurred during the 14th, 15th, and 16th inst. At Mora de Ebro there have been two cases, and at Ribarroja 4 cases and 2 deaths.

The accounts published in Paris on the 17th inst. announce 18 cases of cholera during the previous twenty-four hours in the Pyrenees Orientales, of which 3 occurred at Perpignan and 1 at Port Vendres.

PRIZES AND SCHOLARSHIPS IN THE METROPOLITAN MEDICAL SCHOOLS.

THE following are the principal prizes, &c., awarded for the session 1883-84 in the various London medical schools:—

ST. BARTHOLOMEW'S HOSPITAL MEDICAL COLLEGE.—Lawrence Scholarship and Gold Medal: S. O. Habershon. Brackenbury Medical Scholarship: A. H. Garrod and G. C. Murray. Brackenbury Surgical Scholarship: W. T. H. Spicer. Senior Scholarship in Anatomy, Physiology, and Chemistry: W. G. Spencer. Open Scholarships in Science: F. M. Brown and J. G. C. Colly, equal; and H. G. Adamson and S. Blackmore, equal. Preliminary Scientific Exhibition: J. Wilkie. Jeaffreson Exhibition: S. Wilkie. Kirke's Gold Medal: S. O. Habershon. Bentley Prize: A. G. Francis. Hichens Prize: H. D. Rolleston. Harvey Prize: T. W. Green. Practical Anatomy, Junior: Treasurer's Prize, T. J. Dabell. Practical Anatomy, Senior: Foster Prize, T. W. Green.

LONDON HOSPITAL MEDICAL COLLEGE.—Entrance Science Scholarships for proficiency in the subjects required for the Preliminary Scientific M.B. Examination at the University of London: £60 Scholarship, G. G. Borrett; £40 Scholarship, C. R. Killick. Buxton Scholarships for proficiency in the subjects required for the preliminary Examinations: £30 Scholarship, H. E. Fernandes; £20 Scholarship, A. Fagan. Clinical Medicine: £20 Scholarship, H. Cropley. Clinical Surgery: £20 Scholarship, W. T. Rees. Clinical Obstetrics: £20 Scholarship, J. M. Evans and S. R. Hodge. Letheby Prize for proficiency in Chemistry: £30, Kelson and Rowden, equal; prize divided. Anatomy, Physiology, and Chemistry: £25 Scholarship, H. Smith. Anatomy and Physiology: £20 Scholarship, Ashe. Dressers' Prizes, for zeal, efficiency, and knowledge of Minor Surgery: £15 prizes, N. R. Howse and W. T. Mould; £10 prize, E. J. A. Haynes; £5 prize, G. C. W. Wright.

GUY'S HOSPITAL MEDICAL SCHOOL.—The Treasurer's Gold Medal in Medicine: Albert Martin, M.B. The Treasurer's Gold Medal in Surgery: George E. C. Anderson. The Mackenzie Bacon Prize for Ophthalmoscopy: James Henry Targett, M.B. The Mackenzie Bacon Prize for Nervous Diseases: William Leonard Braddon. The Burdett Prize for Hygiene: Hubert H. Du Boulay. Fourth-year Students: George E. C. Anderson, first prize, £25; William Leonard Braddon, second prize, £10. Third-year Students: Frederick Lever, first prize, £25; Sidney Wacher, second prize, £10. Second-year Students (Joseph Hoare prizes): Henry W. Drew, first prize, £25; Frederick François Burghead, second prize, £10. First-year Students: Ernest Henry Starling, first prize, £50; Guy Bellingham Smith, second prize, £25.

KING'S COLLEGE.—Winter Session.—The Jelf Medal: John Power Gray. Warneford Endowment: Albert Carless and John Power Gray, prizes. Leathes' Endowment: Albert Carless and Richard John Stephens, prizes. Divinity:—Third year: Benjamin John Wright, prize. Second year: Horatio Nelson Baron and Philip Henry Hensley, prizes. First year: Harold Burgess Osburn, Jeremiah Penny and Henry Smith, prizes. Anatomy: Charles Drinkwater, prize. Physiology: Henry Alexander Pope, prize. Chemistry: George Hartley O'Reilly, prize. Medicine: John Power Gray, prize. Clinical Medicine: Francis James Warwick, prize. Surgery: Obadiah Johnson, prize. Clinical Surgery (Professor Wood): John Frail Harries, prize. Clinical Surgery (Professor Lister): Robert Chambers Priestley, prize. Comparative Anatomy and Zoology: John Major Bull, prize.—Summer Session: The Tanner Prize: Frederick Arthur O'Meara. Obstetric Medicine: Albert Carless, prize. Forensic Medicine: Philip Percy Manning,

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prize. Materia Medica: George Hartley O'Reilly and Henry Smith, equal, prizes. Practical Chemistry: Allan James M'Nab, prize. Botany: Herbert Stanley Ballance, prize. The Carter Gold Medal and Prize for Botany: Jeremiah Penny. Pathological Anatomy: Albert Carless, prize. Practical Physiology: George Arthur Bray and Herbert Arthur Smith, equal, prizes. Practical Biology: Peyton Todd Beale, prize. The Todd Prize for Clinical Medicine: Robert Loxham Hildyard.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—The Treasurer's Prize, value £10 10s.: P. Pinhorn. The Thompson Medal: Robert Trevor. The Pollock Prize in Physiology: Arthur Heygate Vernon. Sir Charles Clarke's Prize for good conduct: Richard Emmett.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—Entrance Exhibitions: 1, C. J. Lownds (Houldsworth), value £40 per annum; 2, F. R. P. Taylor and C. S. Vines, equal, value £40. Treasurer's Prize for First Winter subjects, value 20 guineas: W. Powell. President's Prize for Second Year subjects, value 20 guineas: C. Burt. Chadwick Prize, value 20 guineas: W. Weaver. Bird Prize, value £15: J. Swain. Clinical Medicine, value £5: W. Weaver. Clinical Surgery, value £5: W. Weaver, J. Swain. Class Prizes and Certificates: Anatomy, Senior Class: C. Burt; Junior Class: A. H. W. Hunt (prize). Physiology, Senior Class: C. Burt; Junior Class: W. Powell. Histology, Senior Class, C. Burt. Chemistry, Senior Class: W. Powell (prize). Medicine, Senior Class: W. Weaver (prize). Surgery, Senior Class: W. A. Wills (prize).

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Scholarships in Natural Science of £50: J. T. Bays, N. C. Ridley, W. B. Bottomley, and H. A. Kidd. Exhibition of 25 guineas: M. M. Bird. Scholarships in Pathology: G. A. Allen and A. Hastings Stewart. Scholarship in Anatomy: G. W. H. French. Prosectors: G. A. Barton and J. J. Clarke. Rolleston Prize, Biology: E. Evans. Prizes in Physiology: Callender and E. Evans. Summer Session, 1883: Materia Medica, J. J. Clarke, prize. Botany: J. J. Clarke and W. Williams (equal), prize. Practical Chemistry: G. A. Barton, prize. Midwifery: J. Q. Bown, prize. Medical Jurisprudence: G. N. Caley and G. Spear (equal), prize. Winter Session, 1883-84.—First Year—Anatomy and Histology: J. T. Bays, first prize; H. S. Collier, second prize. Chemistry: J. C. Barr, prize. Second Year—Anatomy and Physiology: J. J. Clarke, prize. Third Year—Medicine: J. Q. Bown and G. N. Caley (equal), prize. Surgery: J. Q. Bown, first prize; H. Tanner, second prize. Practical Surgery: H. Tanner, prize. Pathology: E. Evans, prize. Third and Fourth Years—Clinical Medicine: J. Q. Bown and — Fernandez, prizes. Clinical Surgery: G. N. Caley, prize. Prizes in Ophthalmology of £10 10s. each: A. H. Willoughby and G. A. Allen.

THE MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Broderip Scholarships, for the best examination at the bedside and in the post-mortem room: First, C. L. Hudson; second, A. F. Stace. Governor's prize, T. H. Williams. Exhibition in Anatomy, First year: W. G. Nash. Lyell medal: W. A. Furmston. Medicine: J. R. Roberts. Surgery: J. R. Roberts, T. H. Williams. Pathological Anatomy: J. R. Roberts. Practical Surgery: W. A. Furmston. Anatomy: H. Bartlett. Physiology: H. Bartlett. Chemistry: T. H. Clarke. Midwifery: W. A. Furmston. Forensic Medicine: W. A. Furmston. Materia Medica: W. B. Cockill. Practical Chemistry: W. H. Vickery. Botany: W. G. Nash. Practical Physiology: E. E. Lewis. Comparative Anatomy: H. Bartlett. Psychological Medicine: W. A. Furmston, T. H. Williams. Medical Society's Prizes: E. H. Freeland (paper), Bernard Lawson (pathology), Edgar Nicholson (histology), C. L. Hudson (debate). Entrance Scholarships—First: W. B. Cockill; second, W. G. Nash. Science Scholarship: L. P. Gibson.

CHARING-CROSS HOSPITAL SCHOOL OF MEDICINE.—Llewellyn Scholarship: Certificate and £25, L. J. Pisani. Golding Scholarship: Certificate and £15, J. S. W. Chitty. Governor's Clinical Gold Medal: F. O. Stedman. The Pereira Prize: Certificate and £3 prize, E. T. Gregory. Anatomy: Senior silver medal, W. J. Colborne; Junior bronze medal, V. Sapp. Physiology (silver medal): J. G. H. Carter. Practical Physiology (silver medal): E. Cooper. Chemistry (silver medal): L. E. Sexton. Practical Chemistry (silver medal): E. H. Lingwood. Medicine: Senior silver medal, G. H. Charlesworth; Junior silver medal, W. H. Compton. Surgery: Senior silver medal, F. O. Stedman; Junior silver medal, W. J. Colborne. Botany (silver medal): J. S. W. Chitty. Materia Medica (silver medal): W. H. Compton. Midwifery (silver medal): L. J. Pisani. Forensic Medicine (silver medal): A. E. Hardy. Pathology (silver medal): G. H. Charlesworth.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Asaph (Rural).—Dr. Lloyd Roberts reports a death-rate of 16·8 per 1000 for this district, and mortality amongst children under one year of age as low as 91·6 per 1000 births. Only a few isolated cases of infectious disease occurred, and the greatest want of many places in the district seems to be a proper water-supply. Some villages have, however, been so supplied, and other works tending to improve the conditions under which the people are living have been carried out.

Burgh of Dundee.—The death-rate of Dundee was high in 1883—namely, 23·9 per 1000. Dr. Anderson explains that of the large towns of Scotland Dundee stands fifth on the list, four having a lower and three a higher death-rate. This compares unfavourably with the large towns of England, for of the latter, twenty-two have a lower mortality than Dundee. The system of notification of infectious diseases is said to work most satisfactorily in every way. Not only is there no friction, but from a medical point of view it has answered admirably, detecting the existence of infectious disease. It has also incidentally led to considerable improvements in the sanitary state of the drains, by revealing at an early date the conditions under which disease was being spread by them. Dundee possesses a hospital for infectious diseases, and the mortality amongst patients removed to it, as compared with that in those treated at home, shows a difference of nearly 6 per cent. in favour of hospital treatment. This is readily understood when we learn of the 108 deaths occurring in houses; forty-three took place in tenements containing six or nine inmates—that is to say, 40 per cent. of these infectious deaths occurred amongst those whose surroundings were most unfavourable to recovery. In Dundee it is illegal for any pupil to attend school if coming from an infected household, and it is also illegal for teachers to receive them, but the law as to this is hardly observed with sufficient stringency. Intimations as to infectious disease are, however, at once transmitted to school teachers by the sanitary department, and certificates as to freedom of infection &c. are also granted. Where the law is not observed, Dr. Anderson strongly urges that legal proceedings should be taken against offenders. Appended to the report is an important statement by the sanitary inspector, giving advice as to certain details of plumbing and other matters. But we hardly like what he says about connecting overflow pipes with soil pipes, for whilst on the one hand he explains that this should under no circumstances be done, he proceeds to say that when it is done a syphon trap and a wetting pipe, to keep the syphon full, are needed. Even if this should never fail, the system is absolutely faulty, and should never be tolerated where it can be done away with. He also advocates the trapping of rain-water pipes at the bottom, together with the addition of a ventilating pipe, so as to prevent foul air getting into attic windows. But in dry weather, unfortunately, the trap becomes unsealed. Rain-water pipes, if connected with a sewer, should be cut off at the bottom, and made to flow over a trapped gully out of doors, in the same way as waste-pipes.

Tendring (Rural).—Dr. J. W. Cook, in his annual report on this sanitary district, again draws attention to the need for providing Brightlingsea with proper drainage and sewerage. At Clacton-on-Sea a system of sewers is all but completed—indeed, it was hoped that before this season ended the system would be at work. Water supply still seems to be a difficulty in some localties, notably at Parkeston and in the village of Mistley; and at Great Oakley Hall an outbreak of typhoid fever was due to well-pollution at a dairy. The milk was sold in Harwich, and typoid fever was found to be prevailing in that town amongst the consumers of milk from the dairy in question. The sale of milk was at once stopped, the well was closed, and the disease ceased. Typhus is

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reported as having occurred at Frating, and the disease is set down as due to the bad state of the drains and to a polluted well. There was probably some error of diagnosis here for such localties do not suffer from typhus except as the result of importation, and typhus cannot be regarded as having its cause in such sanitary circumstances as are specified. The death-rate of the district stands at 16·3 per 1000.

Wednesbury (*Urban*).—Mr. Garman reports the death-rate of this town as 19·9 per 1000. Scarlet fever became epidemic towards the end of 1883, and was very fatal. Diphtheria also prevailed concurrently with it. Thirteen scarlet fever and four diphtheria deaths were registered. The deaths from typhoid fever were 14 in number, and having regard to the good water-supply in the place, this number must be regarded as unnecessarily large in a population of 24,500. The midden system is stated to be under constant supervision, but in many similar localities this system, as carried out, is responsible for much typhoid and diarrhœa. In 1882 the typhoid fever deaths numbered eighteen. The report deals mainly with the prevalence of disease and with statistics, and it only incidentally refers to the sanitary circumstances of the district and the future improvements needed in it.

Barrow-in-Furness (*Urban*).—This urban district continues to grow steadily. In 1880 the population was estimated at 40,000; now the estimate is 52,000, and on this estimate the death-rate is a satisfactory one, reaching only 17·1 per 1,000. There has during the past few years been a sensible decrease in the number of infantile deaths, and the change is regarded by Mr. Settle as due to improvement both in the sanitary circumstances and also in the moral and social habits of the place. Day nurseries are, however, still needed. Enteric fever was somewhat widely prevalent in 1883, there having been 216 cases and 36 deaths, the causes being the escape of sewer air into houses and general dirtiness of houses amongst those affected. The sanitary hospital was useful during its prevalence, thirty-one cases being admitted. A list of sanitary works carried out shows that continuous improvement in regard to details is constantly in progress.

Hull (*Urban*).—With an estimated population of 176,296, the death-rate of this important borough was, during 1883, 22·5 per 1000, and the birth-rate 36·0. The infantile mortality, as measured by the proportion of deaths under one year to births, was high—namely, 183 per 1000. The zymotic death-rate was much lower than the average for the past ten years, reaching as it did 2·91 per 1000, diphtheria and whooping-cough alone being in excess of the rates for the previous year, when scarlet fever and diarrhœa were prevalent. Referring to the somewhat prevalent opinion that there is a certain relationship between scarlatina and diphtheria both in origin and pathology, Dr. Mason expresses the view that no such relationship exists, the diseases being distinct as regards origin, and differing materially in their pathological bearing. The genuine diphtheria which prevailed had, however, a definite relation to a group of seemingly simple sore-throats. The question of providing adequately for the isolation of infectious diseases in the port of Hull has engaged much attention, but as yet no determination has been arrived at. The current sanitary work of the district makes steady progress. Hull was early in the van of towns which promoted frequent collection of filth and refuse, and the work has never been more efficiently performed than it is now. A house-to-house inspection—one of the most important of sanitary duties—is in progress, and must materially tend to the removal of local conditions of ill-health; so also, such defects in connexion with the sewage and other matters as are detected have either been dealt with or are receiving attention.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 13th inst., 5768 births and [illegible] deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which in the three preceding weeks had been 20·6, 20·3, [illegible] and 20·9, rose last week to 21·4. During [illegible] corresponding weeks of the current quarter the death-rate [illegible] 1883. The [illegible] Wolverhampton, 18·6 in Derby, and 20·1 in Birkenhead. The rates ranged upwards in the other towns to 31·0 in Leicester, 32·0 in Wolverhampton, 32·4 in Cardiff, and 35·4 in Blackburn. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 1314, 1260, and 1147 in the three previous weeks, further declined last week to 802; these included 531 from diarrhœa, 71 from whooping-cough, 65 from scarlet fever, 46 from measles, 45 from "fever" (principally enteric), 31 from diphtheria, and 13 from small-pox. These diseases caused the lowest death-rates in Derby, Brighton, and Plymouth, and the highest in Hull, Blackburn, and Preston. Measles caused the highest proportional fatality in Preston and Halifax; scarlet fever in Leeds, Sheffield, and Cardiff; whooping-cough in Leeds and Birmingham; "fever" in Bolton and Norwich; and diarrhœa in Preston, Leicester, and Blackburn. The 31 deaths from diphtheria in the twenty-eight towns included 22 in London, 3 in Salford, 2 in Liverpool, and 2 in Leeds. Small-pox caused 9 deaths in London, 2 in Liverpool, 1 in Sheffield, and 1 in Hull. The number of small-pox patients in the metropolitan asylum hospitals [illegible] in and around London, which in the nine preceding weeks had declined from 1368 to 530, further fell to 477 on Saturday last; the new cases admitted were 66, against 53, 63, and 77 in the three previous weeks. The Highgate Small-pox Hospital contained 31 patients on Saturday last, 4 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which in the two preceding weeks had been 181 and 167, were last week to 170, and 12 below the average. The causes of 69, or only 1·9 per cent., of the 3588 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Leicester, Nottingham, and in five smaller towns. The largest proportions of uncertified deaths were recorded in Halifax, Newcastle-upon-Tyne, and Birkenhead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which in the three preceding weeks had been 21·8, 20·[illegible] 20·5, rose to 21·5 during the week ending the 13th inst.; it almost corresponded with the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 15·0 [illegible] in Aberdeen and Edinburgh, to 24·7 in Glasgow, [illegible] Leith. The 519 deaths in the Scotch towns included [illegible] which were referred to diarrhœal diseases, 21 to whooping-cough, 17 to scarlet fever, 15 to diphtheria, 10 to [illegible] and not one either to small-pox or measles; in all, 113 [illegible] resulted from these principal zymotic diseases, against [illegible] and 127 in the two preceding weeks. These [illegible] were equal to an annual rate of 4·9 per 1000, which [illegible] exceeded the average rate from the same diseases [illegible] in the twenty-eight English towns. The deaths [illegible] to diarrhœa, which had been 74, 68, and 55 in the [illegible] vious weeks, were again 55 last week, and exceeded [illegible] the number in the corresponding week of last year [illegible] occurred in Glasgow and 10 in Dundee. The 21 fatal [illegible] of whooping-cough showed a slight further decline [illegible] recent weekly numbers, and included 10 in Glasgow [illegible] Dundee, and 3 in Aberdeen. Of the 17 deaths from [illegible] fever 13 were returned in Glasgow and 2 in Edinburgh. The 15 fatal cases of diphtheria showed a slight increase upon recent weekly numbers, and included 8 in Glasgow, 2 in Dundee, and 2 in Aberdeen. The 10 [illegible] from "fever" also showed an increase; 5 were [illegible] Glasgow, 3 in Paisley, and 2 in Edinburgh. The [illegible] referred to acute diseases of the respiratory organs [illegible] eight Scotch towns showed a slight further increase [illegible] the numbers in recent weeks, but were below those recorded in the corresponding week of last year. The [illegible] or more than 15 per cent., of the deaths in the [illegible] towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had [illegible] the three preceding weeks from 30·3 to 29·3 per [illegible] 29·4 in the week ending the 13th inst. During the eleven weeks of the current quarter the death-rate in the city averaged 24·8 per 1000, the rate during the same period being 21·7 in London and 16·5 in Edinburgh. The deaths in Dublin last week exceeded by 1 the number

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in the preceding week, and included 42 which were referred to the principal zymotic diseases, against 65 and 42 in the two preceding weeks; of these, 24 resulted from diarrhœal diseases, 11 from scarlet fever, 4 from "fever," 2 from diphtheria, 1 from whooping-cough, and not one either from small-pox or measles. These 42 deaths were equal to an annual rate of 6·2 per 1000, the rate from the same diseases not exceeding 3·1 in London and 2·5 in Edinburgh. The fatal cases of diarrhœa, which had been 48 and 29 in the two previous weeks, further declined last week to 24. The deaths referred to scarlet fever, which had declined from 13 to 7 in the three preceding weeks, rose again to 11 last week. The 4 fatal cases of fever exceeded the number in any recent week. The fatality of whooping-cough showed a marked decline from that recorded in the three previous weeks. Three inquest cases and 1 death from violence were registered in the city during last week, and 47 deaths occurred in public institutions. The deaths of infants showed a considerable decline from recent weekly numbers, while those of elderly persons were more numerous. The causes of 38, or more than 19 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

THE ALLEGED CAUSE OF CHOLERA.

To the Editor of THE LANCET.

SIR,—There is no subject on which the same amount of labour and observation has been bestowed with so little real or apparent advance as that which forms the heading of this communication. It has fallen to my lot to have seen much of cholera, and it was my good fortune to have known intimately the late Dr. James Bryden, than whom a more truthful or philosophical-minded man did not exist. Strong lights are unnecessary, true ones being at command, says Selden; and it seems strange, where every fresh theory or hypothesis appears destined to add but another to the many scientific pitfalls for the footsteps of the unwary, that the works of a man who sedulously endeavoured to compile such a truthful record of facts that it might have been written, so to say, by cholera itself, and merely chronicled by him, should have received so little attention at the present time.

It is but easy as it is common to drop down with the tide of the latest popular view—the current doctrine of the day; but it unfortunately often happens that the facts are all going the opposite way.

As I propose briefly commenting on the latest view of a most distinguished and competent histologist, I desire to guard against being thought to possess any sympathy with the Philistinism of the day, which roughly ridicules what it cannot understand or appreciate. I quite appreciate and sympathise with the labours of such men as Koch and his *confrères*, but it must be remembered that it is truth, not victory, that has to be sought. It is humiliating to have to confess that we are still ignorant of the cause of cholera, for the latest alleged discovery of it is not, I fear, destined to prove "the light."

Koch, it, he says, found a bacillus of comma-like form in all cases of cholera, and in that disease alone. These bacilli are met with in the small intestines, which are the seat of the disease; they swarm in the inodorous watery alkaline fluid which characterises a certain stage of that disease, being substitutionary apparently of those micro-organisms ordinarily found. These bacilli are easily destroyed by desiccation, by acids, even by so weak a one as that of the gastric juice, and so on. The outcome of his observations is that these micro-organisms are the cause, and not the effect or concomitant, of cholera. All attempts to impart the disease to the lower animals by inoculation have, however, failed.

Several steps in the argument are assumed. For instance, that the fact that the small intestine is the seat of the disease? In cholera the body is, as it were, dominated by a morbid influence, under which exosmosis is everything, endosmosis *nil*. There is in most cases an enormous transudation of alkaline serous fluid into the intestines during one stage (rice-water) of the disease; but that does not justify us in stating as a logical inference that the small intestine is the seat of the disease, any more than we should be justified in saying that the doors of a theatre in case of a panic from an alarm of fire were the seat of the disaster in the theatre.

Next (*a*) it must be shown without any shadow of doubt that these comma-like bacilli are absent in every other disease, and in healthy individuals under ordinary circumstances; and for this purpose the number of observations recorded by Koch to establish it are, to my mind, insufficient. (*b*) Further, it must be shown that the bacillus is a specific object, and not a mere differentiation from some common microbe, owing to the nature of the menstruum in which these latter float, and on which they are presumably nourished.

Although it may be true that, in regard to shape, bacteria are very constant and one kind is not changed into another, experiments are required to prove what would be the effect of subjecting the micro-parasites ordinarily present in the body to contact with a mucous membrane and an alkaline fluid like that found in cholera intestines. Why does a pancreatic digestive mixture soon swarm with bacteria when the natural juice or an infusion of the gland is used. (Foster's "Physiology," pp. 253–298). It is difficult to understand how the intestines can be the sole breeding-ground or infecting depôt, so to say, of these bacilli, which are to produce all the morbid phenomena witnessed in cholera. Koch has not detected these comma bacilli in the blood, liver, spleen, or kidneys. Again, take the effects of desiccation, and how are we to explain the survival of this bacillus in the plains of India? If the gastric juice of a healthy stomach has sufficient acidity to destroy the bacillus, it should follow that the stomach is the safest place to put it. Koch has apparently to evoke the aid of some trifling indigestion or gastric derangement on the part of those attacked; but is not this an assumption, and, at least as far as some cases are concerned, opposed to experience? Does he hold, as he seems to do, that the cholera cause can only reach the system through the gastro-intestinal tract? On what evidence?

How does cholera, as a matter of fact, comport itself in India? This cholera bacillus must be capable of covering the two extremes of (*a*) sporadic cases, where one man is attacked and dies in a place, no other cases occurring, and (*b*) an epidemic extending over half the globe. A return of the cholera cases in Bengal for this year, or for any year, would show that isolated cases at numerous stations, widely separated from one another, are common phenomena; and further, these so-called sporadic cases at certain seasons are often the precursors of epidemics later on. How are we to account, on the one hand, for the apparently spontaneous origin of this cholera bacillus at one time and place, and for its limited sphere of action; and, on the other, for its enormous and rapid development when the disease is spreading as an epidemic?

The regularity of the course of epidemic cholera in Bengal—its relation to time and space—could be easily illustrated. Why is it, in the first year of its advance to the north-west, so often limited by the line of 80° E. long.? It has been lately discovered that at this longitude the two monsoon currents from the Bay of Bengal and Arabian Gulf meet, and must there give rise to an ascential current. It would be easy to illustrate this and other circumstances connected with the past history of epidemic cholera in Bengal by some striking tables embodying the results of repeated observation; and they cannot surely be mere coincidences.

Again, how are we to explain the almost simultaneous outbreak of cholera at so many and distant stations? How are we to explain the contrast exhibited by Peshawar as compared with other places in regard to epidemic cholera? In Peshawar a cholera epidemic will continue till December; in other places, say the Punjab, it is over as an epidemic by the end of September. A great deal has been said from time to time about the influence of water as the vehicle of a *specific*, as contra-distinguished from a *common*, cause of impurity. In the celebrated Broad-street pump case the outbreak was almost identical in its course and duration with a typical outbreak in a regiment on the march in India; and the fact of the fatal cases ceasing at once after closure of the well is against that having been the cause.

The course of an epidemic of cholera in Bengal, instead

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of being with is against the course of the natural drainage of the country. Of course it is no new thing that cholera hugs the banks of a stream; but it has never happened that an epidemic of cholera commenced in the Himalayas or Upper Provinces and spread gradually down the Ganges, Jumna, or Indus; its advance has been exactly opposite.

Professor Koch, misled no doubt by incorrect information, has attributed the improvement in the health of the garrison at Fort William, Calcutta, to the introduction of a pure water-supply; but the fact is that an Order in Council exists refusing to sanction the necessary expenditure for its introduction, in consequence of the remarkably good health which the Fort William garrison had then been enjoying for several years past. The town water was subsequently introduced; but there was no such causal connexion between the two things as has been alleged. There are, moreover, some facts within my knowledge connected with the prevalence of cholera on board some of the Assam steamers, and the town and district of Dacca, which would indicate how cautious we should be before considering that cholera infection through a specifically contaminated water is a demonstrated fact.

This communication has already extended to a wearisome length, therefore I will finish what I have to say next week if you will kindly grant me the necessary space.

I am, Sir, yours obediently,

J. A. MARSTON,

September, 1884. Deputy-Surgeon General, A.M.D.

"THE METAPHYSICS OF COMTE."

To the Editor of THE LANCET.

SIR,—The tone of Mr. FitzPatrick's letter makes me fear that I did wrong in using the not very elegant term "rubbishy" to qualify metaphysics. But the context would show that the worthlessness of rubbish was ascribed by me to metaphysics in general, and not only to the mystical latest phases of Comte, which are at least as like metaphysics as one fog is like another.

I certainly did not mean to speak slightingly of Comtists, and am very sorry if I seemed to do so. No mere passer-by would cast a reflection ever so remote and momentary upon the distinguished group of men known as Comtists, or Positivists. Even a wayfaring man must be moved by the aspect of a somewhat forlorn group worshipping Humanity in the cold shade of public neglect. Nay, it is even quite touching to witness their almost simple disregard of that reciprocity which more numerous and ordinary worshippers commonly have an eye to.

The Comtists made science into what they call philosophy, and philosophy into what they call religion, and having done so they worship. They worship humanity, the source of their undivine religion and science. Very few people join in the worship; and it is curious to me that the Comtists do not see why this is. They do not appear in the least to appreciate the greatest and first of truths which is at the foundation of all religion—the truth, namely, that there must be a reciprocity between worshipper and worshipped. The reciprocity is, indeed, necessarily a close one. Even Pagans have seen this greatest of truths. Cicero clearly perceived it. He remarks that the deity of elephants would have a proboscis. But the correspondence of worshipper and worshipped may be ground too sacred to admit of playful treatment. Nevertheless, I may remark how the intensely personal Jew worshipped a correspondingly personal God. Intense individuality required uncompromising monotheism. The Jew has never been able to accept Christ's simple summary of the Commandments. The intensely personified God who reciprocated to the intense ego of the Jew was even supposed by the Jew to grow jealous about him. But Humanity will never grow jealous about the Comtists, however their clever high priest, Mr. Frederick Harrison, may flirt with the Unknowable quite openly before the very eyes of Humanity in the *Nineteenth Century* and *The Times*. The weakness of the Comtists' philosophy-religion, which is neither religion nor philosophy, but which at any rate worships Humanity, is that there will never be any reciprocity of worshipper and worshipped. I must leave it to Mr. Harrison and to Mr. Spencer to settle for Mr. FitzPatrick whether Comtism includes the whole Spencerian system, metaphysics and all. It is plain to anyone reading Mr. Harrison's letter in *The Times* of this week that Positivists do not see themselves quite as others see them. One cannot be surprised. The "giftie" of seeing ourselves as others see us would belong rather to Relativists than Positivists. But Mr. FitzPatrick has been acquainted with the distinguished group of Comte's followers, and he must be aware that the "latest phases" of Comte became mystical and obscure, and left the safe ground of five-sense science, and undertook to deal objectively with the subjective aspect of life, and that in this departure he was not followed by all his followers, small as the distinguished group has always been. Was not Littré rather than Comte the Paul of the Positive system? And is not Mr. Frederick Harrison now a kind of melodramatic Athanasius, declaring the Positive polity with its human subjective synthetic side to be *ἀνάθεμα* with the awful primitive abstractions of Positive Science. One, indeed, can easily foresee fundamental divisions amongst the Comtists. But such divisions will never reach great dimensions through the numbers involved. To be a Positivist your brain must preponderate over your heart—a result obtainable either through much brain or little heart; and either of these alternatives will disqualify you for a wide religious success amongst the multitudes who compose humanity. Mr. Frederick Harrison has evidently much brain. The little Comtists whose qualification for the Positive philosophy consists in little heart are in even a more hopeless case than Mr. Harrison as to the prospect of attracting the attention of their divinity.

I am, Sir, yours truly,

Finsbury-circus, E.C., Sept. 15th, 1884. W. MORSON.

CONGENITAL SACRAL TUMOUR: A CORRECTION FOR THE "SYSTEM OF SURGERY."

To the Editor of THE LANCET.

SIR,—My attention has been called by Mr. Charles Hawkins to an unaccountable error in an article of mine in the "System of Surgery." May I ask you to allow me space to make the necessary correction? The passage is in vol. iii., p. 781, of the new (third) edition, in the article on Surgical Diseases of Childhood. Speaking of "congenital sacral tumour," and of the danger of operations on such tumours, I say, "This remark is illustrated by a preparation in St. George's Hospital Museum consisting of a number of irregular pieces of bone from a congenital tumour removed by Sir B. Brodie from the sacral region. The operation proved fatal." I cannot explain how such a misrepresentation could have crept into my work, since I had previously, in my book on "Surgical Diseases of Children" (second edition, p. 20) quoted from Mr. Hawkins's paper in the Path. Soc. Trans., vol. iii., p. 447, the following account of the real history of the case in Sir B. Brodie's words:—"Contrary to my advice, a surgeon made an incision into the tumour, which not only served no useful purpose, but left him in a worse state than he was before. Different cysts suppurated, discharging pus and adhesive fluid. Sometimes a collection of fluid and pus pressed on the rectum, occasioning a difficulty of expulsion of fæces, and then discharging its contents into the bowel. After this he was always in a state of greater or less suffering. He lost flesh, had occasional attacks of fever, and at last he sank and died." Thus my statement is erroneous in three particulars. 1. Sir B. Brodie far from having removed the tumour always advised the patient strongly to permit no interference with it. 2. The tumour was never really removed; the "other surgeon" only made an incision into it, when it was inflamed in consequence of the patient having fallen on it. 3. The pieces of bone in the preparation were removed, not during life, but by Mr. Hawkins in post-mortem examination.

I have thought it desirable to correct the error, which indeed ought never to have got into the text, or ought to have been corrected in the second edition of the System. The main conclusion, however, which I attempt to enforce in the article is unaffected by my blunder—viz., that such tumours should only be operated on when the surgeon believes that he can extirpate the whole tumour, and even then not without an adequate motive, since the operation is always a very formidable one.

I am, Sir, yours truly,

Great Cumberland-place, Sept. 11th, 1884. T. HOLMES.

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THE EXAMINATION OF SURGEONS-MAJOR.

To the Editor of THE LANCET.

SIR,—Pressure of business has prevented my ere this asking you the favour of a space in your valuable journal for the few following remarks, in addition to the many already expressed, upon the subject of submitting surgeons-major in the army, over twenty years' service to a qualifying examination for promotion to the rank of brigade-surgeon (*vide* Army Circular, August 1st, 1884). The inadvisability of any examination for officers of such seniority appears to me apparent, having regard both to the prestige of the service and to the *amour propre* of the profession. This presumably is a military question, for which some imaginary precedent may supply the apology. Not even so much excuse or extenuation can be claimed for paragraph 9, by which I see it is intended that these elderly victims are literally, in more senses than one, to be put through their A B C, as I notice alphabetical clauses through two-thirds of the alphabet, terminating at letter O, which forms the culminating point of the whole absurdity. See paragraph 9, clause O: "Questions on operative surgery and practical medicine will also form part of this examination." But one parallel could be found for examining in such subjects professional men of a quarter of a century's seniority—viz., to subject all lieutenant-colonels in the army to an examination in the goose-step as a qualifying test of their fitness for promotion to the rank of colonel. Indeed, my allusion to the manners and customs of the feathered tribe appears suggestively applicable in tracing the present steps taken by the originators of this circular. This does not explain, however, the unaccountable deviation on the Director-General's part from the high order of intellect and capacity with which he has hitherto distinguished his present position, and if, contrary to his convictions, he has allowed himself to be influenced, the fact is only the more deplorable. The assignable object of these innovations is a desire to prove the efficiency of the department; but why delay that demonstration for twenty years? Were an examination necessary for such a purpose, its utility would be more marked at the commencement of an officer's career than towards its close. If a man has been efficient during twenty years' service, there is but scant necessity for proving the fact at the end of that term; and if he has hitherto been incompetent, it is late to remedy the evil. By all means subject officers to a rigid and most searching examination upon the widest range of professional subjects, between the ranks of surgeons and surgeons-major. From that much benefit would most probably accrue. But an officer practising for over twenty years is as unlikely to profit in the smallest degree from an examination as he is certain to be embittered against a service which could subject him to so unnecessary an indignity.

By paragraph 11 we are informed as to the nature and means of this inquisitorial revival. "It is to be in part by printed papers and in part *vivâ voce*. The Board will enter so far into the subject-matter of each head selected for *vivâ voce* examination as to show that the officer's knowledge has been fully tested." By all means. Only primarily let the Board's knowledge "be fully tested" as to its capability of pronouncing upon the practice and experience of officers who quite probably are as worthy of confidence as would be the opinion of those exalted personages forming the Board. By paragraph 12 I see this Board is "carefully to record all questions asked and answers received, and to send the record to the Director-General." But such a record must materially improve or deteriorate in merit according to the capacity and reliability of the source through which it is transmitted. To conclude: The papers will then be submitted to another Board, likewise of experienced officers, who in their turn are to pronounce upon the competence of the officer. For the second time the colouring given to that officer's proficiency would be deeply tinged by the prevailing hues of the Board's capability for transmitting the treble-distilled matter originally received from the unfortunate victim. He consequently must be largely dependent, not upon his own brains, but upon what could not obviously be a certain maximum quantity of that commodity in the possession of those relays of experienced individuals, always apparently unquestionable in their description. One naturally wonders who are to form this all-important tribunal. First, if civilians, an inevitable slur is cast upon the proficiency of the department. Secondly, if men in the same service, how can it be ascertained that they knew more about the subject than those they are pronouncing upon? Thirdly, will the presiding genii be called from amongst those fortunate mushrooms who spring suddenly to the surface and into office, having been grown in the forcing soil of an effete favouritism? Then, indeed, the whole injustice is not left without a coping-stone. But, as though there were any apprehension that the entire fiasco might not be rendered quite complete, we are informed that "the examination will be optional." Is it to be inferred from this that there is a lurking suspicion in the minds of the authorities that the veteran doctor would prefer bringing his grey hairs in sorrow, as a surgeon-major, to the grave, rather than face the alternative of being turned into a metaphorical shuttlecock, to be battledored from Board to Board, and from the A B C to the Omega of his profession? A very heartfelt sympathy with, and interest in, the department, gathered from personal experience in the services, must be my apology to you for so inconsiderately trespassing on your space.

I am, Sir, your obedient servant,

W. I. WHEELER, F.R.C.S.,
Ex-President of the Royal College of Surgeons, Ireland.

Dublin, Sept. 16th, 1884.

THE CHOLERA.

To the Editor of THE LANCET.

SIR,—The continued spread of cholera on the Continent makes it imperative on the part of medical officers to take extra precautionary measures to prevent its outbreak in this country, and especially in London. When cholera first appeared in France, the metropolitan authorities freely used disinfectants to street gullies and gratings, so that poisonous gases from putrefying matter were in a measure destroyed. It is not only gratings, gullies, dustbins, urinals, and receptacles for dust that require special attention at this time of the year, but the greatest danger exists in the branch drains leading from buildings to sewers in the streets. These are to some extent not under the control of vestries, and the inlets into sewers are often closed, and from these gases of the most poisonous nature are produced. In these branch drains disinfectants should be freely employed during the next two months. I am aware that many of the medical profession treat very lightly the theory that gases from putrefying matter are the principal agents in generating and transmitting zymotic disease; but to those who have investigated the question, it is not one of theory, but of fact. Previous to the cholera outbreak on the Continent, small-pox was very prevalent in London, but the free use of disinfectants as a preventive against cholera had the effect of stopping the small-pox epidemic.

I am, Sir, yours faithfully,

R. H. REEVES.

September, 1884.

LORD TENNYSON AND THE SURGEON.

To the Editor of THE LANCET.

SIR,—Even professing Christians are liable to imagine one another to be monsters of iniquity, and this is due to ignorance, for when placed on the same platform in some effort to benefit humanity, they learn to esteem one another. Probably Lord Tennyson is ignorant of doctors and their work, while Dr. Moxon may be ignorant of the incessant charitable visits of the Poet Laureate to his poor neighbours. It may be that Lord Tennyson was accustomed to distribute tracts in some village hospital, and met with a surgeon whose time did not allow him to pay sufficient, or, at least, desired, attention to the distinguished visitor. We ought never to judge hastily, and while surgeons may be doing everything in their power to relieve and cure their patients and deserve all honour for their sympathy and kindness, they must respect and honour the man who throws open his garden to the waifs of the street and at his own expense takes a crowd of little convalescents or street Arabs from the slums of London to indulge them with games and regale them with fruit on his own lawn, while he instructs them by reciting pieces of poetry and reading Gospel stories to them. I do not know anything of Lord Tennyson's deeds of charity, but no doubt his biographer will relate them. It is possible,

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though improbable, that an intelligent man, full of sympathy and kindness for the poor and the afflicted, may be unable to appreciate the work done in hospitals, and may busy himself in establishing homes for the destitute and suffering that may be entirely under his own control. If both Dr. Moxon and Lord Tennyson are spending their lives in relieving the suffering and bringing joy to the mourner, a more intimate acquaintance will no doubt make them love one another.

I am, Sir, yours, &c.,

Sept. 1884. S. B. G. MCKINNEY, L.R.C.P. Edin.

BRITISH MEDICAL BENEVOLENT FUND.

To the Editor of THE LANCET.

SIR,—The late Sir Erasmus Wilson has munificently left the British Medical Benevolent Fund £5000, but as Lady Wilson takes a life interest in the whole of his property, this legacy of course is not payable until after her death.

I take this opportunity of bringing before the profession our urgent need of funds, for we are totally unable at the present time to help many of the deserving cases that come before us.

Subscriptions may be paid to the Treasurer, Dr. Broadbent, 34, Seymour-street, Portman-square, or to

Your obedient servant,

GEORGE P. FIELD,
Hon. Financial Secretary,

31, Lower Seymour-street, Portman-square, Sept. 10th, 1884.

"ORGANISMS IN CHOLERA STOOLS."

To the Editor of THE LANCET.

SIR,—Adverting to my letter and drawing of a fortnight back, I desire to add that the organism in question may flourish abundantly in dejecta possessing a distinctly acid reaction. It can hardly, therefore, represent the specific bacillus of Dr. Koch, however closely corresponding in respect to descriptions of the latter as yet published. Most observers would, I think, agree in referring my figures to those of a vibrio, admitting (what I find now doubted)[1] the validity of this particular form of bacterium.

I am, Sir, your obedient servant,

Bombay, August 19th, 1884. H. V. CARTER.

NEWCASTLE-ON-TYNE.

(*From our own Correspondent.*)

TYPHOID ON BOARD-SHIP FROM IMPURE WATER.

AT a meeting of the Sanitary Committee of the Middlesborough Corporation last week, the medical officer, Dr. Malcomson, reported the arrival of a Norwegian vessel, named the *Tross*, with typhoid fever on board. There were two cases, and one of the men had died. This case was a very bad one, and one or two of those who attended on the patients caught the infection. The ship had been disinfected, and an analysis of the water showed that it was little better than sewage, and had occasioned the outbreak. It was resolved to forward a copy of the medical officer's report to the Board of Trade, in order that captains of ships at Stettin may be warned against taking in a supply of water at that place for drinking purposes.

CHOLERA PRECAUTIONS ON THE TYNE.

Professor de Chaumont, medical officer to Her Majesty's Privy Council, has been visiting the Tyne with a view to ascertain what precautions have been taken to guard against the introduction of cholera into the port. As well as visiting the floating hospital at Jarrow, he has inspected the small-pox hospital on our Town Moor, the convalescent hospital for fever and small-pox at Byker, the fever hospital, &c., and he was shown the plans &c., for the proposed new and extensive hospital at Heaton for infectious diseases. He was supplied with details by our city authorities of the provision made by them for combating any infectious disease that may from time to time become epidemic. Professor de Chaumont, on leaving Newcastle, made a similar inspection of the neighbouring ports of Blyth and Tynemouth.

SANITARY MATTERS AT DURHAM.

In a previous letter, last June, I mentioned that the Corporation of Durham City had, in consequence of the remonstrance of their medical officer of health, agreed to provide a hospital for infectious diseases, and went so far as to select a site. The other day one of their aldermen actually succeeded in inducing the Corporation to rescind the resolution, notwithstanding that it is admitted, and notorious, that a greater necessity exists now than when the proposition was mooted and carried. It may be explained that the Corporation sits as the Urban Sanitary Authority, and that their opposition to their own scheme was based on the "needless expense" foundation, or, in other words, "the penny-wise and pound-foolish" system of economy. One of their own newspapers speaks of the procedure on the part of the Corporation as "the by no means uncommon exploit of advancing one step backwards." As a commentary on the strange proceedings of the Corporation, Dr. Barron, their medical officer of health has notified an outbreak of small-pox in the city, the district of Framwellgate having no less than fifteen cases. The Durham guardians have determined to give liberal out-door relief to all small-pox cases requiring it, in order to isolate the disease as much as possible and to keep it away from the workhouse; but probably the Local Government Board may have something to say about the absence of proper hospital accommodation for infectious cases in the city of Durham.

DEATH OF MR. JOHN PRATT, M.R.C.S.

The death of Mr. John Pratt, M.R.C.S., is announced. He was for many years in active practice in the city of Durham, and a few years since he received a public and valuable testimonial in recognition of his labours during the severe small-pox epidemic in Durham in 1872, when he attended over 700 cases. He was distinguished by his kindness to his poorer patients. Mr. Pratt entertained peculiar views in reference to the subject of vaccination.

Newcastle-on-Tyne, Sept. 16th.

GLASGOW.

(*From our own Correspondent.*)

SMALL-POX AND DIARRHŒA.

IN the health officer's report for the fortnight ending 30th August two important points are noted—a sudden increase in the death-rate from diarrhœa in the very young, and the disappearance of small-pox from our midst. With regard to the first, it is ascribed to the recent sultry weather, ending in a very severe electric storm. No fresh cases of small-pox had been discovered in the city for a month; "and as the last patient had been dismissed from the small-pox hospital on 23rd August, the city is now entirely free of that disease, and when it reappears it must be by importation from without." This result, one of which the citizens of Glasgow are to be sincerely congratulated, may very justly be said to be due to the untiring efforts of Dr. J. B. Russell and his energetic staff of sanitary officers, to check the epidemic.

OUTBREAK OF TYPHOID FEVER.

Another outbreak of typhoid fever, affecting chiefly the inmates and officials of our two infirmaries and the fever hospital, is at present under investigation. In the Royal Infirmary no fewer than thirty cases have occurred, three of the officials being among the number. At the Belvidere Fever Hospital one of the Royal Infirmary nurses has died from the disease. It is believed that the outbreak is in some way connected with the milk-supply; whether this is the case will doubtless be made clear in Dr. Russell's forthcoming report on the outbreak.

THE DRAINAGE SYSTEM OF NEW BUILDINGS.

At a recent meeting of the Dean of Guild Court, in Glasgow, the Lord Dean of Guild (Mr. William [illegible]) made the very sensible statement that, in his opinion, much advantage would be derived from the appointment of an officer whose duty it would be to survey the drains of new buildings and report on their sufficiency. Much good might be anticipated to flow from such an appointment. The Court sanctioned the erection of buildings [illegible]

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standing that the drains should pass the officer's inspection, and should refuse a licenie for occupation till such officer's recommendation had been complied with, the present disgraceful state of our house-drainage system would soon be set right, so far as new erections are concerned. This is a matter which very closely touches the public health, and it is to be hoped that Mr. McEwen's suggestion will not be lost sight of.

IRELAND.

(From our own Correspondent.)

MEDICAL OFFICERS' SUPERANNUATION ACT.

DURING 1883 there were 83 Poor-law medical officers in Ireland receiving superannuation allowances. Of this number 61 were dispensary medical officers, 14 medical officers of workhouses, and in eight instances the medical gentlemen held both these appointments.

RICHMOND HOSPITAL, DUBLIN.

The whole nursing system in this institution has been pointed out by the Medical Board as very defective. There is no one to give the nurses instruction or to overlook their duties. The matron visits the wards during the day, but as she has to superintend three hospitals, it is impossible that she can see that the individual requirements of the patients are attended to. The Medical Board some time since suggested the appointment of a skilled lady nurse as superintendent, and it is satisfactory to find that the governors have at last consented to the arrangement, and that a meeting will be held on the 25th inst., in accordance with a notice given by Professor Stokes, when the salary and emoluments of a trained head nurse for the hospital will be considered.

OPENING OF BERKELY HALL, QUEEN'S COLLEGE, CORK.

Berkely Hall, which has been erected at a cost of some £9000, for the accommodation of Protestant students attending this college, was formally opened last week by the Lord Bishop of Cork Part of the cost was obtained on loan from the Board of Works, and among the contributors was Mr. Crawford, who gave £2500, leaving a debt remaining of upwards of £2000. The building, which contains forty bedrooms and grounds attached for the use of the students, has principally been erected owing to the exertions of the Dean of Residence, the Rev. Dr. Webster.

CORONERS AND MEDICAL WITNESSES.

A person recently died at the Hammam Baths, Dublin, and a medical gentleman being sent for found that life was extinct. The gentleman in question, Dr. McVeagh, very naturally expected that as he first saw the case, he would be the proper person to give evidence at the inquest, more especially as his name and address were taken by the constables in charge for that purpose. Another medical practitioner was, however, examined by the coroner, who was not sent for at the time of the man's death; and Dr. McVeagh complains, and with reason, of the want of courtesy and justice adopted by the coroner in this case towards the profession and himself.

Dr. Cameron, medical officer of health for Dublin, in his report for August states that the death-rate was unusually high, owing to the great mortality caused by diarrhœa, due to a considerable extent to the high temperature which prevailed.

The Dublin Corporation has arranged to add swimming baths to the baths and washhouses now being erected in that city.

The late Mr. James Gorman of Dublin has left £1000 to Jervis-street Hospital, £6000 to the Cabra Deaf and Dumb Institution, and £400 to the Mater Misericordiæ Hospital.

Dr. Fleetwood Churchill of Dublin died very suddenly from cardiac disease on the 6th inst. The deceased was highly esteemed and respected, and his untimely death is deeply regretted by a very large circle of friends and acquaintances.

Dublin, Sept. 15th.

VACCINATION GRANT.—Dr. Richards, of Birmingham, has, for the second time, received a Government grant for successful vaccination in the Edgbaston district of the King's Norton Union.

PARIS.

(From our own Correspondent.)

THE CHOLERA EPIDEMIC.

I HAVE nothing new to report in regard to the progress of the cholera in the south of France, and although it is still raging, it is doing so with diminished intensity, and is confined to the localities already named. Even in Spain the situation is about the same, but in Italy the epidemic is assuming alarming proportions, particularly in Naples, where, however, the mortality and the number of admissions have been somewhat on the decrease during the last two or three days. The incursion of the epidemic into these parts would seem to point to the futility of quarantines and "cordons sanitaires" so zealously carried out by the Italian Government.

Two cases were reported to have occurred in Paris, but, as usual, were found on inquiry to be nothing more than severe cases of seasonal diarrhœa, which, however, proved fatal. The deaths having occurred in a hospital, the same precautions were taken as are now prescribed for genuine Asiatic cholera.

Paris has not for a long time been so healthy as it is at present, and although the mortality is rather higher than that of the preceding week (985 against 932), it is about the average of the corresponding periods of the five previous years.

THE DISINFECTION OF ROOMS.

At the requisition of the Prefect of Police, MM Dujardin Beaumetz, Pasteur, and Roux performed experiments with the view of ascertaining what would be the best gas for disinfecting rooms in which patients suffering from contagious affections had sojourned. These gentlemen have come to the conclusion that sulphurous acid gas would be the most efficacious for such purposes; but instead of simply burning sulphur as is done in the barracks and military hospitals, they recommend the burning of the sulphur of carbon as being the least expensive and the least injurious to the furniture or articles of metal in the rooms.

A MONUMENT TO FRESNEL.

A rather interesting ceremony was performed last Sunday at Broglie (Eure) in the inauguration of a monument that has been erected in honour of Augustin Jean Fresnel, the illustrious physicist and member of the Institute, where he was born on the 10th May, 1778, and who died at Ville d'Avray, near St. Cloud, in 1827. The ceremony was presided over by the Duc de Broglie as Maire of the district, and was attended by the Municipal Council of the place, and delegates from the Academy of Sciences. Fresnel was the author of several important works on the phenomena of the dispersion, refraction, and polarisation of light, which led to the invention of "Phares à lentilles à échelons," or lighthouses with gradation lenses, which have rendered such material service to navigation.

Paris, Sept. 17th.

ITALY.

(From our own Correspondent.)

"*Sempre avanti, Savoia!*" (Ever forward, Savoy!)—the now historical exclamation of Queen Margherita when, on the eve of the royal visit to Sicily, the commandant of the *Duilio*, hesitating to put out into the stormy sea, took Her Majesty's opinion on the point—seems no less the watchword of King Humbert. When besought by his retinue of statesmen, soldiers, and physicians to pause in his pilgrimage through cholera-stricken Naples, he simply bows and continues his progress from bedside to bedside and from ward to ward. Before starting for the doomed city he received from the town council of Pordenone a memorial to honour with his presence the races about to come off in that Venetian town; and his reply, sent by telegram, has such a truly Roman ring that I cannot forbear quoting it in the original, if but to show how modern Italian, equally with ancient Latin, condenses into force and crystallises into epigram—"A Pordenone si fa festa; a Napoli si muore. Vado a Napoli." (At Pordenone they are merry-making; at Naples they are dying. I go to Naples.) And he was as

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good as his word, though the danger to be encountered was as great as when he faced the Austrian fire at Custozza, or as when his father, while also a youth, had his hussar jacket riddled with seventeen bullets at Novara.

Courage is the requisite the Neapolitans are most in need of, and had they possessed but a fiftieth part of it as it lives and moves in the King, their mortality due to cholera would have been lessened in the same ratio. Of this none are more cognisant than the Italian physicians, two of whom, Dr. Paolo Mantegazza and Dr. Angelo Mosso, have written classical treatises on "La Paura [fear]; and its Influence in courting and aggravating Disease." The truth is that in sudden explosions of epidemic maladies the Southern are no better than the Northern races when the cry of "fire" has been raised in a theatre and the audience *en masse* makes for the door. Seventeen years ago the town of Albano, perched on the hills some fourteen miles from Rome, was the scene of a panic disastrous in the same proportion with that now decimating Naples. Rome had just been visited with cholera, and a few sporadic cases sent crowds of the inhabitants to the Alban Hills. One fugitive, who had certainly the germ of the disease in him before his flight, took refuge in the Cappuccini monastery just above Albano itself, and in twenty-four hours he died. The Capuchins, in their wisdom, interred his body wrapped in its cholera-stained garments at a spot within a few feet of the one well which supplied Albano with water! The consequences may be imagined. In two days the mortality in a population not numbering 7000 rose to hundreds. First one churchyard was filled, and then another had to be opened. The demon of terror seemed to have possessed the inhabitants. All fled who had the opportunity—ecclesiastics (with one or two honourable exceptions), shopkeepers, even the apothecary. The one physician who remained had more to do in exorcising fear than in any other treatment, and case after case came under his observation which (I quote his words) "died of sheer panic." Before the week was out there was no escaping from Albano, as the townsfolk of Castel Gandolfo on the one side, and those of Ariccia on the other, planted artillery at every point of egress and forced the Albanese to simmer in their own juice. The patrician Cardinal Altieri was among those who died at his post, which was immediately filled by another Monsignore. A powerful description of the scene presented by the usually slumberous Alban town during the August of 1867 was contributed by the late Mrs. Robert Macpherson to *Blackwood's Magazine* of the same year.

It must also be remembered that liability to panic in presence of a mysterious danger like that of cholera is intimately dependent on bodily well-being, as no one who has any knowledge of the *modus vivendi* in Southern Italy can fail to see. The population have no physical stamina, no moral resisting power. They sleep in overcrowded rooms—rabbit hutches rather. They are very ill-clad, in winter especially, flannel being well nigh unknown among them, while a clean skin means a cold skin, and the ablutions required by health are neglected accordingly. Then, their food is the least sustaining imaginable, nine-tenths of it being macaroni—that is, starch and water with a little lettuce or an olive doing duty as salad. Butcher's meat or aliments of any kind containing the proper proportion of nitrogen they seldom taste. In summer they consume large quantities of fruit, invariably unripe, as the produce of orchards is never allowed to ripen, lest it be stolen or annihilated by hailstorms. Their poverty is such that they can barely afford fuel enough to cook their macaroni, which is generally eaten half raw and conveyed to their mouths with their fingers from unutterably filthy tables unfurnished with plates or forks. In point of education or moral enlightenment they are pretty much as they have been for centuries back—ignorant, superstitious, at the mercy of every quack, medical, religious, or political. Such is the population which on every occasion of a cholera epidemic furnishes victims by the thousand, particularly in cities like Naples, where the water-supply has long been execrable, and where twenty-five years of constitutional freedom and parliamentary representation have not sufficed to bring back even the semblance of the magnificent reservoirs, aqueducts, and fountains of ancient Rome, republican or imperial.

Special treatment in cases of cholera is still undetermined in Italy. That which has proved most successful has been the hypodermic injection of water saturated with chloride of sodium—hypodermoclysis, as the Italian physicians call it (ὑπό, under; δέρμα, skin; and κλύζω, lave). This is simply an extension of Pacini's recommendation, practised also by Duchaussoy in Paris, and fully described in the "Report on the Results of the different Methods of Treatment pursued in Epidemic Cholera, addressed to the President of the General Board of Health," p. 13 (London, 1855). Pacini says:—"It is clear that the injection of salt water into the veins produces immediate reaction, but it is easy to see that the said reaction cannot be maintained so long as the intestinal transudation lasts. Everyone will admit that the primary care for a leaking wine barrel is not to keep filling it, but to make it tight; all the more is this the case in the human subject, where the vascular system has the power of refilling itself the moment the overflow ceases. So long as the patient is capable of swallowing astringent and antiseptic drinks, I do not believe the physician is authorised to practise those injections, since, besides being attended with risks, they are not absolutely required until the stage of apparent death, at least, in bodies presumed to be dead which present some return of warmth or some movement. The use of astringent and antiseptic beverages may be reverted to when reanimation manifests itself." Acting on these indications, Professors Perli, Amoroso, and Adinolfi, when in consultation one evening on a case of cholera collapse, practised hypodermoclysis according to Cantani's method. The operation itself was performed by Professors Perli and Adinolfi. In fifteen minutes the patient had absorbed a litre of water, and it was observed by the other physician present, as well as by a non-professional bystander, that the pulse became perceptible, the countenance, previously cadaverous in colour and feature, assumed something of animation, the anuria ceased, and a general improvement set in. During the night the amelioration was more and more pronounced, until the temperature touched fever point and the reaction commenced. The next morning the patient, though very weak, was comparatively well. Some interesting records of hypodermoclysis may be looked for from Naples.

Rome, Sept. 15th, 1884.

Obituary.

JOHN NETTEN RADCLIFFE.

WE deeply regret to have to announce the death after a long illness of this well-known member of the profession. Mr. Radcliffe was born in Yorkshire, and received his medical education at the Leeds School of Medicine, of which he was in later years practical teacher of anatomy and prosector; he also was for some time medical superintendent of the Hospital for the Paralysed and Epileptic in Queen-square. But it is in connexion with his labours on public health questions that Mr. Radcliffe secured his most lasting reputation. Having acquired some considerable experience on questions of health in the East during the Crimean campaign, he was selected by Mr. Simon in 1865 to prepare a report on the sources and development of the diffusion of cholera which then existed in Europe; a report was also prepared by him for the Privy Council office at about the same date on an outbreak of cholera at Theydon Bois; and it is certainly not too much to say that had Mr. Radcliffe never again written on the same subject his name would ever after have been identified with the standard literature on this important subject. The wide knowledge which Mr. Radcliffe obtained as to the topography of the East, and his immense power for accurate research, are brought out in a striking manner in these reports; indeed, from that date forward the Government invariably sought his aid in connexion with their investigations of Eastern epidemics in Europe. In 1867 followed Mr. Radcliffe's now famous report on cholera in the east of London, a report which embodied the results of an elaborate and impartial inquiry which led him to the conclusion that the terrible outbreak in question had been produced by the distribution of infected water from certain reservoirs of the East London Water Company. It was not long after the issue of this latter report that the Privy Council office secured the permanent services of Mr. Radcliffe as a medical inspector, and later

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on, when the Local Government Board was formed, he was appointed to the post of assistant medical officer. From time to time he continued to issue reports on the prevalence of Eastern diseases, and these form by far the most valuable records on this subject which have ever been prepared in England. Thus, at the end of 1874 an exhaustive report was commenced, which recorded all the more important matters concerned with cholera diffusions in Europe during the preceding ten years. The report commences with the outbreak at Mecca in 1865; it traces its diffusion in such a way as to bring home to all who are open to conviction the fact that the disease had travelled by the various routes of human traffic and pilgrimage, and then it supplies a mass of details as to the various epidemic outbreaks in different European countries and towns, which of themselves give evidence of the immense amount of labour which was brought to bear upon the preparation of this important document. The last contribution of this sort consisted of an extensive report, issued in 1881, on the progress of Levantine plague in 1878-79, including the reappearance of the disease in Europe, and dealing also with the questions of quarantine in the Red Sea and of the sanitary regulation of the pilgrimage to Mecca. This report had a special value, insomuch as it effectually exposed the fallacies of quarantine regulations by land and sea.

But it was not only as an expert in the question of the distribution of Eastern diseases that Mr. Radcliffe must be regarded as holding one of the highest positions amongst workers in public health; he took his full share of the current work of investigations which were carried out in England to ascertain the causes of epidemics; his inquiries into the prevalence of erysipelas and pyæmia in connexion with faulty hospital construction and administration remain as standard contributions on this subject; and his very complete report on the means for preventing excrement nuisances in towns and villages has probably done more in this and other countries towards removing conditions of filth-poisoning than any other work ever issued. Mr. Radcliffe had also long been identified with the work of the Epidemiological Society, and after holding the office of honorary secretary for a long series of years, he was deservedly raised to the presidential chair in 1875. He was a constant and valued contributor to the pages of THE LANCET.

Some three years ago it was observed by his friends and colleagues that he was ailing in health, and then followed symptoms of paralysis which more than once compelled lengthened absences from official duties, and which early last year led to his resigning the official post he had so ably and honourably filled. Unfortunately, the progress of his illness prevented him from enjoying the rest he had so well earned, and latterly those of his friends who visited him were pained to see that a great light in the sphere of sanitation had evidently finally gone out. The actual symptoms which led to his death were of short duration. At the date of his resignation it was evident that his loss was much felt by all his colleagues, for, quite apart from his marked abilities, John Netten Radcliffe was the fortunate possessor of personal characteristics which had won for him a circle of true and sympathising friends, and which secured him against a single enemy.

The funeral took place last Wednesday at Highgate Cemetery, and was attended by several of his colleagues at the Local Government Board, by his brother, Dr. Charles B. Radcliffe, Dr. Glover, and other friends. Mr. Radcliffe leaves a widow and large family to mourn and deeply to realise their loss.

[illegible] GUISE WESTMACOTT, M.D., L.R.C.S., EDIN.

We [illegible] to have to record the death of Dr. Westmacott, [illegible] the late Henry Westmacott, Esq., of Cadogan-[illegible]. The deceased was born in London in 1811, [illegible] at the Medical College, Edinburgh, in 18[illegible] passed about three years in Paris, attending [illegible] hospitals, and made interesting studies in [illegible] of "calculi" for different professors, which were [illegible] at the time. After quitting Paris he settled in New York, where he practised for about ten years, distinguishing himself especially in the treatment of the eye, as is testified in works by Bouman and others; he then returned to London and set up in practice. He was delineator of Anatomy and Pathology for more than twenty years at King's College, consulting surgeon for the Paddington Provident Dispensary for upwards of thirty years, surgeon and surgeon-major in the London Scottish Volunteers, and also surgeon to the X division of the police for more than twenty years. The drawings in Gray's Anatomy, Druitt's "Vade Mecum," Obstetrical Works, and other publications, bear testimony to Dr. Westmacott's abilities. The deceased was twice married, and leaves three sons and five daughters.

Medical News.

APOTHECARIES' HALL. — The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Sept. 4th:—

Mathews, Frank Edward, York-place, Hill-rise, Richmond.

The following gentleman also on the same day passed the Primary Professional Examination:—

Bray, Percy Dean, Middlesex Hospital.

The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Sept. 11th:—

Barwise, Sidney, The Oaks, St. Paul's-road, Birmingham.
Blackwood, Frederick Martindale, Park-place, W., Sunderland.
Callender, Milton Romaine, St. Thomas's-crescent, Newcastle-on-Tyne.
Lynes, John, Argyll-road, Kensington.
Pedler, William Frederick, Albert Villas, Serpentine-road, Regent's-park.
Williams, Edward, Great Coram-street.

BERLIN oculists assert that the dust from the elevated railroads has added five per cent. to the profits of their profession.

BADLY ventilated school-rooms are blamed by the New York Board of Health as the cause of a large percentage of the cases of pulmonary consumption in the State of New York, where one death in every twelve is from that disease.

UNIVERSITY COLLEGE.—The annual dinner of the old and present students of the Faculty of Medicine will take place at the Freemasons' Tavern on Saturday, October 4th. Sir William Jenner will occupy the chair, and a large gathering of old University men is expected. Application for tickets (price 12s. each) must be made before October 1st to D. Poore or Mr. Stonham, F.R.C.S.

SUICIDE OF A SURGEON.—An inquest was held on the 13th inst. on the body of Mr. Charles Palmer, surgeon, of Yarmouth, who was discovered dead on a lonely part of the South Coast between Eastbourne and Birling Gap. Evidence was given that surgical instruments were found upon the deceased, an artery in whose groin had been skilfully opened. A verdict was returned of suicide while in a state of temporary insanity.

NEW COTTAGE HOSPITAL AT LLANDUDNO.—On the 4th inst. the foundation-stone of a new cottage hospital, to be erected as a memorial to the late Mrs. Dr. Nicol, who was the founder of the movement, was laid by Lady Augusta Mostyn Gloddaeth. When completed, the hospital will contain twenty beds, besides convalescent ward, operating room, spacious hall, mortuary &c.; and the outlay will be £2960, upwards of £1500 of which sum has been subscribed.

THE EXAMINATION OF WATERS.—A Blue-book has been issued by the Local Government Board containing the second report of Dr. R. Angus Smith, one of the inspectors under the Rivers Pollution Prevention Act, 1876, on the examination of waters. Dr. Smith states that the Thames waters show distinct inferiority to the hill waters both as to hydrogen and transformation of gelatine. He had concluded from the experiments he had made that the water of the Thames, even after being filtered, was less pure than the waters of the uplands of England. That truth, he adds, could scarcely be called new, but the difference might be subjected to measurement and put into the form of figures so far as certain qualities were concerned. He could not, however, measure in the same way the effect upon health.

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SMALL-POX IN THE ARMY AND NAVY.—A return published on the 6th inst. of the number of deaths from small-pox in the army and navy during each of the years from 1860 to 1882 shows that in 1860, with an average annual strength of 203,017, there were 30 deaths in the army, or a ratio of 0·15 per thousand. This percentage was increased to 0·22 in the following year, but since that time has been greatly reduced, the ratio in several years being only ·01 per 1000. In the navy the ratio per 1000 in 1864 was as high as 0·51, but since that time has not exceeded 0·26 per 1000, while in 1877 and 1878 there were no deaths returned from this malady.

SOCIAL SCIENCE CONGRESS.—The twenty-eighth meeting of the Social Science Congress commenced at Birmingham on the 17th inst., when the inaugural address was delivered by Mr. Shaw-Lefevre, M.P. The Congress is divided into five departments, as follows:—Jurisprudence and Amendment of the Law—President, Mr. John Westlake, Q.C., LL.D. Education—President, Mr. Oscar Browning, M.A. Health—President, Dr. Norman Chevers. Economy and Trade—President, Viscount Lymington, M.P. Art—President, the Right Hon. A. J. Beresford Hope, M.P. The weather being favourable, the gathering promises to be more than ordinarily successful.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The monthly meeting of this association was held on the 11th inst., Dr. M'Nicoll, presiding. Dr. F. Vacher called attention to the extent and limits of the powers given in the sections of the Public Health Act, 1875, which empower medical officers and inspectors of nuisances to deal with bad food. He pointed out that the Act conferred powers which it would be impossible to dispense with, and which, though less complete than they might easily be made, were as a rule fairly efficient and easily worked. The subject will be further discussed at the next meeting of the Association.

ARMY NURSES.—A Royal Warrant has just been promulgated, by which the provisions of the warrant of June 10th, 1884, relative to the nursing staff of the army, are amended. By the new warrant the pay of lady superintendents of nurses is to be £150, increasing £10 annually till it reaches £200. The lady superintendent of the Royal Victoria Hospital at Netley is to receive an additional allowance of £50 for training the nursing staffs and carrying out such duties as the director-general of the Army Medical Department may direct from time to time. A senior nurse, acting as superintendent, is to receive pay of £20 a year in addition to her salary. The lady superintendents at the Victoria Hospital, Netley, and at Herbert Hospital, Woolwich, shall, on relinquishing their duties, receive retired pay at the rate of 20 per cent. of their salaries after ten years' service, rising by 2 per cent. for each additional year of service up to a maximum of 50 per cent.

THE NIGHTINGALE FUND.—The annual meeting of the Council of the Nightingale Fund was held last week at the "Nightingale Home," St. Thomas's Hospital, Lord Houghton in the chair. The report stated that the number of probationer nurses remaining in the School at St. Thomas's on the 31st December, 1883, was 31, of whom 12 were special or lady probationers and 19 nurse probationers. From the opening of the School in June, 1860, to the end of 1883, a total of 739 candidates had been admitted, and 437 had left the School, after completing a year's training, as certified nurses. The number of failures was exceptionally large; they were due mainly to deficient physical strength. The Committee noted, as indicating the progress made in Training Schools for Nurses in connexion with other hospitals, the opening of the new building of the Westminster Training School and Home for Nurses, in connexion with the Westminster Hospital, of which Miss Pyne is the lady superintendent; the addition of largely increased accommodation for both probationers and nurses at St. Mary's Hospital, Paddington, where a successful School had been established under the matron, Miss Williams; and the opening of a Home for the same purpose at the St. Marylebone Workhouse Infirmary, Notting-hill, of which Miss Vincent is the matron. The abstract of accounts showed an income of £3881, and an expenditure of 1907, leaving a balance of £2074 in hand.

A TABULAR VIEW OF THE DAYS AND HOURS OF THE INTRODUCTORY LECTURES

*To be delivered at the different Medical Schools.**

	Lecturers.	Days and Hours.
St. Bartholomew's Hospital	(No Lecture)	—
Charing-cross Hospital	(No Lecture)	—
St. George's Hospital	Dr. Champneys	Oct. 1st 4
Guy's Hospital	(No Lecture)	—
King's College	Rev. H. Wace, D.D.	,, 1st 4
London Hospital	——	,, 1st 8
St. Mary's Hospital	Dr. Lees	,, 1st
Middlesex Hospital	Dr. D. W. Finlay	,, 1st 3
St. Thomas's Hospital	Sir J. Risdon Bennett	,, 1st 3
University College	Dr. W. R. Gowers	,, 1st 4
Westminster Hospital	Dr. Hughes Bennett	,, 1st 3
Mason's Science College	Prof. Paynting	,, 2nd
University College, Bristol	(No Lecture)	—
Queen's College, Birmingham	Dr. Sawyer and Dr. Fletcher	,, 1st
Sheffield School of Medicine	Mr. Birks	,, 1st 5
Leeds School of Medicine	Dr. Michael Foster	,, 1st
Edinburgh University	(No Lecture)	—
Glasgow University	Prof. Leishman	,, 28th
Anderson's College, Glasgow	Dr. Thomas Barr	,, 28th
Glasgow Royal Infirmary and School of Medicine	John Glaister, M.B.	,, 28th

* Owing to pressure on our space, the above was crowded out of the recent Students' Number.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BATES, CHARLES POPE, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Ramsey Urban Sanitary District.

BEATLEY, WM. CRUMP, M.D.Durh., M.R.C.S., late Senior Assistant Medical Officer to the Somerset County Asylum, has been reappointed Resident Medical Officer to the Newcastle-upon-Tyne Dispensary.

BRADSHAW, THOMAS R., M.D.Dub., M.R.C.S., has been appointed Assistant House-Surgeon to the Liverpool Northern Hospital.

BROWN, JAMES, L.R.C.P.E. &c., has been appointed Honorary Physician to the Bognor Convalescent Home.

CAMPBELL, JAS. J., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

DALZELL, J. KENNEDY, M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

EVANS, WILLIAM, L.R.C.P.Ed., M.R.C.L., has been reappointed Medical Officer of Health for the Anglesey United Sanitary District.

EWBANK, FRANCIS, M.R.C.S., L.D.S., L.S.A.Lond., has been appointed Dental Surgeon to St. Bartholomew's Hospital, vice Coleman, resigned.

FALKINER, N.M., M.B., has been appointed Joint Lecturer in Chemistry to Carmichael College.

HARDWICKE, Dr. W. W., has been appointed Medical Officer of Health to the Borough of Harwich. Also Medical Officer of Health to the Harwich Port Sanitary Authority, both vice A. Kinsey Morgan, resigned.

HOBLEY, J.H., L.R.C.P.Lond. &c., has been appointed Medical Superintendent of Quarantine, Southampton, vice Bencraft, deceased.

HOPE, HENRY, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Southampton Port Sanitary District, vice Bencraft, deceased.

HOWARD, THOMAS, M.B., C.M., has been appointed House-Physician to the Royal Infirmary, Glasgow.

HUNTER, R. R., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

JEFFERY, EDWARD, M.D.Aberd., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Lowestoft Urban Sanitary District.

KENDALL, THEO. M., B.A.Sydney, L.R.C.S., L.R.C.P., L.M., has been appointed Assistant-Surgeon to St. Vincent's Hospital, Sydney.

LYS, FRANCIS DANIEL, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Wareham and Purbeck Rural Sanitary District.

MCMUNN, J. A., M.B., C.M., has been appointed Medical Officer to the Odd Fellows, Rechabites, and Parish of St. Anne, Alderney, Channel Islands, vice W. A. Ross, M.R.C.S., resigned.

MARSHALL, WILLIAM, M.B., C.M., has been appointed House-Physician to the Royal Infirmary, Glasgow.

MASON, HENRY, M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

MUIRHEAD, ISLAY B., M.B.Glas., has been appointed Medical Officer for the Second District of the Malling Union.

PARTRIDGE, SAMUEL, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Darlaston Urban Sanitary District.

PEACOCK, ALEX., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

RANSON, WILLIAM EDWARD, M.R.C.S., has been appointed House-Surgeon to the Staffordshire General Infirmary, vice Frank Marsh, F.R.C.S.E., resigned.

RUSSELL, FRANK, M.B., C.M., has been appointed House-Physician to the Royal Infirmary, Glasgow.

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SCOTT, ROBERT, M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

SMITH, WILLIAM HARVEY, M.R.C.S., has been appointed Medical Officer for the Meriden District and the Workhouse of the Meriden Union.

STARK, J. NIGEL, M.B., C.M., M.R.C.S., has been appointed House-Physician to the Royal Infirmary, Glasgow.

WADE, A. B., M.B.Edin., &c., has been appointed a Medical Officer to the Odd Fellows, Southampton, vice Bencraft, deceased.

WELCH, R., L.R.C.P.Ed. &c., has been appointed Medical Officer to the Southampton Workhouse. Also a Medical Officer to A.O.F., Southampton, both vice Bencraft, deceased.

WILSON, FRANK, M.B., C.M., has been appointed one of the Parochial Medical Officers for the Burgh of Paisley, vice Dr. Whitehead, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ARCHER.—On the 16th July, at Moonta, South Australia, the wife of R. Kendray Archer, M.R.C.S., of a son.

BAKER.—On the 15th inst., at Lawn-terrace, Dawlish, the wife of A. De Winter Baker, L.R.C.P.Lond., M.R.C.S., of a son.

BEEVOR.—On the 10th inst., at Harley-street, the wife of Charles E. Beevor, M.D.Lond., of a son.

CADELL.—On the 13th inst., at Castle-terrace, Edinburgh, the wife of Francis Cadell, F.R.C.S.Ed., of a daughter.

CLARKE.—On the 4th inst., at 21, Lee-terrace, Blackheath, the wife of Ernest Clarke, M.B., B.S., of a daughter.

DAVISON.—On the 13th inst., at Langton House, Battle, Sussex, the wife of Rashell Davison, M.D., of a son.

DE MERIC.—On the 14th inst., at Weymouth, the wife of Staff-Surgeon E. V. De Meric, R.N., H.M.S. *Iris*, of a daughter.

PICKERING.—On the 13th inst., at Hargrave-terrace, Terenure-road, Dublin, the wife of T. H. Pickering, M.R.C.P., of Monte Carlo, of a daughter.

SEYMOUR.—On the 15th inst., at Sangora-road, New Wandsworth, S.W., the wife of J. R. Seymour, L.R.C.P., M.R.C.S., &c., of a son.

STARKIE.—On the 14th inst., at Sussex-street, Warwick-square, London, S.W., the wife of Richard F. Starkie, M.D., of a daughter.

WATSON.—On the 9th inst., at Wellfield, Penistone, Yorkshire, the wife of Alfred M. Watson, M.D., of a son.

WILLIAMS.—On the 10th inst., at Newbeggin, Richmond, Yorkshire, the wife of Howell Williams, L.R.C.P. and M.R.C.S., of a son.

MARRIAGES.

EMERSON—WILLIAMS.—On the 10th inst., at St. Peter's Church, Hammersmith, by the Rev. A. Tidcombe, George Augustus Emerson, M.B., C.M.Ed., I.M.D, to Edith Rachael, second daughter of the late T. R. Williams.

FREEBORN—LAWTON.—On the 10th inst., at St. Olave's, York, John Charles Richard Freeborn, M.A., M.R.C.S., to Emily Sarah, eldest daughter of the late George Lawton, Esq., Proctor of York.

GILLON—NOCK.—On June 5th, at St. Paul's Cathedral Church, Wellington, New Zealand, by the Rev. Fancourt George Gore Gillon, M.B., C.M., to Cathreen, youngest daughter of Joseph Nock, of Westminster, Frankley, near Birmingham.

HERMAN—GIBBINGS.—On the 5th inst., at St. Peter-the-Less, Chichester, by the Rev. W. D. Cowley, D.D., George Ernest Herman, M.B., M.R.C.P., of 7, West-street, Finsbury-circus, to Emily, fifth daughter of the late Thomas Gibbings, of Chichester.

HOSKYNS—IVESON.—On the 11th inst., at the Parish Church of Crich, Derbyshire, by the Rev. F. W. Moore, Vicar of All Saints, Duffield, assisted by the Rev. R. J. Hope, M.A., uncle of the bride-groom, Edward John Hadderton Hoskyns, Surgeon, Belper, to Rosalie Marie, eldest daughter of T. G. Iveson, Esq., C.E., of Crich.

RECKITT—YOUNG.—On the 3rd inst., at St. Paul's, Hammersmith, by the Rev. Cecil S. Pollard, Edward Bass Reckitt, L.R.C.P.Ed., of Boston, Lincolnshire, to Ellen Isabella, eldest daughter of the late Charles Vernon Young, 49, Aynhoe-road, West Kensington-park.

SHAW—SPALDING.—On the 2nd inst., at St. Helen's Church, Ore, near Hastings, C. Knox Shaw, L.R.C.P., M.R.C.S., to Ellen Elizabeth, daughter of Thomas Spalding, Esq., of Ore Place, Ore.

VACY-ASH—MAXWELL.—On the 11th inst., at St. Barnabas' Church, Kensington, Surgeon-Major R. Vacy-Ash, M.B., to Eliza, eldest daughter of Major T. Maxwell.

WALTER—WHITWORTH.—On the 4th inst., at Ulverston Parish Church, by the Rev. W. Crowther, M.A., Rector of Norton, Kent, uncle of the bride, assisted by the Rev. E. H. Aldridge, M.A., Vicar of Facit, Rochdale, and the Rev. C. W. Bardsley, M.A., Vicar of Ulverston, William Walter, M.A., M.D., of 20, St. John-street, and Hilton-park, Manchester, eldest son of Dr. Walter of Dublin, to Gertrude Phœbe, only daughter of the late Edward Whitworth, Esq., of the Grange, Whitworth, near Rochdale.

DEATHS.

CADE.—On the 28th ult., at Spondon, Joseph Wright Cade, M.R.C.S., L.S.A.Lond., late of Breaston, Derbyshire, in his 88th year.

GOODALL.—On the 10th inst., at Southborough, Kent, William Preston Goodall, F.R.C.S., formerly of Birmingham, aged 50.

HAMILTON.—On the 10th inst., Alfred Hamilton, formerly Surgeon to the London Hospital.

KING.—On the 4th inst., at Torquay, David Alexander King, M.B., M.R.C.P., late of 26, Harley-street, in his 28th year.

PATERSON.—On the 7th inst., at Gainsboro', suddenly, Robert Haldane Paterson, M.R.C.S., L.R.C.P., aged 34.

SHARP.—On the 7th inst., George Wyatt Sharp, F.R.C.S.E., son of the late Henry Lockyer Sharp.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, September 13th, 1884.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sept. 12	30·33	N.E.	62	59	107	74	56	..	Cloudy
,, 13	30·24	E.	65	61	115	77	57	..	Hazy
,, 14	30·09	E.	67	63	94	72	58	..	Cloudy
,, 15	30·06	E.	65	62	105	78	59	..	Overcast
,, 16	30·10	S.W.	67	64	110	79	63	·01	Cloudy
,, 17	30·23	E.	69	65	103	83	62	..	Hazy
,, 18	30·23	N.E.	69	64	100	79	62	..	Hazy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE BACILLUS OF THE "PERIOD."

THE Italians, slightly jealous of the temporary superiority of the Germans in pathological research, particularly in the investigation of the cholera microbe, are relieving themselves in a little satire, of which the following quatrain, freely translated, may be taken as a specimen:—

"Dr. Koch—with surprise it doth fill us—
Is hailed as a medical Solon,
For proving the *comma* bacillus
Is often attached to the *colon*."

Obstetrics.—Our correspondent must not be too proud to state the facts. He cannot claim the full consideration of a qualified and registered practitioner, but he will not find any medical man insensible to the facts.

Major Upton.—The best plan would be to advertise, when no doubt applications would be received from which a selection might be made.

Dr. Squire.—The matter is under consideration.

PECULIAR FORM OF PLACENTA CAUSING DELAY IN THE THIRD STAGE OF LABOUR.

To the Editor of THE LANCET.

SIR,—I send the following particulars, trusting they may be of interest.

Mrs. W——, aged thirty-five, multipara, was confined on Sunday, Sept. 7th. The child was born at 4 P.M., and after waiting the usual time, "expression" of the placenta was tried, after Credé's method. The uterus was well contracted under the hand, but appeared somewhat enlarged. After adopting this procedure for about twenty minutes, and finding that the placenta was not expelled, a vaginal examination was made. The placenta was found well down in the vagina, the examining finger almost reaching its inner extremity. Gentle traction on the cord was now resorted to; and, finding this useless, after a while strong traction was made, but all to no purpose. Being puzzled at this prolonged retention in the vagina, a more thorough search for its cause was about being made, when the placenta was suddenly expelled, to be followed almost immediately by a supplementary one, to which it was attached by a fibrous cord about four inches in length. On examination the first placenta was found to be very large, and of the "battledore" variety. The second, or supplementary, mass was rudimentary in structure, and appeared to be a quarter the size of the placenta proper. The fibrous band which connected them was pretty strong, and on carefully examining it a vascular communication between the placentæ was discovered running through its centre. This anomaly explained the retention of the placenta proper in the vagina, it being held there by its communication with the supplementary mass, which had not yet been expelled from the uterine cavity.—I am, Sir, yours truly,

Middlesbrough, Sept. 13th, 1884. WILLIAM BAXTER, M.D.

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TEMPERANCE AMONG RAILWAY SERVANTS.

ALL men with grave responsibilities, whether railway servants or professional men, should be conspicuously sober. It is gratifying to know that the United Kingdom Railway Temperance Union numbers 5470 members. This is a great security against railway accidents.

Mr. Hugh Stott.—The question is strictly legal, and can only be answered by a legal authority, equally recognised by both parties.

Mr. G. Rivers.—See the leader on Cholera in our present number.

M.D.—Next week.

"WHAT IS A MINIM?"

To the Editor of THE LANCET.

SIR,—In reply to this query of Lieut.-Col. J. Herschel, C.E., I beg to state that in the Appendix to the British Pharmacopœia a minim is defined as being "0·91 grains of water;" it is about $\frac{1}{10}$, not $\frac{1}{8}$, of a grain, and is the 480th part of a fluid ounce, which is there defined, "the measure of 1 ounce, or 437·5 grains of water." The fluid ounce of water at 62° F. weighs 1 ounce avoirdupois, and the fluid drachm 54·68 grains, not 57 grains, as stated by your correspondent to be its "proper weight." It is true that the 128th (i.e., $\frac{1}{8}$ of $\frac{1}{16}$) of the old wine pint, which was the measure of 7289·72475 grains troy, gives 57 grains (nearly) as the weight of the old fluid drachm. This 57 grain fluid drachm, until the imperial measure was recognised by the London Pharmacopœia of 1836, was the one used in medicine. Since then the 54·68 grain fluid drachm has been in use. Your correspondent has proved his minim glass to be correct. My authorities for the above are the British Pharmacopœia and Gray's Supplement to the Pharmacopœia, edited by Dr. Redwood (also editor of the last British Pharmacopœia). It often causes great trouble to pharmacists, particularly in preparing solutions for hypodermic injection, that their units of weight and of measure, the grain and the minim, are not easily convertible; their ratio is 960:875. I learn with sorrow for coming pharmacists that the same system of weights and measures is to be continued in the next British Pharmacopœia. Although nearly every other civilised nation recognises the use of the metric system for dispensing medicines, the British Pharmacopœia is to be produced with the cumbrous weights as before, of which the grain is not even the aliquot part of an ounce, because, it is feared, the doctors and the chemists do not understand the metric system. I am, Sir, your obedient servant,

New Cavendish-street, W., Sept. 6th, 1884. WM. MARTINDALE.

To the Editor of THE LANCET.

SIR,—If Lieut.-Col. Herschel refers to the last edition of the British Pharmacopœia he will find, at page 402, a table showing that a minim is the $\frac{1}{7680}$ part of a gallon, by which is intended the imperial gallon, as the preface informs us. Another table on the same page states that a minim is the measure of 0·91 grain, and a fluid drachm of 54·68 grains of water (at 60° F.). As this agrees with the weight obtained experimentally by your correspondent, it is unnecessary to imagine a systematic blunder in the graduation of minim glasses; but (if the figures are correctly quoted) there certainly appears to be an error in Thompson's Conspectus.—I am, Sir, yours faithfully,

Moorgate-street, Sept. 5th, 1884. F. R. WALTERS, M.D., F.R.C.S.

To the Editor of THE LANCET.

SIR,—If it is remembered that at the introduction of the British Pharmacopœia the imperial measure of 20 oz. to the pint and the imperial pound of 16 oz. were adopted, whilst the grain weight was left intact, the discrepancy noticed by Lieut.-Col. Herschel disappears. He states that the imperial gallon weighs 10 lb., or 70,000 grains; and if he will work this down into pints, fluid ounces, drachms, and minims, he will find the latter weighs 0·91 grain. His practical weighing shows that the measure he used was perfectly marked. All graduated measures should be thoroughly tested, to see that the fluid ounce of water weighs exactly one ounce avoirdupois, and that the drachm (or sixty minims) weighs 54·68 grains. I am, Sir, yours obediently,

Sept. 5th, 1884. A COUNTRY DOCTOR.

To the Editor of THE LANCET.

SIR,—A minim is the 480th part of a fluid ounce. Since a fluid ounce (the 20th part of a gallon) of distilled water at 60° F. weighs 437·5 grains, a minim is the 480th part of an ounce, therefore a minim would weigh 0·91152 of a grain, and the fluid drachm of sixty minims would weigh 54·69126 grains. Such being the case, the minim measure to which Lieut.-Col. Herschel refers was perfectly correct—more so than the generality. In the volume on "Materia Medica and Therapeutics" of Bassell's Manuals for Students of Medicine, page 17, Dr. J. Mitchell Bruce gives the weight of the minim as being 0·91 of a grain.

I am, Sir, yours faithfully,

Wilton, Sept. 8th, 1884. WALTER PIPPETTE.

MISSING INSTRUMENTS.

To the Editor of THE LANCET.

SIR,—During my absence a stranger called at my house and was admitted to my study, to write a letter to me about his wife. This same man is in custody at [illegible], and on him have been found an ophthalmoscope and [illegible]. Neither of these is mine; but perhaps some [illegible] will be able to know where he may possibly find his [illegible]. I am, Sir, yours faithfully,

[illegible] HENRY PATRICK, M.D.

Gloucester-road, [illegible], Sept. 8th, 1884.

THE FRIENDLY SOCIETIES' INSTITUTE, BATH.

A VERY sensible and reasonable letter appears in the *Bath Argus* of Sept. 11th, against what the writer considers the arbitrary action of the committee in thinking of dismissing the medical officer without consulting the members.

Mr. W. H. Day.—The point made is ingenious, but will not avail in the present state of the law, which draws a clear distinction between vaccination and inoculation, which science does also, in spite of the theory alluded to. Moreover, in any case the *law enjoins* vaccination.

W. J. M. (Sutton).—Was the certificate sent direct from the office to the medical man, asking for the information; or was it brought to our correspondent, and the application made by the parties claiming?

M.D.—The question is not clear.

WANTED, A DIAGNOSIS.

To the Editor of THE LANCET.

SIR,—Can any of your readers give me a diagnosis and the line of treatment to be adopted in the following cases.

A patient of mine, a gentleman aged thirty-six, chief clerk in a merchant's office, has for the past three or four months noticed a gradually increasing weakness in the right hand and an inability to hold the pen firmly between the fingers. At the present time he writes his letters with considerable hesitation. There is no cramp, no spasmodic or irregular jerking of the muscles of the fingers, none of the usual symptoms of a typical case of "writer's cramp," an affection which this occupation would naturally lead one to suspect. There is simply muscular weakness, perhaps it might almost be called muscular incompetence. But the curious point is that his brother, aged thirty-two, whom I have seen, living in a different part of the country, and whose duties do not require him to write more than a score or two lines a day, is troubled with the same affection. In neither case is there muscular wasting, nor was it preceded by lightning pains. There is nothing in the family history bearing upon the case, and neither of them had had any serious illnesses in former years. The elder of the two is a total abstainer and non-smoker, the younger is a moderate smoker. Physically they are healthy and strong. The fact that in the case of the younger brother the affection is not traceable to over-use of the muscles leads one to suspect that in the one case, if not in both cases, the origin may be spinal, and that there may be some want of controlling power over the muscles. In the way of treatment, rest and strengthening have been tried, but with little or no improvement. Galvanism has not yet been resorted to. Can you give me any suggestion as to the cause, pathology, and treatment? I am, Sir, yours [illegible],

September 16th, 1884. [illegible].

Z.—We do not remember such a point being raised in a law [illegible]. The error would have to be very serious.

Mr. John Brown.—We do not recommend individual physicians. The knowledge of gout is not monopolised by one man nowadays.

R. T. D. and others.—The card is beneath notice.

J. T. P.—We do not remember the appearance of the receipt mentioned.

"NON-QUALIFIED, EXCEPT AS TO SURGERY."

To the Editor of THE LANCET.

SIR,—I shall be obliged by your letting me know at your convenience if there is any authority in the profession to which a member of the public might properly apply for opinion on a prescription. I desire such an opinion on a prescription given by a [illegible] practitioner, and acted on (but with unsatisfactory effect), in order to ascertain whether it is a competent prescription, the person who wrote it being a non-qualified practitioner, except as to surgery.

I am, Sir, yours [illegible],

Sept. 8th, 1884. [illegible] M.

*** There is no such authority. The fine distinction between qualifications is rather a legal refinement than anything else. It is kept up in the interest of the numerous separate corporations which, [illegible] in asserting their right to be maintained by the profession [illegible] the reasons for their separate existence have been abolished, [illegible] the result of entailing offensive charges of incompetence, as above, on [illegible].

A. T. Brand, M.D.—See the articles on Home Health [illegible] which appeared in THE LANCET of Aug. 9th and 23rd.

Richard James.—A work on the subject mentioned may be obtained from any of the medical booksellers.

Mr. J. G. Fennell.—We regret we cannot afford the information desired.

"SKILLED NURSING."

To the Editor of THE LANCET.

SIR,—So many people have written to me about the letter which appeared, signed "E. Faithfull," in THE LANCET a fortnight ago, that I should feel very grateful if you would kindly state in your next issue that I am not the writer of it, for I should scarcely wish to endorse the same. I have been in Scotland since my return from the United States, finishing my volume, "Three Visits to America," which will be brought out here and in New York in October.

I am, Sir, yours very truly,

Bryanston-street, W., Sept. 11th, 1884. EMILY FAITHFULL.

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Inquirer.—No such appointment is recognised either by the Public Health Act or the orders of the Local Government Board, and that Board object to the delegation of sanitary work to a deputy. If a medical officer of health is temporarily unable to perform his duties, the appointment of a substitute is sanctioned; but if an officer is not capable of performing his duties, he is expected to resign.

M. M. M.—Medical men are supposed to attend each other without money considerations; but there are circumstances of distance, inconvenience, &c., which make it reasonable to offer a fee, or to take other means of showing that medical kindness is appreciated by medical men.

Justice Campbell.—There is no particular work on the subject, but the matter is treated in most books on Diseases of the Skin.

Enquirer shall receive a reply next week.

Mr. Crosbie.—The statement has already appeared in THE LANCET.

INFANTILE CIRCUMCISION.

To the Editor of THE LANCET.

SIR,—I frequently perform the operation of circumcision on new-born infants—that is to say, on infants eight days old. It forms part of the religious ceremony observed on initiating male children into the "Hebrew Faith," and is rarely, if ever, neglected. My experience may therefore be of use to "Foreign Practitioner," who seeks information on the subject in your issue of the 6th inst. Your able answer gives a clear description of the principal points of the operation; but, if I may be allowed, to add a few remarks, I think that it will be found that the operation is not so formidable as it may at the outset appear. When the prepuce is drawn in front of the glans, as you describe, I use a shield to grasp it, which consists of a tolerably thick silver plate, having a slit in it narrowing from the circumference to the centre. The prepuce is forced into this slit, and the shield is applied in a slanting direction from above downwards, as mentioned in Erichsen's Surgery, vol. ii. The advantage of this shield is that it is light, easily adjusted, and remains in its place without the aid of an assistant. Then, instead of slitting up the mucous membrane, I tear it along the dorsum with my thumb nails, which, to prevent slipping, I cut into points, so that they easily retain their retain it. In this way I tear no more than is sufficient to allow of the membrane being pushed well back, so that the glans are thoroughly exposed. I next apply a piece of boracic lint tightly round the penis behind the glans, as you describe. But I use no stitches of any kind in infants, nor even in children of two or three years of age; and my experience is that the edges come together of themselves, and the wound heals rapidly, usually in three or four days, without the necessity for further interference, beyond attention to cleanliness and the observance of the simplest rules in surgery. To guard against the lint being disturbed I bandage the child's knees and legs together with a napkin for a few hours after the operation. Performed in this way, I have never met with the slightest difficulty, and have always had most satisfactory results.—I am, Sir, yours obediently,

Wearrington-gardens, Sept. 8th, 1884. M. CLIFFORD, M.R.C.S., &c.

To the Editor of THE LANCET.

SIR,—In your issue of the 6th inst. "Foreign Practitioner" asks for information respecting the operation of infantile circumcision. In reply you recommend sutures to be used, and I believe the standard works on surgery do the same; but I am convinced it is a mistake. I have performed the operation on more than forty boys within the last two years, and rarely pass a week now without a case. At first I inserted sutures, but soon discontinued doing so, finding so much irritation and suppuration arise therefrom, besides leaving when healed a ragged and thickened edge to the remaining portion of the prepuce; and being, as I believe they are, worse than useless, it is as well to avoid the unnecessary pain caused by their insertion. In my last thirty cases I have not inserted a single suture, and they have all done well; neither have I used an anæsthetic of any kind, and have only dressed the wound with lint first wetted with cold water for three or four days, and then with olive oil. If any undue hæmorrhage take place (which is very seldom) after the operation, a drop of the solution of perchloride of iron has succeeded in, where the cold water has not proved sufficient.

I am Sir, yours truly,

Birmingham, Sept. 9th, 1884. A. G. WILKINSON.

A Constant Reader.—The questions are not free from difficulties. They involve not only the law of qualification, but the law of contract, upon which we cannot speak dogmatically; but, clearly, in a moral sense, an agreement is binding, whether witnessed or not.

"PERFORATED RUBBER KNEE-CAPS."

To the Editor of THE LANCET.

SIR,—With reference to the above, I observe that your correspondent, Mr. F. D. Huxley, has omitted to give the name of its inventor thirty years ago; neither has he mentioned the names of "practical" men who were compelled, owing to its inutility, to abandon its use in disgust. I recorded personal experience, and should be glad if that gentleman would furnish the same.—I am, Sir, yours faithfully,

Bristol, Sept. 9th, 1884. HUGH THOMAS.

Mr. ——.—There are many good works of the character desired, but we cannot particularise. The one mentioned cannot be recommended.

Mr. A. W. Graham shall receive an answer next week.

IN the list of the Westminster Hospital Lecturers, in our recent Students' Number, the name of Mr. O. Hehner, who conducts the practical chemistry classes, was inadvertently omitted.

Mr. Joseph Morton.—Our correspondent's questions are not clearly put. Question 1 is too hazy to be answered; but we may state that no medical school or society in London "passes" men.—2. No university will accept certificate of success in examinations elsewhere in lieu of its own examinations.—3. No.

Sempronius.—The case is eminently one for friendly settlement.

"CASE IN DENTAL PRACTICE."

To the Editor of THE LANCET.

SIR,—The case quoted by Mr. Percy May in your issue of the 30th ult. concerning the sympathy between ear and teeth is of very great interest, for the relations these parts bear to each other have been very little studied compared with those reflex phenomena which occur in the eye and its structure. In fact, I am not aware of very much explanation having been recorded concerning such cases. For this reflex trouble I have at various times been compelled to advise the removal of teeth for no other reason than that the means adopted for their preservation seemed to increase the evil. One case I have lately had under treatment where the patient, a young man, has a mesial cavity upon the left upper first molar. The tooth is "dead;" the fang cavities have been excavated and filled, but when the cavity is closed the deafness and slight pain in the ear are increased. The tooth is quite free from peridental lesions. Its retention being of great service to the patient, I have loosely filled the fang cavities with cotton-wool and inserted a tube through the filling. I believe there is very little inconvenience for the present.

I am, Sir, yours truly,

W. T. ELLIOTT, L.D.S. Edin. and Dub., F.C.S.

Birmingham, Sept, 8th, 1884.

Richmond.—Yes. Members of other British colleges can be admitted to the examinations of the Royal College of Surgeons of England and the College of Physicians. Certain conditions have to be observed, which will be found stated in our Students' Number or in the Medical Directory.

Volunteer Surgeon.—1 and 2. Longmans and Co.—3. Clowes and Sons.

CHOLERA IN MARSEILLES.

To the Editor of THE LANCET.

SIR,—In a recent issue of your journal I saw an allusion to the fact that there were cases of cholera in Marseilles last autumn. Now that the fact has oozed out there can be no harm in my stating what I know on the subject. Last October I stayed some weeks in Marseilles, attending the hospitals regularly. One day I was taken by a medical friend to see what he called a "clinical curiosity." It was undoubtedly a case of Asiatic cholera, though I was amused to see that the diagnosis put on the board at the head of the bed was "bilious irritation." I believe that an oath was administered by the chaplain to all the medical attendants that they would not divulge what they saw. No such precaution was taken with me, possibly because I was a heretic, and my word was considered as good as my bond—both being equally valueless. I am, Sir, yours faithfully,

ALFRED DRYSDALE, M.B.Lond.,

Mentone, Sept., 1884. Officier de Santé.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Farmer, Colchester; Messrs. Bermingham and Co., London; Mr. White; Dr. E. M. Schaeffer, Baltimore; Dr. R. Saundby, Birmingham; Mr. Paget, London; Mr. Stott, Colney Hatch; Dr. Gordon Holmes, London; Mr. Tallach, London; Dr. W. O'Neill, Lincoln; Dr. Rogers, London; Dr. J. B. James, London; Messrs. Essinger and Neuburger, London; Mr. H. C. Williams, Manchester; Dr. Lucas, London; Mr. Pulling, London; Mr. T. Holmes, London; Dr. Lee, London; Mr. E. S. Pattison, Fulham; Dr. Pippette, Wilton; Dr. W. M. Kelly, Taunton; Mr. C. O'B. Murphy, Belfast; Dr. A. G. Wilkinson, Southampton; Dr. Brand, Driffield; Dr. H. Thomas, Birmingham; Rev. H. Swann, London; Mr. W. T. Elliott, Birmingham; Mr. H. G. Aldous, London; Dr. Field, London; Dr. R. W. Middleton, Fulham; Mr. F. Witson, Paisley; Messrs. Loeffund and Co., London; Dr. Dobson; Mr. W. P. Bell, London; Mr. A. Drysdale, Mentone; Mr. James, Dudley; Dr. Walters, London; Mr. Rivers, Ilkley; Dr. Paramore, London; Mr. Martindale, London; Dr. Moxon, London; Mr. Whitey, London; Dr. T. P. A. Stuart, Sydney; Dr. Baxter, Middlesbrough; Mr. Waghorn, London; Mr. W. H. Day, Norwich; Miss E. Faithfull, London; Mr. Morton, Glasgow; Dr. Collie, London; Mr. Brown, London; Dr. D. Freire, Rio Janeiro; Dr. Scattergood, Leeds; Mr. Boughton, Gloucester; Mr. Algar, London; Messrs. Smith and Son, Birmingham; Mr. P. Ness, Liverpool; Mr. Walton, Blackpool; Mr. Mackay, Edinburgh; Mr. Harries; Mr. Roberts, Henley-on-Thames; Mr. Andrew, Manchester; Dr. Adam, West Malling; Messrs. Smith and Son, Dublin; Dr. Hayes, London; Mr. Austin, Faversham; Mr. Woodland; Rev. J. D'Orsey; Mr. Maytherne, Biggleswade; Mr. Hodgkins Oxford; Messrs. Wilkinson and Co., London; Messrs. King and Co., London; Mr. Hecks, London;

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Mr. Gurnon, London; Mr. Roberts, Sheffield; Mr. Forman, Virgin Island; Mr. Russell, Birmingham; Dr. Soulonniac, France; Mr. Sell, London; Mr. H. Williams, London; Mr. Lister, London; Dr. T. Wharton Jones; Mr. W. A. J. F. Mickle; A Country Doctor; V. G.; M. B., Epsom; M.D.; H. S.; Medicus, Malmesbury; M.D.; M. L., Tunbridge Wells; W. T. S., Finsbury; Alpha; Obstetrics; One Interested; Iridium; Inquirer; M. B. E.; Cecelian; M. M. M.; Z.; J. F. P.; Bab; Rickword; M.D.; Sempronius; Enquirer.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Leggatt; Mr. Jollye, Donington; Mr. Blythe, East Knowle; Mr. Clarke, Burton-on-Trent; Mr. Edwards, Paris; Mr. Brian, Leicester; Dr. Wood, Pontypridd; Mr. Adams, Ipswich; Mr. Barry, Hartlepool; Mr. Hinwood, Gravesend; Mr. Lyng, Saxmundham; Mr. Watts, Moorgate-street; Mr. Miles; Mr. Ormrod, Workington; Mr. Morgan, Ipswich; Mr. Griffith; Mr. Hewett, Kersal; Messrs. Prescot and Co., Manchester; Mr. Richards; Mr. Mackay, Esk; Mr. Matheson, Milford Haven; Mr. Cades; Miss Hutton, Hanwell; Dr. Reid; Mr. Foster, Knowle; Messrs. Byas and Son, Bow; Mr. Sweeting, West Runton; Mr. Morris, Swansea; Messrs. Kensington and Co., London; Dr. Maltby, Basford; Dr. Taylor; Mr. Sprout; Mr. Heaton; Mr. Parker, Eccleston; Mr. Enson, Southwold; Messrs. Squire & Co., Tavistock; Mr. Montgomery, Hovendon; Mr. Winter, Oldham; Miss Henderson; Dr. Clarke, Lee; Mr. Howes, London; Mr. Banks, Cheltenham; Messrs. Porteus and Co., Glasgow; Mr. Gardner, Bournemouth; Messrs. Roberts and Co., London; Mr. Still, Sheepshed; Mr. Humphreys; Messrs. Bibby Bros., Liverpool; Dr. Norton, Folkestone; Mr. Ellis, Helston; Mr. Jones, Tonypandy; Mr. Ker, Halesowen; Mr. Parrot; Mr. Johnston, Sheffield; Messrs. Brady and Martin; Dr. Taylor, Newcastleton; Dr. Williamson, Ventnor; Mr. Morton, Sheffield; Mr. Edwards, Wye; Dr. Wickham, Newcastle-on-Tyne; Mr. Gordon, Petersfield; Mr. Rickett, Boston; Mr. Bethys, Woolwich; Mr. Joyce, Winchester; Mr. Knight, Grimsby; Mr. Cooke, Halifax; Mr. Davies, Pontypridd; Messrs. Pope and Sons, Downham Market; Mr. Tomson, Liston; Miss Davis, Godalming; Mr. Johnson, Sheffield; Dr. Spender, Bath; Messrs. E. Smith and Co., London; Mr. Thompson, Wardington; Mr. Eames, Hilderthorp; Mr. Cox, Harrogate; Mr. Geach, St. Agnes; Dr. Whitla, Belfast; Messrs. Robbins and Co., London; Mr. Birch, Newbury; Mr. Box, Fairfield; Mr. Cockle; Mr. King; Mr. Wilson, Bishop Auckland; Miss Reynolds, Ashford; Mr. Farr, Dunstable; Dr. Squire, London; Mrs. Chapman, Clapham; Miles; T. L.; Neurosis; W. L., Forfar; M.B., St. John's-wood; H. S., Burford; Medicus, Omagh; Horace, Swanage; H. E. P.; Dr. H.; W. S., Birmingham; Alpha, Commercial-road; B. B. B.; Medicus, Bristol; R.; A. Z.; M. I. D.; F.S.A., Wye; T. Y.; Dr. C., Liverpool; C., Edinburgh; T. W. M., Liverpool; W. D.; M.A., Brighton; T. N.; Medicus, Folkingham; Ajax; Medicus, Great Marlow; Medicus, Southport; X. Z.; Surgeon, Penistone; X. Y. Z., Hammersmith; L. T., Arlington; J. T., Leicester; Alpha; V. R. J.; Veritas; Constanter, Bristol; Surgeon, Newcastle-on-Tyne; Medico; I. M. D., Barnsbury; W. H., Harrow-road; H. G., Kennington; A. K.; X.; A. H., Kentish Town; Peto, Leeds; Physician; Beta, Dalton-in-Furness; N. A., Brighton; Alpha; L.R.C.S.I., Southwark; M.R.C.S., Chew Stoke; M. S., Ilfracombe; B., London; X. Y. Z., Birmingham; Medicus, Wigan; M.A.; M. S.; M. A. B.; Medicus, Nottingham; Edgar, Chiswick; Practitioner; Delta, Bow; R. S. T., Manchester; Mac; F. T.; R. C., Truro; Suaviter; C. C., London.

Watford Observer, North Cheshire Herald, Alnwick Gazette, Kent Courier, Bath Argus, Manchester Examiner and Times, Montreal Gazette, Liverpool Courier, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

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Clinical Lecture
ON
PELVIC HÆMATOCELE.

Delivered at St. Mary's Hospital,

BY ALFRED WILTSHIRE, M.D., F.R.C.P.LOND.,
JOINT LECTURER ON OBSTETRIC MEDICINE, AND PHYSICIAN-ACCOUCHEUR FOR OUT-PATIENTS; TREASURER OF THE MEDICAL SOCIETY OF LONDON; FORMERLY MEDICAL INSPECTOR TO HER MAJESTY'S PRIVY COUNCIL.

GENTLEMEN,—Pelvic hæmatocele, the subject of to-day's lecture, comprises the various forms of blood effusion occurring in the pelvic region or pelvi-abdominal cavity. Some of these internal hæmorrhages are accidents of great severity, may even prove rapidly fatal, and are usually more or less grave and painful. For clinical purposes it is desirable to group them under this comprehensive and well-known term, rather than to employ loosely or indifferently those of "retro-uterine," "peri-uterine," or "peri-metric" hæmatocele, or "pelvic hæmatoma," which, if etymologically more accurate as descriptive of varieties, are not altogether free from the fault of postulating hypothetical views, while they divert attention from that clinical concentration and convergence so essential for accurate diagnosis in an affection owning manifold origins. At the bedside it is helpful to have a wide grasp of the possibilities of causation in any malady, and in none more than in pelvic hæmatocele, which may arise in the pregnant or non-pregnant, be of spontaneous or traumatic origin, and may in some cases urgently demand prompt remedial measures. The clinical features of the affection will chiefly occupy us, but some reference to the subjects of etiology and pathology is unavoidable, because upon the correct appreciation thereof depends the accurate interpretation of clinical phenomena as to which there is little disaccord. Moreover, recent experimental and pathological researches, together with some bedside observations of my own, throw fresh light upon problems which to some yet appear obscure, and will, it is hoped, help to solve them. Blood effusions of the kind in question occur mostly during menstrual life, from the fifteenth to the forty-fifth year, and commonly during the prime of that period (twenty to thirty-five), although there are forms to which the epochs of puberty and the change of life are exposed.

As some of you may not yet be clinically familiar with the affection, let me describe to you a typical case, such as is commonly designated the "retro-uterine" form. At or near a catamenial period, which may be checked, retarded, suppressed, or otherwise deranged, and may have been preceded or accompanied by pain, weight, throbbing, tension, and discomfort about the pelvic region or genitals (although premonitory symptoms are not always present), a young woman, married or single, is seized with sudden and severe pain of a stabbing or tearing character in the lower part of the abdomen or groin on either side, and extending into the privates. Faintness ensues, and the sufferer is compelled to lie down. Thereupon speedily follow vomiting, sweating, more or less faintness or even collapse, with a thready pulse. A flow of blood from the genitals often comes on (metrorrhagia) and may be profuse, or there may be none. Frequent efforts at micturition urge the patient, but are followed shortly by retention. Unsatisfactory efforts at defecation may also annoy the sufferer, to whom every movement becomes increasingly distressing. She lies with her knees drawn up, one generally trending over the other—that on the side of the lesion usually—dreading every movement, troubled by thirst, and complaining of bearing down and pressure in the lower part of the body and privates. The countenance becomes anxious, and the extremities and surface generally chilled and clammy, and the whole body may be bedewed with cold sweat. The abdomen is excessively tender, and the parietal muscles tensely contracted. Such an attack may supervene without warning, but more usually patients have been exposed to sudden chill, to mental emotion, moral or physical shock, or have been making some violent effort, all occurring mostly about the time of the menstrual epoch. One of my patients got chilled in a snowstorm while menstruating, and had an intra-peritoneal hæmorrhage; another had a subperitoneal effusion from severe exertion; a third, an effusion between the folds of the left broad ligament from sudden effort in an awkward attitude—catching a young lady who jumped into her arms from a drawing-room stairs. After the acute stage, that of effusion, has subsided, distension of the abdomen supervenes, accompanied in most cases by exquisite sensitiveness. The tongue becomes dry, and later on glazed and striped. Thirst may be insatiable, and vomiting persistent. The aspect of the patient in severe cases is that of profound exhaustion and collapse; and in all of somewhat acute suffering, alarm, and shock. These symptoms, you will observe, resemble those of acute irritant poisoning,[1] and in several instances of sudden death from internal hæmorrhage the suspicion has justly been aroused that the fatal issue was due to poisoning, and has, very properly, led to post-mortem investigation to clear up the doubt.[1] They also simulate those of perforation of gastric ulcers (the ulcer of young women, chlorotic and other, which has a punched-out aspect and tends so readily to perforate, especially about the menstrual periods) or perforation of the intestines, notably in typhoid fever; of strangulation of intestine, hernial or other; of acute retroversion of the gravid uterus, as in a case of my own, and so on. Again, sudden and severe hæmorrhages may occur into the peritoneal cavity from splenic disease, from burst aneurysms or atheromatous arteries,[2] and from hæmatolytic changes, however originating.

So far it may be assumed that observation and inquiry have informed us as to the patients' condition and symptoms, but we are now led to desire such further exact information as physical investigation of the parts or viscera suspected to be implicated will afford. Usually the necessity for pelvic exploration is indicated. In proceeding to consider that subject, let me expressly inculcate the importance of extreme gentleness and delicacy, and enjoin upon you that it is imperative that you explore only with that best of all instruments, the finger—the index finger, and that alone. I am constrained to do this the more emphatically, because it is within my experience that large pelvic effusions, hæmorrhagic and other, have not only remained entirely unrecognised through the exclusive use of specula, but I might go further and mention examples, seen in consultation, where such effusions have altogether escaped recognition, owing to the omission to make any pelvic examination, digital or other. You are aware that I am chary of resorting to internal examinations as a routine practice, but when they are obligatory they should be properly and thoroughly performed. The illumination afforded by pelvic exploration may be great. Take an ordinary case, such as we have already supposed. What shall we find? We should divide the phenomena into those of the *early* stage, where the blood is fluid, and those of the *later* stages, when it has coagulated, omitting for the present changes that ensue when softening from suppuration &c. occurs. If a case be examined shortly after the blood has been effused a *soft* swelling will be found, bulging into the hinder wall of the vagina, and crowding the uterus downwards and forwards against the pubic arch (I am speaking now of the undisputed phenomena of what some call "retro-uterine" hæmatocele).

Should the patient, however, not be examined in the acute stage (and great caution, even reticence, ought then to be exercised) say for two or three days or more, then a similar globular mass will be felt in the posterior vaginal wall behind the womb; but it will be firm and tense, because the effused blood has coagulated, and later on it becomes hard. It is this physical condition, so often met with in a certain class of cases—a mass behind the womb crowding it down against the pubic arch—that has given rise to the name of "retro-uterine" hæmatocele, and has led theorists into disputes and embarrassments as to its seat, whether it is intra- or sub-peritoneal. Is the blood effused freely within the peritoneal cavity? or is it beneath and outside the peritoneum? This is a point upon which I hope to be able to throw some light by showing that usually the blood effusion which crowds the uterus downwards and forwards is beneath the peritoneum, and not inside its sac, as commonly alleged; and that in

[1] See case recorded by Drs. Ogston and MacQuibban, British Medical Journal, April 12th, 1879; also by Tomkins, Ibid., January, 1873. Tardieu relates cases.

[2] Gallard's case, in a woman about fifty-five, quoted by Poncet; De l'Hématocèle Péri-utérine.

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cases of true intra-peritoneal hæmorrhage, which are apt to be more formidable, the relations of the effused blood to the womb and adjacent viscera are different. By many writers upon this subject it is assumed that the blood is effused into the peritoneal cavity; and upon this hypothesis they are driven to invent an imaginary "limiting membrane," which they allege bounds the superior limit of the mass, and which, it is asserted, is thrown out by the plastic peritonitis excited by the blood, regarded by them as an irritating fluid; and it may be supposed to account for the fact that the uterus is bodily displaced and thrust downwards and forwards, the phrase "crowded down" against or upon the pubic symphysis being a favourite one. As you will presently learn, there are several forms of intra-peritoneal hæmorrhage, but their physical disposition differs from that now under consideration, which is commonly known as "retro-uterine" hæmatocele, and, in accordance with the views advanced by myself and held by others, is beneath that membrane, and external to its sac.

Let us first appeal to certain physical laws—those of hydrostatics—and, so guided, abide by their arbitration. We may then appropriately inquire what light is derived from clinical investigation and experimental research. Observe, first, that if blood be shed freely into a cavity, such as the peritoneal, it obeys the ordinary laws of gravity, and being fluid, behaves as fluids do in accordance with those pertaining to hydrostatics. That is to say, it flows in directions of least resistance, and accommodates itself to bodies of greater specific gravity by adapting itself to them, instead of displacing them; in short, the blood behaves in relation to the pelvic viscera much as would melted fat, a warm solution of gelatine, or newly mixed and fluid plaster-of-Paris, if poured into the pelvic cavity; it moulds and fixes them in their normal positions. Another point to be remembered in this connexion is that patients suffering from these hæmorrhages are usually compelled to lie down speedily, and that obviously tends to favour gravitation of fluid backwards along the posterior part of the abdominal cavity into the most dependent parts. As the intestines often contain gases they may be displaced superiorly to the effused fluid, but only to the length of their mesenteric tether. On the other hand, if blood be shed into yielding tissues, and be bounded by a membrane, such as the peritoneum, or by resilient tissues encapsulating it, such as the broad ligaments with the pelvic platysma enfolded in them and beneath the peritoneum, what then happens? The limiting or bounding membrane or tissue may offer enough resistance to cause some displacement of mobile or partly mobile organs, such as the uterus, which may accordingly be thrust down in the direction of least resistance, downwards and forwards. But it is alleged by some that the peritoneum is so fragile a structure that it must tear easily, and would burst under pressure so slight that it could never withstand the strain of rapid effusion of blood from ruptured vessels. As evidence to the contrary, consider and weigh the following facts. The late Dr. Radford of Manchester published in the Obstetrical Transactions of London, vol. viii., 1867, an essay on "Cases of Laceration of the Uterus." In Case 15 the woman died undelivered just as Dr. Radford arrived, and he found the abdomen to present two tumours, which, on post-mortem examination, proved to be respectively the ruptured uterus on one side and on the other the fœtus (hydrocephalic) lying underneath the peritoneum in an unbroken sac.[3] In Case 17 an enormous blackish-looking tumour, caused by coagulated blood, was found underneath the peritoneum, extending as far as the right psoas muscle, and also distending the broad ligament. In Case 3, from a pound to a pound and a half of blood was found effused behind the peritoneum as high as the mesocolon. "The peritoneal coat was entire." The late Dr. Roberton,[4] among other cases of "laceration of the uterus in complicated labours," mentions one in which the patient died suddenly and unaccountably, and at the post-mortem examination rupture of the uterus was found, and several pounds of blood had escaped and lay under the peritoneum in the left iliac fossa. Dr. Blundell—a great master, whose foresight into abdominal surgery is too little known or recognised in these days—records a case similar to Dr. Radford's of escape of a fœtus from a ruptured womb into a pocket formed by the unlacerated peritoneum. This case occurred in the practice of Mr. Barlow of Blackburn, who deserves undying renown for having boldly forthwith performed abdominal section, whereupon he discovered rupture of the muscular substance without rupture of the uterine peritoneum. The patient recovered rapidly.[5]

Again, a woman admitted into the West Riding Asylum for puerperal mania died suddenly from pelvic hæmatocele, and at the inspection the effused blood was found to rise up to within an inch of the umbilicus, fully occupying the hypogastric and inguinal regions, and to be beneath the peritoneum, that membrane being raised up entire.[6] Mr. Morris[7] mentions a case of rupture of the bladder in a boy upon whom the late Mr. Lyell operated at the Middlesex Hospital by abdominal section, believing that effusion of urine, &c., had occurred into the peritoneal cavity, but neither fluid nor opening could be found. The boy died, and at the post-mortem examination a large quantity of effused blood was found behind and outside the peritoneum, overlying the spine, and in the right iliac fossa. Hæmorrhage had also taken place into the mesentery. "The peritoneum was separated from the anterior abdominal wall just to the right of the symphysis pubis, and was much bruised by the broken pelvis, but not torn anywhere." Mr. Heath[8] records a similar case in a man aged thirty, and Dr. Skerritt has recorded a case of abdominal aneurysm treated by distal compression, in which the aneurysm became diffused; and at the necropsy, seven weeks after compression, rupture was found to have taken place into the retro-peritoneal tissue, forming an enormous false aneurysm composed of soft dark clot and dark fluid blood.

The evidence already adduced is irrefragably conclusive that the peritoneum will bear suddenly produced strain to an enormous extent without rent; but a crucial test *ad hoc* is furnished by a case of Baumgartner's,[9] which he correctly diagnosed as a subperitoneal hæmatoma, and upon which he operated by abdominal section, finding the tumour to be completely covered by peritoneum. Again, a distinguished American physician, Dr. Fordyce Barker, in his admirable work on "Puerperal Diseases" quotes a case from Perret in which a thrombus was found post mortem filling the left lateral half of the pelvic cavity, and the infiltration of blood had extended into the subperitoneal tissue of the abdomen. Dr. Gowers,[10] speaking of splenic leucocythæmia, mentions that subperitoneal hæmorrhage (as well as intra-peritoneal), may occur in that disease. A case of rupture of a fusiform aneurysm of the left common iliac artery, producing an enormous hæmatocele, lying behind the peritoneum and extending from the scrotum below (where it formed a sausage-shaped tumour) up to the level of both kidneys along the back of the abdominal cavity, recorded by Dr. Uthoff of Brighton, is very instructive.[11] Chaussier[12] relates a case of sudden death in a woman pregnant five months where a large effusion of blood was found beneath the peritoneum, extending from the right iliac fossa to the kidney (Poncet). Moreover, the experiments of Tripier, made at the suggestion of Poncet, by injecting liquid coloured with Prussian blue into the uterine annexes, showed that the peritoneum readily stripped up from the subjacent tissues, and that it required a pressure of two atmospheres to rupture the peritoneum, as was determined by the manometer. Baumgartner's analogous experiments yielded similar results.[13] The peritoneum, then, displays marked distensibility under rapid strain, and will peel up with great celerity even under the stress of solid bodies, such as the fœtus, and still more under hydraulic pressure. And then, with reference to the supposed deleteriousness of blood when shed into the peritoneal cavity: that is hypothetical, not to say imaginary. Its innocuity is shown by experiment, as well as proved by clinical experience; neither plastic exudation nor peritonitis is necessarily excited by the effusion of *pure* blood. Again let me appeal to evidence. Of late years quite a number

[3] Dr. Radford's words are: "On opening the abdomen the peritoneum appeared perfectly free from disease; nor was any fluid discovered in its cavity.....The uterus, which was very large, formed one segment of the tumour—viz., the left—and the child's body, covered by the peritoneum, the other. Upon making a very careful examination of these parts, not the smallest laceration was discoverable in any part of the peritoneal covering. An incision was made through this membrane, which exposed the body of the child." A diffused clot was also found under the peritoneum with the child's body.

[4] Essays and Notes, pp. 296-7.

[5] Blundell's Principles and Practice of Obstetrics, p. 704.

[6] THE LANCET, July 10th, 1874.

[7] Ibid., July 7th, 1883.

[8] Ibid., May 12th, 1877, Injury of Pelvis with Rupture of Bladder and Abdominal Aorta.

[9] Ueber Extra-peritoneales Hæmatom., Deutsche Med. Woch., No. 36, 1882.

[10] Reynolds' System of Medicine, vol. v., p. 257.

[11] British Medical Journal, January 10th, 1880.

[12] Mémoires et Consultations de Médecine légale.

[13] A. Baumgartner's "Ueber die Ablösbarkeit der Peritoneum im Becken," Centralb. f. Gynäk., No. 42, 1882.

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of experiments have been made upon the tolerance of the peritoneum for blood when poured into it artificially. Valpian and Laborde, Franck, Ponfick, Bizzozero and Golgi, Arloing and Tripier, Livon, Toussaint, Penzoldt and Cordua, have all made corroborative observations. Von Recklinghausen,[14] according to Ziegler,[15] first investigated with success the process of absorption of foreign substances in the abdominal cavity—e.g., milk, tinted liquids, and blood; but recent researches by already named observers are still more conclusive. Poncet,[16] alluding to the experiments of Valpian and Laborde of injecting blood into the peritoneal cavity, says that they throw light upon the little known tolerance of the peritoneum for large quantities of blood and its rapid absorption, and show in a peremptory manner the impossibility of provoking encystment of sanguineous effusions in mammiferæ when the peritoneum is quite healthy. Franck's[17] experiments are also striking and conclusive. He found blood transfused either directly from the carotid of one animal into the peritoneal cavity of another or after defibrination, to be absolutely absorbed within a little over a week, as was shown by post-mortem examination of the animals. Arloing and Tripier's inquiries gave identical results, even when large amounts of blood were used, as much as one-tenth the weight of some of the creatures. The results of M. Livon were similar, the blood was always promptly absorbed, and there was never peritonitis. M. Toussaint, Professor in the Ecole Vétérinaire de Toulouse, made like observations on large as well as small animals (using asses, sheep, &c.) with corroborative results, except in the case of an ewe which, like sheep generally, did not bear operation well. Poncet comments upon the prodigious rapidity with which large quantities of blood were absorbed from the peritoneal cavities of twenty-four animals. Penzoldt and Cordua have studied histologically the characters of the blood, and found defibrinated blood to be most rapidly absorbed. Bizzozero and Golgi[18] made observations on the influence of peritoneal transfusion of blood on the globular richness of the blood in the circulating apparatus, and found that it was rapidly enriched. Ziegler[19] remarks that the rapid absorption of blood from the peritoneum has a practical value, and suggests the possibility of similar successful transfusion in the human subject, and I think I have somewhere seen accounts of such a case, but I cannot find the reference.

It should be recognised that there are two distinct classes of pelvic or pelvi-abdominal blood effusion, and that either may arise from several, and in some cases identical lesions. First, there is that which is always external to the peritoneum—e.g., as between the broad ligaments, or rectum, bladder, and uterus, and beneath the peritoneum of the pelvic and pelvi-abdominal regions, where fused with the pelvic platysma (Rouget's muscle), arising from burst veins, &c. Secondly, that which is within the sac of the peritoneum, a large and important class, comprising rupture of ectopic gestation sacs, burst varicose or other veins of the utero-ovarian plexus, whether in the pregnant or non-pregnant (illustrations were given), from burst uterus (one horned or other); from hæmato-salpinx or burst Fallopian tube, or ovary; from aneurysm, ruptured atheromatous artery within the abdomen, burst bladder, and various traumatisms; from bleeding from the Graafian follicle in hæmatolytic conditions; from regurgitation through the Fallopian tubes, burst spleen, liver, or kidney; from exhalation of blood from the peritoneum, without recognisable lesion, as seen in purpuric states, acute specific diseases (e.g., small-pox), and after phosphorus poisoning; in short, in hæmatolytic conditions, however produced. These large, profuse, and sudden intra-peritoneal hæmorrhages have been well named cataclysmic by Dr. Barnes, and may be of deadly import.

Let us now learn what happens when blood is shed freely into the peritoneal cavity. If pure blood only be shed, the irritation from its mere presence *qua* blood is not severe, although death may speedily occur from collapse, and be preceded by convulsions. In conformity with the laws governing fluids, it does not collect only in the pelvis, but also flows backwards along the hinder part of the belly cavity, this reflux being favoured by the lying down of the patient. Nor, when pure, does it excite peritonitis, and thus provide an encysting capsule. That hypothesis is invoked by those whose minds are dominated by preconceptions as to the acrid or irritating action of blood upon the peritoneum. It is beyond question that patients suffer severely in various ways, from loss of blood, and so on; and probably in some cases the material effused is not pure blood, but either blood whose vitality is damaged or impaired (perhaps putrid), or matters from extra-uterine gestation sacs and the like, as foul blood from the tubes, ovaries, tumours, ruptured bladder growths, and so on. Hæmorrhages from malignant intra-abdominal growths are hardly within our present purview.

When patients do not sink under acute loss of blood internally, the physical condition found per pelvem in most cases (i.e., where pure blood alone is effused into the peritoneum) is that of fixity of the pelvic viscera in their normal relations and positions. This I have repeatedly verified in cases of intra-peritoneal hæmorrhage. When the blood is damaged, clotting may be absent or long deferred if the patient survive.

Let us now turn from the topical to the general or systemic symptoms of pelvic hæmatocele. As most of the early symptoms have already been mentioned, a brief recapitulation will suffice. The one-sided pain of a sharp character low down in the pelvis and down the genitals and thighs; the breathlessness, collapse, and, in very severe cases, convulsions from loss of blood; the cold sweats, the thirst, vomiting, and low temperature of the body; the attitude, the legs so significantly drawn up, the one on the side of the lesion usually the more so; the thready, flickering pulse; the dysuria and bearing down in the privates—all tell their tale plainly enough. Uterine epistaxis, metrorrhagia, or menorrhagia are frequent, almost constant, accompaniments.

Later on there will be feverishness when reaction supervenes. The tongue becomes dry, glazed, and striped, ribbon-like; it is the "pelvic tongue." The pulse becomes quick. The abdomen enlarges either from distension or from encroachment of the tumour upwards, as in many of the sub-peritoneal forms—the "hæmatomata," or "thrombi," as some prefer to designate them. Here I wish to mention another special symptom observable in hæmatoceles, the presence of which is constant, and of which I have satisfied myself by observation of many cases during the past fourteen years. It is that of an icteric or jaundiced hue which overspreads the surface after a few days. I was first made acquainted with this about 1870 in the person of a patient at the West London Hospital, who came under my care, in the first place as an out-patient, when I found a huge pelvic hæmatocele in the recent and fluid state. I at once admitted her into hospital, and in a few days the mass became firm and solid. It rose as high as the umbilicus, and almost blockaded the pelvis. I diagnosed a subperitoneal effusion, and watched the case carefully. After about a fortnight or more she became so distinctly yellow that a colleague remarked that she was a good case of jaundice. He was not a little surprised when I informed him that observation of her motions showed no want of bile, and that chemical tests of her urine yielded no evidence of presence of bile—that, in short, the case was not of biliary origin, but one of hæmatic jaundice, due to absorption of the colouring matter of the blood from the large effusion. Since that time I have been on the alert to observe all cases of hæmatocele whether occurring in hospital or consultation practice, and with invariably corroborative results. Of course the amount of icteric hue will depend partly upon the amount of effusion and partly upon its seat. Fortunately for the corroboration of this clinical manifestation a case of traumatic scrotal hæmatocele was admitted into the West London Hospital a few months after the observation of my pelvic hæmatocele case. It occurred in the person of a young man aged about twenty-four years, and was of considerable volume. Being present on his admission, and finding there was no wound, I begged my surgical colleague, under whose care he fell, to do me the favour of refraining from incising the scrotum to let out the blood-clots, explaining to him my object, and predicting that in a few weeks the patient would become icteric. Accordingly only spirit lotion was applied, and in due course the young man became quite yellow as the effused blood was absorbed. There was, moreover, no sign of biliary implication. Dr. Ginders of Normanton, surgeon to the railway works there, who has seen many cases of traumatic scrotal hæmatocele, kindly informed me, in reply to inquiries upon the point, that when he refrained from opening the scrotum the men not only became yellow, but some were actually green, an observation which tallies with the spontaneous remark

[14] Virchow's Archiv., vol. xxvi.
[15] Special Path. Anat., Transl. by Macalister. Part II., pp. 125 6.
[16] Thèse de l'Hématocele Peri-Uterine. Paris, 1878. [17] Ibid.
[18] L'Osservatore, Nov. 4th, 1879, p. 639; Della trasfusione del sangue nel peritoneo, &c. [19] Loc. cit., p. 126.

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of a lady who suffered from a severe pelvic hæmatocele, that she became "sage-green." This condition of hæmatic jaundice agrees with the "Ictère Hématique Traumatique" of Poncet, and has analogies with the "Ictère Hémaphéique" of Gubler; it is due to rapid absorption of the colouring matter of the blood—the hæmoglobin. It is also akin to the icterics witnessed in other hæmatolytic affections, as in paroxysmal hæmoglobinuria (or, as I have formerly suggested, paroxysmal hæmatolysis or hæmatolysuria), chlorosis, icterus neonatorum, and blood poisons (animal—e.g., snake and other). The urine shows the source of the pigment to be the blood by the presence of colouring matters in excess—urohæmatin, &c.; and chemical and spectroscopic evidence is corroborative. The observations of Ponfick, MacMunn, Poncet, and others support this view. The clinical value of this symptom of hæmatic icterus has to myself been very great. It was well illustrated in a case seen by me with Dr. Lacey, also in one with Dr. Walker and another with Mr. Moon, and was helpful recently in one seen with the Messrs. Shillitoe, senior and junior, at Hitchin, besides in many others. Very notably, also, in a case recently in St. Mary's Hospital, where internal hæmorrhage to a considerable amount occurred from the stump of an old ovarian pedicle, after exertion, in a woman on whom I performed ovariotomy several years ago. This patient was so sallow that the general impression was that she had cancer, but her recovery verified the diagnosis of hæmatic jaundice. The yellowness beguiles many into the belief that "liver disorder" is present; and I have known horse exercise and blue-pill ordered for a lady whose pelvis was blocked with effusion. I mentioned that puberty and the menopause were not free from pelvic hæmatoceles. I have seen examples of both in consultation: one at the change of life notably with Mr. Moon of Norwood, and others at various times with other gentlemen.

Among the causes of one form of pelvic hæmatocele I have already mentioned bursting of extra-uterine pregnancy sacs, especially in the tubal variety. This cause is by some alleged to be the only one in pelvic hæmatoceles, but that inference or assertion is erroneous if imposed as absolute, although no doubt a large proportion of cataclysmic hæmatoceles own this origin. The class is unquestionably a large and important one, and I have myself seen several cases, some in consultation with Dr. Alderson, Mr. Mason, Mr. Duke, Mr. Senior, Mr. Parrott, and other gentlemen; others in public and private work. I show you specimens of ruptured tubal sacs and of fœtal relics from a case seen with Dr. Alderson. In these cases, when an accurate diagnosis is attainable, prompt operative measures may be required to save the patient, although they do not all die, for among the cases above alluded to only one proved fatal (the one seen with Mr. Mason), the patient succumbing a few hours after I saw her, without any operation being practised.

Among the causes of pelvic hæmatocele must be mentioned bursting of a vein in the utero-ovarian (or pampiniform) plexus, whether varicose or no. It is probable that this occurs in many of the subperitoneal cases, but it may also give rise to intra-peritoneal bleeding. The stress thrown upon the vascular apparatus of the pelvis during the menstrual nisus is great, and under abnormal conditions, such as chills, suppression of menses, emotions (erotic and other), and so on, weakened vessels may give way, as has been verified by many post-mortem examinations. An internal hæmatoma or thrombus thus produced has analogies with those occurring in the labia externally from various causes; and, like the latter, are no doubt in some cases vicarious. Cases illustrative are recorded by Jacquemier, Puech, Lissner, and Ledouple; and Billroth alludes to episio-hæmatomata. The venous plexus, internal and external, are *erectile* structures.

Rupture of Graafian vesicles is attended by a small hæmorrhage into the follicle normally, but under hæmatolytic conditions this slight "menstruation of the follicle" as it is called, may become excessive, and produce great internal loss. The specimens I show you illustrate this possibility. Certain writers on pelvic hæmatoceles allege that they chiefly arise from rupture of neo-membranes produced by pachyperitonitis. Bernutz advocates this view, which undoubtedly is a restricted one. This preliminary pachyperitonitis is sometimes invoked and formulated to help out the hypothesis as to encapsulation. It doubtless does occasionally happen that neo-membranes form, and they may yield blood on being torn; but it is doubtful whether they are at all a frequent source of hæmatoceles. Virchow first called attention to the formation of neo-membranes and possibility of some hæmorrhage from laceration of young vessels, but large effusions from such sources are rare. Traumatic rupture of ovarian cysts may cause serious trouble and internal hæmorrhage, as in a case seen by myself in consultation with Dr. Oldham, Dr. Swann of Dublin, and Mr. Skelding. The patient recovered, and remains well. Rupture of the uterus, in the lower segment particularly, is an occasional cause, and was present in a remarkable case I saw in consultation with Dr. Owen Roberts, where a large effusion of blood was produced within the folds of the left broad ligament from spontaneous rupture of the lower segment of the womb during labour a week after the accident of slipping on the patient's doorstep. Reflux of menstrual blood through the Fallopian tubes is asserted by some writers to be a frequent cause of pelvic hæmatocele. Probably this is extremely rare, and the evidence of its occurrence is by no means conclusive. Its possibility must be admitted, but it is remarkable how rarely anything of the kind occurs in imperforate hymen and other atresial conditions preventing the escape of menstrual fluid.

A very serious condition rarely met with is that in which an enormous quantity of blood is found post mortem in the peritoneal cavity, without discoverable source, and apparently from exhalation. I have seen one such case (I think with Mr. Mason), where we could find no lesion to account for the bleeding. I do not say there was none; but we failed to find any. In some of these cases the blood may resemble that of purpura—in short, may be a form of hæmatolysis, and in such cases it never clots. A case of peritoneal exhalation is actually recorded by Mollière in the subject of hæmophilia. My own clinical observation leads me to the conviction that there may also be a form of pelvic hæmatocele due to lesions in the nervous centres. Drapier's case, mentioned in his thesis "L'Hématocele Rétro-utérine consécutive à la Pelvi-péritonite" (p. 16), is an illustration.[20] I have met with a somewhat analogous case, which was seen with me by Dr. Ferrier. The researches of Nothnagel, Brown-Séquard, Vulpian, Jehn, and Charcot respecting hæmorrhages into the lungs and other viscera consecutive to cerebral lesions are interesting and suggestive in this connexion; while Andral cites a case from Serres of hæmorrhage from the sexual organs of an aged woman from cerebral hæmorrhage, and of priapism in men from like lesions, showing influence over the sexual zone. Dr. Savage's case (Bethlem) of "melancholia passing into partial dementia, following childbirth, which recovered suddenly and permanently after formation of retro-uterine hæmatocele," is suggestive, as also is the influence of emotion and shock.

Probably lesions of the spinal and sympathetic systems may be operative, especially when the latter implicates the vaso-motor system, which it so largely influences. Vulpian's observations in his "Leçons sur l'Appareil Vaso-moteur" are suggestive; and so also are those of Marotte,[21] who cites the influence of lumbo-sacral neuralgias on the production of hæmatoceles; and Cohen's on congestions seen in ileo-lumbar forms of neuralgia which provoke congestions of the womb and its annexes. It should not be forgotten in this connexion that embolism of the mesenteric arteries is attended by hæmorrhage from the bowel, the mechanism whereof has been shown by Vulpian.[22] Considered in their entirety, then, the various hæmorrhages which may occur in connexion with pelvic and abdominal lesions, and which for clinical purposes may be grouped under the comprehensive term pelvic hæmatocele, form an important class, some acquaintance with which is demanded from the diagnostician who desires not to be led astray by preconceived notions which would limit and hamper his grasp of the subject.

As to the treatment of pelvic hæmatoceles, the cardinal injunction in most cases is absolute rest and opium. The value of opium is here transcendent. It tranquillises, relieves pain, and enables the exhausted and collapsed patient better to bear the blood loss, while it compels repose, both mental and bodily. But to procure these desirable ends it must be given in full doses, and be repeated as may be necessary. The best method is to give it in one-grain

[20] Drapier gives it under the following heading:—"Hémorrhagie cérébrale; coma; mort. Autopsie: Vaste foyer hémorrhagique dans le lobe moyen de l'hémisphere droit; épanchement dans le ventricule latérale correspondant; anevrysme miliares; hématomes rétro-utérines; hématomes ovariens.

[21] Considérations Nouvelles sur la Pathogénie de l'Hématocele Rétro-utérine.

[22] Leçons sur l'Appareil Vaso-Moteur, vol. ii. pp. 445-6.

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doses of the solid opium, either in pill or powder. Next to solid opium, Battley's sedative solution of opium is good; but morphia is much less useful in these hæmorrhages, especially in the cataclysmic forms. Ice and brandy, champagne, or other suitable stimulants may be requisite; and, above all, Valentine's meat-juice is most valuable. Peptonised meats and other foods (Benger's, Darby's, and others) may be useful adjuncts. In certain cases the hypodermic injection of ergotinine of Tanret (Paris) may be helpful, and tincture of hamamelis may help in certain forms. The bladder should be relieved by catheterism with antiseptic precautions, as may be required. The use of astringents, such as gallic and other acids, is not great in these accidents, nor can I recommend the use of heavy bags of ice to the abdomen. But besides medical treatment, certain grave surgical questions arise in some cases, and demand urgent solution: for example, in cases where there are reasonable grounds for suspecting the source of internal hæmorrhage to be a ruptured tubal or other pregnancy, and in similar accidents, such as bursting of a vein in the pampiniform plexus or elsewhere, where the diagnosis is sufficiently clear; in short, in those cataclysmic intra-peritoneal bleedings where rapid dissolution is threatened prompt operation may not only be justified, but become imperative to rescue the patient from impending death. It must not be forgotten, however, that even in ruptured ectopic gestations many patients recover without operation, as has happened several times within my own experience. The difficulty of accurate diagnosis is no doubt sometimes great, but not always; and when the well-balanced judgment arrives at reasonable grounds for belief that hæmorrhage threatening to be rapidly fatal is going on unchecked from a controllable vascular lesion, then a bold, but not rash, interference is justifiable, and in these days of heroic abdominal surgery laparotomy should be done without delay.

During the later stages of pelvic hæmatoceles watchful supervision of the patient is necessary. The bladder should be carefully attended to with scrupulous cleanliness and great gentleness. Bedsores should be prevented if possible. The bowels as a rule should be seldom opened. The mouth often becomes sore from the glazy and raw condition of the tongue and lips, therefore all food should be bland. Sedative mouth-washes give much relief (borax, myrrh, wine of opium, mucilages, and orange-flower or rose-water). The better patients are fed and cared for the sooner does the effusion disappear according to my experience. Care should be taken to guard against relapses or exacerbations, which are apt to occur about the time of the next catamenial period. I have been able occasionally to predict a fresh effusion at these epochs; and when such happens, it is followed by fresh manifestations of hæmatic jaundice. There is periodicity about these forms of hæmorrhage, and the explanation of effusions occurring at the inter-menstrual or fortnightly periods is that it is part of a minor nisus that happens then. The condition of the vascular system will warn the physician, and the sphygmograph or finger may indicate increased arterial tension, while the eye can see the venous turgescence. Undue vascular excitement may be reduced by aconite, amyl-nitrite, nitro-glycerine, the bromides, &c. The pelvic viscera may be quieted by actæa racemosa, monobromide of camphor, Indian hemp, opium, gelsemine, and so on, given internally, and by vaginal pessaries of iodoform, coniæ, morphia, atropia, &c., or by rectal suppositories. An atmosphere of turpentine about the sick chamber is good, both for styptic and purifying influences. With reference to the puncture of hæmatoceles, I should, as a rule, deprecate opening, and would counsel caution in resorting to any operative measures. Should relief become necessary in the later stages from suspicion of suppuration or decomposition of blood, or from clear evidence of intolerable or dangerous tension, then aspirate by the vagina and not by the rectum; but operation is generally undesirable, and should be carefully resorted to. During convalescence sea air and water will be found beneficial, and where absorption is tardy poultices of scalded seaweed and brine baths are essential. The air of Harrogate is also good as promoting metabolism, and occasionally iodine waters, notably those of Woodhall Spa, Horncastle, are good.

In conclusion, let me ask you to remember the two clinical points I would urge: the behaviour of effused blood according to its position, intra- or extra-peritoneally, and the symptom of hæmatic jaundice, slight or well-marked, from absorption of the colouring matter of the blood, and I believe you will find them helpful in your bedside practice.

LONDON TEACHERS OF ANATOMY: A RETROSPECT.

BY CHARLES HAWKINS, F.R.C.S.

IN the obituary of Mr. Cæsar Hawkins, published in THE LANCET of July 26th, it is stated that "he was the last member of the great Hunterian school founded by William Hunter in Great Windmill-street." Perhaps a few notes relative to those who taught in that school, as well as to some of the early days of anatomical teaching, will be interesting.

William Hunter may be said to have been the founder of anatomical schools in London. The first Act of Parliament respecting the practice of anatomy was passed in 1540, in which it was recited "that the masters and governors of the Mystery and Commonalty of Barbers and Surgeons in London should take the bodies of four persons condemned and adjudged and put to death; and make incision of the said dead bodies, or otherwise to order the same after their said discretion and pleasure for the further and better knowledge, instruction, insight, and learning in the said science or faculty of surgery." This Act was repealed by the Anatomy Act of 1832. The "Readers in Anatomy" at Barber-Surgeons' Hall were at first supplied by the College of Physicians. Caius, the pupil of Vesalius, is said to have been the first. In 1566 the United Company of Barbers and Surgeons passed a bye-law that no private anatomy be dissected out of the Hall under a fine of £10. In 1590 Dr. (afterwards Sir William) Paddy was appointed Reader; in 1609, Dr. Gwynne; in 1649, Dr. (afterwards Sir Charles) Scarborough; in 1708, Dr. Mead. In 1629 the Company ordered "that the ancientest master should read the lectures, and so after every surgeon in his antiquity and degree in the Company." In 1046 Edward Arris paid £200 for the Company to establish an annual public anatomy; in 1698 it was ordered "that there be an anatomy lecture called Gale's Anatomy."

In the beginning of 1700 private lecturing commenced. Cheselden, then twenty-two years old, lectured in 1711; Frank Nicholls in 1728; Nourse of St. Bartholomew's Hospital lectured at London House in Aldersgate-street in 1730; Bromfield of St. George's Hospital was elected anatomical demonstrator at Barber-Surgeons' Hall in 1744, Cheselden being one of the wardens. In 1746 William Hunter, a pupil of St. George's Hospital and a Member of the Corporation of Surgeons in 1747, succeeding Sharp, his teacher, commenced a course of lectures to a "Society of Navy Surgeons" in Covent-garden in the evening; but Garrick, at that time appearing at another theatre, was a rival Hunter could not compete with, and finding his theatre deserted was compelled to lecture in the afternoon. At this period the courses of lectures were not extended over a length of time. Bromfield comprised anatomy and surgery in thirty-six lectures; Nicholls professed to teach anatomy, physiology, and midwifery in thirty-nine; Nourse, the whole of anatomy in twenty-three. Hunter's first lecture produced about seventy guineas, which he carried home in a bag, remarking that it was a larger sum than ever he had been master of; this was the nucleus of the fortune he subsequently acquired which enabled him to spend £100,000 on that magnificent collection now at Glasgow, although it is recorded that he was obliged to postpone the commencement of his third year's lectures on account of not having the wherewithal for necessary advertisements. He continued to teach in, I conclude, the house of his master, Douglas, where he lived until he removed, about 1750, to Jermyn-street. In 1755 he admitted his brother as a partner in his lectures; this arrangement ceased upon John Hunter going abroad in 1761, and was never renewed, so that he was not a member of the Great Windmill-street School. At this time he was joined by Hewson; they parted company in 1770, upon a personal misunderstanding, he building a theatre in Crown-street, where he lectured, but died after a short illness in 1774.

In 1765 William Hunter applied to the Government to have granted him a piece of ground, part of that on which the National Gallery now stands, that he might erect a building fit for the purpose of a School of Anatomy, and supplied a plan "for a museum in London, for the improve-

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ment of anatomy, surgery, and physic." Upon this being declined, he commenced building the Hunterian School in Great Windmill-street, comprising a mansion, museum, theatre, and anatomical department. He removed into the house in 1768, resigning his house in Jermyn-street to John Hunter, where he lived until he removed to Leicester-square in 1783. Most accounts give the date as 1770; but the lists of the College of Physicians show that his address in 1767 was Jermyn-street, and Great Windmill-street in 1768. In 1771 he was joined by Cruickshank, who lectured until the day of his death in 1800. On March 15th, 1783, he commenced a course of lectures on Surgery, but was removed from the theatre in an insensible state, to die on the 30th of the same month. In 1784 his nephew, Mathew Baillie, joined Cruickshank in lecturing, and continued to do so until 1799. In 1785 James Wilson, a pupil of William and John Hunter, commenced as demonstrator to Baillie, and when he quitted the school he became joint lecturer with Cruickshank, and continued teaching until his death in 1821, which was as sudden as his predecessors', Hunter and Cruickshank. In 1807 Wilson purchased the freehold of the premises in Great Windmill-street, and inhabited the house, as Hunter and Baillie had previously done. He subsequently sold the property, reserving the school part of the premises on a lease. When Honoratus Leigh Thomas began to teach in Great Windmill-street I am not certain. Brodie found him there in 1802, and says in his Autobiography:—"He delivered only a few anatomical lectures. He was not fond of his vocation as a teacher, and was led to play truant a good deal." In 1805 he resigned, when Brodie commenced to teach in Great Windmill-street, which he continued to do until 1812, when Wilson proposed that he should take the school off his hands. This offer he declined, not possessing the funds required for the transfer. Thus ended his career as a teacher of anatomy. In 1808 he had commenced lecturing on surgery, and on parting from Wilson he took a house in Great Windmill-street, where he built a theatre and museum; these lectures he continued until 1830, when the school removed to St. George's Hospital. On Brodie's retirement from the school in 1812 Charles Bell joined Wilson. He had commenced lecturing in London in 1806. In one of those most interesting letters published in 1870—which anybody wishing to have an insight of medical society at the commencement of the present century should read—he says: "I resolved to remain in London, and took a large ruinous house in Leicester-square, previously inhabited by Speaker Onslow. When I got into the house, the first night I slept in it, I had put out the candle, and leaping into bed, the floor gave way under my foot, and I found that I had displaced the board. On examining this in the morning I discovered a tube under the loose board; it was the house where the 'invisible girl' exhibited!" In a letter, October 7th, 1812, he says, "I gave my first lecture yesterday in Great Windmill-street. I gave an hour and a half to a full class; there were from eighty to a hundred, not gathered for the occasion, but pupils of the class." His brother-in-law, John Shaw, assisted him in his lectures and dissections until his death, which took place in 1827. In one of his letters at this time he says: "I have lost my dear and best friend, John Shaw. There is such a blank, I have not an idea left." In 1828 Bell opened the Medical School at University College, then called London University. On the institution of this school, Sir Benjamin Brodie was solicited by the Council to undertake the duties of either professor of anatomy or surgery, with any assistants he might wish to have. In 1826 Herbert Mayo and Cæsar Hawkins purchased Bell's interest in the school, he continuing to lecture in the session 1826-27, and they carried on the school until October, 1830, when Cæsar Hawkins left for the opening of St. George's Hospital School, and Mayo in 1831 for King's College. In the winter session of 1830-31 Mr. Thomas Tatum gave the anatomical demonstrations. Subsequently, Mr. Gregory Smith and Mr. Bushell delivered lectures. Mr. Smith afterwards removed to the school in Little Windmill-street, where Mr. Prescott Hewett joined him in October, 1836, as demonstrator previous to his being house-surgeon at St. George's Hospital in 1838.

I venture to add some criticisms on those I have mentioned as teachers. Baillie said of William Hunter: "He excelled very much any lecturer whom I have ever heard in the clearness of his arrangements, the aptness of his illustrations, and the elegance of his diction; he was perhaps the best teacher of anatomy that ever lived." Brodie, born the year William Hunter died, says in his Hunterian Oration, delivered in 1837: "Hewson partook in no small degree of his master's zeal and industry, and his works show how much may be accomplished by means of these qualities when infused into a mind of moderate dimensions. Cruickshank, over-sensitive and hypochondriacal as he was from disease, was much superior to Hewson; his physiological papers in the Philosophical Transactions and his treatise on the absorbent vessels exhibit a combination of genius and learning, and justify us in assigning him a very high place in the scale of men of genius." And in his Autobiography he says of Wilson: "He had a most profound knowledge of his subject, and his demonstrations were very far superior to those of any other anatomist of that day"—and I may, I believe, add to those of any one since.

In writing this sketch of a school I have been struck with an interesting intellectual lineage. A sister of William and John Hunter was the mother of Mathew Baillie and his gifted sister, the well-known authoress. Baillie married the daughter of the celebrated Dr. Denman, the father of the first Lord Denman, distinguished as a great lawyer. Dr. Denman married the aunt of Sir Benjamin Brodie. The second Sir B. Brodie, by his writings in science, gave evidence of his claim to be ranked as a distinguished professor of chemistry. Dr. Baillie's son, Mr. William Hunter Baillie, is one of the present trustees of the Hunterian Museum at the College of Surgeons.

Savile-row.

OSTEOTOMY FOR GENU VALGUM.[1]

By WILLIAM MACEWEN, M.D. GLASG.,
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OSTEOTOMY, as a means of cure of genu valgum, has been before the profession now for about seven years, and during the last three or four it has been very extensively adopted by surgeons over the civilised world. The present is therefore a fitting time for eliciting an expression of opinion concerning it. From the manner in which the subject has been framed, I apprehend that we are not to discuss the various methods of treatment of genu valgum, but that we are to confine our attention to osteotomy for that disease. In the limited time at our disposal it is necessary that we confine our attention to a few points only. I have considered that the two following could be discussed with advantage:—

1. The various methods of performing osteotomy for genu valgum and their comparative qualities.
2. The results of these operations.

As to the first point, we have to consider whether the intra- or the extra-articular method ought to be adopted, whether the femur or the tibia ought to be selected for the operation. It is presumed that all of the members are sufficiently acquainted with the descriptions of Ogston's (and its various modifications), Billroth's, Schede's, Chiene's, and Macewen's operations to render it unnecessary to say anything on these points. It would be out of place in me to say anything as to the comparative qualities of these operations, considering my close connexion with the last one mentioned. I have the more reason for doing this as I know that the gentlemen whose names are most closely identified with the various operations are present. Regarding the second question, I have gathered statistics which will help the members in forming a conclusion on the subject.

A schedule was drawn out, asking for statistics concerning osteotomy for genu valgum, and a copy was addressed to every hospital surgeon in Britain. Replies have been received from about forty-five surgeons, but only thirty-seven of these have been able to answer the questions sufficiently fully to permit of them being of value. The statistics received have been formed into a table, which is here presented to the members of the International Medical Congress. The table must not be understood to be a complete one, inasmuch as many surgeons have not been able to reply, which it is hoped they will yet do. With regard to continental and American surgeons, I trust to be able to arrange a similar scheme by which they may be inclined to favour

[1] A paper read as introduction to a discussion on Osteotomy for Genu Valgum, International Medical Congress, Copenhagen, 1884.

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me with their results, so as to obtain as wide a basis for deduction as possible. The table as it stands is made up of statistics furnished by thirty-seven surgeons. They have operated on 1118 limbs. In some instances only have the number of patients, as well as the number of limbs, been given. The ages of the persons operated on extend from three to thirty-nine years. The operations which have been chosen by those thirty-seven surgeons are as follows:—

Three surgeons have performed Ogston's exclusively; eight surgeons have performed sometimes Ogston's, sometimes another operation. Eleven surgeons in all have used Ogston's operation; these eleven surgeons have operated on 525 limbs, one gentleman alone having performed 370.

Chiene's method has been used exclusively by one surgeon, Professor Chiene himself. One surgeon has twice performed Chiene's along with another method of osteotomy. Two surgeons have thus performed Chiene's operation; these two have performed operations on fifteen limbs.

No one has operated by Schede's method exclusively. Two surgeons have performed occasionally Schede's operation; these two surgeons have operated by Schede's method on five limbs.

Twenty-two surgeons have used Macewen's method exclusively. Eleven surgeons have used Macewen's method occasionally, giving a total of thirty-three surgeons out of thirty-seven who have used Macewen's method; these thirty-three surgeons have operated on 560 limbs.

The next question referred to accidents during the operations. Hæmorrhage is mentioned in two of Macewen's, in thirteen of Ogston's, and in one of Chiene's. The knife was broken off in the joint in one of Ogston's. As to the conduct of the operation, thirty-four of the surgeons used spray and other Listerian precautions, while three conducted the operation by the open method.

The progress under treatment shows that thirty-two cases of Macewen's operation afterwards suppurated, eight cases of Ogston's, and one of Chiene's—that is, forty-one in all have suppurated. Of fatalities there are five cases in all after Macewen's operation. One from blood poisoning (this though stated to be Macewen's operation was not in reality such), one from septicæmia, one from phthisis, one from congestion of the lungs, and one from scarlet fever. In the last three the operation is not credited with the result. Of recoveries there have been 1113 out of 1118 limbs. The results as to utility of limbs show that anchylosis has taken place in two of Macewen's operations, in four of Ogston's (one with dislocation of the patella), and in one of Chiene's. In two of Ogston's bow legs resulted after the operation. All the others were good.

As to relapses after the operation, Macewen's operation has been followed by four such, mostly occurring in young children (one stated to have recovered after using supports for a short time is not counted). One gentleman who has performed both Ogston's and Macewen's has had three returns to the deformed condition. In one of Chiene's there was a return, but in this case the patient had led an irregular life. In one of Chiene's, amputation had to be resorted to about a year after he had performed his operation. The amputation was rendered necessary by the onset of gelatinous degeneration of the synovial membrane. The average duration of treatment has been from one to three months. Mr. Chiene, however, states that he only keeps his patients in the wards for twenty-two days after the operation. Regarding the answer to this question, it is evident that considerable difference of opinion exists as to the meaning of it. Some give the number of days necessary for the patient to remain in bed, while others give the time necessary to fit him for resuming his work.

Statistics of my own Operations.—Up to July 31st of this year I have operated on 804 limbs belonging to 490 patients, and on these have performed 820 osteotomies for genu valgum. The ages have been from seven to forty-six years; the great majority being adolescents. The operation was never undertaken unless after the stage of ramollissement had passed. The supra-condyloid method has been performed alone in 810 instances; in five it was assisted by Schede's operation on the tibia, while in the remaining five modifications of the supra-condyloid method were performed (in the earlier days of my experience). When operating for genu valgum by the supra-condyloid method, the anatomical lines formerly laid down by me have been strictly adhered to, and I have never had occasion to apply a ligature. As a rule there have only been a few drops of blood, sufficient to leave a slight stain on the sponge. The operations have been conducted throughout under the spray, and with strict Listerian precautions.

In eight cases suppuration took place; in six the cause was pressure or some extra force applied, under accidental circumstances. In one it was due to diphtheria of wounds. During the last three years no suppuration ensued after any osteotomy for genu valgum.

Mortality after Supra condyloid Method.—Since the last report two patients, who had been operated on for genu valgum, have died. Both were weak adults with marked deformities. The first was aged twenty-four years. He was operated on for aggravated bow-leg and knock-knee. He had a history of hæmoptysis, and the apices of his lungs were dull. From what could be ascertained at the time, as well as from the information supplied by his medical attendant, there were no recent advances of the disease. It was evident that the degree of deformity of his limbs was such that his health was necessarily kept below par by want of exercise. Unless the condition of his limbs was rectified, it was doubtful whether his strength would improve, and it was certain that he could not lead a useful life. So keenly did he feel this that he urged the operation. For the first week after the operation he progressed well. There was no untoward symptom. At the end of that period the temperature began to show a rise in the afternoons. He had a slight cough, accompanied by a considerable degree of aphonia. He had profuse night sweats. The upper portions of his lungs were affected with coarse crepitant rales, except at the very apices, which were dull. On the ninth day after operation there was a thin liquid discharge of pus found in the wound on the bow leg, which continued. His condition gradually became worse; hæmoptysis came on in a severe form, and he died one month and two days after the operation. The post-mortem showed that the wound on the bow-leg was not healed. The genu valgum wound was healed, though the union of the bone was weak. The upper lobes of the lung were filled with tubercle; at the apices it was of old standing, having undergone degeneration, while lower there was a fresh deposition of miliary tubercle, with ulceration at parts. The bases were free.

The other case was also that of a weak adult, who had marked genu valgum, preventing him from working or from walking other than very short distances. On the twelfth day after the operation his temperature rose, and on the thirteenth it had reached 102·6°. His limbs were examined, the wounds found healthy, and there was nothing in their appearance to account for the increased temperature. On the fourteenth day it was 103°, and still the cause was not discovered. On the fifteenth a stain was seen on the sheet, and on examination it was found to have proceeded from a sore over the sacrum, of which he had never complained, and stated that he had not been aware of its presence. This sore at first seemed superficial and was covered with a greyish membrane, which on removal left rather a deep raw inflamed surface. Next day it was seen that the area of the sore had considerably increased, and that another layer of greyish membrane implicating the tissues had formed over its surface. The temperature was now 104° to 105°. On the seventeenth day he complained for the first time of pain in his limbs. The wounds were therefore again inspected, when both were seen to be covered with a greyish false membrane, similar to that which covered the bed-sore. There was at this time very little discharge, and the little that was present was serous. This membrane was deeply seated, involving the superficial layers, and penetrated into the interior of the wounds. It was removed; but at the next dressing the sores had greatly enlarged, and were again covered by thick false membrane, while the discharge of thin matter—pus and bloody serum—was profuse. It was evident that we had to deal with a case of diphtheria of wounds, showing itself, first, in the sore over the sacrum, rapidly affecting the constitution, and through it the wounds on the limbs. Notwithstanding vigorous measures at destruction of the membrane by external means and internal remedies the sores increased with great rapidity. The greyish membrane on removal exposed a bleeding, raw, inflamed surface. The mucous membranes later became involved, and at the same time he had profuse diarrhœa, with shreds of membrane in the stools. The patient died thirty-two days after the operation and twenty after the onset of the illness. The post-mortem, besides showing the diphtheritic membrane on the sores, revealed its presence in the alimentary canal, the fauces, œsophagus, and rectum. The intestines were much congested. The liver was five pounds

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and a half in weight and was two-thirds fatty. The ward drainage was at this time in a bad condition. Several patients who had been operated on for other affections were attacked. Enteric fever became epidemic, nurses and patients being struck down with it. As soon as the drainage was put in order it disappeared. Adding these two deaths to the three formerly reported, there have been in all five persons who died after the operation for genu valgum was performed on them; and in none of these was death due to the operation. The only one which admits of doubt is that one in which diphtheria commenced in the sore over the sacrum, and quickly showed constitutional manifestations.

It may be interesting to note that up to July 31st, 1884, I have osteotomised 1267 limbs belonging to 704 patients, and have performed on these 1800 osteotomies; all for deformities of the lower limbs. The deaths from all causes after these operations are: one from pneumonia (contracted on the eve of operation), one from tubercle of the lungs, one from diphtheria of the respiratory passages, one from diphtheria of bedsore and wounds, and one from enteric fever epidemic at the time in the wards (the two last-mentioned deaths occurred about the same time). The first five were for genu valgum, the last one for genu varum.

Results as to Utility of Limbs.—In all cases there has been improvement in the form, strength, and utility of the limbs of those who have been operated on for genu valgum. Where the knock-knee has been present without complications from other rachitic curves the limbs have been rendered quite straight.

The advantages of the operation and the results may be summarised as follows:—A deformity of a very grave kind has been removed; the height of the patient has been increased, often by several inches; the patients have been able to walk easier, much better, and a great deal further than they could prior to the operation. As a consequence they improved in health and strength, and in many instances they have been enabled to occupy situations from which they had previously been debarred. It would be out of place to give cases in detail, especially as they are numbered by hundreds, but by way of illustration the following may be quoted:—

1. A lad eighteen years of age was affected with genu valgum to such an extent that a horizontal line drawn from the internal malleoli measured eighteen inches, while a vertical line running from the horizontal one to the apex of the knees measured fifteen inches. He could neither walk nor stand for more than five minutes at a time, and was totally unfitted for work. After supra-condyloid osteotomy his limbs were straight; he could walk and leap with ease, the movements of the knee-joints being perfect. He was several inches higher than he was prior to the operation. A year afterwards he several times walked eighteen miles at a stretch without fatigue. He is now engaged as a mechanical engineer, in regular employment, and walks six miles daily in going to and coming from his work. This patient has now been operated on six years. There has never been any weakness of his legs since the operation. He has grown considerably during that time both in height and breadth, and he is a great deal stronger than he was ever likely to be had the operation not been performed.

2. A man twenty-five years of age, affected with double genu valgum (fifteen inches between the malleoli), had to give up his employment some time previous to his admission into my ward on account of his inability to walk to and from his work and difficulty of standing. After supra-condyloid osteotomy his limbs were straight; his knees were freely movable, his stature increased, and he was capable of doing his work with ease. A year afterwards he walked in four consecutive days over 100 miles without fatigue. This man has now been operated on about five years; he is now quite well, and has changed his occupation to that of a traveller for a publishing firm.

3. A third patient, affected with marked genu valgum, could scarcely walk with the help of crutches from his own door to the shop at which he wrought, situated thirty yards distant. There he had a sedentary occupation. After operation, besides having straight limbs which were freely movable, his height was increased, and he was able to walk without any support. He changed his residence, walking then daily four miles to his work. At one time he walked ten miles [illegible] without fatigue. [illegible] also been operated on [illegible] of the supra-condyloid [illegible] genu valgum. In a former paper I have answered the question as to whether the femora grow after supra-condyloid osteotomy. There is abundant proof that the operation does not interfere with the growth of the bone. Many patients, from eight to fifteen years of age, have been operated on, and have now grown considerably, and the femora have grown in proportion with the rest of the body. As an example, one boy aged eight years, affected with genu valgum, measured 4 ft. in height; after supra-condyloid osteotomy he measured 4 ft. 3 in.; four years later he was measured, and found to be 4 ft. 10 in., the femora having proportionately increased.

Relapses to the deformed Condition.—As to relapses to the deformed condition after osteotomy, I have seen in two cases in which osteotomy was performed for anterior curves of the tibia in young children, who were afterwards the subjects of severe illnesses, that the curve recurred; but in genu valgum, after supra-condyloid osteotomy performed by me, I have only once seen a case which showed a return, and that to a very slight extent. It occurred in a boy who had a standing occupation and was poorly fed. Four years afterwards he returned with a slight degree of knock-knee (4 in. between the malleoli, while the knees measured 12 in. from the malleoli).

Average Duration of Treatment.—The average duration of treatment is six weeks in the splints, and two in the wards after that, while learning to walk. The patients are then advised to go to the convalescent home for two weeks. Three months are ample to enable them to be fitted for walking about and to permit them to engage in their occupations again. I have never tried to find the very earliest limit which was necessary to enable the patient to get up and walk about, but rather tried to gain a point which would enable us to say that after that time there was no fear that any mishap would take place.

Combining these statistics of British surgeons with my own, we have 580 limbs operated on by others by the supra-condyloid method, and 804 operated on by myself, which gives 1384 limbs that have been operated on by British surgeons by this method. Of these, ten have died *after*, though not all *from*, the operation. There are only three that are stated to be due to the operation. In one of these cases, however, the operation though credited as Macewen's was not such; so that two only are left: in one the death is clearly due to the operation (septicæmia); while in the other there is a reasonable probability of the operation having been, indirectly at least, the cause of death, the operation having been performed in this instance under bad sanitary conditions.

I have observed in the medical journals within the last few months that there have been some cases in which hæmorrhage has followed the supra-condyloid method; one in which the anastomotica magna, and another in which the popliteal had to be ligatured. One surgeon says that he performed the operation in the usual place for Macewen's operation. He then states that he took his bearings "from the patella." The patella is not given by me as a guide to the place of incision, either in the soft parts or in the bone. It is not a fixed point, and does not bear a constant relation to the plane of the condyles in the deformed condition of the femur. It is probable that if such a guide was taken it might have led some to cut the anastomotica magna or the superior articular. With regard to the division of the popliteal, if the instructions given for the performance of the operation be attended to, it is difficult to understand how it can be divided, except by pure accident. It is, however, possible that it could be divided in one of the following ways. First, by the use of instruments which have a greater breadth than the diameter of the bone. A portion of the instrument might thereby project on the posterior border beyond the bone, and come in contact with the artery. Secondly, by not cutting the bone in a methodical manner, and especially by not attending to the directions given to cut the posterior and inner portion of the bone from behind forwards and outwards. If, instead of this, the osteotome be directed from within outwards and backwards, the popliteal might be divided. Thirdly, by holding the osteotome between the finger and thumb, and more especially when this is done at the head of the instrument alone, while the rest of the handle is left unsupported; the chisel is then apt to slip off the bone, and the impulse which it has already received might cause it to penetrate the artery. This is all the more likely to follow if the surgeon holds the osteotome so as to cut away from, instead of to, himself. Regarding suppuration, it seems to me that the chief point in bringing it about

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is the exercise of force, either during the operation, or afterwards by tight bandaging. There is another way in which it might happen—viz., by the elastic rod which is sometimes used for arresting the flow of blood in the limb during the operation. This rod may be applied too tightly or too roughly, and so predispose to suppuration.

The placing of the limb correctly on the splints is a point to be attended to in connexion with obtaining perfect results. In any case where it is feared that suppuration might ensue, it would be an element of safety to enlarge the wound to a couple of inches and insert a drainage-tube. In fact, Mr. Lister in performing this operation always does so.

The work of continental surgeons has not been referred to, not that they have been idle—quite the contrary; but the data have not yet been furnished which would enable me to speak with sufficient confidence as to their work. Papers have appeared from the following (among others)—Paul Bruns of Tübingen, Boeckel of Strasburg, Checcarelli Alessandro, Panzeri, Margary, Romano, Morelli, Albertini, Ambrosio, Topai of Italy; and in America we have among others Fowler, Pilcher, and Hutchinson of New York.

OBSERVATIONS ON THE

RELATION OF THE PRINCIPAL FISSURES AND CONVOLUTIONS OF THE CEREBRUM TO THE OUTER SURFACE OF THE SCALP.

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A GOOD deal has been written about the relation of the sulci and convolutions of the cerebrum to the outer surface of the bony cranium, especially with regard to the various sutures. Frequently these sutures are not to be felt through the scalp, and practically, therefore, such relations are of little value to anyone examining the head from a medical or surgical point of view. Hence it occurred to me that a gap might be filled up in regional anatomy by describing the relation of the principal sulci to the outer surface of the scalp, and consequently I made a series of investigations on the dead body, to try if possible to make out some guides by which, on examining a person's head, one might readily be able to localise the chief sulci, and thereby the position of the principal convolutions. Of course it is impossible to draw a line on the scalp exactly to follow a sulcus of the brain, for the simple reason that the sulci are never in any two brains precisely alike, or the shape of the head exactly the same in all cases. We must also remember that, as the surface area of the outside of the scalp is greater than the surface area of the corresponding part of the cerebrum, any lines drawn on the scalp to represent the sulci will be longer than the sulci themselves, and the spaces between those lines, indicating the convolutions, will be larger than the convolutions themselves.

What I propose to do is to show that by taking large and easily felt landmarks on the head, and drawing from these certain lines, those lines will indicate accurately enough for all practical purposes the position of the principal sulci, and that by removing in any of these lines a piece of the scalp and skull an inch square, or by applying the one inch trephine to the skull, with the centre pin on the line, we can expose the fissure in any part of its course.

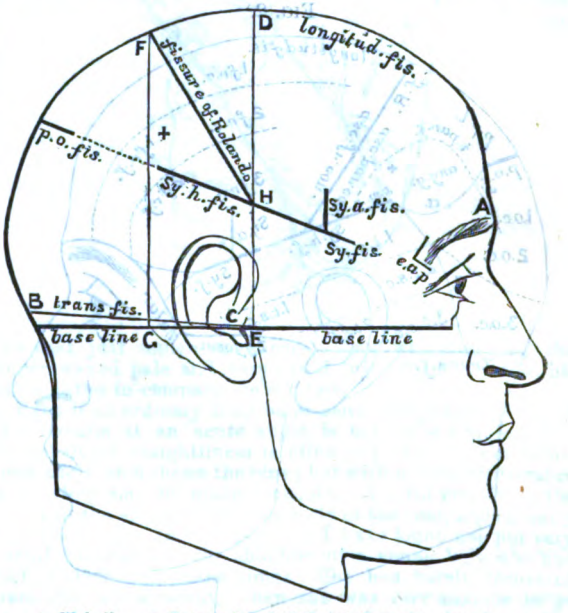
The landmarks which can easily be felt on the outside of the scalp, and with reference to which lines can be drawn to indicate the position of the sulci are the glabella, or depression between the two nasal eminences just above the root of the nose, external occipital protuberance, superior curved line of the occipital bone, parietal eminence, posterior border of the mastoid process, depression just in front of the external auditory meatus, external angular process of the frontal bone, frontal part of temporal ridge, and the supraorbital notch. If the last is not to be felt, its position will be at the junction of the inner with the middle thirds of the supraorbital margin. We shall also suppose that the base line (Fig. 1), from which all perpendicular lines are drawn, runs through the lowest part of the infraorbital margin and the middle of the external auditory meatus.

Longitudinal fissure of cerebrum.—This of course is readily indicated by a line running along the middle line of the top of the head from the glabella to the external occipital protruberance.

Transverse fissure.—This is indicated by drawing a line along the superior curved line of the occipital bone from the external occipital protuberance to the external auditory meatus—that is, along the line of junction of the head with the neck posteriorly.

Fissure of Sylvius.—To find this draw a line from a point one inch and a quarter behind the external angular process of the frontal bone to a point three-quarters of an inch below the most prominent part of the parietal eminence. Measuring from before backwards, the first three-quarters of an inch of the line will represent the main fissure, and the rest of the line will indicate the horizontal limb. The ascending limb will start from the posterior end of the line indicating the main fissure—that is, two inches behind and slightly above the external angular process,—and run vertically upwards for about an inch. (See Fig. 1.)

FIG. 1.



A, Glabella. B, External occipital protuberance. *e. a. p.*, External angular process of frontal. B C, Transverse fissure. A B, Longitudinal fissure. *Sy. fis.*, Sylvian fissure. *Sy. h. fis.*, Horizontal limb of fissure of Sylvius. *Sy. a. fis.*, Ascending limb of fissure of Sylvius. D E, Perpendicular line from depression in front of external auditory meatus to middle line of top of head. F G, Perpendicular line from posterior end of base of mastoid process to middle line of top of head. F H, Fissure of Rolando. *p. o. fis.*, Parieto-occipital fissure. + Most prominent part of parietal eminence.

Fissure of Rolando.—To find this and, at the same time, the region of the ascending frontal and parietal convolutions, first indicate on the surface of the scalp the longitudinal fissure and the horizontal limb of the fissure of Sylvius, next, from the base line draw two perpendicular lines to the top of the cranium, one (D E, Fig. 1) from the depression in front of the external and auditory meatus, and another (F G, Fig. 1) from the posterior border of the mastoid process at its root. We shall thus have described on the surface of the head a four-sided figure, bounded above and below by the lines for the longitudinal fissure and horizontal limb of the fissure of Sylvius respectively, and in front and behind by the two perpendicular lines. If we now draw a diagonal line (F H, Fig. 1) from the posterior superior angle to the anterior inferior angle of the space, this diagonal line will lie over the fissure of Rolando. In the majority of cases the fissure of Rolando does not actually run into the fissure of Sylvius, a convolution bridging across at that point; hence the lowest half inch or so of the line would cross this convolution. In those cases where the two fissures join the fissure of Rolando would be indicated by the whole length of the line.

External parieto-occipital fissure.—This fissure is more variable in its position than any of the other principal fissures of the cerebrum, and consequently any indication of it on the

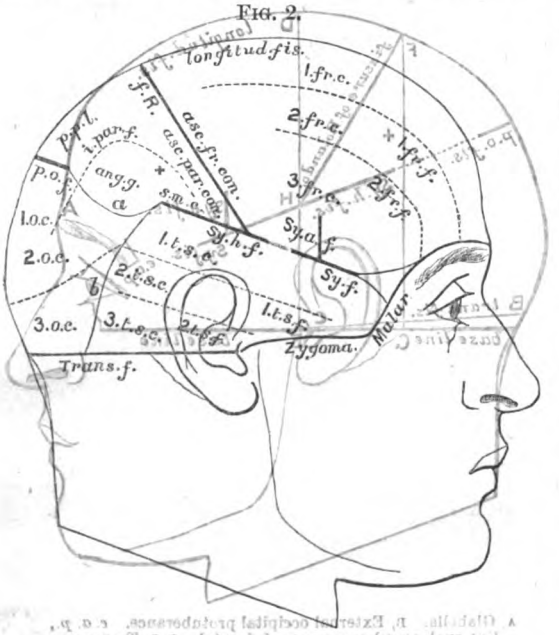
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surface of the scalp must be approximately accurate. If we continue the line for the horizontal limb of the fissure of Sylvius onwards to the line indicating the longitudinal fissure, we shall find that on trephining over the inner inch of this line we shall expose the external parieto-occipital fissure, or some part of it. In most cases we have seen the whole of the fissure in the opening so made, in others it showed itself in the posterior half of the opening, and in still fewer cases it was seen in the anterior half.

Having now indicated the position of the principal fissures, it will be comparatively easy to map out the areas of the frontal, parietal, temporo-sphenoidal, and occipital lobes, with their chief sulci and convolutions as far as they are in relation with the outer surface of the scalp.

The *frontal lobe* will be bounded above by the line for the longitudinal fissure, below by the line for the trunk and horizontal limb of the Sylvian fissure, behind by the line for the fissure of Rolando, and in front by a line just above and parallel with the supra-orbital margin. A line drawn from the supra-orbital notch backwards to within three-quarters of an inch

FIG. 2.



+ Most prominent part of parietal eminence. *a*, Convex line bounding parietal lobe below. *b*, Convex line bounding temporo-sphenoidal lobe behind. *1 fr. c.*, First frontal convolution. *1 fr. f.*, First frontal fissure. *f. R.*, Fissure of Rolando. *Sy. f.*, Sylvian fissure. *Sy. h. f.*, Horizontal limb of Sylvian fissure. *Sy. a. f.*, Ascending limb of Sylvian fissure. *p. o. f.*, Parieto-occipital fissure. *i. par. f.*, Intra-parietal fissure. *ang. g.* Angular gyrus. *s. m. c.*, Supra-marginal convolution. *1 t. s. c.*, First temporo-sphenoidal convolution. *1 t. s f.*, First temporo-sphenoidal fissure. *1 o. c.*, First occipital convolution. *p. p. l.*, Postero-parietal lobule.

of the line for the fissure of Rolando, and parallel with the line for the longitudinal fissure, will indicate the first frontal fissure. The frontal part of the temporal ridge will indicate the second frontal fissure. The first, second, or third frontal convolutions will thus be mapped out. The ascending frontal convolution will occupy a space about three-quarters of an inch broad parallel with, and in front of, the line for the fissure of Rolando. (See Fig. 2.)

The *parietal lobe* will be marked out by the line for the longitudinal fissure superiorly, and in front and behind by the lines for the fissure of Rolando and the parieto-occipital fissure respectively. Below, the line for the horizontal limb of the fissure of Sylvius will separate it from the temporo-sphenoidal lobe. The interval between the posterior end of the Sylvian line and the outer end of the parieto-occipital line is occupied by the junction of the postero-parietal lobule (*p. p. l.*, Fig. 2) with the first annectant convolution and the angular gyrus (*ang. g.*, Fig. 2) with the second annectant convolution, the arrangement of these convolutions with regard to one another being very variable, the angular gyrus usually projecting somewhat more posteriorly than the postero-parietal lobule. We can therefore only indicate the separation of this part of the parietal lobe from the neighbouring temporo-sphenoidal and occipital lobes by drawing a line (*a*, Fig. 2) slightly convex downwards from the posterior end of the Sylvian line to the outer end of the parieto-occipital line. An irregularly triangular space will thus be marked out to indicate the parietal lobe. If in this space we draw a line from a point half an inch outside the outer extremity of the parieto-occipital line to a point about an inch above and behind the anterior and inferior angle of the space, this line will lie over the *intra-parietal fissure* (*i. par. f.*, Fig. 2). The line must be curved, with its convexity directed forwards and inwards, and parallel in its anterior third or so with the line for the fissure of Rolando, and about three-fourths of an inch behind it. In the space above the intra-parietal sulcus we shall have, in front, parallel with the whole length of the fissure of Rolando, the ascending parietal convolution, and behind, the postero-parietal lobule. The space below the sulcus will indicate, in its anterior part, the supra-marginal convolution (*s. m. c.*, Fig. 2), filling up the most prominent part of the parietal eminence, and, in its posterior part, the angular gyrus (*ang. g.*, Fig. 2).

Temporo-sphenoidal lobe.—This lobe, like the last, is somewhat difficult to indicate posteriorly, because it becomes continuous there with the parietal and occipital lobes without any distinct line of demarcation. Its outline will lie in the lower part of the temporal region, extending a little beyond the temporal ridge behind. It will be bounded above by the line of the main trunk and horizontal limb of the fissure of Sylvius, below by the upper border of the zygoma and a line carried back from the posterior end of that to a point midway between the external occipital protuberance and the posterior border of the mastoid process at its root. The anterior border or apex of the lobe will extend as far forwards as the posterior superior border of the malar bone. Behind, the lobe will be bounded by a slightly convex line (*b*, Fig. 2), with the convexity directed backwards, extending from the posterior end of the Sylvian line to the posterior end of the line indicating the lower boundary of the lobe. A line running about one inch below and parallel with the line for the main trunk and horizontal ramus of the fissure of Sylvius will indicate the first temporo-sphenoidal fissure (*1 t. s. f.*, Fig. 2), and another line about three-quarters of an inch below and parallel with the last will indicate the second temporo-sphenoidal fissure (*2 t. s. f.*, Fig. 2). Thus the first, second, and third temporo-sphenoidal convolutions will be mapped out (*1 t. s. c.*, *2 t. s. c.*, *3 t. s. c.*, Fig. 2).

The *occipital lobe* will occupy the remaining surface of the scalp. It will be bounded above by the parietal lobe, below by the superior curved line in its inner half—that is, the part of the line unoccupied by the lower limit of the temporo-sphenoidal lobe. Internally the line of the longitudinal fissure, and externally the convex line for the posterior border of the temporo-sphenoidal lobe, will bound it. The area of the lobe being marked out, the first, second, and third occipital convolutions can be readily filled in (*1 o. c.*, *2 o. c.*, *3 o. c.*, Fig. 2).

The above description has been taken from a series of dissections made by myself and kindly allowed to be carried on by the demonstrators of morbid anatomy in the post-mortem room of St. Thomas's Hospital. It has been frequently tested on the dead body and found to be accurate, and is merely intended to afford for practical purposes a general idea of the surface of the cerebrum in relation to the scalp. It does not take into consideration the shape of the head in different races, or in those heads which present an abnormal outline from pathological conditions.

Lambeth-palace-road, S.E.

ON A CASE OF POISONING BY SARDINES.

BY AUGUSTUS W. ADDINSELL, M.B.

THERE are few things more embarrassing to the practitioner than to be called upon suddenly to treat a case of poisoning, especially when it is not quite clear what the poison is. The rarity and gravity of the following case make it, I think, worthy of record.

On Tuesday, June 17th, at 7 P.M., I was hastily sent for to visit a lady who was vomiting very severely. I went immediately, and the husband told me the following details:—At 3 P.M. Mrs. A—— had taken for luncheon some brown-bread-and-butter and four sardines, which were the remnant

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of a box that had been opened some days. She had noticed a small speck of white on one or two of them, but had thought nothing of it. Almost immediately she commenced to yawn, but, being tired with nursing some children lately with measles, this was overlooked; the yawning, however, increased towards 4.30 P.M., and from that time became incessant, until it culminated in an act of vomiting. She was then seized with diarrhœa and violent abdominal pains. Between 5.30 and 6.30 P.M. she vomited five times, and had seven evacuations of the bowels. I found the patient much prostrated; no pulse could be detected in any of the superficial arteries but the temporal, and there very feebly indeed; a cold clammy sweat bedewed the face, which was perfectly colourless; the eyes were much sunken and the pupils contracted, the mouth very parched, the lips perfectly livid, and great thirst was complained of, with severe pains in the umbilical region and cramps in both lower extremities. The mind was a little wandering, though she fully recognised me. The temperature was 97·2°. Though she was scarcely able to speak for yawning, she pleaded piteously for water. I gave her ice to suck and placed hot flannels with turpentine over the abdomen, which relieved the pain for the instant only. This not producing any permanent relief, and the evacuations continuing every quarter of an hour, I injected three minims of morphia hypodermically, and gave one drachm of brandy with ice. At this time (7.45) she was fainting, and the collapse seemed more complete. I administered another drachm of brandy, which was vomited in ten minutes. I had previously ordered the vomited and evacuated matter to be kept, and I found the latter consisted entirely of blood and mucus. The former merely contained water and the brandy. By nine o'clock the cramps had ceased, and there had been no vomiting and but one evacuation during the last hour. The temperature had remained all along subnormal and the yawning had persisted. I then gave half a pint of rice-water with an egg beaten up, with some ice to allay the thirst, which was causing great agony. By 11.30 P.M. the pulse had returned so as to be felt at the wrist; the temperature had gone up to 99·2°; in the next hour she vomited once, and had two motions of the same sanguineous description. By 1.30 A.M. the temperature was down again to 97·4°, and the pulse distinct though very feeble. During the night the patient slept fitfully, but vomited twice and had three motions by 9 o'clock in the morning. Bismuth and carbonate of potash were then prescribed, with plenty of rice-water and egg, which was taken freely during the day. At noon on the Wednesday, seventeen hours after I first saw the patient, the temperature was normal; the pulse fairly full. There was no pain, and the patient felt comparatively well, though of course very weak. From this time she rapidly recovered, and is now perfectly well again.

It seems to me that the great interest in this case lies in the violence of the symptoms (for certainly not less than six pints of liquid and bloody evacuation were passed in a few hours) and the rapid recovery; one was naturally on the look out for enteritis and peritonitis to supervene, but no approach of these disorders could be detected. Primarily, I consider the vomiting, by removing a portion at least of the irritant matter was beneficial to the patient, and that the subsequent morphia injection had the effects for which I gave it—viz.: (1) To allay the pain; (2) to stop the cramps; and (3) to arrest peristalsis. Had this not been done and the diarrhœa allowed to continue, I think the patient must have succumbed. Now the question is, What was the exciting cause? The oil being rancid could scarcely account for it, and besides, but a very small quantity of oil was taken. It has been proved in a rather recent case that tin (Professor Attfield in a paper read before the Pharmaceutical Society, 1883) in sufficient quantity to poison would be so extremely objectionable that the patient would have refused to take it; one is therefore forced, *per viam exclusionis*, to the conclusion that it must have been the sardines which had caused the mischief, and as the box had been opened some time, and others had been taken from it with no evil results, it becomes an interesting and important question for the profession, as well as for the public, how long it is safe for a box of sardines to be open and in use, and what the precise nature of the poison is to which they become subject. That it is an irritant, and a very strong one, is clear from the foregoing account; but as far as I can gather this is the first case reported of the evil, and as it arose from the use of such a very popular article of diet, I thought it worthy of being brought forward.

Talgarth-road, West Kensington, W.

A PIN SLING.

BY SAMPSON GAMGEE, F.R.S.E.,
CONSULTING SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

A GENTLEMAN consulted me the other day, for a painful condition of the tip of his left little finger. To secure the benefits of physiological position and immobility, I bent the elbow at an acute angle and raised the hand; then, pinching up the sleeve at the wrist, fixed it to the coat by a strong safety-pin; with another I attached a fold of the sleeve to



the coat just under the elbow. Rest was absolute; the finger waxed pale and easy; and my patient went to his office duties in comparative comfort.

Even if an ordinary sling be at hand, the process of fixing the forearm at an acute angle is not quite simple; and the resulting unsightliness is often unpleasant. For clearness, the sketch shows the pins; but with a little contrivance a pin sling may be made invisible. A third pin, fixing the inside of the arm sleeve to the body of the coat, adds greatly to immobility. In this position I have found one pin very useful, in steadying the shoulder of a young lady who had had it dislocated three times. She had barely recovered *from* the last accident, when she was very anxious to go to a ball. By fixing, with a safety-pin, the inside of the sleeve to the bodice, a trusty, yet invisible, checkmate was provided, allowing freedom of hand, but barring abduction. These are trifles, only noted apologetically, because *pro re nata* they may be useful.[1]

Birmingham.

CEREBRO SPINAL WHITE LINE.

BY JAMES OLIVER, M.B. EDIN.

THE term white line I employ to designate a condition of skin produced in the same way as the "tache cérébrale" of Trousseau, but its direct opposite, and dependent on a spasmodic instead of a paralytic state of the capillaries. The capillary wall, although devoid of anything like a distinct muscular coat, such as can be demonstrated in the larger vessels, is nevertheless capable of being acted on, dilating or contracting according to circumstances. To a certain extent the minute blood channels may resemble an ordinary elastic tube, varying in width according to the amount of pressure exerted on their walls by the contained fluid. That, however, they have more than a passive existence in the animal economy there can be little doubt. It must still remain a debated question whether they are or are not governed by a special nerve influence. The minute structure of the capillary wall is a simple one, being a single layer of cells, epithelioid in character, and continuous with the similar layer of cells

[1] While correcting this proof, I find that Research (The Surgeon's Hand-Book by Clutton, p. 58) has made slings by pinning up the skirt of the coat, or the coat and shirt-sleeve; but the pin sling as sketched above seems likely to commend itself for simplicity and effectiveness

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lining the larger vessels. The epithelioid cells of capillaries in process of development have been seen to vary in shape. We are, therefore, justified in concluding that they are most probably protoplasmic in nature. The protoplasm of the bloodvessel is the same as the protoplasm of muscle, only less active, and this lessened activity is altogether due to the character of its limiting membrane. The application of dry faradaism to the skin exerts for the time being an apparent paralysing influence on the healthy capillary wall. Should, however, the epithelioid cells be already altered by some morbific change, the paralytic condition is more apparent and more lasting. In many cases the use of the faradaic brush prevents the production of white line in the most marked cases for at least an hour after its application. That the protoplasmic masses are not readily acted on is evidenced by the fact that twenty seconds as a rule elapse before they respond to the pressure influence. The condition may be one belonging to the category of reflexes. I am, however, inclined to believe it is due to an inherent contractility of the cells. The cells acted on alone contract. In some cases heat appeared to aid in the production of the phenomenon, and rendered the white line more likely to be obtained on the body than any of the extremities. In cases of progressive muscular atrophy, associated with well-marked fibrillary twitchings and no pain, the white line was readily produced all over the body, even on the scalp. It is not, however, obtainable in all cases of progressive muscular atrophy. It is quite possible that whilst many cases of this disease may, and apparently do, depend on central change existing in the nervous system, others are primarily due to a change in the muscle itself.

Montague-street, W.C.

A CASE OF
AUTOGENETIC PUERPERAL SEPTICÆMIA, WITH REMARKABLE EXACERBATIONS AND REMISSIONS; RECOVERY.

By H. S. REYNOLDS, F.R.C.S.E.

MRS. P——, primipara, was confined, after a natural labour, on the 9th of August last. The loss after the labour was very scanty. Next morning the temperature was 102°, pulse 125; great pain over the area of the left ovary, with unmistakable peritonitis; lochia still very scanty. Evening temperature 104°; pulse 125. I ordered quinine, half a grain of opium every two hours, and hot fomentations. She had temporary paralysis of the bladder, necessitating catheterisation twice daily. She remained in this condition, with exacerbations and remissions, for four or five days. On the third day she had a rigor; pain was still felt over the left ovary, and then appeared over the right, necessitating the continuance of the opium. On the fifth day the temperature was 105°; on the 6th, 105·4°. I gave her large doses of quinine, which had a very beneficial effect. On the ninth day, for the first time, the temperature and pulse went down to normal. I have omitted to say that, contrary to my anticipation, the breasts failed in the ordinary course, and I had them drawn twice daily. The pain over the ovaries gradually subsided. There had also been considerable tympanites, which subsided also. The bowels were in a relaxed condition from about the fifth day. From the ninth to the eleventh day the temperature and pulse went up till they were 105° and 125 respectively, and she had a severe rigor, lasting half an hour. Next day the temperature was 106°, both temperature and pulse dropping the following day to normal, although the skin acted profusely and the tongue was moist and clean.

Remarks.—I consider the septicæmia autogenetic in origin, as I have not had any cases of erysipelas or zymotic diseases in my practice, neither are there any cases in the village in which the patient lives calculated to produce such symptoms. I am at a loss to account for so severe a rigor appearing so late as the ninth day, as I surmised it certainly was too late for further septic absorption, and since which rigor the patient has gone on well towards recovery, and at the present time is in a satisfactory condition. One of the remarkable features of the case was the almost entire absence of lochia.

Castle Donington.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

TWO CASES OF EXTRACTION OF CATARACT IN WHICH THE EYE FIRST OPERATED ON SUCCESSFULLY WAS LOST FROM SYMPATHETIC OPHTHALMITIS, FOLLOWING UNSUCCESSFUL EXTRACTION IN THE SECOND EYE.

(Under the care of Mr. C. HIGGENS).

CASE 1.—Sophia H——, aged sixty-seven, was admitted on May 2nd, 1881. Cataract had been extracted from the left eye by small flap section upwards with iridectomy on February 7th, 1876; iridectomy downwards was performed at the same time in the right eye.

On March 20th, 1876, the vision of the left eye was $\frac{2}{60}$ with + 3-inch lens, and Snellen No. 3½ with + 2½ inch.

On the date of admission (May 2nd, 1881) the cataract was extracted from the right eye by oblique corneal section downwards. At the end of the third week the pupil was entirely blocked by inflammatory material; there was no anterior chamber, the eye had perception of shadows.

The patient left the hospital shortly afterwards, but returned on August 8th with severe iritis in both eyes. The right eye was excised. The left eye improved somewhat after excision of the right, but the improvement was not maintained. On September 20th the pupil of the left eye was entirely adherent. The eyeball eventually shrunk.

CASE 2.—Thos. McT——, aged seventy-five, was admitted on July 23rd, 1883. Iridectomy had been performed in both eyes, upwards in the left and downwards in the right on June 12th, 1882, neither cataract being at that time mature. Extraction by small flap upwards had been done in the left eye on July 10th of the same year. Subsequently (Nov. 6th) an operation for spasmodic entropion was performed on both sides. On Nov. 13th, the vision of the left eye was $\frac{5}{60}$ with + 13 dioptres (Jaeger). No. 12 with + 16 dioptres.

At the date of admission (July 22rd, 1883) extraction by small flap downwards was performed, the vitreous humour escaped before the cataract, which was removed with a sharp hook. Much soft matter was left behind. Severe iritis supervened.

Nov. 30th.—The globe was shrinking, and there was no perception of light.

In January, 1884, the patient presented himself with sympathetic ophthalmia well established in the left eye. When last seen in May of this year the eye was soft and shrinking.

RADCLIFFE INFIRMARY, OXFORD.

CASE OF SUNSTROKE; NECROPSY; REMARKS.

(Under the care of Dr. W. TYRRELL BROOKS.)

FOR many of the following notes we are indebted to Dr. Street, late senior resident medical officer at the infirmary.

John M——, aged twenty-nine, was admitted into the infirmary on August 10th, 1884. From his friends it was gathered that he had been doing harvest work at Windsor, and on the evening of the 8th had walked thence to Wolvercote (a village near Oxford), which he reached on the afternoon of the 9th. After resting a short while and taking some bread-and-butter and tea, he set to work reaping, and worked about two hours when the rain compelled him to stop. In the evening he had a meal of bacon, bread, and beer, and after walking about for a short time he went to bed in a loft. Early the next morning (about 4 A.M.) a man sleeping near him noticed him rolling about, and at 6 A.M. he was found in an unconscious state with froth issuing from his mouth. He was then taken to the infirmary.

On admission he was comatose, with his face congested; his eyes closed; his conjunctivæ insensitive; his pupils equal, dilated, and not reacting to light. Reflex action was totally abolished, but the sphincters of the rectum and bladder were unaffected. Respiration was laboured and

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stertorous, the diaphragm and the interepetals not working rhythmically. On listening over the lungs a few râles were heard, but the respiratory sounds were masked by the loudness of the stertor. The pulse was regular and full, and no abnormal sounds were detected over the heart. The number of pulse beats per minute was 72; the respirations were 136 per minute; temperature 102·4°. The bladder was distended and a large quantity of urine was drawn off by the catheter, which did not contain either albumen or sugar. The contents of the stomach were drawn off, and that organ washed out with tepid water. The stomach contained a small quantity of dark-brown fluid with shreds of leaves in it; there were not any solid masses of undigested food. The surface of the body was clammy and warm; the superficial vessels, especially the veins, being much congested.

The patient died in three hours after admission from failure of respiration, the pulse persisting a short time after the respiratory movements had ceased.

At the necropsy the surface of the body was found to be livid and rigor mortis, which came on before four hours after death, had passed off. On removing the calvaria the sinuses of the dura mater were seen to be full of fluid blood. The pia mater did not show anything abnormal, except at the base of the brain, where it was opaque in places, especially within the circle of Willis. The cortex of the brain was congested; the substance was firm but presented a number of bleeding points where cut. The medulla was sliced, but no abnormal appearance discovered. The lateral ventricles contained about two ounces of cerebro-spinal fluid, but no clot. The lungs were emphysematous, the large veins filled with black fluid blood, the heart being entirely empty. The remaining organs of the body were healthy.

Remarks by Dr. BROOKS.—This disease falls, I think, under the second category of Sir Joseph Fayrer's classification of sunstrokes—viz., those in which there is a profound disturbance of the nervous centres, due to the combined influences of heat and exhaustion. It was elicited at the coroner's inquest that the patient had had a sunstroke many years before, which had left as its sequela a certain amount of cerebral irritability; thus, although he had been in service as a butler, he was unable to take alcohol, even in small quantities, without losing more or less self-control. He was, however, not in fear of the sun, as he had been working in the harvest fields during the very hot weather. The amount of fatigue he underwent may be estimated by the fact that, after reaping at Windsor he walked a distance of over thirty miles, and after only a short rest recommenced work; the weather during the time was exceedingly hot until the evening, when rain came on, and there was a considerable amount of moisture in the air owing to the rapid evaporation. The full effects of the sun do not seem to have been manifested as long as the air was dry and evaporation from the surface of the body considerable; when, however, the air became moist and the evaporation from the body somewhat checked, the powerful action of the heat in the man was shown. His case was, as far as I know, the only one near Oxford (certainly the only one brought to the infirmary) during the past summer, and he would be a subject in whom there existed a predisposing cause on account his former attack. The thickening and opacity of the pia mater at the base of the brain were of old standing, the result probably of the former attack. The failure of respiration, I think, was due to some changes taking place in the respiratory centre. The vagus was not affected so far as its cardiac fibres were concerned, the heart beat being normal both in frequency and rhythm. The want of coördination in the muscular mechanism of the respiratory act would point to the involvement of the respiratory centre rather than to any affection of the vagus. There was not any engorgement of the lungs, and both sides of the heart were empty and contracted. This emptiness and contracted state of the heart might be due to tonus of the cardiac muscle brought about by the heat and analogous to the heat tetanus of ordinary skeletal muscle.[1] It seems probable that the comatose condition was preceded by convulsions, though little can be said on this point, as the fellow-sleeper of the man was extremely unintelligent, and could not give any trustworthy account of the period before the man became unconscious. The lividity and congested appearance of the surface of the body, together with the fulness of the venous system, point to a relaxation of the arteries due to some vaso-motor paralysis. The rapidity of the onset and disappearance of the rigor mortis is what might have been expected from the exhausted state of the patient. I do not know if any explanation of the post-mortem fluidity of the blood in such cases has been advanced. It appears a curious circumstance that of the two important coagulable substances in the human body—viz., blood plasma and muscle plasma—that in the case of the one the power of coagulation should be diminished, whilst in that of the other it should be increased.

[1] Vide Sir Joseph Fayrer on Sunstroke.

THREE COUNTIES ASYLUM, ARLSEY.

PASSAGE OF A SPOON AND OTHER FOREIGN BODIES THROUGH THE ALIMENTARY CANAL.

THE following case, for the notes of which we are indebted to Mr. S. E. De Lisle, senior assistant medical officer, is worthy of record, as showing the capabilities of the alimentary canal for the passage of foreign bodies of even a large size.

S. P——, a delicate-looking woman, aged thirty-two years, was admitted a patient in November, 1882, into the asylum, in a state of acute melancholia. She was actively suicidal, having attempted to kill herself by thrusting things down her throat and by starving herself.

About six weeks after her admission she succeeded in evading the watchfulness of the nurse placed in special charge of her, and snatching a teaspoon from the table, instantly swallowed it. The spoon was 6 in. long, 1¼ in. wide in the bowl, and weighed 7 drs. 20 grs. She subsequently succeeded, although specially watched, in tearing pieces varying from 4 in. to 6 in. square from her blanket and swallowing them. This was discovered by the holes being noticed in the blanket and the pieces subsequently found in her stools.

In April, 1883, four months after she had swallowed the spoon, whilst walking in charge of two nurses she suddenly broke from them, picked up a stone from the ground and swallowed it. About four days later she passed it. The stone weighed 4½ drs. and was about 1½ in. long and 1 in. broad.

In March of this year, fifteen months after she had swallowed it, she passed the spoon per rectum. It was found to have lost size and weight, its dimensions now being, length 5½ in., width of bowl 1½ in.; weight 5 drs. 11 grs. It will thus be seen that the spoon lost ½ in. in length and 2 drs. 9 grs. in weight during its passage through the body.

On August 7th she swallowed a large steel thimble, which she snatched from a nurse sitting beside her. This she passed on the 11th.

Note.—It will be noticed that while the spoon was in her stomach and intestine she passed through her several foreign bodies of various shapes and sizes; also that the pieces of blanket, the stone, and the thimble all took about the same time to pass through the alimentary canal—namely, four days. The spoon was made of the composition known as Britannia metal. During the time it was making its way through the intestine her condition was variable. She suffered from jaundice for a considerable period, with pain and tenderness over the right hypochondriac region. It seems as if the spoon lodged in this situation for a long time. Her condition then was critical. She persistently refused food, and was fed with the œsophageal tube. She then improved and gained weight, and seemed free from pain or inconvenience till the spoon appeared to have reached the right inguinal region, when she became very ill. She again improved after some time, and seemed to suffer no further distress. The treatment adopted was rest, with opium and belladonna and soft pulpy food. Constipation was relieved by enemata.

A NARROW ESCAPE.—At Bridgewater on the 5th inst. a labourer fell into a trance, and his wife, thinking he had died suddenly, made preparations for the funeral. The vicar, however, on being informed of the facts, inspected the supposed corpse, and refused to allow it to be buried, since it was not cold enough to satisfy him that actual death had taken place. The body was placed in a coffin and conveyed to the church, where it was frequently visited by the vicar and others. On the 8th inst. a slight movement occurred, the man was removed to bed, and has since slowly recovered.

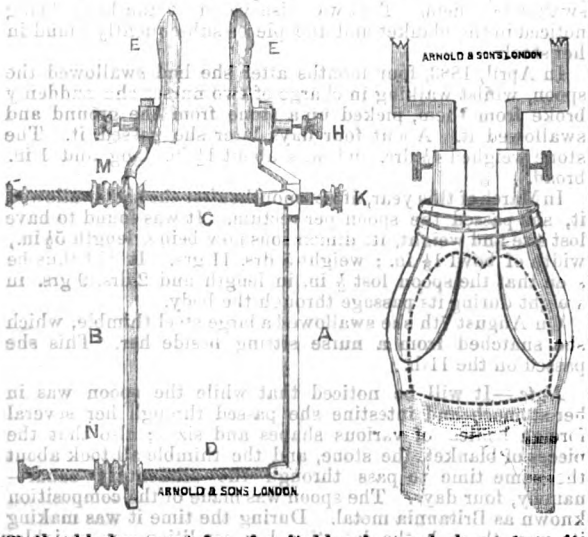
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New Inventions.

RICHMOND'S PREPUCE DILATOR,

FOR THE TREATMENT OF PHIMOSIS WITHOUT OPERATION.

THE only method of treating phimosis, in common practice, is by operation. There are, however, a great many patients suffering from this malady who absolutely refuse to undergo any operation for its relief. Numbers of cases are constantly presenting themselves of men considerably advanced in years who have never been able to get their foreskins back, and have consequently suffered continually from discharges attributable solely to the irritation attendant on this condition. Yet many such patients will rather pass their lives with the inconvenience and risk which this state of things involves than submit to the knife. There can, however, be only one other possible means of treating phimosis, and that is by stretching the prepuce. But this method appears to be very seldom put into practice, for when it is tried it generally results in failure. I can see no reason, however, why the skin and mucous membrane surrounding the glans penis should not be as freely dilatable as in other parts of the body. The reason of the failure, I take it, is simply that no proper instrument has been invented for the purpose. Extemporised instruments, such as dressing forceps, aneurysm needles, or blunted hooks, are painful and inadequate dilators. An instrument proper for the purpose should (1) possess blades which could be introduced separately;

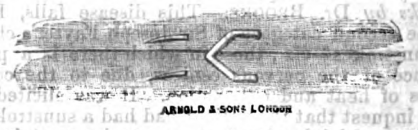


(2) the blades must be of suitable size and shape to suit the case; and (3) it should be possible to open them parallel to one another or at any angle. The instrument which I have devised for this purpose consists of two rods, A B, connected together by means of two long screws, C D. At one extremity they are bent inwards and fixed to the blades, E E. These blades can be removed and may be of any size and shape. The rod, B, is of a tuning-fork shape with the screw-nut, M, sliding in the groove between the two branches of the fork. Through the nut, M, is passed the long screw, C, the end of which is received into a cup working on a hinge joint attached to the cylinder, K, which slides along the bar, A. The screw end may be detached from the socket by pressing a little spring. The blades are passed separately down between the foreskin and glans. Very small blades are used at first, and they are of course previously oiled to facilitate their passage. They are then attached to the rods, which are united by fixing the end of the screw, C, into the cup-joint, K. The other screw rod, which is fixed only to the bar A by a joint, can be pulled over into the groove of B. Gradual extension can then be applied by turning the nuts M and N. Since there is a joint at K the blades may be opened parallel to one another, or at any angle, and in fact the relative position of the blades may be altered in any direction. The idea is not to stretch the foreskin forcibly, and at one sitting, but to dilate it gradually in the same manner as a stricture of the urethra is dilated by repeatedly passing a catheter. If the instrument be used once or twice a week for about ten minutes at a time, the foreskin will in most cases go back in a month or six weeks. The larger blades are used to thoroughly stretch the tissues and complete the treatment. The foreskin may thus be dilated to any reasonable extent, and will after a time easily roll back over the corona. The instruments are made by Messrs. Arnold and Sons.

St. Bartholomew's Hospital. W. STEPHENSON RICHMOND.

A NEW FORM OF SUTURE.

I BEG to submit to the notice of the profession a form of suture which in my opinion would be useful, and might in certain cases and in certain situations supersede with advantage the ordinary means of approximating the edges of wounds. I am not aware that such a contrivance has been used before, although the age of the thread suture and the absence of recent attempts to modify its principles of fixation would seem to indicate that it has reached the stage when modification is unnecessary and impossible. Nevertheless, the suture is objectionable in ways which will immediately suggest themselves to anyone who reflects for an instant on its application. 1. It fails to approximate the walls of a wound in a desirable manner, only too often bringing into contact the limited superficial portions of the tissues corresponding to where the threads are inserted, and leaving the deep parts unapproximated. 2. There is a circular constriction, which frequently leads to ulceration and



strangulation of the tissues enclosed within it, and thus to uselessness of the suture; while this defect is not at all times caused by a too tight application, but is indirectly owing to the smallness of the body which bears the strain of the tissues. 3. The suture acts as a foreign body in the wound, and causes those conditions which are known to prevent early union. These not being imaginary objections, but based on experience, I wish to suggest the following form of suture as fulfilling indications not met by the ordinary interrupted suture, and being at the same time easy of application. These sutures may be very readily introduced by a torsion forceps, which is made to grasp the V-shaped bend, while the fingers of the left hand approximate the edges of the wound; after which, if the wound is not thoroughly closed, the wire may be clamped at the bend and the points brought closer together, with or without being held by a thread, or a piece of cork fastened on them. A piece of folded lint may then be applied under the bend to afford support to the wound. The sutures may be introduced either in the long axis of the wound, which is preferable; or across it, when a foreign body would of course be present. These sutures may be had of various thicknesses, sizes, and curves, with lancet points. They are made of silver, with hardened points, by Messrs. Arnold, of Smithfield.

JAMES MAC MUNN,

Finsbury Park. Late Res. Med. Officer, Gt. Northern Hosp.

A NEW TRACHEOTOMY TUBE.

THOUGH gum elastic has, I believe, been used for tracheotomy tubes, hitherto all attempts have been failures. For the tube I now bring before the profession I cannot of course promise a success, but on theoretical grounds, as well as having received approval when a friendly criticism has been asked from distinguished members of the profession, I am induced to publish the results of my endeavours. I believe that of all tubes now in use, Mr. Durham's lobster tail, and the indiarubber tube of Mr. Morrant Baker have the most general popularity, the aluminium, the other silver, celluloid, vulcanite, &c, being found inferior in one or other respect. For the lobster tail, durability, the rectangular curve, its method of introduction, and its movable shield give it special advantages, but it is very costly, complicated, heavy, and prone to produce ulceration and irritation. The indiarubber tube is light,

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soft, and consequently unlikely to irritate or ulcerate, and cheap; but its thickness, especially if on a webbing, its tendency to rot, collapse, and fall to pieces if not on a webbing, render it very unsafe, while it cannot be used from the beginning. In the gum-elastic tube I have sought to achieve all the virtues, while reducing to a minimum the disadvantages, of the other tubes. Messrs. Baker, of 243, High Holborn, have successfully made some under my direction. They are constructed of the thinnest material that can be made on a webbing (the shield and tube can be made in one piece), are very light, simple, and compressible when warm, but to a degree far short of collapsing, thus enabling them readily to accommodate themselves to the shape of the trachea and its movements, while their webbing framework will keep them from rotting and falling to pieces. They are very cheap, and as no mould is required as for indiarubber tubes, any modification of shape can be adopted according to the fancy of the surgeon. Those I have had made are rectangular, the tracheal end slightly incurved, with a small shield having lateral processes, varnished both inside and outside, and, provided due care be taken with their preparation and keeping, will, I believe, be always found clean and not sticky. I have



tried some other shapes, but I think that the one shown in the engraving, and just described, will be found the most useful. The engraving shows the tube a little tilted to one side. Those who have tied catheters in the bladder will know how much the best the gum-elastic catheter is for the purpose, and I may say it was that fact that first suggested to me the use of gum elastic for a tracheotomy tube. Finally, as regards its use: When desired, it can be used immediately in conjunction with a lobster-tail inner tube, the latter to be left off as soon as convenient. And though this may increase its bulkiness and weight, yet it will not do so to such a degree as to impair its utility. But believing as I do that Mr. G. Bird's dilator is the best instrument in general for the first few days, especially in croup and diphtheria, its use would then be limited to those cases in which a tube has to be worn for a long time—e.g., after injuries of the larynx and other parts of that region, tumours, some inflammatory diseases, and during and after some operations upon the tongue and jaws, when tracheotomy is deemed advisable. Messrs. Baker are preparing tubes in different sizes, so as to make sets.

A. REA EDWARDS, M.R.C.S., L.R.C.P.
Late House-Surgeon King's College Hospital.

THE ANTIDOTE BAG.

MR. MARTINDALE, of New Cavendish-street, was the first to adopt a suggestion to produce a bag fitted with every remedy and appliance likely to be needed in the treatment of a case of poisoning. A notice of this really useful innovation appeared in these columns three years ago, and since that time other similar bags have been devised. Mr. Martindale has further improved upon his by omitting some articles, as the stomach-pump, enema, catheter, &c., which are always at hand, and has thus not only rendered the bag more portable, but has been enabled to supply it at a greatly reduced cost. This smaller bag contains the following antidotes, which are labeled with directions for their use,—viz., dialysed iron, syrup of chloral, chloroform, aromatic spirit of ammonia, spirit of chloroform, oil of turpentine, acetic acid, tincture of digitalis, nitrite of amyl capsules, sulphate of zinc, ipecacuanha, bromide of potassium, calcined magnesia, tannin, and a hypodermic case with syringe and solutions of acetate of morphia, apomorphia, nitrate of pilocarpine, sulphate of atropia, and nitrate of strychnine. The bag is supplied with a copy of Dr. Murrell's "What to Do in Cases of Poisoning."

MICRO-ORGANISMS OF YELLOW FEVER.

IT will be remembered that Dr. Domingos Freire is the author of several communications founded on investigations directed to prove that yellow fever is a contagious disease which owns a micro-organism as its proximate cause. A few weeks ago (THE LANCET, July 29th, p. 29) we published an abstract of some experiments by Messrs. Mozley and Harrison, which went to prove that none of the conclusions at which Dr. Freire had arrived were correct. The latest phase of this discussion is a communication sent to us by Dr. Freire himself, and we propose to give here a *résumé* of his latest arguments and observations.

He thinks that the divergence in results is to be attributed to the widely different conditions under which their experiments were carried out. In the first place, Messrs. Mozley and Harrison injected into the animals liquids obtained by cultivating the earth taken from the graves of persons dead of yellow fever, whilst Dr. Freire employed the earth itself a few minutes after it had been merely diluted and mixed with pure water. It is contended that the particulate liquid injected by Dr. Freire was of great virulence, whereas on cultivation the virulence steadily diminishes. Further, the earth used by Dr. Freire came from individuals dead hardly a year, whilst the material employed by Messrs. Mozley and Harrison had lain three times as long. It is likely that the organisms would in that time have perished, the dead bodies having been reduced to little more than the condition of a skeleton; the more so as the bodies buried in coffins were separated from the earth which covered them by a layer at least of a corrosive substance (lime). In Dr. Freire's experiments the bodies were not surrounded with lime, and were not buried in coffins.

The two authors did obtain fatal results when material was taken immediately from the dead bodies; yet they were not inclined to look on the cause of death as due to yellow fever, but rather to a form of septicæmia. Dr. Freire, however, believes that in their experiments the micrococcus xanthogenicus was the agent in the production of the fatal disease, and he asks how it was, supposing the disease to have been septicæmia, that no bacteria were discovered in the blood. He perceives many lacunæ in the researches made by Messrs. Mozley and Harrison, and is curious to know whether they discovered in the earth employed the micrococcus which he has described as characteristic of yellow fever. He further argues that it is impossible for all guinea-pigs to manifest the symptoms of yellow fever, because species makes a difference, and may profoundly modify morbid processes. Moreover, accurate descriptions of the conditions of all the viscera in guinea-pigs dead after inoculation with the peculiar earth are wanted, and these, with fresh evidence in support of his views, are about to be published by Dr. Freire, who has kindly sent us some of the proof-sheets in advance. In the first autopsy of a guinea-pig inoculated with some drops from a mixture of water and earth taken from the cemetery of Jurujuba, where individuals dead only of yellow fever are buried, the following lesions were noted:—Slight tint of jaundice over the skin of the animal; the brain of a decided grey colour; the lungs congested, and their surfaces studded with black areas; the heart dilated, and containing blackish blood in the ventricles; the liver swollen and blackish; the spleen also dark-coloured; the stomach full of food, and its mucous membrane of a yellow colour; the intestines of a yellowish tint at certain parts and brownish in others; the kidneys swollen and congested; the urine albuminous; and the bladder full. A second necropsy was made, with similar results, on a guinea-pig, which had died after injection of some blood of another guinea-pig, which had lived in a confined atmosphere saturated with the spores of micrococcus xanthogenicus taken from the cemetery of Jurujuba. In all the post-mortem examinations Dr. Freire has found the same morbid changes, with yellow scattered granules and cryptococci of various sizes, shapes, and colours on microscopic examination of the blood. And here Dr. Freire ceases for the present, in the hope that Messrs. Mozley and Harrison will repeat the same experiments with all the necessary precautions.

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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 27, 1884.

THE near approach of October reminds us that educational work must soon begin again; and it begins this year, it must be admitted, under somewhat new circumstances—circumstances which throw upon the medical authorities unusual responsibilities. The Medical Council is to meet on the 7th of October. All the later meetings of the Council have been held with a halter round its neck. This curiously constituted body, in which the Apothecaries' Society of Ireland and the Glasgow Faculty of Physicians have as much representation as the University of London and twice as much as the University of Edinburgh, has been threatened with wholesome change ever since attention was directed to its composition. For two years past the Government has been trying to pass a Medical Bill that would abolish the individual representation of bodies which are pecuniarily interested in medical licensing, and to substitute a Council in which they should be collectively represented, and confronted with representatives of the Crown on the one hand and of the profession on the other. The complete failure of these attempts, and the exhibition of the Government—the strongest Government of recent times—being at the mercy of gentlemen of the Home Rule party, who have condescendingly given out that they will allow the Bill to pass on the slight condition of sixty or seventy amendments, and of other exacting gentlemen, of whom better things might have been expected, have for the present disheartened, almost to despair, those who ventured to hope for medical reform. The failure of the Government, and the proved incompetence of Parliament, with its present Rules of Procedure, to deal intelligently and effectually with the reform of our licensing system, may well embolden the existing bodies to conclude that they are their own masters, and that Parliament neither knows nor cares how they execute their trust or discharge their duties towards medical students on the one hand and the public on the other.

The ostensible duty of the Medical Council at its approaching meeting is to elect a President. It is vain to speculate on the action of the Council in this matter. Sir HENRY ACLAND has served the Council long and well. He was for years only too complacent towards that body, of which he has been a member from its creation. But of late he has faithfully testified that in his judgment legislation was essential, and that only such legislation as was proposed in the recent Bill of the Government could quiet the disturbed state of medical education, and reduce to a reasonable and more uniform shape the increasing mass of knowledge which our students are required to produce at the examining boards. It will be very interesting to hear what Sir HENRY has to say on the collapse of the Government's efforts to effect even that portion of medical reform which has been proposed in every Bill, by whatever party or by independent members, since reform was first attempted—viz., the consolidation and conjunction of the bodies for licensing purposes. Sir HENRY ACLAND has more to gain by a stout and determined refusal to betray this fundamental principle than he can gain by giving way to those bodies which cannot look at this subject in any other than a parochial and commercial light.

It is too much, however, to expect that these bodies will not see their opportunity in this practical defeat of the Government by its *quondam* colleague, Sir LYON PLAYFAIR. And one result possibly will be, that at the approaching meeting the Council will be asked to sanction a conjunction of the English Colleges, as it has already sanctioned a conjunction of the Scotch corporations. By effecting voluntary combinations, the corporations hope to abolish the demand for combinations enforced by law. There is every reason to believe that the combination of the two English Colleges now contemplated is the same as that set forth in the scheme presented to the Council in March last, by which the College of Physicians and the College of Surgeons respectively undertake to "abstain, so far as allowed by law, from the exercise of its independent privilege" of licensing, to co-operate in the appointment of a board of examiners in this division of the kingdom, and in conferring upon every candidate who shall pass the series of three examinations, two diplomas—the licence of the Royal College of Physicians of London, and the membership of the Royal College of Surgeons of England—for the modest sum of £36 15*s.*—a few shillings more than the sum for which the M.D. of Edinburgh can be obtained. This scheme includes some good points and many bad ones, which we will not at present consider in detail; the more so, as we have done so at length on former occasions (see THE LANCET, March 10th and 17th, 1883). We are looking at the scheme for the moment as a public proposal made by responsible and respectable bodies, and one to which the Medical Council will be asked to give its sanction. The Council should feel more than ever bound to see fair play to medical students and to the community at large in public medical arrangements. Should it sanction this scheme, no English student, however desirous—as, we think, all English-trained students should be—of obtaining a complete English qualification, will be able to do so under a cost of £36 15*s.* The Royal College of Physicians can now give a complete diploma in medicine and in surgery—and a respectable diploma too, one recognised by the State as a qualification in medicine, surgery, and midwifery—for the sum of £15 15*s.* It is somewhat strange that the College of Physicians should be willing to forego the rare power of complete diplomatisation conferred by ancient charter and amply recognised by modern usage. It is very doubtful whether in point of law it can do so. But it will be strange indeed if the Medical Council gives its sanction to a body discontinuing its legal and honourable function, in the exercise of which it has not been accused of performing slovenly work, and so compels the student to take two diplomas where one completely qualifies him for the duties of all branches of the profession. There is another aspect of this question. The Council has sanctioned a scheme for the co-operation of the three Scotch corporations, in which they agree to give three diplomas for £25. We say nothing here about the fact that the mere combination of corporations in the several divisions of the kingdom gives no guarantee of good work. The conjoint diplomas of the Scotch corporations have occasioned

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more suspicion and scandal than any others. But what can the Medical Council hope for in the way of giving guarantees to England—which must really now look after itself—by sanctioning a scheme which will set two diplomas of England at £36 15*s.* against three diplomas of Scotland at £25? The Colleges of England should not drive men to the corporations of Scotland, and if they do so they should receive no sanction from the Medical Council.

LEAVING the personal issues involved in the regrettable dispute which has been raised by Mr. MUNDELLA'S equivocal mode of traversing Dr. CRICHTON BROWNE'S report on the subject of "over-pressure of work in public elementary schools," we turn to the main question: Is it, or is it not, the fact that over-pressure exists, and that it is doing mischief? The case seems to us to lie in a nutshell, and it would be difficult to cast the underlying hypothesis in a more terse form than that embodied in one of Dr. CRICHTON BROWNE'S concluding sentences. No one alleges, or for a moment supposes, that the Vice-President of the Council, or any influential member or official of the Educational Department, is either wilful or careless in the matter. It is simply a question of policy; and the most that need or can be justly said is said in these words: "It is quite possible that a scholar, whose body is twelve years old, but whose brain stopped growing at eight, might by his pleasing exterior and superficial sharpness impress the inspector with the idea that he is rather clever, while all the time he is childish, not to say babyish, in intellect, and ineducable beyond the first standard." If this be conceded, as we think it must be, then it follows that the inspector is not in a position to determine whether a particular pupil is or is not physically able to do the work required of him or her, and fit safely to be pressed through the educational curriculum. This seems to us to cover every contingency. It is not necessary to argue closely or warmly as to the question of experiences. It is conceivable that not a single case of injury may actually have occurred, and yet the system which makes a non-medical inspector—however humane and competent for his *proper* task—the judge of physico-mental fitness, whether of pupil or pupil teacher, must be indefensible. What are we doing? Simply this: applying a uniform pressure to a vast multitude of brains, some of which must, in the nature of things, be too weak or too ill-developed to bear the strain thrust upon them. It is a monstrous and inexplicable blunder this insistance on a level code of education for *all*. Why, even as regards the muscular and general organism of the soldier and the sailor a medical examination precedes the commencement of drill, and medical inspection from time to time keeps the question of health in view. Muscular weakness is not half so serious a bar to physical training as mind weakness is to intellectual exercise. How comes it to pass, then, that without any medical examination or supervision whatsoever the brains of a multitude of children, the majority of whom are under-bred and ill-fed, should be subjected to the same discipline and required to do the same task? It is not considered enough to know the age of a recruit for the army or navy; means are taken to ascertain whether his heart, lungs, and organs generally are healthy, and medical officers are specially appointed to examine him from time to time with a view to determine whether he is bearing the strain healthily; but no provision whatever is made for testing or watching the immature cerebral organs upon which the public pedagogue is not only left free, but required, to operate. The mere fact that this obvious measure of individual scrutiny, from the health point of view, is omitted puts the case for the Department out of court.

Dr. CRICHTON BROWNE insists that "in a great number of cases of dulness of intellect, a medical man could at once recognise the physical defects (which are often distinctive enough, although imperceptible except to the medical eye) which accompany mental weakness, and would support the judgment of the teachers; and in many cases of bodily disease and debility he could interfere to protect the children, even against the teachers, by preventing scholars who, although quick-witted and eager to learn, are certain to suffer in the process from being unduly pushed forward." The profession will endorse this statement as one of fact, and with that endorsement the dispute ought to end. Dr. CRICHTON BROWNE has undoubtedly proved his case. It is not to the point whether the victims are many or few; the system extant is radically bad; and that being so, the magnitude of the mischief wrought is of secondary importance. The blunder of striving to enforce a uniform code ought to be repaired without more ado. It may be strictly true, as Lord SHAFTESBURY has remarked, that "there does not live on the face of the earth a man who is more opposed to tyranny and oppression than Mr. MUNDELLA, or anyone more earnestly desirous of putting down all over-pressure as regards women and children." Then why, in the name of common sense, does not the Vice-President adopt the suggestion made to him, instead of fighting what must needs be a losing battle against his own moral and statesmanly consciousness of right?

Headaches, short-sightedness, neuralgia, and sleeplessness are not normal contingencies of youth, either for pupil teachers or children, yet it is a fact which Dr. CRICHTON BROWNE has demonstrated, and which men "engaged in the ordinary practice" among the humbler classes, and who, according to Mr. FITCH, are "able to know something of the children of the poor, their pursuits and their ailments," can substantiate, that these troubles—the direct fruits of over-pressure of work—largely prevail. Nothing can be gained by denying this fact, and certainly a lay inspector is not the person to contradict an able and experienced practitioner on the subject. Dr. CRICHTON BROWNE modestly says, "I cannot doubt that many of the facts which I have brought before you in this letter will be disputed, and that many of the principles which I have incidentally laid down will be challenged; but the former admit of verification, and in the latter I shall, I believe, have the support of the medical profession." We accept the facts and support the principles. If Mr. MUNDELLA is not satisfied with one of the best professional opinions obtainable, let him appoint a small commission of physicians and surgeons, men of mark, in whom he and the public will have confidence, but who are in no sort of way connected with the public service or the department, and let the issue be left in their hands. It is not for Mr. MUNDELLA and his lay inspector to impugn the judgment of a qualified physician. The presumption of

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so doing does not beseem these gentlemen: it goes better with the crass heartlessness—to use no stronger epithet—of the school manager who, when a wearied mistress ventured to sit while teaching her class, ordered all chairs to be removed from the building! While the administration of our educational system rests in hands like these, there is little hope of success or safety in its operation. For the sake of children and teachers alike, the schools ought at once to be placed under medical supervision. In an able and interesting paper on "The Brain of the School Child," read before the Social Science Congress at Birmingham, Dr. FRANCIS WARNER has insisted on the urgency of the need which exists for medical inspection. We cordially endorse and support his argument. It is the cry of common sense. If the reasonable demand be not met fairly and fully, there cannot fail to be disappointment and regret when the inevitable issue of a mistaken and futile policy is fully worked out.

THE doctrine that phthisis is a communicable disease, to which the discovery of the tubercle bacillus gave some countenance, and the report last year of the Collective Investigation Committee of the British Medical Association tended in part to confirm, should, if it be a fact, find most support in the medical history of those places which are resorted to by invalids suffering from the disease. For thither there flock year by year numbers of tubercular individuals, mingling in social intercourse with, and inhabiting the houses of, the residents, many of whom have themselves chosen the place for their home on account of pulmonary affection or of an inherited tendency to it. Not very long ago Mr. THOMSON of Melbourne collected facts to show that tubercular phthisis had been in this way imported into Australia, and formulated thereon a "germ theory of phthisis" before KOCH'S discovery was made known. But it is reassuring to find that such an inference does not apply universally, and that, at least as regards Madeira, phthisis has not been disseminated in consequence of the annual influx of consumptives. Professor PAUL LANGERHANS, who is the author of a work upon Madeira, and has practised there for many years, contributes an article to VIRCHOW'S *Archiv*, based on a painstaking statistical inquiry which bears on the face of it evidence of accuracy, so far as it has been possible to attain it.

When Madeira was discovered by the Portuguese in 1419 it was uninhabited, and amongst the first settlers to join the Portuguese colony were families from France, Italy, and other European States. During the Napoleonic wars it was occupied by the English, who now form the major part of the inhabitants, of whom a small proportion are Germans, these residents being distinct from the original Portuguese element, who form the industrial class. For nearly a century the island has been annually resorted to by invalids to the number of about three or four hundred, who, together with an equal proportion of healthy visitors, add largely to the population during the winter months. The largest number of these are English, some remaining for several years, and others taking up their abode permanently. Since the failure of the wine trade the number of residents has fallen off—viz., from about 320 in 1836 to 270 at the present time, of whom 250 are English. It is plain that the residents must be brought into contact with the annual influx of visitors, who occupy about 100 houses in winter and 50 in summer, so that with the lapse of time there is scarcely a house that has not received the phthisical at one period or another.

The material for an inquiry into the influence exerted by this phthisical environment is afforded by registration records, which Dr. LANGERHANS has analysed. These records date from the year 1836, when there were 321 residents, and among these he has traced the subsequent history of 267, of which number 210 were healthy subjects and free from any inherited phthisical taint, the remaining 57 being individuals who had come for their health or who had inherited a disposition to phthisis. Of the 210 healthy people (34 being then under the age of ten years), 78 have died in Madeira since 1836, at an average age of sixty years. Four of these died from phthisis, two contracting the disease apparently abroad and returning to Madeira to die, the third dying after a slow illness at the age of thirty-eight, and the fourth at the age of fifty-five from acute pneumonic phthisis. There have also died after leaving Madeira 46, none from phthisis. There still survive 86 of these people, at an average age of sixty-two, but only 24 now reside in Madeira. There is no case of phthisis known amongst these survivors. Turning now to the 57 who in 1836 were affected with lung disease or disposed to it, there have since died 35, 9 being from phthisis, but only 2 of these deaths occurred in the island. Of the survivors, 9 remain in Madeira at an average age of sixty-nine, and 13 are living elsewhere, one only, a woman fifty-one years of age, presenting indications of phthisis. The writer next inquires into the fate of those people who have settled in the island since 1836; and dealing only with those who have dwelt there for more than twenty years, he has compiled a table including 115 persons, 83 of whom were of healthy and 32 of unhealthy stock. Amongst the 31 deaths that have occurred in the former group there has not been one case of phthisis, nor is there any phthisical person among the survivors. Of the 32 who came phthisically disposed, 17 are dead, including 12 cases of phthisis. Again, he finds that 253 children have been born to the 382 (residents in 1836 and subsequent immigrants) between 1836 and 1884, 147 being of healthy and 106 of tainted parentage. Amongst the former there have been 28 deaths, one from phthisis at the age of thirty-seven, after alcoholic excess in England; whilst of the latter 23 have died, 8 from phthisis; and 8 phthisical individuals survive in this group of 106 children, at an average age of thirty-six years.

The sum of these observations, which are far more fully elaborated in the article, is that between 1836 and 1884 Madeira contained 835 residents, of whom 440 were of healthy and 195 of presumably tainted stock. Tracing the subsequent history of these, it appears that of the 440 there have died 208, only 5 from phthisis during this long period, and 2 of these dying elsewhere than in Madeira. Not one of the 237 survivors exhibits signs of lung disease. If this be true, it is a striking fact, for it shows that in spite of conditions most favourable to infection, phthisis barely ever occurs amongst those free from inherited taint. Indeed, the proportion of the phthisical is below the average of other countries, and implies that residence in Madeira affords immunity against the onset of the disease, even under most

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unfavourable conditions. It is of course otherwise with the 195 who have either arrived in the island ill, or have derived a tendency to the disease from their parents; and yet the numbers show that the disease must have been arrested in many; for although 29 of the 75 deaths in this group have been from phthisis, there are but 12 of the 120 survivors who show evidence of the disease. Dr. LANGERHANS does not rest here, but in a further analysis he separates the members of each of the four generations from 1836 onwards. The numbers are too few to admit of generalisation; but they tend to show that phthisis appears in the later generations, to become milder in type, and slower in its evolution.

Dr. LANGERHANS thinks that these facts, and especially the fact that since 1836 almost the only individuals to fall ill of phthisis in the colony have been those in whom heredity could be traced, point to the very great importance of inheritance in the etiology of phthisis. They seem to be wholly opposed to the notion that phthisis is an infective disease, and rather assign it a place with such affections as cancer or hæmophilia. As showing the influence of heredity, he gives the genealogy of eight families, whereby it is seen that the tendency to phthisis may remain latent for one generation, to be manifested in the next; and it also appears as if special forms of the disease were transmitted. Nor does his inquiry, necessarily limited as it is, lead him to endorse the popular belief that children born of parents who have inherited phthisis, but who do not manifest the disease until a later period, are any the less liable to become its subjects than are those who are procreated after the disease is manifest. Indeed, the liability may be even greater in the earlier than in the later born progeny. These are suggestive points; and we wish that the family practitioners of our country, where phthisis claims so many victims, would compile similar genealogies for the benefit of science. It would not be difficult in many cases to so trace the medical history of a phthisical family through several generations, and the result of such an inquiry, if conducted on all sides, might serve a very useful purpose.

A SERIES of experiments of much interest has been performed on the supra-renal body during the past year by M. TIZZONI. In order to avoid unnecessary sacrifice of life, the author studied the best methods of removing the supra-renal capsules without damage to the surrounding structures and with the infliction of the least possible injury to the system at large. After having made a small incision in the lumbar region at the level of the adrenal body, the parenchyma of the capsule was lacerated and its ablation practised, strict antiseptic precautions being observed. On the right side the neighbouring vena cava inferior rendered the operation of extirpation difficult. For his experiments TIZZONI generally made use of rabbits weighing only about a kilogramme each, because in this circumstance the muscular mass of the lumbar region was but little developed, and so the operation was facilitated. When the animals succumbed as the result of the operative procedure, death was not due to the nervous accidents signalised by BROWN-SÉQUARD, but was caused by subcutaneous and intermuscular suppuration infiltrating the neighbourhood of the wound. The majority of the animals which exhibited contracture of one or other of the front or hind limbs recovered, and it was only rarely that paralysis and death followed the appearance of the spastic contraction. The necropsy revealed in such cases the presence of an exudation about the meninges of the spinal cord and a softening of the spinal marrow without any demonstrable direct connexion of the lesion of the supra-renal capsule with that of the nervous centres. Outside these complications—which may be regarded as quite exceptional—the operation was generally followed by no grave accidents; the animal, if the etherisation were not too powerful, gave signs of pain only when the adrenal capsule was seized and lacerated. If this body, instead of being completely removed, were allowed to remain in the cavity of the abdomen (of course, after laceration of the capsule), the healing was much more rapidly effected; and if, some days later, the animal were killed, not a trace of the lacerated parenchyma of the suprarenal capsule could be detected; complete absorption of the essential elements appeared to have taken place. Then, according to TIZZONI, the suprarenal body is absorbed without giving rise to any phenomena such as might be interpreted to be of the nature of blood-poisoning, so that the adrenal capsule contains no organic poison; and if by treating the organ with various chemical reagents a poison be obtained, one may affirm that it is not produced during life, and consequently the poison must be due to cadaveric decomposition. A certain time after the extirpation of the capsule there commences to appear a brownish discoloration of the nose, as if the animal had been plunged in charcoal powder after having drunk some liquid. Some small blackish linear markings also may be found scattered here and there, over the mouth and nasal fossæ. The mucous membranes of these regions seem at first to be intact, but at the end of some days they become dotted with minute spots of the colour of tobacco; the minute areas become circular as they enlarge, and by coalescence a bronzed surface of considerable extent and of a uniform tint is formed, and reaches its maximum intensity about the sixtieth day after the operation of removal or laceration of the suprarenal capsule. A remarkable circumstance is mentioned by the Italian observer, which is to the effect that the destruction of one capsule only brings about unilateral pigmentation of that side of the body on which the operation was performed. If, however, the median line of the body were trespassed upon, the pigmentation extended to the whole of the surface of the body. (The text from which this report is taken leaves it doubtful by what the median line of the body was to be trespassed upon. We take it that should the pigmentation proceed beyond the mesial line then the discoloration would be universal.) White rabbits did not present any of the pigmentary phenomena.

From a histological point of view the following observations were made. When the coagulum of blood and the parenchyma of the lacerated organ had been resorbed, the fibrous envelope of the capsule was found to be filled with a connective tissue of new formation, together with large granular cells like those which are found in white softening of the brain; giant cells which had undergone caseous degeneration were also to be seen. The last fact would seem to negative NOTHNAGEL'S opinion that chronic caseous inflammation of the adrenal body was always of a

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tubercular nature. These giant cells were produced in the same way as those which develop as the result of irritation of serous membranes by a foreign body. Another observation was made by TIZZONI, which appears to be extraordinary, to say the least of it. The various elements of the suprarenal capsule in the rabbit may be "reconstructed." This fact is alleged to have been observed 144 days after the almost total destruction of the suprarenal body in a rabbit. The size, colour, and structure of the organ were normal in another rabbit twenty-six days after the operation, presumably, of free laceration. At the autopsy a small nodule exhibiting active new formation of suprarenal parenchyma was also discovered. A fine interlacement of filaments of the great sympathetic cord with numerous ganglion cells and gangliform swellings had developed and covered the cortical substance of the adrenal gland of the animal last referred to. The Italian pathologist does not speculate on the mode of production of the bronzing which he observed. Many of the statements made by him require careful consideration at the hands of other experimental pathologists, but as opening up afresh the relations of the adrenal body to the system at large the results of TIZZONI'S experiments must be admitted to be of decided value.

THIS unsavoury but essentially important subject is again to the front. The only marvel is that it should ever be lost sight of even for a moment. The correspondence which is going on in *The Times* has not, so far, been characterised by the making of any new disclosure. It is perfectly well known to all who have investigated the subject of house-drainage and sewerage, that the pipes designed to convey the soil and waste-water from house-closets and sinks, and which often run under kitchens and between floors without isolation—in any true sense of the term—are not uncommonly simply placed together without being properly connected. We recently heard of an instance in which the workmen employed on the outside drain did their work well enough, and those engaged on the house drains performed their task with commendable skill and integrity; but no one seems to have been appointed to connect the two systems, so that the contents of the house-drains were discharged into the earth of the basement under the kitchen and formed a large cesspool, while the free end of the outside drain or pipe ventilated the sewer into the premises, and delivered sewer-gas without let or hindrance. The work was in this case well done, as far as it went, only it did not go quite far enough. The omission to make good the joints of drain-pipes is a quite ordinary piece of negligence. The correspondents in *The Times* insist that house drains should be periodically tested by filling them with water, and then noticing whether, when the proper outlets are stopped, the water level sinks; because if it does there must be an improper outlet—in short, a leak—somewhere. This is all very well as a rough test; but it is not enough to rely upon as ground for a guarantee of safety from sewer-gas. We know perfectly well that gas will escape from an opening which is not large enough to allow any perceptible escape of water! Many a crack or opening, which would suffice to fill a house with sewer gas would not allow so much water to escape as to make any notable difference in the level, even though the drains were charged for some hours. The fact is no test will suffice to make this matter safe, and safety ought not to be looked for solely in the integrity of the work done, important as this must be. Perfect "disconnection" should be insisted upon, so that whatever is wrong in a house must needs be of the householder's own making. It is not the soil from the house that does harm, but the sewer gas entering the house-drain from outside. Of course, if the inside work be bad there may be an escape of the contents of the house-drain into the earth of the basement, as in the case just mentioned; but this is a contingency well within control. The great evil against which those who would have healthy homes have to contend is the effect of blundering on the part of sanitary engineers and drain-makers generally. They *will* make openings "for the inlet of fresh air" at the lower levels, forgetful or ignorant of the fact that where air can get in gas can and will escape! It ought to be made imperative on every householder to erect a ventilating shaft immediately outside his house system, and to carry the same above the roof of his house away from his chimneys. No ventilating pipe or grating should be allowed to open on the lower levels. It is all nonsense about letting fresh air into the drains from the ground levels. The aim and scheme should be to afford such vent for the contained air, or gas, of the outside drain, at a high level as shall prevent the comparatively warm house-drains and pipes from sucking the gas into the house. All the year round a house and its pipes are warmer than the sewer, and when the fires are lighted they are very much warmer. As a natural physical consequence the house is always drawing air from the sewer; and the only proper and safe precaution is to place a ventilating shaft immediately *outside the house-system*, so that there shall be no pressure from without inwards to create a *vis a tergo* supplementary to the *vis a fronte* created by the higher temperature of the house-drains. We know this will seem strange doctrine, but we are convinced it is sound, and that it ought to be generally understood and acted upon by householders who would be safe.

Annotations.

"Ne quid nimis."

OUT-PATIENT DEPARTMENTS AT LARGE HOSPITALS.

THE conditions under which the physicians and surgeons to the out-patients at our large hospitals have to work are anything but hygienic in the more limited sense of the term. The crowded waiting-rooms, which frequently discharge their loaded and poisonous atmosphere into the very working-rooms and up the very nostrils of the physicians, are certainly not the kind of apartments favourable to the best intellectual work. We have no desire to find fault with the authorities of any of our hospitals—their task is hard enough in many ways; but we do hope that the condition of their out-patient departments will receive the consideration they so much need. We are fully aware that some of the hospitals which are most numerously attended are amply provided for in respect of the distribution and management of their out-patient arrangements; but we should like to see this provision more general at all the hospitals. Really the matter is one of serious importance. The out-patient department falls to the lot of the junior members of a staff who have before them many years

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of labour and weary waiting. For them it is essential that the bodily vigour and intellectual activity which they possess should not be consumed before the time comes for their term of service in the wards. Anyone who will take the trouble to spend one afternoon in assiduously doing the duty or following the steps of the out-patient medical officer will soon be brought to a sense of the weariness and hard work which such physician or surgeon must undergo. And when we remember that this task has to be performed thrice or oftener a week all the year round, it will be readily conceded that the labour is one which calls for comfortable quarters and hygienic surroundings. Every man has, or ought to have, a reserve of force; and this reserve ought never to be drawn on. No physician or surgeon should be expected to do more than two hours' work in the out-patient department; four or more hours spent in the out-patient rooms severely tax the reserve force of most physicians and surgeons, and make it correspondingly difficult for the reserve power to be recouped. Indeed, this continued over-work is a too frequent cause of the premature breakdown of some of the junior medical men attached to hospitals; and usually it is precisely these who are least able to obtain the needed annual holiday; they have to do their own work during the session and that of their seniors in addition during the vacation. It is time that the offensiveness, uncleanliness, and overcrowding of our out-patient departments should by necessary alterations be reduced to the minimum.

THE LONDON WATER-SUPPLY.

WHETHER the London water-supply is good or bad is a moot point now as it was a dozen years ago. Dr. Frankland still thinks it unsatisfactory; while Messrs. Crookes, Odling, and Tidy, who represent the water companies, seem to consider it as practically perfect. Some natural bias, no doubt, exists on both sides; for each of the eminent chemists concerned has held and fought for his opinion so long that it is impossible to suppose him an absolutely impartial witness. Thanks to external pressure, and by no means to their own spontaneous action, the great London water companies have greatly improved their supply of late years. They have long been debarred from the use of tidal water, and have been compelled to filter all the water drawn from rivers and store it in covered reservoirs. In the last few years the filtration has been greatly improved, and the water delivered to the consumers is now, as a rule, free from visible suspended matters and of fair organic purity. Probably sand filtration is now doing its utmost in the purification of the contaminated waters of the Thames and Lea. The question is, therefore, whether we ought now to be satisfied with our water-supply—to "rest and be thankful." We are compelled to believe that we ought not; for even if we were to accept all the statements of the water companies as to the present purity of their supply, we could not forget that the source of that supply is a polluted one, and that in addition to the ordinary sewage pollution, representing the excreta of an immense number of persons, there is at all times the risk of an accidental and far more dangerous pollution in the neighbourhood of the companies' intake. The Thames, for example, is in summer a crowded thoroughfare. Many people bathe in it; dead dogs are by no means infrequent; barges, house-boats, steamers, and smaller craft throng its waters; and it is certain that foul matters do, from time to time, find their way into the water from these, as we can testify from personal knowledge. A single case of cholera or choleraic diarrhœa occurring in a barge might obviously lead to most disastrous results; for the filter-bed would be a poor protection against the subtle poison, and the chances are that an outbreak occasioned in this way would never be traced to its source.

THE EPIDEMIC AT KIDDERMINSTER.

THE outbreak of enteric fever at Kidderminster has assumed very serious proportions, and although its incidence is mainly on some of the worst parts of the town, yet all classes are suffering, and at least one of the principal medical practitioners has been attacked. Dr. Parsons, of the Local Government Board, is investigating the causes of the epidemic, and he has already conferred both with the sanitary authority and a number of the medical men in the town. The outbreak, as we have already explained, had at the onset much of the appearance of having been produced by water pollution, and the fact that one of the wells of the public service is in such relationship to the area of the sewage pumping works that its use has now been abandoned, gives some additional colour to this view. The condition of the sewers, if correctly described in the local press, is precisely such as to favour the spread of diseases like enteric fever, for it appears that, instead of allowing the sewage to flow away, certain catch-pits have been constructed in the line of the sewers, and that in these solids are retained. Whether the statement be true or not as regards Kidderminster, it is certain that this system is at times adopted, and any more dangerous or offensive contrivance it is difficult to conceive. Such pits are cesspools, and cesspools have no *raison d'être* in a system of sewers. Sewers are designed to carry away sewage in the most rapid manner practicable, not to retain its most injurious constituents. It is to be feared that the epidemic at Kidderminster has already attacked some 500 persons, and we are now arriving at the stage of the disease amongst those first attacked when fatal results most commonly ensue. We sincerely trust the mortality will be small, and that the cause will turn out to be one which can be expeditiously rectified.

URÆMIA.

THE pathology of uræmia reminds one of attempts to thread a needle in darkness, the distance of the point of the thread from the eye of the needle being very difficult to determine. One year we are informed on good authority that urea may be injected into the system without serious results, and the next year the direct opposite is affirmed. This is but one aspect of this many-sided subject. The chief dispute in the pathology of uræmia is as to the nature of the toxic agent. MM. Gréhant and Quinquaud have returned once more to the question, and in an experimental method. Subcutaneous injections of aqueous solutions of pure urea have been employed in gradually increasing quantities on frogs, guinea-pigs, rabbits, pigeons, and dogs. The result was constant for the different kinds of animals, and consisted in a more or less rapid death from tetanic convulsions, similar to those produced by strychnia. The most numerous experiments were performed on dogs. The toxic dose of urea in the blood was fixed with exactitude, and the influence of urea on muscular contractility was studied. Death always ensued when a dog received into its system 0 grammes of urea for every kilogramme of body weight, or in other words when a hundredth part of the body weight of urea was injected. The proportion of urea in the blood, as estimated just before or after death, was ·6 gramme for every 100 grammes of blood, and this relative proportion obtained in all the other animals employed. In a case of anuria in a man the proportion was ·410 per 100 grammes, and in another case of retention of urine ·278; in a case of interstitial nephritis, the patient suffering from uræmic dyspnœa, it was ·210, and in a case of uræmic coma ·215. Under the circumstances of the experiments all the tissues of the animals were impregnated with urea, so that 100 grammes of blood yielded 613 milligrammes of urea; 100 grammes of liver, 589

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milligrammes; 100 grammes of cardiac tissue, 311 milligrammes; 100 grammes of spleen, 662 milligrammes. The observers always noticed that the urea injected under the skin was never completely absorbed, even at the time of death, though death might have been delayed for ten hours. By exposing the sciatic nerve and displaying the calf muscles, to the cut tendo Achillis of which a dynamometer was connected, the authors decided that uræmia does not increase or diminish muscular contractility. The blood of the dead animals, when submitted to distillation at a temperature of 40° C. *in vacuo*, furnished a liquid absolutely free from ammonia; the conclusion drawn from this experiment is that urea does not act as ammonic carbonate.

FRIENDLY SOCIETIES' PROVIDENT MEDICAL INSTITUTIONS.

OUR readers are well aware that in some towns the old and friendly institution of the "club doctor" has been threatened with overthrow by the wholesale amalgamation of Friendly Societies into one huge Provident Medical Institution, to be served medically by one doctor, with perhaps an assistant. Everything in this institution was to be on a huge scale, except the remuneration and the liberty of the medical man. His work was to be that of several medical men; he was not to be allowed to do it in his own way, but on a system of iron rules, and his salary was to be as small as his liberty. Such arrangements have never had our approval. They did not appear to us likely to secure the best results to the members of sick societies and their friends; they treat thousands of human beings as if they were without choice and preference in regard to medical practitioners; they presume on the eagerness of young medical men "wanting a start" and tempted to overlook what is due to the profession and to seniors who have worked other provident arrangements patiently and conscientiously, and by so doing have formed extensive medical relations with the working classes which are most beneficial and creditable. Moreover, such institutions seem to be manipulated by small committees or caucuses, without reference to the wishes of the members, and with such scanty appreciation of the respect due to professional men, that even the youngest and most eager of these must soon find that in serving them he is serving a hard master. We have on various occasions expressed these views, but never with any but the most respectful feelings to the members of friendly societies, who deserve all praise for their provident intentions and for their efforts to put the medical attendance of the working classes on an independent footing. Our objections meet with striking illustration and confirmation in a pamphlet sent us by Dr. Maunsell, containing letters published first in the *Bath Argus*, and setting forth the arbitrary way in which the Committee of the Bath Amalgamated Friendly Societies' Provident Medical Institute have called for his resignation, without deigning to give any reasons. The only reason seems to be that he appears to have been overcome with doubts as to the perfectly satisfactory working of such institutes, and to have been bold enough to suggest changes for "placing them on a basis that will enable medical men to accept and retain the appointments." He has published letters from gentlemen holding the existing appointments, some of which are no doubt aggravating to committees of such institutes as the B.A.F.S.P.M.I. One honorary surgeon of the Bath Institute, Mr. Hoblyn, says: "I know very little of their rules, or how they intend to work, but from all I have as yet made out I do not see how any man is to do all the work, and I do not suppose that any one can retain the appointment longer than six months. For my own part, I do not, as my age, object to be tied down to time in any manner. I have no objection, myself, to be called consulting surgeon, with any definite duties to perform, for a guinea a visit." A medical officer of such an institution writes: "I am working beyond powers of endurance." Another says: "I 'put up' with the work for three years, during which time I suffered enough insult and annoyance to last a moderate lifetime, had it not been condensed into three years. I resigned in disgust because the committee was powerless to enforce their own rules, the members of which body were quite at the mercy of their various clubs, and although quite ready to make rules, only required me to keep them, and always interpreted them as the members of the Association wished. Professionally, the rank and file of the medical profession here put me 'in Coventry;' the consulting men did not actually refuse to meet me, but practically I was outside the profession." The Bath Institute should initiate a testimonial to Dr. Maunsell instead of dismissing him. Let the working classes take the whole profession a little more into their respect and consideration, and they will find that they have no better friends in the dark days of trouble and sickness than the tried practitioners by whom they are surrounded.

COMMITTAL AND DISCHARGE OF DR. WOLFF.

OUR readers will remember that during the conflict of opinions that has raged at the Diamond Fields respecting the nature of the disease which has proved so disastrous in its results, Dr. Wolff has been a persistent opponent of the theory which supposes the epidemic to be one of small-pox. It was with deep regret that we heard of the committal of Dr. Wolff on the charge of "culpable homicide" for having, as alleged, allowed a woman to be exposed to the contagion of small-pox, not only without warning her of the danger, but with the positive assertion that neither infection nor contagion was to be feared. According to the sworn testimony of the witnesses, Dr. Wolff attended a patient who was suffering from an eruptive fever which proved fatal. The woman who laid out the deceased sickened twelve days afterwards and died, from the effects of what Dr. Grimmer, who was called in to see her, declared was no other than small-pox. It was of having indirectly caused her death that Dr. Wolff was accused. For obvious reasons we did not discuss the merits of the case at an earlier date, although we were then, as now, convinced that before a grand jury found a true bill they would have to satisfy themselves (1) that Dr. Wolff was *primâ facie* answerable for having contributed to the death through wilful and culpable negligence; (2) that he had contravened the 35th section of the Public Health Act, which orders that a medical practitioner shall inform a householder as early as possible of a case of small-pox, or a disease declared by the governor to be infectious, having occurred in his house; (3) that even supposing the deceased to have succumbed to small-pox, the infection was, without reasonable doubt, derived from the source set forth in the indictment. Drs. Sauer, Grimmer, and Smith, who examined the body after its exhumation, were agreed that the death was due to confluent small-pox, and the two former deposed to that effect. Dr. L. S. Jameson, who was called for the defence, is reported to have said that the epidemic is not one of small-pox, and that it is not contagious, and is probably propagated by the soil. Notwithstanding we are entirely opposed to this view of Drs. Jameson and Wolff, we give them the credit of being honestly persuaded of its truth, and it would be unjust to hold Dr. Wolff responsible for the consequences of error of judgment. As he stated in his defence, if he believed the disease was not small-pox he could not be expected to notify that it was. The present epidemic has not been declared by the governor to be small-pox, and the only disease [illegible] small-pox specified as infectious in the section of the Act

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referred to is syphilis. On these grounds alone, as it seems to us, the prosecution must have failed. Although Dr. Wolff was committed for trial by the local magistrate, the public prosecutor refused to take up the case against him, and a warrant was made out for his discharge. Whilst congratulating Dr. Wolff on his deliverance, we take the opportunity of entreating him and Dr. Jameson to once more weigh the evidence as to the character of the scourge with which the Diamond Fields are visited, and see if they cannot adopt the almost universally accepted belief that they are confronted with what is commonly known as small-pox. As to the executive authorities, we urge upon them the taking of such steps as will render the recurrence of the unhappy affair related above an impossibility.

THE OUTBREAK OF ENTERIC FEVER IN THE GLASGOW HOSPITALS.

DR. RUSSELL, medical officer of health for Glasgow city, has presented to the Health Committee a long and elaborate report on the outbreak of enteric fever in the Glasgow Hospitals. He describes the rise of the epidemic in the Western Infirmary towards the end of August last. The disease was not confined to patients, but attacked the nurses and attendants, and was not limited to any ward or department. In the history of the hospital only one case of enteric fever had ever originated in the building, and that was some years ago, in the person of one of the nursing staff who was in attendance on an isolated patient admitted to the house. As to the cause of the outbreak, water, says Dr. Russell, may always be set aside as an epidemic agent. The fact of cases occurring simultaneously also in the Royal Infirmary and the Belvidere Hospital, institutions deriving a portion of their milk-supply from the same farm, however, at once directed suspicion to the latter as the source of the mischief. On close investigation this suspicion was confirmed. On the farm in question several cattle had suffered from disease, arising, in the opinion of a local veterinary surgeon, from drinking foul water. An analysis made by Dr. John Clark, city analyst, showed the water of the well used on the farm to be grossly contaminated with the products of sewage, indicating that the soil in the vicinity of the well was saturated with sewage matters. There was evidence, moreover, to show that enteric fever was produced in consumers of milk from the farm who were not inmates of either of the hospitals. The report gives in detail an account of the main features of the outbreak in the three institutions up to September 17th. In the Western Infirmary forty-four cases in all occurred; in the Belvidere Hospital thirty-one persons were affected; and in the Royal Infirmary the sufferers numbered twenty-nine. Dr. Russell concludes his report with a severe animadversion on the supineness of the local authority in allowing the district in which the farm is situated to remain in the bad sanitary condition in which it has been long known to exist, and after the attention of the authority had been repeatedly called to the matter.

RHEUMATIC PERIOSTITIS.

A DISCUSSION took place at the recent meeting of the French Association for the Advancement of Science, held at Blois, on a communication by M. Verneuil, entitled "Ephemeral Rheumatic Periostitis," an affection which has not attracted a large share of attention from writers on medicine. It is described by M. Verneuil as appearing in the form of a hard swelling, becoming softer after the lapse of a certain time. Fluctuation, which is sometimes present, leads to the suggestion of pus; but this phenomenon disappears and the swelling subsides. There is no hyperplasia like that seen in ordinary surgical periostitis, no fever, and no alteration in the colour of the skin. In some places the affection spontaneously disappears, in others the swelling first diminishes and then increases in size; there seems to be a congestive element in the swelling, for "when the patient took cold" one of the swellings on the face became double its former size. In none of the cases was there evidence of antecedent syphilis, though the arthritic diathesis was well represented. Many observers who spoke on M. Verneuil's paper had witnessed similar affections. On purely theoretical grounds there does not appear to be any argument against the occurrence of rheumatic nodes or periostitis. We have nothing to do on this occasion with the "subcutaneous rheumatic nodules" so well worked at by Drs. Barlow, Warner, and others. We may also take it for granted that the periostitis was not confounded with the nodose erythemata of rheumatism, where the skin is the site involved. Physicians of large experience cannot fail to have seen examples of periostitis occurring in rheumatic cases. We have no wish to beg the question; and it is right that the whole evidence on which the rheumatic origin of such cases of periostitis exists should be placed clearly before us. In our experience there has been distinct affection of joints of typical rheumatic nature with sweating, and in some instances heart affection and fugitive erythemata with fever of moderate degree. In one case which we recall, the tonsil was also inflamed, whilst there was mitral disease of some standing, distinct affection of both knees and the right wrist, with periostitis of the lower third of the inner side of the right tibia, occurring in a man aged twenty-four, in whom no evidence of syphilis could be elicited, and who was not suffering from gonorrhœa. We should be chary of admitting the presence of rheumatic periostitis when no other "rheumatic" manifestations are to be found. We may also state that in our experience nothing we should call fluctuation was detected. The subject is one well worthy of extensive investigation, and would undoubtedly add to our knowledge of that most protean and most ill-understood affection—rheumatism.

DAIRY FARMS AND SCHOOLS.

WE have received the prospectus of the Southern Counties Dairy Farm Association, Limited, which has been started with the double object of providing farm and dairy produce on sanitary and scientific principles, and of establishing a school at which all that pertains to dairy farming can be practically taught. On a former occasion we wrote at some length on the advantages that would accrue from the adoption of such a line of action. We fear that English dairy farming generally is carried on without due regard to many points essential to the success of an enterprise which, apart from the question of monetary remuneration, has an important bearing on the health and comfort of the community. It is an undoubted fact that the "milk-producing power" of cows is largely under the control of those who have charge of them. The selection of animals suited to certain pastures is of primary importance, but of greater moment still is the development of the resources of grazing and arable land by natural and artificial means. Proper drainage and water-supply need only passing mention. A large field is open for improvement as regards the proper cultivation of the soil, including its preparation for those kinds of pasturage best adapted to thrive upon it. There is no reason whatever why every farmer and grazier should not be able to avail himself of the knowledge which the agricultural chemist and the sanitary engineer are able to give. In the present depressed condition of trade in land there are few, we fear, who will be induced to try what appear to them as new-fangled ideas of getting more for their money and labour than they have hitherto succeeded in doing, unless tangible

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results are brought under their notice at some one else's expense. For this reason we trust that associations similar to that above referred to will be multiplied and worked with rigorous economy yet generous treatment. The allotment of "broad acres" into small farms is preferable to the system of extensive "runs," both for the prevention and arrest of diseases that decimate our herds and flocks. This holds good alike as concerns serious epidemic disorders and certain diseases dependent on accident, overcrowding, or the spread and development of entozoa. "Sturdy," or "the gid" in sheep—e.g., which is due to the presence in the brain of cœnurus cerebralis, the larval or hydatid form of tænia cœnurus of the dog, is not nearly so common in enclosed pastures as in unenclosed, where the sheep are herded by dogs. There are many other considerations which might be urged in favour of a more enlightened system of dairy farming than at present obtains, but enough has been written to justify the attempts that are here and there being made to make us at least equal in this matter to our Continental neighbours.

"TEXAN FEVER."

THE stipendiary magistrate at the Birkenhead Police Court had before him on Sept. 17th a very important case for decision. The meat inspector for the Corporation applied for an order to destroy the carcase of an animal belonging to Messrs. Nelson, cattle importers, which animal, it was alleged, had died from the effects of a disease known as "Texan fever." The 117th Section of the Public Health Act of 1875 states that if a magistrate is convinced that the meat is diseased he shall condemn it, even if he is not certain that it is unfit for human food. The meat inspector deposed that the carcase of the beast recently killed was deeply bile-stained and was of a dirty yellow colour, that in the fourth compartment of the stomach (abomasum) were a number of erosions and ulcers, that the spleen, which was congested, weighed 9½ lb., the normal weight being about 2 lb. (Armatage gives 2 to 3 lb.) The liver weighed 24½ lb., whereas it should only have weighed about 15 lb. The kidneys weighed 1½ lb. more than normal. He was of opinion that the disease was "Texan fever," which he said was the twin sister of splenic fever. Mr. Moore, V.S., Privy Council Inspector of Cattle, corroborated the inspector's evidence as to the nature of the complaint the animal suffered from. He stated that "Texan fever" was conveyed from animal to animal by direct contagion, and that it took from ten to forty-two days for its full development. Drs. Vacher, Braidwood, and Craigmile gave similar testimony. For the defence, Mr. Wylde, Chief Inspector of Meat for the City of London; Mr. Holman, V.S., Inspector for the Privy Council at Deptford; Drs. Imlach and Paul, of Liverpool; Professor Williams, of the New Veterinary College, Edinburgh; and Inspector Luyd, of Liverpool, were called. The magistrate, puzzled, as well he might be, by the contradictory nature of the evidence, decided the case on the grounds that from his own inspection he could not say the meat was unfit for human food; therefore he could not say it was diseased, and consequently he refused to condemn it. The logic of this argument is a little confused, as it seems to us, yet under the circumstances we cannot impugn the magistrate's decision. Whether there is such a disease as "Texan fever" or not, and whether the animal in question died from it or not, we hold that a very strong case was made out by the applicants. It is not usual for "coarse feeding" nor a sea voyage to cause ulceration of the stomach and enlargement of the liver and spleen to the extent described in this instance. A much wider issue was involved than the mere condemnation of a carcase of beef. If "Texan fever" is a blood disease at all resembling splenic fever, the most rigorous measures ought to be adopted to prevent its diffusion. It is but just to add, that out of 540 animals carried by the same vessel, only one was affected in the manner described. In the event of a like case occurring in the future, we hope that it will receive a full and impartial scientific investigation, so that this vexed question concerning a disputed disease may be finally set at rest.

SUCCESSFUL NEPHRECTOMY FOR CALCULOUS PYELITIS.

La Gazzetta degli Ospitali (Aug. 31st) contains a report by Dr. A. Salomoni of a case in which Professor E. Bottini successfully removed the kidney. The operation was performed at Milan, on the 8th of June last. The patient, Annibale M——, aged twenty-seven, had had two calculi removed by lateral lithotomy fifteen years previously. Three years after that operation an abscess formed in the right iliac fossa. It opened spontaneously, and after a few months reappeared in the lumbar region, when it was opened with caustic potass. A permanent fistula resulted, and proved intractable to all local and constitutional treatment. The patient lying on the left side, under chloroform, Professor Bottini, under strict antiseptic precautions, made a vertical incision through the whole ilio-costal space, three inches outside the quadratus lumborum. The kidney having been isolated, the renal artery was secured in one ligature, the vein and ureter in another. The space having been well cleared and all bleeding stopped, a drainage-tube, about one-third of an inch in diameter, was introduced. The walls of the fistula were excised, and the wound united by one deep metallic suture and eight superficial silk ones. The operation lasted a little over an hour. The antiseptic dressing was renewed daily, the metallic suture was removed on the third, and the silk ones on the fourth day, when the drainage-tube was shortened. It was withdrawn on the eighteenth day. Progress was uninterrupted. The highest temperature, 37·8° C, was reached the second day; urine in normal quantity and without deposit was passed without pain or trouble. The patient left his bed on the sixth, and went home the eighteenth day, when only a slight sinus remained, about an inch deep. The extirpated kidney weighed forty-eight grammes, and measured vertically six centimetres, four across, and two anteroposteriorly. Its consistence was greater than normal; colour greyish. On section the upper three-fourths consisted of fibro-cellular tissue, the lower fourth of renal parenchyma, altered, with the pyramids in process of disappearance. The fistula led into the pelvis of the kidney, which was dilated, with thickened and suppurating walls, and contained, besides some uric-acid sand, two small calculi about the size and shape of grains of barley.

SULPHUR FIRES IN CHOLERA EPIDEMICS.

IN the autumn of 1872, when sanitary officer at the Sonepore Fair and during the height of the pilgrimage, when the people thronged in thousands to the bathing ghats, Deputy Surgeon-General Tuson first used sulphur fires as a prophylactic measure against cholera. These fires were made at fifty yards apart and kept alight during the whole time that the fair was at its height. Not a single case of cholera occurred; a remarkable circumstance, since cholera had generally broken out at previous fairs. A similar good result was obtained at Dinapore, where cholera was actually prevailing. In the pamphlet on this subject, which is published by W. H. Allen and Co., Waterloo-place, Dr. Tuson has adduced certain facts and arguments in support of the contention that sulphur fires are efficacious in epidemics of cholera. The basis of his explanation of their efficacy is the germ theory of the disease.

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CARDIOPATHY OF NEURAL ORIGIN.

THE field of nervous disease is a field for all. There seems to be nothing in the disorders of the body which may not emanate from disorder of the nervous system. M. Teissier of Lyons read a paper at the Congress of the Association for the Advancement of Science, held at Blois, on "Cardiopathies d'Origine Spinale." He said that transitory cardiac affections due to nerve disturbance were by no means rare; Graves' disease and the altered cardiac rhythm of certain lesions of the spinal cord—for instance, chronic pachymeningitis—were examples of this. But the influence of disease of the spinal cord in the production of organic heart disease had not yet been demonstrated. Nevertheless, such cardiac changes do exist, according to M. Teissier. The mechanism of their production is either by the induction of trophic changes in the valves, or else by the causation of true dilatation of the cavities of the heart. Trophic troubles are represented by a rarefaction of the fibro-cellular tissue forming the basis of the valves, and chiefly the sigmoid valves of the aorta seem to be affected. This tissue is absorbed much in the same way as occurs in emphysema of the lungs. A small perforation is caused, which increases as the result of the traction of the elastic tissue elements which have remained or form the partitions between neighbouring holes of the same nature. Seven or eight may be seen at one orifice, and several may measure as much as six or seven millimetres in length. It is in the course of chronic affections, such as Friedreich's disease, locomotor ataxy, and paralysis agitans, that these lesions were observed; but they are in no case found more marked than in locomotor ataxy, especially when vaso-motor disorders have been conspicuous. Cardiac dilatations of spinal origin are still less common. A case was given in illustration. The patient was a merchant, who suffered from disease of the cervical portion of the spinal cord, the result of a railway accident. After a period of six months the patient, who had previously been free from heart mischief, began to suffer from palpitation and angina. False rhythm, evidence of dilatation, and the appearance of a basic bruit were found on physical examination. When seen by Teissier, eighteen months after the accident, there was evidence of great dilatation of the right side of the heart. A murmur was heard, which appeared to be exo-cardial. All the symptoms and signs of the cardiac disease subsided as the affection of the cervical part of the spinal cord passed away. Unilateral vaso-motor phenomena in the form of flushings were observed in the course of the case. In this annotation we have simply given an abstract of M. Teissier's paper.

THE HOSPITAL FLOWER MISSION.

THE season for the distribution of flowers in hospitals and infirmaries will soon have closed, but it is not perhaps too late to express our appreciation of the spirit which has daring the summer maintained this kind work among the sick. It may stand as a good general rule, that the more sensitive one is to bodily or mental pain, the more capable and desirous his mind is of finding relief in every attraction outside himself. Diversion in one or other form is what he seeks, and what on medical grounds is often prescribed for him, for diversion has much therapeutic value, and even a pharmacopœia of its own. Among its many remedies, none is readier to hand or more widely applicable than that which we are now considering. To no state of illness is the presence of wholesome flowers unsuitable. Almost every invalid can enjoy them through one or other sense. It should therefore be a point of skill with those whose office it is to distribute them to understand and be able to meet the several needs of those whom they visit. A blind man, for instance, cares nothing for a brilliant flower which has no smell; a subdued colour, again, is probably more grateful to a restless temperament than a bright one; a rank odour is in favour with no one; and so forth. The satisfaction with which these flower gifts are received affords abundant proof that judgment is generally used in their selection. There is much, too, in the fact of the gift, and in the way of giving. The sick man, like all others, values what is given him, not only for its intrinsic worth, but even more for the friendly feeling which accompanies it. Many words are not required to express this feeling. The absence of speech in such cases is often a kindness in itself, and this, we take it, most of the flower-distributors know. In consideration of these points, the fact that members of the Flower Mission are usually ward visitors as well, is a circumstance which must commend itself.

TYPHUS FEVER AT CHORLTON-ON-MEDLOCK.

A RATHER serious outbreak of typhus fever has occurred at Chorlton-upon-Medlock. According to the report of the clerk to the guardians eight cases have been shown to have originated in one house. The district may be fitly described as a fever den. The ventilation and drainage are such as to make it matter of surprise that the untoward event that has recently happened has been so long delayed. The inhabitants seem to be living in the most abject squalor. The houses, which are built on the back-to-back system, are in a wretched state of repair; in fact, nothing seems to have been done of recent date to improve their sanitary condition. Those that have become more dilapidated than the rest have been in whole or part appropriated as closets. In three of these a chamber used as a sleeping-room forms the roof of what is nothing more nor less than a cesspool. We learn that disinfectants have been freely distributed, and that the officers of the Nuisance Department of the Manchester Corporation have received strict orders as to the removal of refuse. This is a step in the right direction; but to grapple with the case in its entirety something of a more radical nature will have to be done. The simple removal of filth and the use of carbolic acid can only be of temporary benefit. Unless the account we have received is grossly exaggerated, and we have no reason to suppose that it is, we fear the Chorlton guardians have sufficient on their hands to tax their resources and ingenuity. From a sanitary point of view, the best course would be to close compulsorily all the houses in the district, with a view to their being demolished; but such a proceeding would necessarily involve the provision of domiciles for the evicted tenants, a matter which experience in large towns has shown to be of no inconsiderable importance.

WHOOPING-COUGH AND RESORCIN.

AN excellent monograph on the nature and treatment of whooping-cough has recently appeared at Rio de Janeiro[1] from the pen of M. Moncorvo, a most distinguished member of the medical profession in that country. He accepts in a great measure the consequences of the germ theory as regards pertussis, and looks on the affection as due to the presence of micrococci which proliferate abundantly upon the mucous membrane which coats the upper part of the larynx above the rima glottidis, where the epithelial cells become infiltrated, and which region appears to be the seat of election for the proliferation of the micrococci. Resorcin directly applied to the mucous membrane of the region indicated has led to diminution in the number of spasmodic attacks, which lose their intensity, whilst the total duration of the disease is shortened. The benefit is said to be wholly due to the resorcin, because no other means were employed.

[1] G. Leuzinger & Fils, 31, Rua do Ouvidor; and Paris, O. Berthier, 104, Boulevard Saint Germain.

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The drug was used in the strength of a one per cent. aqueous solution as a topical application, by means of a soft brush mounted on a long handle. The application was made three, four, or five times a day.

THE DIAGNOSIS OF CANCER.

FROM a painstaking study of a series of cases M. Rommelaere believed that he had established the conclusion that cancerous affections were attended with a decrease in the amount of urea daily discharged. We have given in outline the results of this observer's examinations in vol. ii. 1883, pp. 379 and 737. MM. Dujardin-Beaumetz and Albert Robin have reconsidered the question, but seem to be unable to support the conclusions of M. Rommelaere. They have shown that the daily discharge of urea may remain normal or even augment whilst cancer is progressing, provided the patients take nourishment; further, it was demonstrated that the daily discharge of urea may diminish considerably in chronic affections of the internal viscera if the patients vomit or cease to take food.

DR. G. Y. HEATH.

OUR Newcastle-on-Tyne correspondent writes:—Some time ago I mentioned with regret the serious accident sustained by Dr. G. Y. Heath of this city, who was driving a pair of horses in an open vehicle, when owing to some mechanical defect in the carriage, it was overturned, and he was thrown with violence against the parapet of a bridge, fracturing four of his ribs. Thanks to the doctor's vigorous constitution and elastic mental organisation, he has made an excellent recovery, and is again to be seen in our midst, having resumed his professional duties. Everywhere he will receive a hearty welcome, for as a citizen, a consulting surgeon, and a teacher, he has long occupied a prominent position in the north of England.

LIGHT AND VEGETABLE CHEMISTRY.

THE effect of light on tissues destitute of chlorophyll has been recently investigated by MM. Bonnier and Mangin (Comptes Rendus, xcix., p. 160). Roots, rhizome, flowers, blanched plants, and parasitic plants without chlorophyll—e.g., monotropa—were the materials employed. It was uniformly found that the intensity of respiration was decreased, more carbonic acid being eliminated, and more oxygen absorbed when these structures were placed in darkness than when they were exposed to light. The amount of oxygen absorbed, however, bore the same proportion to the carbonic acid given off in light as in darkness.

THE LEIPSIC CHAIR OF PATHOLOGY.

SEVERAL *savants* have been mentioned as likely to succeed the late Professor Cohnheim in the important Chair of Pathological Anatomy at Leipsic. Amongst them are Dr. R. Koch of Berlin, Professor Klebs of Zurich, Professor Rindfleisch of Wurzburg, Professor Ziegler of Tübingen, and Professor Weigert. It is said that the first named has actually received the "call," and that he has replied by expressing his determination to remain in Berlin, where he will doubtless succeed Dr. Struck as Chief Director of the Board of Health, and be also nominated Professor of Hygiene. It is probable that the choice will lie between Klebs and Ziegler.

DEATH OF DR. OULMONT.

DR. OULMONT, honorary physician to the Hôtel Dieu, and member of the Academy of Medicine, died on the 18th inst. in the seventieth year of his age.

THE MEDICAL SOCIETIES.

THE vacation is gradually drawing to a close, and before long the various Societies will have again commenced work. The Obstetrical Society leads the way on October 8th; the Ophthalmological Society opens on the 9th, and the Clinical Society on the day following. The Pathological Society will hold its first meeting on October 21st; the Association of Medical Officers of Health on the 24th, and the Medical Society on the 27th of next month. The session of the Royal Medical and Chirurgical Society commences on October 28th, and the Epidemiological Society on Nov. 5th.

SEWER VENTILATING PIPES OPENING AT HIGH LEVELS.

WE are glad to see that the suggestion we made repeatedly some time ago for the benefit of Brighton has been adopted by the Corporation of the City of London, and that the Commissioners of Sewers are about to arrange with all builders of new houses to construct pipes for ventilating the sewers, and to carry them to a level above the roofs of the houses. When this is done the ground-level openings can be closed, and then the plague of sewer gas will be a thing of the past.

"HIGH" GAME.

IT is sheer wantonness to throw away game because it happens to be a little "high," but is it necessary to use permanganate of potash to purify it from the taint, though that is sometimes used successfully if carefully employed? It will generally suffice to cleanse the game thoroughly and wipe it quite dry with soft cloths, rubbing a little salt into the worst parts. Game which is simply "high," without being *putrid*, is particularly easy of digestion, and of great value to invalids.

A MINISTER OF HEALTH.

IN his presidential address at the Social Science Congress, Dr. Norman Chevers urged the need and importance of appointing a Minister of Health. We have so repeatedly insisted on the wisdom of creating such an office, that we cannot but hail the revival of the proposal by the President of the Health Department of a body largely representing public opinion.

THE International Association of Surgical Instrument-makers held its second annual meeting at Dresden on the 15th to the 18th inst. There were about seventy members present from Germany, Austro-Hungary, Switzerland, England, Roumania, Russia, &c.; and the Association has doubled in numbers since its formation last year. The objects are to protect the medical profession and the public from badly constructed appliances. The topics mainly discussed at this meeting concerned the establishment of a journal devoted to the publication of new and improved instruments, and the means for training the *employés* in the objects and methods of their work. The next meeting will be held at Berne.

THE Aberdeen University Court has appointed the following six gentlemen to be Extra Professorial Examiners in Medicine for next year—viz.:—Dr. John Alexander, Glasgow; Dr. Alex. Campbell, Dundee; Dr. Alfred H. Carter, Birmingham; Dr. J. A. MacWilliam, London; Mr. Frederick Treves, London; Dr. Francis Warner, London.

THE Harveian Oration will be delivered by Dr. Russell Reynolds, at the Royal College of Physicians, on Saturday, Oct. 18th, at 4 P.M.

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THE *Bombay Gazette* says: "Cholera has broken out at Ecoaim and Penga de France, Goa, where five fatal cases have occurred. It appears that the disease has been imported by Hindoo pilgrims who have just returned from Pondichery, where cholera is prevalent."

WE learn from Indian papers that typhoid fever is very rife at Simla and Murree, which, in place of being "health-resorts," are, owing to the want of sanitary arrangements, proving themselves to be death-resorts.

DR. KOCH is now giving a course of lectures in Berlin, the purpose of which is to instruct military medical officers in the microscopic investigation of the cholera bacillus, with a view to the prompt detection of cases of Asiatic cholera.

IT will be interesting to many of our readers, especially at the present time, to learn that the Ocean Steam Yachting Company, Limited, purpose sending the *Ceylon* on a cruise to the Mediterranean as far as Alexandria.

WE learn that the medical officers of the Indian Medical Service propose to present to Mr. E. Gibson, M.P., a testimonial in recognition of his efforts to obtain a removal of certain grievances of which they complain.

IT is understood that the scheme for the employment of female nurses in the naval hospitals is to come into operation experimentally at Haslar Hospital on Oct. 1st. Nine trained nurses have been engaged.

TYPHOID fever is reported to be on the increase in Paris. The Seine is in a foul state, smelling like an open sewer. Even the drinking water has a distinct odour which is only removed by boiling.

A SEVERE epidemic of measles is reported to be prevalent at Bolton.

THE BIOLOGICAL LABORATORY AT THE HEALTH EXHIBITION.

No. IV.

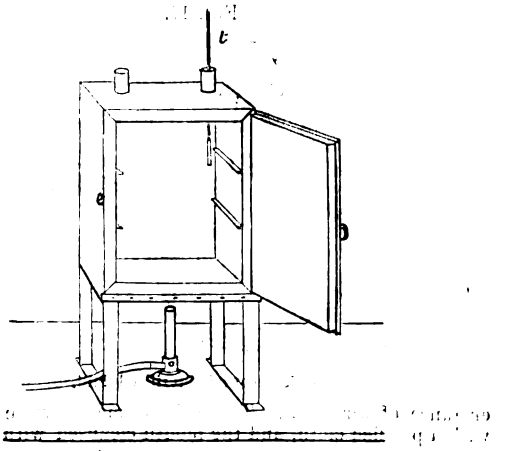
ORGANISMS PRODUCING CHANGE OF COLOUR IN THE MEDIA IN WHICH THEY GROW.

CERTAIN bacteria produce colours in the media in which they grow. They are characterised by their form and their manner of growth in solid media in the same way as others, and possess this striking feature in addition. The colour produced by an organism is always the same under the same circumstances, and is a constant character of the species. The colouring matter is round about the organisms, not in them; and in many cases it is formed only when in contact with the air. The bacteria of this character cultivated in the laboratory are the following: Micrococcus prodigiosus, which produces a crimson colour; Micrococcus Indicus, producing a bright rusty red; the "*violet*" and "*fluorescing*" bacilli; the bacilli of green and of blue pus; and a species of Sarcina, which produces a yellow colour. Two species of Torula are also cultivated, one of which produces a beautiful coral red ("Rosahefe") and the other a black colour.

METHODS OF CULTIVATION.

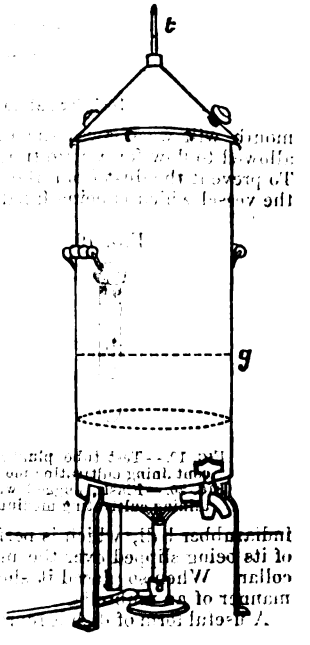
In cultivating the bacteria which have now been described, it is of essential importance to have trustworthy means of sterilising the apparatus and fluids used. In sterilisation by heat, it must be borne in mind that, besides the active, rapidly dividing form of the organism, which is readily killed by the temperature of boiling water, there is another form, that of the spore, which is more resisting. These may be raised to a considerably higher temperature in the dry state, without being killed. In order to ensure sterilisation of the vessels &c. used in cultivations, they are heated to a temperature of 150° C. for three hours. This is done in the hot box represented at Fig. 15. It is made of sheet iron, and the walls, floor, door, and top are double, and contain air. It is heated from below by a Bunsen's burner. The vessels to be sterilised are first cleaned and firmly plugged with cotton-wool.

FIG. 15.



Hot box for sterilising apparatus, at a temperature of 150° C.

FIG. 16.



Steaming apparatus.

Fig. 16 represents a convenient form of *steaming apparatus*. It is a cylindrical box with a conical lid. An iron grating is fixed at a level below the middle, and serves to support what has to be steamed. The water is poured in from above, and heated by a Bunsen's burner. The box and lid are invested by a thick layer of felt, which reduces the loss of heat, and so maintains the interior at a uniform temperature. A hole in the top of the lid admits a thermometer, which is held in place by cotton-wool.

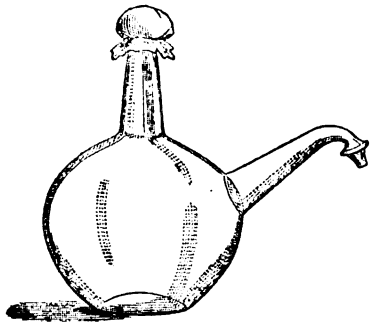
VESSELS.

A peculiar kind of flask is used to contain a sterilised fluid, and is so constructed that part of the fluid may be poured off without the remainder becoming infected from the air. It was introduced by Sir Joseph Lister. A wide neck opens into the body of the flask. To the side is attached a spout, which gradually narrows and is bent over at the end. A sort of collar a little above the mouth of the spout allows a cotton-wool cap to be fixed over it. When the flask contains some sterilised fluid both apertures are closed by means of cotton-wool caps. When it is desired to pour off some of the fluid, the cap is removed from the spout for the purpose. When sufficient liquid has passed out the flask is set upright, and the part of the contents

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which is contained in the spout flows back into the body of the flask. There remain, however, in the extreme end, which is bent over, a few drops, and these serve the purpose of closing this orifice and preventing the

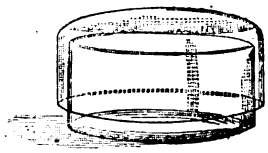
FIG. 17.



Flask to contain sterilised fluid.

entrance of air by it. These drops may now be removed with a purified cloth, and the mouth cleansed with an antiseptic and covered again with the cap. On again removing liquid from the flask, the first part which flows over the

FIG. 18.



Dish for potato cultivation &c.

mouth will wash away the antiseptic, so that the stream is allowed to flow for a little time before the liquid is collected. To prevent the dust from the air falling into the mouth of the vessel which is being filled, it is convenient to use a half

FIG. 19. FIG. 20.



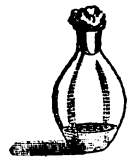
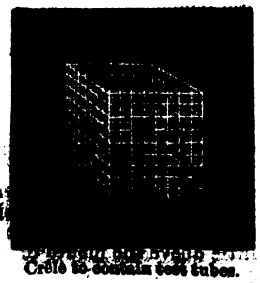


FIG. 19.—Test tube plugged with cotton-wool, and containing cultivating medium.
FIG. 20.—Flask plugged with cotton-wool, and containing cultivating medium.

indiarubber ball, which is perforated in the middle to admit of its being slipped over the mouth of the spout above the collar. When so placed it shelters the space below it in the manner of an umbrella.

A useful form of dish is represented in Fig. 18. It consists

FIG. 21.



Crate to contain test tubes.

of two similar parts, one of which fits over the other as a cover. The floor of the inner one is flat, so that plates &c. placed in it are approximately level. Cultivations are usually contained in test tubes. These should be wider than are generally employed for chemical purposes. When they are to be sterilised in the hot box they may conveniently be contained in the wire framework represented in Fig. 21. Fig. 20 represents a form of flask which is convenient for containing milk, bread infusion, &c.

The *inoculating needle* consists of a piece of platinum wire which is fixed in the end of a glass rod. Before it is used for inoculation it is passed through the flame of a spirit lamp, so as to kill any organisms which may be adhering to it.

Pharmacology and Therapeutics.

ROOT OF COTTON PLANT.

HAVING learnt that in America the root of the cotton plant (Gossypium herbaceum) is employed by doctors as a substitute for ergot of rye, M. Prochownick of Hamburg has studied the subject. There does not seem to be any glucoside or alkaloid in the root. Clinical observation goes to prove that a fresh infusion of the root best preserves the properties of the remedy. Administered as a fresh infusion in doses of from three to six or ten grammes, the root gives rise to intermittent uterine contractions like those pertaining to the natural process of parturition. Owing to these effects the drug may be given before the birth of the child, whereas ergot cannot be so recommended. The new remedy is not so powerful in its action on the smooth muscle fibre of the uterus, and so is of less value in post-partum hæmorrhage. M. Prochownick has used the infusion of the root of the cotton plant in some cases of metrorrhagia due to fibroid tumour. When given at the time of the hæmorrhage, the infusion does not influence the loss of blood; but if administered immediately after the bleeding the further losses are diminished in quantity, and occur at longer intervals. It is said that fibroid tumours have diminished in size under this treatment, and no increase in size has taken place in cases where the drug has been administered several months without intermission. The daily allowance is a single dose of ten grammes, or fifteen grammes in two doses. The same doses may be employed in cases of subinvolution. The commercial cotton plant ought to be macerated in cold water before making the infusion.

SCOPOLIA JAPONICA.

"Japanese belladonna root" has been the subject of an investigation by Professor Eykman, who confirms the results reported by Dr. Langgaard (*Pharmaceutical Journal*) so far as relates to the presence in the root of an alkaloid capable of dilating the pupil; it is stated that the mydriatic action is exercised by a solution of the strength of 1 in 5000. The fluorescence observed by other chemists in aqueous extracts of the root appear to be due to a non-nitrogenous body, obtained by exhaustion of the root with chloroform, and which has been named "scopoletin." It forms colourless needles or prismatic crystals, and is soluble in hot alcohol or boiling water; the aqueous solution has an acid reaction and both solutions a strong blue fluorescence. Scopoletin is said to be the decomposition product of a glucoside named "scopolin," which has a narcotic action but does not dilate the pupil.

KOLA NUT.

Specimens of fresh and dry kola nuts, Sterculia acuminata, a native of tropical Africa, were shown at the Société de Thérapeutique by M. Dujardin-Beaumetz. The nut contains a large proportion of caffeine, as well as a small quantity of theobromine and tannin. It is employed in the Soudan in two forms: as an infusion and for mastication, the nut being first roasted and then powdered. M. Dujardin-Beaumetz has used the article in cases of chronic diarrhœa with excellent results, thus confirming the statements of naval surgeons who have employed the remedy in the diarrhœa of Cochinchina. In cardiac affections where there is a tendency to asystole the drug has been found to act like coffee and caffeine, as a diuretic and as a tonic to the heart muscle. In many maladies showing signs of adynamia the tonic and stimulant properties of kola nut are of much value. M. Dujardin-Beaumetz has used the infusion of the burnt nut in the dose of fifteen grammes to a cup of water. An elixir or tincture has been prepared from the fresh nut and administered in doses of a dessert to a tablespoonful. Other alcoholic preparations may be made.

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PHELLANDRIA.

This ancient remedy has received fresh attention, and is said to be a most valuable agent in treating various affections of the chest characterised by excessive cough, whether dry or attended with expectoration. Its action appears to be of a sedative as well as of an alterative and strengthening kind. Narcotism is not produced by its administration. It appears to have a special action against pulmonary phthisis. The most acceptable preparation is the syrup of phellandria used in a concentrated form. Other preparations, such as the arseniate of iron, may be advantageously prescribed with the syrup.

BORATE OF QUININE.

This salt of quinine has been prepared by Zimmer of Frankfort-on-the-Maine. It is an amber-coloured powder of faintly bitter taste, and soluble in an equal weight of water. The dose varies from eight to sixteen or more grains. In chronic and acute diseases it is said to be borne even better than the hydrochlorate, particularly if given in wafer capsules with water or a little wine. The preparation is cheaper than other salts of quinine.

CEREBRAL ANÆMIA AND HYPERÆMIA.

Curci has shown, by trepanning experiments on dogs, that chloral, chloroform, ether, paraldehyde, and quinine produce anæmia, whilst morphia and nitrite of amyl cause hyperæmia of the brain. Atropine in small doses has but little effect; in larger doses it is rather an "anémiant."

PURE CANNABINE.

Some months ago the tannate of cannabine was highly recommended as a soporific and substitute for morphine. But as the tannates of organic radicles are said to have a very indefinite composition, and are only of value in masking the taste of the alkaloid itself, Eugene Bombelon of Neuenahr has proposed to employ pure cannabine. The tannate is first prepared by precipitation, and then decomposed by means of oxide of zinc. Cannabine appears as a greenish-brown dry powder, volatile without residue on platinum foil. It is a prompt soporific in doses of ·05 to ·1 gramme, and is said not to be preceded by a period of excitement. The pure drug is tasteless, insoluble in water, but readily soluble in alcohol, ether, and chloroform.

KAIRIN.

Chlorhydrate of kairin has again been the subject of investigation—this time by M. Dreby of Lyons. As the use of the drug is yet in its infancy, we shall give here a *résumé* of the latest worker's conclusions. Kairin may be given in doses of from six to eight grammes a day without inconvenience to the patient. It may be given in all febrile states, but more especially in cases of meningitis, acute articular rheumatism, and typhoid fever. By its action on the heart and pulse the remedy is really antipyretic. Like quinine, it is a powerful antiseptic agent. Kairin may be an efficient antipyretic when quinine and other agents fail. It does not act by causing stimulation of the vaso-motor centre, nor by diminishing the excitability of the heat-regulating centres, but by lowering the activity of the tissue changes. The accidental discomforts, such as vomiting, frontal headache, collapse, and cyanosis, are very unfrequent and not marked, with the exception of the chill which attends each fresh elevation of temperature.

FRUIT OF CALABASH TREE.

Dr. Peckolt, of Rio Janeiro, who has contributed so much to the history of South American plants, has published a communication upon the fruit of the "calabash tree" (Crescentia cujete, L.) The plant is generally supposed to have been introduced into America from Africa by negroes; but Dr. Peckolt says that the Portuguese found it in America on their arrival. At any rate, it has long been utilised by the natives for economical and medicinal purposes. The flesh of the barely ripe fruit and the expressed juice of the fruit are popularly esteemed as medicines, and Dr. Peckolt confirms the estimate of the latter as a laxative. An alcoholic extract, in doses of ·10 gramme, had the effect of a mild aperient, and the quantity could be increased to ·5 gramme, which exercised a strong drastic action without griping or ill effects. As an application against erysipelas, the fresh pulp is boiled with water until it forms a black paste, to which vinegar is added and the whole boiled together, after which it is spread upon linen. A chemical examination of the fresh fruit pulp yielded a new organic acid, crystallising in plates, to which the name "crescentic acid" has been given. It was obtained by exhausting with water an alcoholic extract of the pulp, heating the aqueous solution with lead acetate, suspending the lead precipitate in water, and decomposing and removing the lead, then evaporating the solution to a syrupy consistence, and leaving it to crystallise in a cool place. Besides crescentic acid, there were found tartaric acid, citric and tannic acids, two resins, a bitter, and an aromatic extractive substance, and a colouring matter that appeared to resemble indigo (*Pharmaceutical Journal*).

FLUORIDE OF QUININE.

Fluoride of quinine has recently been recommended by Dr. Weddell of Calcutta in the treatment of enlarged spleen. He has investigated the action of fluoric acid and the fluorides, and has come to the conclusion that in cases of chronically enlarged spleens of malarial origin the effects obtained are often very striking. In very small doses the fluorides have produced marked benefit in cases of rickets and other diseases associated with malnutrition of the osseous system. Of the salts of fluoric acid, Dr. Weddell considers those of quinine or quinetum (i.e., of the mixed cinchona alkaloids) to be the best.

ARTIFICIAL (?) CONIINE.

Some researches made by Herr Ladenburg some time ago led him to believe that some propyl derivatives of pyridine had a close resemblance to the natural alkaloid conia. After some trouble the one of these derivatives which appeared to be the most promising (α—isopropylpyridine) has been isolated and purified. The smell of the base is described as being strikingly similar to that of conia, and some experiments on frogs showed that the two bases (artificial and natural coniine) correspond in their physiological action. The specific gravity of α—isopropylpyridine at 0° C. is ·8660, that of coniine being ·8625; the former boils between 162° and 164° C.; coniine boiling at about four degrees higher. The two hydrochlorates, the hydrobromates, and the platinum salts correspond in crystallisation and solubility, but the hydrochlorates and hydrobromates differ slightly as to their melting points. The two bases also behave similarly towards certain precipitants. Herr Landenburg is inclined to look on the slight differences hitherto observed as being connected with the optical inactivity of the artificial base, and he thinks it is possible that if the base can be split up into its two optically active components, the dextro-rotatory portion will prove to be perfectly identical with conia.

SALICYLATE OF ATROPINE.

Salicylate of atropine appears to be in some quarters displacing the sulphate. Herr Frederici has prepared the neutral salt by dissolving the atropine (twenty-three parts) with the aid of gentle heat in a suitable quantity of pure alcohol, and then adding the salicylic acid gradually to complete neutralisation (eighteen parts), the solution being carefully tested with litmus paper during the operation. The liquid is then evaporated in a water bath to a gelatinous consistence, the mass assuming an amber colour, and the drying is finished in a sand bath or drying closet. The compound deliquesces quickly when exposed to the atmosphere, but is said to keep well if properly preserved, though the solution is very unstable.

CONVALLARIA MAJALIS.

As the result of a series of experiments made by M. Reboul on the physiological action of convallaria on the heart of warm-blooded animals, the following conclusions have been drawn:—Convallaria acts primarily on the nervous system of the heart, and more especially on its intracardiac elements; the chief effects observed consisted in the slowing or arrest of the cardiac beats (*Lyon Médical*, Nos. 37 and 38). Several tracings illustrating the effects of the drug on the cardiac beats and blood-pressure are given in the paper by Reboul.

THE Director-General of the Army Medical Department visited Aldershot on the 19th inst. for the purpose of examining the medical officers who have been undergoing a course of Army Hospital Corps instruction during the past three months. Dr. Crawford also examined two large classes of non-commissioned officers and men of the Army Hospital Corps who have been undergoing the special course for some months past.

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THE INTERNATIONAL HEALTH EXHIBITION.

COWLS AND VENTILATORS.

THE problem of ventilation should occupy a large space at the Health Exhibition. It is a question that affects everybody. Whether well or ill, an adequate air supply is equally indispensable for the maintenance of health or the curing of disease. At the Health Exhibition this all-important question is treated in a somewhat irregular manner. There is a small gallery or annexe close to the Central Gallery devoted exclusively to ventilation, where rival cowls in regimental array stand in long rows defiantly facing each other. But many more cowls may be found in quite another part of the Exhibition—namely, the section devoted to machinery in motion. We cannot attempt to describe individually all these contrivances; the battle of cowls has not yet been definitively fought. There are three or four rival principles governing the manufacture of cowls, but the votaries of each system imitate each other so closely that it is almost impossible to discern any crucial difference between them. Best known among the manufacturers of ventilating cowls is the name of Boyle, but in close opposition, and acting on a very similar principle, are the ventilators of Messrs. C. Kite and Co., Mr. Buchan's ventilator, and others. In each case the air strikes upon the angle of a metallic plate and is deflected to either side. The deflected wind passes in front of an opening, and produces a suction which creates the up draught. This opening is protected from the direct current of air by a metallic plate or shield; thus the air cannot blow over the chimney or pipe, cannot pass through the ventilator, but is turned aside; and this passing round instead of across the pipe gives rise to the upward suction within the pipe, which almost entirely obviates the danger of a down draught. A plane pipe without any cowl will, it has been shown, draw up, under certain conditions, as much air as the best ventilating cowls; but it cannot prevent the occasional down currents, and is less effective when there is only a very slight wind blowing. Mr. Buchan asserts that on one occasion his ventilator drew up 82,739 feet more air in eighteen hours than any of the rival ventilators with which it was competing. On the other hand, Messrs. Kite and Co.'s ventilators are much cheaper, and no one has studied the question without meeting endless and voluminous reports in favour of Boyle's patent. In any case, none of these are new inventions; and, indeed, though this section of the Exhibition is useful, it is certainly not very fruitful in new ideas.

Other cowls also act by deflection, but the wind is allowed to pass over the top of the pipe. In this case the deflectors are horizontal instead of perpendicular. The wind is thrown upon a covering and deflected at an obtuse angle that prevents its rushing down the pipe, and in describing this curve it produces a vacuum and consequent suction. Messrs. Sharp and Co. exhibit several cowls that work on this principle, and the same may be said of the exhibits of Dr. H. B. Dows' cowls, which has the further advantage of great simplicity. Steven's patent is very similer, and extensively patronised, while Kershaw's is a little more complicated and a trifle dearer. Both Messrs. Hill and Hey and Benjamin Hainsworth work on the same principle, but they combine their exhaust cowls with an inlet. This is a method we are not prepared to approve unless it be applied in a very different manner from that shown in the prospectuses of these firms. The cowl communicates with the centre of the room or apartment, and at once lets down air and draws air up. This double action is supposed to ventilate the room, but we fear it will only ventilate the air shaft, for if the inlet be not at some distance from the outlet a large portion of the air brought into the room will be drawn out again before it has time to reach the inmates. The last-mentioned firm also shows cowls constructed on the third of the four leading methods to which we have alluded. These are cowls which revolve either by the force of the wind or by the employment of some artificial power. In revolving the cowls act upon an archimedian screw below, which draws up the air within the pipe or shaft. Messrs. Ewart and Son and Mr. James Howorth also employ the archimedian screw, but the latter is able to apply it in a horizontal as well as a vertical position.

The fourth principle on which these cowls are built is similar to that which we described when speaking of the Papier ventilator exhibited in the French court. The action in this case is produced by imparting a rotatory motion to the air as it blows into the cowls. For this it suffices to make channels of a screw-like shape, and the air passing up these is converted into a sort of whirlwind when it reaches the centre and summit of the pipe or air shaft. This whirlwind has the effect of drawing up the air below, which rushes up to fill in the vacuum of the spiral. Messrs. W. Lord and Co., in their patents brought out last year, have cleverly contrived blades so as to catch the wind which ever way it may blow, and have also applied their system to railway carriages, where it is very much wanted. Lambs' ventilators revolve while giving a spiral motion to the air, and have been also much recommended. These cowls are employed for chimneys as well as for ventilators. Another chimney cowl is brought out by the Atmospheric Cowl Company, similarly based on the spiral system. The air in this case is admitted by a long spiral slit, which, however, is so narrow that it obviously runs great risk of being choked up with soot.

Instead of one or two expensive cowls, Mr. H. Thompson, C.E., has devised a ventilating ridge-tile, which he proposes to place along the entire ridge of the houses. Shafts communicating from the ceiling of each room to the attic would carry away the heated atmosphere. How far a down draught might result is an open question. But a little extra expense would obviate this danger. Mr. Thompson has an ornamental glass globe which he places near the outlet. The globe is loaded with mercury, and a weighted tube rises as the heat of the room expands the mercury. This action opens the valve in the outlet, the warm air escapes and automatic action is secured. The facility of application and the inexpensive nature of these contrivances commend themselves to all who are about to build houses.

With respect to inlets for ventilation, Ellison's conical ventilators are specially worthy of notice. These were exhibited during the Medical Congress of 1881, and we then described them at some length. The principle is that air should be admitted as through a trumpet. It is then so diffused as to prevent draught; but if it comes through a straight aperture or tube it will travel in a straight line, and therefore cause a cutting draught. Messrs. Hale and Co. have a more elaborate system of inlet by which the air is carefully diffused before it is admitted into the room. Doubtless draughts are thus avoided, but some scientific experiments should be instituted to ascertain how far these precautions reduce the volume of air drawn in.

We also observed a great number of patent window sashes which are intended to prevent accidents while cleaning and to facilitate ventilation. These are great improvements on the clumsy method generally used. We would recommend Meakin's sash fastener and opener, which by rendering the closing and opening of windows a matter of great facility incidentally promotes ventilation; as the window can swing forward they can be cleaned without danger. Mr. W. W. Nicholls has a method for opening both windows at once, the one balancing the other. For fanlights Leggott's and Bruce's patents may be recommended; but Messrs. Rownson, Drew, and Co. exhibit, in the South Central Gallery, an improved folding lattice shutter that will contribute most effectively to the ventilation of houses, especially when placed in somewhat isolated positions, suburban villas, &c. This is a strong, compact trelliswork fixed inside the window. It would be more difficult to break through this folding lattice shutter than through an ordinary window, so that the house may be thoroughly aired even when there is no one left to guard it.

Before concluding, there is one phase remaining, to which however, we can allude only in an apologetic manner, for it is impossible to render justice to the question in a short paragraph,—we mean the problems involved in the use of mechanical ventilators, such as the huge bells of the Norton ventilator, which, moving up and down in a cylinder, forcibly pump out the foul air from the cabins of ships; or Aland's patent induction ventilating fan for coalpits, and Capell's double-power blast fan. For the ventilation of houses, and especially public or large buildings, Blackman's air-propeller should be studied with attention. The theory on which this invention is based is that "the amount of air moved per horse power by any air-moving machine has definite relation to its feed and delivery surfaces." To ensure the best result it is maintained that the mechanical propeller should not be enclosed in any case or tube, but be allowed to feed itself from all sides. Acting upon this, the

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fans in question may be seen in full action, and crowds of visitors daily expose themselves to the powerful currents of air they create.

In conclusion, we regret to note the Æolus waterspray ventilator can only be seen in action at the vegetarian restaurant, as it well deserves to take its place among the many contrivances which we have examined.

SOCIAL SCIENCE CONGRESS.

THE following is a brief abstract of the most important papers which were read in the Health Department of the Social Science Congress, held at Birmingham on Sept. 17th and following days.

Dr. Norman Chevers, President of the Health Department, in his address on Health in England remarked that no power of concentrating language would enable him to detail within the space of time at his disposal even a bare list of the grave sanitary shortcomings which every stranger must perceive within a week after he sets foot on British chalk; and that though no one esteemed and gloried in more appreciatively than he did the admirable work done in the past half century by such sanitarians as Chadwick, Miss Nightingale, Simon, Sidney Herbert, Sutherland, Parkes, Gavin Milroy, Benjamin Richardson, Netten Radcliffe, and George Buchanan, yet he recognised with painful clearness the disheartening fact that without powers full almost to benevolent absolutism, the benefit conferred upon their suffering fellow-countrymen, even by such enlightened administrators of the public health as these, must always be very tardy in its advance and very narrow in its scope. He could not hope to live to see the day, but confidently anticipated that all who do will find that in a very short time after the appointment of a Minister of Public Health, invested with great powers, against which all narrow self-interested opposition will be futile, and commanding large means, nothing more will be heard of sewage-poisoned rivers, smoke and fog-blocked cities, or of public buildings and attractive suburban retreats constructed upon burial-grounds, quagmires, or abandoned lay-stalls; and, in addition, due regard will doubtless then be paid to the control of our charities for the sick, of some of which, as they were ruled in his time, an old writer said, "They are like children with water on the brain: the limbs wither as the heads increase."

Mr. Bayley described a method of treating human bodies for the prevention of putrefactive changes.

Dr. Pringle, in a paper on Asiatic Cholera and some of the Lessons learnt in its Home in India during Thirty Years' Service, divided the subject into four heads—viz., Origin, Spread, Treatment, and Prevention. Origin: With the single exception of the cholera epidemic of 1882–83, which appeared to come back from the Punjab to Bengal, every cholera epidemic of the past thirty years has originated in Lower Bengal, and worked up to the north-west, and so passed out of India. Spread: Judged by the experience of thirty years' observation in India, and the spread of the cholera outbreak from Juggernauth, on the Bay of Bengal, in 1856, and those at Hurdwar, on the Ganges, at the foot of the Himalayas, in 1867 and 1879, at all three of which Dr. Pringle was present as medical and sanitary officer of the district, Dr. Pringle appeared to favour the view that the disease spreads by human intercourse, though not in the contagious and infectious manner seen in small-pox and similar diseases. Treatment: Dr. Pringle's views on this subject were those of believers in the theory of elimination of the poison, and he was strongly opposed to the employment of opiates and alcoholic stimulants, as he was satisfied that, in the stage of reaction, and consequent reabsorption following that of collapse, they tended to the production of, if they did not actually produce, the febrile symptoms and those of congestion, which often proved fatal after the stage of collapse had been passed through. Dr. Pringle also contended that there was no such stage as premonitory diarrhœa. In true cases of Asiatic cholera in India, hundreds of instances are known in which the sufferers were in perfect health till they were seized with cholera, which, in a few hours generally, in severe epidemics proved fatal. Prevention: That which removes the conditions which produce diarrhœa and dysentery, and which seeks out and treats these cases, is the best measure of prevention. Quarantine on land is worse than useless: it conceals the disease when present, and secretly admits it when, till then, absent. In the case of railway changing and halting stations, special arrangements for the inspection and treatment and ultimate removal to destination of all suspicious or real cases of cholera will obviously be most beneficial. In the case of infected ships, a careful and independent inspection of crew and passengers should be made, and, as in changing and halting stations, special arrangements either on board another ship or on land should be available for the cure and treatment of the sick, and when the ship is empty it should be thoroughly fumigated and cleaned out.

Dr. Pringle also read a paper on Vaccination and Re-vaccination.

Dr. Page read a paper on the Sanitary Test Value of the Mean Mortality, with Suggested Means for Reduction of Child Mortality.

Mr. T. Pritchard, in discussing the question, What are the Best Means of Dealing with Town Sewage? premised that the answer some fifteen to twenty years ago would have been in favour of irrigation; the experience of the last few years had, however, caused a considerable modification of his opinion as to the best method for adoption, varying according to local circumstances and conditions. The author called attention to the conflicting opinions of chemists regarding the oxidising properties of rivers, for the purification of sewage effluent, when discharged into running water many times its volume, and pointed out that there are three methods generally adopted in this country for the disposal of town sewage—viz.: 1. Land purification. 2. Chemical precipitation. 3. Discharge into the sea. After discussing these methods in detail, the author concluded his paper by stating that no one particular system for the treatment of town sewage could be adopted for universal use, but that the local conditions and circumstances connected with each town must be carefully considered and a method of sewage disposal prepared in accordance therewith.

Mr. Lawson Tait, in a paper on the Utilisation of Town Refuse, remarked that few of the many questions which have engaged the efforts of sanitary authorities during the brief period in which real attention has been given to the care of the public health have caused so much anxiety as the disposal of town refuse. In a few favoured places the difficulties had not been pressing, but in a town like Birmingham, the rapidity of whose growth has been almost unexampled, and situated as it is in the centre of England, with a river no larger than a brook, the difficulties and dangers of the disposal of refuse have risen to an extent probably unknown in other large centres of population. Mr. Tait then described the process for the utilisation of the refuse as adopted in Birmingham, by burning the household refuse and subjecting the excreta to intense heat—these two varieties of refuse being in collection kept entirely separate.

Dr. Joseph Rogers read a paper on the Relations between Boards of Guardians and their Medical Officers. In introducing the subject, Dr. Rogers gave a brief sketch of the causes which led to the introduction of the new Poor-law, 1834, and showed that whilst every conceivable factor in the production of pauperism was inquired into by the Commission that sat in 1831, 1832, and 1833, the subject of sickness was altogether ignored; that as a result the Commission did not refer to this question in their report, and that the arrangements made for the treatment of the sick poor were conceived in the harshest and falsest economic spirit. Dr. Rogers then pointed out the nature of the reforms he advocated, which were an extension of the dispensary system, which had been established in London and in Ireland, to all unions and parishes in England and Wales; and, with the view to the improvement of the status and emoluments of medical officers, that their stipends should be paid wholly either from a county rate or from the Consolidated Fund; and that a larger measure of discretion should be accorded to those gentlemen in determining what medical comforts should be given to the sick poor under their charge.

Mr. R. Denny Urlin, in a paper on the Future of some of the London Hospitals, stated that there have been counted in a single copy of a London evening paper no fewer than ten urgent appeals for pecuniary aid on behalf of hospitals in or near to London. From many such instances it may fairly be concluded that, in spite of Saturday and Sunday Funds, there are a number of unendowed hospitals which cannot now pay their way; while as London grows, and contributions fall off, some of them will probably collapse. If this fate befell some of the small specialist institutions it would be no great loss; but there are others which from their posi-

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tion and mode of operation have become public necessities, and, if they are to be maintained, there must be sooner or later a subvention from public funds. This will certainly bring with it some degree of inspection and control, which will be advantageous. It is reasonable that any building which shelters a large number of inmates should be periodically inspected by a responsible officer. At present a hospital may be planned, built, and carried on without any due security for the safety and health of the inmates, and solely at the caprice of a secretary and a board; it may be rarely meeting and without special aptitude for this important work. Inspection for sanitary and other purposes should be compulsory in case of all such structures, while audit should be imposed as the condition of obtaining any grant from Government or local funds.

Dr. P. Murray Braidwood, in a paper on Hospital Ships, after describing the drawings he exhibited of two designs representing vessels of different classes or types, but of similar dimensions—viz., what are known as "spar deck" and "shade deck" steamers, remarked that at present the method adopted by Governments is to charter at the lowest freight rate the largest steamers available, and to convert them into hospital ships. Now, all medical men know that the treatment of sick and wounded persons in a building which has been converted from an ordinary dwelling-house into a hospital is always most unsatisfactory. Hence it is deemed necessary to erect, on shore buildings specially constructed for hospital purposes. It seemed to the author, therefore, that modern advancement requires that we afford equally suitable accommodation and arrangements for the treatment of the sick and wounded at sea. The objection of expense the author met by stating that it would be cheaper to build outright a hospital ship than to convert a trading steamer into one, and that such a steamer would serve best for the transport of troops, and if not required for either of these purposes, it could be utilised as a ship for convalescents.

Dr. Ashby, in considering how far may the average death-rate of a population be considered an efficient test of its sanitary condition, and by what means can the high death-rate of children be reduced, remarked that the causes of the high mortality are very complex, and include the influence of the health and life conditions of the parents in producing weakly children, insanitary conditions of dwellings, insufficient ventilation of rooms, and effects of smoky atmosphere, improper feeding of young infants, employment of mothers in mills &c., bad effects of burial clubs, poverty, degradation, and drunkenness of parents. In discussing the means to be adopted to reduce the high death-rate the author alluded to:—1. Improvement in the surroundings and homes of the working classes, provision of open spaces, diminution of smoke, improved dwellings, checks on burial clubs and friendly societies. 2. Improvement in the habits and status of the working classes by means of education, by extension of ladies' sanitary associations for systematic work among the poor.

In the opening of a paper on the same subject, Mr. Humphreys urged the public need for some numerical test of sanitary condition, and to the increasing use of the death-rate for this purpose he referred much of that growth of public interest in health matters which has been the mainspring of recent sanitary progress. In view of this plea for a numerical test, and of the good that has already resulted from the use of the death-rate for this purpose, the inexpediency of its surrender was pointed out, except under one of two conditions: unless its use can be proved to be absolutely mischievous, or unless a better numerical test could be provided in its place. As the result of his investigations, Mr. Humphreys considers that death-rates afford a numerical test of health condition sufficiently approximative and trustworthy to be useful, in the future as they have been in the past, as a stimulant of the public interest in health progress.

In a paper entitled a Plea for Homes and Hospitals for Incurable and Chronic Diseases, with special reference to the Midland Counties Home for Incurables at Leamington, Dr. J. Lancaster Ranking briefly reviewed the development of hospitals, and the provision which has been made throughout the length and breadth of the land for hospitals for special diseases, and classes of disease, and for convalescents; but remarked that homes and hospitals for incurable and chronic diseases are few, and insufficient for the wants of the community.

In discussing the best method of dealing with the products of combustion, Captain Douglas Galton stated that if we are ever to obtain an atmosphere free from smoke over the vast aggregation of buildings of which our towns are now composed, we can only do so by abandoning the crude method of burning coal in the manner of our early ancestors, and we must resort to the more scientific method of using gaseous fuel.

Surgeon-Major George A. Hutton, in a paper entitled Facts and Figures connected with "First Aid," and the Carriage of Sick and Injured Persons, said that although he looked on this question as affecting everyone—prince, peer, and peasant alike—for all are subject to accident, yet largely and in the main he considered it a working-man's question. He asserted that ambulance work would largely promote kindly, good, and reciprocal feeling amongst all classes, especially employers and their workmen, and he therefore claimed for it national recognition.

MR. SIMON ON JOHN NETTEN RADCLIFFE.

[THE following notes on the late Mr. Radcliffe were most kindly sent us for use anonymously, and not for independent publication. But they are so precious that we have, after some amicable contention, prevailed on their author to allow them to appear under his name, and that in the informal and epistolary style in which they reached us—too late for use last week. Even without the initials, the authorship could not be concealed. Apart from their value as an eloquent testimony to Radcliffe from the one man who is conspicuously able to give it, the notes have so much interest in regard to sanitary legislation, work, and literature, that we feel very grateful to the author for allowing us to publish them just as they stand. Mr. Simon, as may be inferred, writes away from books and the opportunities of reference, but we may safely trust his memory for the accuracy of the chief dates and facts, as we may his judgment on the merits of one of the best public servants the State has ever had, who has died all too soon either for its interests or his own.—ED. L.]

"First of all (for certainly here I need make no reference) let me say what very warm regard and admiration I had for him. Certain quite superficial peculiarities which he had—on the one hand, a somewhat unpunctuated or unaccentuated mode of speech, and, on the other hand, a somewhat frequent preference for semi-sarcastic (though never ill-natured) forms of expression—may sometimes have hidden from casual observers particular features of his real character; but I think it may truly be said of him that he grew in the respect and affection of his friends in proportion to the duration and familiarity of their knowledge of him. Thoroughly kind-hearted (indeed soft-hearted) towards his fellow-creatures, always generous of help and sympathy, very susceptible of personal attachment, and very staunch in retaining it, he always seemed to me to be equally characterised by the straightforward truthfulness and loyalty of a remarkably simple and honest nature. His intellect was of a typically English sort, and in that sort seemed to me one of the ablest I knew. I need not tell you that it was eminently practical. Whatever book-learning he had, or whatever imagination, or whatever abstract philosophy, one never saw any separate flourish of any of them; one saw, when he was at duty, a workman of rare vigour, thoroughly intent on what he had to do, and pursuing that object with inflexible perseverance; but of personal flourish, never a trace. When he had to investigate, he investigated with such dogged constancy and such absolute regard for truth as I have never seen surpassed; and when he had to advise, his advice was characterised in the same eminent degree by its wise regard to practicality. Widely experienced in everyday life, and highly vigilant in observation, he was, above all, greatly gifted with common sense, and his abundant technical knowledge was always under the control and guidance of that Anglo-Saxon form of genius.

"From nearly twenty years ago he has been well known, not only to me, but, I should suppose, to our profession at large,

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as one of the ablest of the small staff of men who were then beginning to head the progress of State Medicine in this country; and illustrations of the admirable quality of his work are to be found in the successive annual Reports of the Medical Department of the Privy Council, and, after 1871, of the Medical Department of the Local Government Board. Among reports which he made on the subject of particular local outbreaks of disease investigated by him there are especially three which I count classical. 1. The Report on the very remarkable Outbreak of Cholera at Theydon-Bois, near Epping, in 1865. 2. The Report on the East London Cholera Epidemic of 1866, and its relation to the use of the East London Company's Supply of Water. 3. The Report on the terrible Epidemic of Enteric Fever which prevailed in and about Marylebone in 1873, in consequence of a Dairy Company's Distribution of Infected Milk. These Reports ought to be familiarly known to every officer of health, not only for the tremendous significance of the lessons which they teach, but as examples to be studied and remembered of the minutely cautious and complete way in which local epidemics require to be investigated by anyone who aspires to advise on them. Equally classical in the literature of preventive medicine, though in another direction than the above, are the expositions which he made in matters of epidemiological history, more particularly in 1866 and 1875, with reference to the successive steps by which cholera had advanced from India and had been diffused to various countries of Europe; and in various late years with reference to the diffusions of Levantine plague. His acquaintance with the 'time and place' relations of epidemic and endemic diseases was unusually large and accurate, particularly in respect of cholera and plague, and of the therewith-connected questions of traffic between places and countries. It was, I believe, quite unique; it was like the familiar knowledge which a Charing-cross policeman is supposed to have of the omnibuses which pass his beat; and in the distribution of the work of the Medical Department I used always to look to him as a specialist in that branch of information.

"By the passing of the Sanitary Act of 1866 (which I always consider the best result and reward of my years of official life) both the responsibilities of Local Authorities for the prevention of disease, and likewise the responsibility of the Central Government for looking after them in that duty, were very largely increased; and that being the case, the Medical Department found it must prepare to communicate with the local authorities far more systematically than before on questions of disease-prevention of all sorts. Two branches of this duty, larger and more pressing than perhaps all other branches put together, were the two which related (1) to the prevention of filth-diseases, and (2) to the prevention of the spread of contagion. I need not here attempt to explain at length the policy which I tried to make effective for those and like purposes, but I must mention that at the beginning of 1869 the then new Chancellor of the Exchequer (Mr. Lowe) cordially consented to augment the staff of the Medical Department; that hereupon, for the first time, Buchanan and Radcliffe became permanent officers of the Medical Department; and that from this time they took a more active part with me in what followed—viz., in preparing schemes of detailed information and suggestion for local authorities with reference to local sanitary purposes, such as prevention of filth-nuisances, provision of hospital accommodation for infectiously diseased persons, &c. Much of this sort of work was at first done by them more or less jointly, as especially in my twelfth Privy Council Report, their studies of the various 'not-watercloset' sorts of privy contrivance which were in successful use in various places. Gradually Radcliffe gave more time to the observation of foreign epidemics, combining with that work the kindred specialism of helping port-authorities to understand their sanitary responsibilities with regard to ship-borne infectious disease. Under the Sanitary Act of 1866, and in accordance with the advice I had given in my Report of that year, we had done all we could to develop, instead of the obsolete quarantine system of the country, a system of dealing with infectious arrivals at ports in substantially the same way as inland infections were to be dealt with—i.e., by hospital isolation under the auspices of the local sanitary authority; and cholera only be dealt with on like principles with small-pox or typhus. Many of Radcliffe's local reports or memoranda on cases of that sort were highly interesting, but I have not at hand the means of particularising any.

"In 1874, when I codified in a Report to the Local Government Board all that I had to say on the subject of filth-diseases, I gave as an appendix to my own paper a thoroughly worked new study by him of the prevention of excremental nuisances—a most valuable second casting of the studies of 1869. And it seems to me that here again is a report of his which every officer of health in the country ought to know with the most exact familiarity.

"In 1875, when, as you may remember, there had been considerable cholera-alarms in Europe for the last year or two, and when an International Conference on Cholera had been held at Vienna, I found it desirable to re-examine our scientific standpoint in relation to the opinions of other countries; and the occasion was also taken for Radcliffe to extend his cholera paper of 1866 into a report for the whole decennial period. For the guidance of European opinion on the question of Red Sea quarantine, and other such questions, the mass of evidence given in that report with regard to the many ways by which cholera, so often as it grows in India, tends to reach Europe, is, in my opinion, the most instructive document in existence; and the man who can resist that kind of evidence must be either an idiot or a quarantine *employé*. To the ordinary medical reader it might be too laborious to study the paper, but as a *pièce de résistance* for the English Government when it has to confer with other Governments about their quarantine proposals the report is simply invaluable, and worth even the immense labour which Radcliffe bestowed on its compilation.

"As for poor Radcliffe's actual death, under the conditions which had so grievously come to him, of course it would be absurd to express regret. The moment for regret—and to me the regret was indeed extreme—was when I saw, now two years ago, that the strength, and usefulness, and happiness of his life had gone from him. I suppose that the disease to which he eventually succumbed must have been creeping on him from a much earlier period, and that it accounted for the degree to which, in years after my withdrawal from office, he developed in his way of work a certain slowness which, in its moderate degrees, I had previously noticed in him as peculiar. In regard of that question of rate of work, Radcliffe had from old been a psychological curiosity: for while undoubtedly he was capable of what in so industrious a worker seemed a quite extraordinary slowness of work, and this even at times when he was in his best health, he could be of equally extraordinary swiftness in cases where swiftness was evidently essential. Where, for instance, there was necessity to judge off-hand on the advice to be given to a local authority in an emergency or a panic, his opinion was formed and expressed with an almost military promptitude; and I do not remember that any such prompt judgment of his ever seemed to me mistaken. In what he considered his provisional judgment on the broad facts of cases, he never loitered, but yet never seemed to go wrong; and the slowness which, even in my days there, used to be proverbial, attached entirely to the extraordinary zeal which possessed him to give a finish of absolute certainty (in matters of fact) to passages which in general were of quite subordinate significance. Even on occasions when I was obliged to wish he could more easily satisfy his extremely fastidious self-criticism in matters of that sort, I could not but immensely respect the scrupulous regard for truth which was at the root of it. Noble steadfastness of work, abhorrence of incomplete testimony, and in general a loathing for pretentious and scamped work, were characteristic of him; and no doubt he strove to work up to his own high standards of accuracy and completeness long after he had begun to feel (through ill-health) more and more difficulty in the endeavour. I suspect, too, that the later circumstances of the office, allowing him to give more and more time to documentary compilations, and drawing him out less and less into the practical work in which he was so eminently qualified to excel, was probably unfortunate for his health. The public service, owing to the changes in the office, derived from his great qualities far less good than it might have got, and has lost in him (not by this last removal, but by the long incapacitation which led to it) such a man as it will hardly replace.

"Folkestone, Sept. 16th, 1884." "J. S."

PRESENTATION.—Dr. C. T. Ewart has, upon his resignation of the post of resident medical officer at the Fisherton House Asylum, Salisbury, been presented by the attendants, nurses, and inmates of that institution with an escritoire and inkstand.

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THE BENEVOLENT FUND OF THE BRITISH DENTAL ASSOCIATION.

IN the report of the annual meeting of the British Dental Association at Edinburgh, which appeared in our issue of Sept. 6th, pressure on our space compelled us to omit the first annual report of the above Benevolent Fund, which was inaugurated last year at Plymouth. The managing committee, through its chairman, Mr. John Tomes, reported that the fund was originally intended to be applied only to the relief of necessitous members of the Association, their widows and orphans; but, several most urgent cases having arisen during the year, it became necessary to extend the field of usefulness, and the rules as now amended permit of help being given to any deserving cases of necessity, with the sole proviso that the recipients must be registered dentists or the widows or orphans of such, strict inquiry being made. The treasurer (Mr. A. J. Woodhouse) reported that the donations and subscriptions promised and received amounted to £848 18s., and that relief had been administered to the extent of about £120 in eight cases in all. Sir Edwin Saunders, one of the trustees, said that £530 had been invested in Consols, and the vice-chairman, Mr. Dennant, explained that the committee had no intention of pauperising those aided, but of relieving "the distress of the widow, the helplessness of the orphan, and the dire misfortune of sudden calamity overtaking a professional brother." Their desire was to help the widows to earn their own living, and to find homes and education for the orphans. Mr. S. J. Hutchinson, who acted as honorary secretary (in the absence of Mr. Oakley Coles), stated that a local committee for Scotland had been formed by the Scottish Branch at this meeting, and that in the two dental schools in London, and in that of Edinburgh, it was proposed to establish free scholarships in the event of any of the pupils now being educated at the cost of the fund, deserving free education at any of these hospitals, which would most likely be granted by the medical staff of every dental school in the kingdom.

REPORTS OF THE STATE BOARD OF HEALTH OF NEW YORK.

A VALUABLE series of special reports has been issued by the State Board of Health of New York, each report dealing with some one special subject, and being complete in itself; and in this respect they very much resemble the reports of the inspectors of the Medical Department of the Local Government Board in this country. But they are by no means confined to medical subjects; one, for example, gives an exhaustive account on the drainage of the Tonawanda and Oak-Orchard Swamps, and another deals with the system of sewerage for the village of Peekskill, and these latter might justly form a type of the species of report which, in our opinion, should issue from the engineering department connected with our Central Sanitary Board. From the diagrams attached to some of the reports, we observe that through-ventilation of house-drains is strongly advocated, but the arrangement of openings by which it is effected differs from that suggested in the annotated model bye-laws in use here, for the two openings are much on the same level, both being secured by means of pipes carried to the top of the house. A more certain way of ensuring a through current of fresh air would be to have the inlet opening nearest to the house side of the drain-trap on the ground level, the more distant one, or the outlet one, alone being carried above the house. So also, the sewer itself is ventilated by means of a pipe carried up above the house. Whatever advantages attach to this system, it could not be enforced here under the Public Health Act, which limits any regulations as to ventilation &c. to house drains, the public sewers not being included.

THE PROPOSED NEWBURY DISTRICT HOSPITAL.

At a meeting of the general committee held last week, it was decided to obtain plans for a hospital of eight beds, allowing 1200 cubic feet for each patient, with provision for an extension to twelve beds.

THE CHOLERA EPIDEMIC.

CHOLERA still clings with much tenacity to Naples and to Spezia, both of them towns where the sanitary circumstances are eminently favourable to the extension of a disease which finds its principal means of diffusion in conditions of excremental pollution. At Naples the diminution in the fatality, which commenced some ten days ago, is still steadily in progress, the more recent records showing that about 150 deaths take place daily. In Spezia the severity of the epidemic is liable to considerable fluctuations. Thus, on the 18th inst. the deaths were nine in number, next day they rose to thirty, now again they are reduced to seven and nine a day. In the other parts of Italy previously infected no material outburst has taken place, but the diffusion of the disease in the province of Naples is considerable, and a fresh province—namely, that of Ascoli, is now reported as infected. At Rome another case has occurred, but it may be hoped that the means of isolation and other measures available will prevent any extension of the disease. In France the epidemic is more quiescent; a few deaths occur almost daily in Toulon and Marseilles, and at Perpignan, where the largest mortality is now maintained, five deaths a day are not unusual. As regards Spain, the contradictory statements as to whether cholera is really prevalent or not are still maintained, but it is quite certain that the Government feel no hesitation upon the point, for they daily record the cholera deaths in the province of Alicante, and now also in that of Tarragona, and they maintain by means of the troops a sanitary cordon round the places that are infected. The extension of the disease into the province of Tarragona has taken place notwithstanding the cordon. On the subject of land quarantines it is noteworthy that Dr. Proust, the chief French sanitary inspector, has reported that the extensions of cholera which have taken place, both into Italy and Spain, of themselves suffice to show that quarantines in populous districts are not only useless but that they become centres from which the disease diffuses itself. He now advocates, in the place of these effete measures, the rigorous enforcement of measures of public health, coupled with proper medical inspection at certain centres along the principal lines of human traffic.

QUARANTINE AND INFECTED PORTS.

At Gibraltar quarantine on vessels arriving from Italy is extended from seven to fourteen days, and all vessels arriving from Indian ports are subjected to twenty-four hours' quarantine. All arrivals from Spanish ports are subjected to a quarantine of fourteen days, and all arrivals from the Mediterranean ports of Spain are ordered to quit Gibraltar.

Vessels from Naples are subjected to ten days' quarantine, in the rest of the continental littoral of Italy.

Quarantine at the frontier of Italy, in the provinces of Turin, Cuneo, and Port Maurizio is abolished.

In Greece vessels from Tunis are subjected to a quarantine of five days' observation.

Vessels arriving from Spanish ports are refused admittance in ports of Morocco. The same regulation is still maintained as regards vessels arriving from France, Italy, and Algeria.

From Nice it is reported that the quarantine at the Var for passengers arriving at that town from the East has been abolished.

At Malta passengers coming from England are to make, before embarking, a statutory declaration that they have not been during twenty-one days immediately preceding their departure from England in any district on the Continent infected by cholera. This declaration must be produced on arrival at Malta, otherwise passengers will not be allowed to land and the vessel will be kept in quarantine. The infected districts are Italy, Spain, and France south of Lyons. Arrivals from French and Spanish ports in the Atlantic will be subjected to twenty-one days' quarantine. Arrivals from ports beyond the Suez Canal are admitted to pratique, provided no passengers or merchandise have been shipped at any ports in Egypt, in the Red Sea, or the Mediterranean.

At Pernambuco vessels arriving from Europe are subjected to quarantine ranging in length from twenty-four hours to ten days.

At Odessa and other Black Sea and Sea of Azoff ports,

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quarantine of fourteen days is imposed on vessels arriving from Gibraltar. The quarantine in Algeria on arrivals from France has been reduced from seven to five full days.

At Constantinople ten days' quarantine has been applied to arrivals from the Spanish Mediterranean shore, in the same manner as to arrivals from France and Italy. Arrivals from Tunis have to perform five days' quarantine at Turkish ports.

WILLS OF MEDICAL MEN.

THE will of William Parker, M.D., formerly of 25, Palmeira-square, Hove, Sussex, but late of 37, Pulteney-street, Bath, who died on July 13th last, was proved on the 22nd ult. by Mrs. Eleanor Parker, the widow, one of the executors, the value of the personal estate exceeding £4400. The testator gives, devises, and bequeaths all his real and personal estate to his wife absolutely.

The will and codicil of Job Lockyer Seale, M.D., late of Ashton House, Steeple Ashton, Wilts, who died on July 17th last, were proved on the 3rd inst. by the Rev. Frederick Samuel Seale, the son, one of the executors, the value of the personal estate being over £4300. The testator bequeaths certain household furniture and effects, and an annuity of £130 for life or widowhood, to his wife Mrs. Marianne Seale; and remainder of his furniture and effects to his said son. The residue of his property is to be divided between his son's children.

The will of Mr. Frederick William Harris, retired Surgeon-Major Bombay Army, formerly of Leigh Lodge, Leigh, Worcestershire, but late of Buckingham Lodge, Vansittart-road, Torquay, who died on the 7th ult., was proved on the 1st inst. by Mrs. Kate Harris, the widow and sole executrix, the value of the personal estate exceeding £2300. The testator gives, devises, and bequeaths all his real and personal estate to his wife for her own absolute use and benefit.

The will of Donald Cochrane Campbell, M.D., late of Warley, Essex, who died on the 8th ult., was proved on the 10th inst. by Mr. James William Copland, the acting executor, the value of the personal estate exceeding £2500. The testator bequeaths £100 and all his effects, horses and carriages, to his wife, Mrs. Jessie Euphemia Campbell. The residue of his real and personal estate is to be held upon trust for his wife for life and then for his children.

The will of Mr. Thomas Wallis McDonald, Inspector General of Hospitals, R.N., late of Teignmouth, Devon, who died on April 1st last, was proved at the Exeter district registry, on the 28th ult., by Mrs. Louisa McDonald, the widow and sole executrix, to whom he devises and bequeaths all his real and personal estate. The personal estate exceeds £580.

The following legacies have recently been left to hospitals and other medical institutions:—Mr. Edwin Cox, late of 11, Rochester-terrace, Kentish-town, £500 each to the Royal Free Hospital, the City of London Truss Society, the Hospital for Consumption and Diseases of the Chest at Brompton, the Cancer Hospital, Middlesex Hospital, Westminster Hospital, Charing-cross Hospital, and St. Mary's Hospital.—Mrs. Rebecca Gray, widow of John Charles Gray, late of the Strand and of Windsor, Berks, £1000 to the Charing-cross Hospital.—Mr. William James Patterson, late of Carlton-crescent, Southampton, £1000 to the Royal South Hants Infirmary; £5000 to the executive body of the same Infirmary to be called "the Patterson Chaplain Fund," the income to be appropriated as a stipend for a chaplain, who is to be a member of the established Episcopal Church of England, and a graduate of one of the universities of Oxford or Cambridge; £500 to the Southampton Dispensary and Humane Institution; £250 each to the Royal Hospital for Incurables, Putney, and the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, and £150 each to St. Mary's Cottage Hospital, Southampton, and the Sanatorium, Bournemouth.—Mr. J. J. Crosthwaite, £300 to St. Michael's Hospital, £100 to the Children's Hospital, and £100 to the Hospital for Incurables.—The late Mr. John Walker (Preston), £2000 to the Preston Infirmary.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Sanitary State of Gateshead, by Dr. BARRY.[1]—A voluminous report has been issued by Dr. Barry on the sanitary state of the borough of Gateshead, and on the prevalence of infectious diseases in the district. After describing the district generally, as also from a topographical and geological point of view, Dr. Barry enters into details as to the streets and dwellings. Some description of the state of Gateshead, as given by the commissioners who reported on cholera there in 1854, shows that at that date the poorer parts of the town were built back-to-back, or that the back yards between them were so small that they served for little else than the reception of accumulations of filth, that the narrow streets were habitually dark, damp, and unwholesome, and that they often constituted culs-de-sac; or that narrow courts and entries were made to abut on undrained banks of a clayey soil. To all this was added what so usually follows on house accommodation of this sort—namely, overcrowding, filthy habits, and disease. Alterations and improvements have been made since that date, but it is still possible to report that there are districts where somewhat similar defects of house arrangements exist, the insanitary conditions being aggravated by the number and the size of the filth receptacles in the yards. A large number of houses are divided off into what we call tenement houses, and these are at times situated around unpaved or badly paved yards, into which slops are apparently thrown quite regardless of the position of the slop-sink, and consequently the ground is habitually sodden with filth. What is especially needed in Gateshead is action under the Artisans and Labourers' Dwellings Acts of 1875 to 1882, and the enforcement of proper bye-laws as to tenement houses under Section 90 of the Public Health Act, 1875. The details given by Dr. Barry as to individual tenements are worthy of the notice of the Royal Commission on the Dwellings of the Poor. Thus of Riley's house it is said:—"Single room, ground floor; capacity, 1720 cubic feet; six inmates, 286 cubic feet per head; condition, filthy and wretched in the extreme; typhus prevalent. The room above inhabited by another family, no furniture except a broken chair and a small straw heap in one corner covered with a ragged quilt; typhus also." As regards Murray's yard a long description is given, and of the second storey it is explained that it is let off into two-roomed and one-roomed tenements; the third floor is similar, and the excrement and filth of the families in the upper rooms are kept in buckets in cupboards till full, and then emptied into the midden. Several cases of typhus prevailed here in 1882. The general arrangements for the disposal of excrement and refuse are unsatisfactory as regards the poorer classes, and the bye-laws relating to this subject are, as so often is the case, such as to maintain and perpetuate the evils which need remedy. Thus, instead of limiting the capacity of ashpits and middens by some maximum size which none shall exceed, the bye-law as to this says that they shall not be *less* than a specified size, the result being that huge receptacles for filth can be constructed in the midst of human dwellings. The conditions of the sewers and water-supply are next entered into in much detail, and then follows an elaborate account of the mortality statistics. The population is estimated at 69,620 in 1883, the mean mortality for the ten years ending 1880 amounts to 26·1 per 1000, as opposed to 24·0 and 21·4 for the twenty large towns, and for England as a whole, respectively, and the excess is shown to have been mainly due to the epidemic prevalence of one or other of the infectious fevers; small-pox, scarlatina, "fever," and also diarrhœa having largely contributed to it. All this is clearly set out in a series of tables; and then reference is made to certain recent prevalences of typhus and small-pox, which were the immediate causes of the inquiry which has been

[1] To be purchased of Knight and Co., 90, Fleet-street; Shaw and Sons, Fetter-lane; Hadden, Best, and Co., West Harding-street; and P. S. King and Son, King-street, Westminster.

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instituted. As regards the small-pox, it is worthy of note that whilst the actual number of cases of small-pox was larger in the districts where there was overcrowding and bad house accommodation, yet the proportion of fatal cases to persons attacked was highest amongst the well-to-do; and Dr. Barry is inclined to attribute this difference, to some extent, to the fact that whilst in the poorer parts of the town the vaccination is almost exclusively performed by the public vaccinator, whose work is unexceptionable in quality, in the better-class districts the vaccination is almost entirely performed by the private medical man, in which case regret is expressed that it was frequently of a very imperfect character. This same condition has, in one of Dr. Buchanan's recent reports, been also referred to in connexion with vaccination in the metropolis. The mean age of persons attacked with small-pox in Gateshead was 19·4 years amongst the vaccinated and 8·9 years amongst the unvaccinated, by far the greater proportion of attacks amongst the latter class being in children under five years, whereas amongst the vaccinated no case occurred under one year, and no appreciable prevalence occurred until ten years were reached. The report next goes into a lengthened description of the hospital provision available, pointing to some serious defects which were associated with the early history of the infectious buildings. The report is further illustrated by a series of lithographs, showing the arrangement of houses, &c., and it may be taken as a type of a complete report on the general sanitary circumstances and administration of a large and populous borough. A series of recommendations, suggesting the sort of action which is needed in the future, is appended to it.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 20th inst., 5732 births and 3518 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 25·6 to 21·4 per 1000, further fell last week to 21·0. During the first twelve weeks of the current quarter the death-rate in these towns averaged 23·1 per 1000, against 20·6 and 20·0 in the corresponding periods of 1882 and 1883. The lowest rates last week in these towns were 14·9 in Portsmouth, 16·6 in Brighton, 17·1 in London, and 17·2 in Birkenhead. The rates ranged upwards in the other towns to 28·3 in Blackburn, 28·3 in Preston, 28·8 in Salford, and 29·9 in Leicester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had declined in the four previous weeks from 1314 to 802, further fell last week to 715; these included 413 from diarrhœal diseases, 91 from "fever" (principally enteric), 83 from scarlet fever, 52 from whooping-cough, 41 from measles, 29 from diphtheria, and 7 from small-pox. These diseases caused the lowest death-rates in Plymouth, Halifax, and Portsmouth, and the highest in Sheffield, Sunderland, and Hull. The highest rates of mortality from diarrhœa were recorded in Sunderland, Hull, and Leicester; from scarlet fever in Sheffield and Cardiff; from measles in Birkenhead and Bolton; and from "fever" in Preston, Hull, and Sunderland. The 29 deaths from diphtheria in the twenty-eight towns included 21 in London and 3 in Liverpool. Small-pox caused 6 deaths in London and 1 in Sheffield. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had steadily declined in the ten preceding weeks from 1368 to 477, further fell to 471 on Saturday last; the new cases admitted were 65, against 77 and 66 in the two previous weeks. The Highgate Small-pox Hospital contained 26 patients on Saturday last, one new case having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 167 and 170 in the two preceding weeks, declined last week to 159, and were 51 below the average. The causes of 84, or 2·4 per cent., of the 3518 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Wolverhampton, Leicester, and in four smaller towns. The largest proportions of uncertified deaths were recorded in Huddersfield, Leeds, Sunderland, and Oldham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which in the two preceding weeks had been 20·5 and 21·5 per 1000, declined to 20·8 in the week ending the 20th inst., and was slightly below the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 11·8 and 12·2 in Perth and Greenock to 23·6 in Glasgow and 24·1 in Paisley. The 503 deaths in the Scotch towns included 51 which were referred to diarrhœal diseases, 23 to whooping-cough, 20 to diphtheria, 15 to "fever," 14 to scarlet fever, 7 to measles, and not one to small-pox; in all, 130 deaths resulted from these principal zymotic diseases, against 127 and 118 in the two preceding weeks. These 130 deaths were equal to an annual rate of 5·4 per 1000, which was 1·1 above the average rate from the same diseases last week in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 55 in each of the two preceding weeks, declined to 51, and included 24 in Glasgow and 12 in Dundee. The 23 deaths from whooping-cough showed a slight increase upon recent weekly numbers; 10 occurred in Glasgow, 4 in Edinburgh, 4 in Dundee, and 4 in Aberdeen. The 20 fatal cases of diphtheria showed a considerable increase, and included 11 in Glasgow and 4 in Dundee. The deaths from "fever," which had been 9 and 10 in the two previous weeks, further rose to 15 last week, of which 12 were returned in Glasgow. The 14 fatal cases of fever included 11 in Glasgow, where 5 of the 7 deaths from measles were also recorded. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns showed a decline of 10 from the number in the preceding week, and were considerably below those returned in the corresponding week of last year. The causes of 78, or nearly 16 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 29·3 and 29·4 per 1000 in the two preceding weeks, declined to 26·6 in the week ending the 20th inst. During the first twelve weeks of the current quarter the death-rate in the city averaged 25·0 per 1000, the rate during the same period being 21·3 in London and 16·8 in Edinburgh. The 179 deaths in Dublin last week showed a decline of 19 from the number in the previous week, and included 32 which were referred to the principal zymotic diseases, against 42 in each of the two preceding weeks; of these, 21 resulted from diarrhœal diseases, 5 from scarlet fever, 4 from whooping-cough, 1 from diphtheria, 1 from "fever," and not one either from small-pox or measles. These 32 deaths were equal to an annual rate of 4·8 per 1000, the rate from the same diseases being 2·7 in London and 4·0 in Edinburgh. The fatal cases of diarrhœa, which had declined in the three previous weeks from 48 to 24, further fell last week to 21. The deaths from scarlet fever, which had been 7 and 11 in the two preceding weeks, declined to 5 last week. The 4 fatal cases of whooping-cough exceeded by 3 the number in the previous week, while those of "fever" showed a decline. Three inquest cases and 4 deaths from violence were registered in the city during the week, and 39 deaths occurred in public institutions. The deaths of infants showed a marked increase, while those of elderly persons were considerably below those recorded in recent weeks. The causes of 47, or more than 26 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General Thomas John Murphy, M.D., is granted retired pay, with the honorary rank of Surgeon-General; Brigade-Surgeon Fitzgerald Edward Scanlan is granted retired pay, with the honorary rank of Deputy Surgeon-General; Surgeon-Major James d'Altera is granted retired pay, with the honorary rank of Brigade Surgeon; Brigade Surgeon George Faught to be Deputy Surgeon-General, vice Francis Holton, M.B., retired upon temporary half-pay; Surgeon Patrick Joseph Gallwey, M.D., has resigned his commission.

ADMIRALTY.—Fleet Surgeon Alexander McDonald, M.D., has been placed on the retired list of his rank.

The following appointments have been made:—Staff Sur-

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geon Bernard Renshaw, to the *Boscawen*; Surgeon Herbert E. Marsh, to the *Alexandra*, additional; Surgeon John Brunt, to the Royal Marine Artillery at Eastney; Surgeon John J. O'Doherty to be Surgeon and Agent at Cushenden and Cushendall.

RIFLE VOLUNTEERS.—3rd Hampshire: Surgeon and Honorary Surgeon-Major John Robert Kealy, M.D., resigns his commission; is also permitted to retain his rank, and to continue to wear the uniform of the corps on his retirement. —1st Suffolk: Pryce Jones Langford Morris, Gent., to be Acting Surgeon.

Correspondence.

"Audi alteram partem."

THE ALLEGED CAUSE OF CHOLERA.

To the Editor of THE LANCET.

SIR,—There is a subtle danger involved in the assumption of some hypothesis or doctrine at the outset of an inquiry, on account of the influence which it insensibly exerts in systematising the facts so as to harmonise with the assumption. The impressions derived by those who have an opportunity of registering and considering all the facts connected with the progress of an epidemic, and of comparing one epidemic with another, are necessarily different from those of a local, a clinical, or a pathological observer. It is quite true that the investigations of the latter are more likely to be accurate, because their restricted nature allows of their being indirectively and exhaustively made. In speaking of the need for the exercise of caution before concluding that cholera infection through the medium of a specifically contaminated water-supply had yet been demonstrated, it is scarcely necessary to add that no sane man doubts the great importance of a pure water-supply. Of course, if there be a specific germ or cause it will probably be present in water, but it is, and must be, very difficult to prove it, for a population exposed to the risk of drinking dirty water is commonly living under all the other conditions rendering it susceptible to epidemic disease. Practically, life assurance offices are little, if at all, affected by cholera risks, the classes who effect life assurances not being usually those who reside in cholera localities. Have we, in reality, any evidence to show that the use of an impure water would prove more injurious than the use of some saline purgative during the prevalence of cholera? In studying cholera, it should be borne in mind that so-called sporadic cases, an outbreak of limited extent, cholera on shipboard, in a regiment on the march, and an epidemic, whilst so many separate manifestations of one and the same disease, are otherwise distinct things, each having its own history and significance. On all these points I know of no work except Bryden's which gives any foothold of facts; and it was probably due to his intimate acquaintance with these that he was so often enabled, as he certainly was, to make his forecasts of events.

In the Bengal Presidency it frequently happens that, west of the eightieth degree of east longitude, individual cases of cholera in the last quarter of the year precede the appearance of the disease in the following spring; and a bad cholera in spring is often, as a matter of experience, found to be followed by a worse one during the monsoon; but it does not at all follow that the outbreaks should subsequently occur at the same stations as those in which the individual cases had appeared. In 1875 cases of cholera occurred almost simultaneously at the hill stations of Dharmsala, Simla, and Kasauli, and at the same time as in the Deccan and the Berars. The percentage of villages or stations attacked in a given epidemic area is relatively small; attempts to prove that cholera has, as an epidemic, radiated from any given outbreak as a common centre have failed, and it is a matter of observation that it does not retrograde. In other words, it does not proceed at all equally in all directions, neither does it happen that a place or district which has been heavily visited one season suffers disproportionately the next; on the contrary, it generally escapes. Of course, several reasons might be assigned for this, that by Pettenkofer, for example.

In the second Afghan War (1879), while the cholera may be said to have ceased in India in September, it was still prevailing beyond the Indus, in the Khyber and Kurram routes, even up to October, having penetrated as far as Cabul itself in the preceding July. The troops returning from Afghanistan to India in the first week of June actually marched into the cholera, which was advancing to the north. The heat was terrible (110° to 115° F. in the shade), and their sufferings and exhaustion great from this and dust storms. Their losses from cholera were severe, and the disease in at least one of the corps did not disappear for some time, in spite of frequent changes of camps and water-supply. I never heard that this body of troops lighted up an epidemic or an outbreak in the stations through which they passed, which they would certainly have had the credit of having done had they been going in the opposite direction—viz., to Cabul, instead of to India.

The experience at Meean Meer, in the summer of 1881, was interesting in indicating the effect of locality; for the troops were moved out from that station in consequence of cholera amongst them, lost it after a few days, returned, were again affected, and went into camp the second time with a similarly successful result. What cholera has done before it will commonly do again, and once the disease has appeared in Lahore and Meean Meer as part of an epidemic, it may be expected to continue from time to time up to the end of September.

That there should be certain localities which resist the development of cholera in spite of the frequency and the extent of their communications is sufficient to indicate that the transmissibility of that disease is subordinated to some complex influences. The Hurdwar pilgrims carried cholera with them into Mooltan in 1867, and as Mooltan had become a great railway terminus, it was alleged that its immunity from cholera—an immunity lasting over half a century—would be destroyed. But from 1868 to 1875, out of a population exceeding a million in Mooltan, Mozuffargarh and Dera Ghazi Khan, the districts tapped by railway communications, only seventeen deaths from cholera were registered, notwithstanding that the Punjab had suffered from no less than three epidemics during that interval. And I believe that, to come nearer home, Lyons in France, and Birmingham in England, have manifested a similar insusceptibility.

The cholera of 1883 in Egypt began at Damietta, and advanced in a pretty straight line to Cairo in the direction of the prevailing wind, all the places attacked having severally gone through much the same series of phenomena in pretty nearly the same period of time. It did not retrograde, neither did it spread to Europe, although opportunities for its doing so were not wanting. From the same facts different inferences were drawn by different observers: one set holding that it spread along the line of human intercourse, and, directly or indirectly, by it; the other, that as cholera can only manifest itself in the human organism, that is exactly what it should be expected to have done, if human beings are the reagent rendering the presence of cholera manifest. It may be true, of course, that some cholera germ or virus multiplies enormously in the human body, and is disseminated by it. It is quite right that cholera should be studied like any branch of natural history or micro-parasitic pathology; but it seems necessary to assume the existence of bacillus germs or resting-spores, capable of movement by the wind and of resistance to heat, to explain all the phenomena. There may, however, be another aspect of the question. The cause of cholera may be attributable to a condition or quality of matter rather than to matter itself; and it would be easy though unprofitable to cite in illustration the action of magnetism on iron, or what is known as catalysis. We know the influence of locality in which cholera is present, and, for all we know, human beings may (if the apparent paradox be pardoned) represent so many pieces of the locality in movement. Such individuals may sicken and die of the disease and impart it to others, but seemingly with relatively slight results unless they happen to be travelling in the direction and at the rate at which some unknown epidemic influence is itself going. I hold that it would be a matter of prudence, at any rate, to divert the course of a cholera-stricken crowd of people from occupied towns and villages. The fact of there being an appreciable interval between the exposure of an individual and his attack (incubation?) is, however, to my mind evidence that the cause is a material one—possibly a vital agent.

We next come to the *Crocodile*, which left Bombay early

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in April of the present year. It had cases of cholera on board, but no fresh admission for that disease took place after the 20th of April. The affected men had all come from India. The affected and non-affected drank the same water, and the men of the Army Hospital Corps who were embarked from Malta to attend on the sick did not take the disease. All the passengers and their baggage were disembarked in this country and scattered to their several destinations without any alleged introduction or appearance of cholera anywhere, so far as I am aware.

There is no need to enter into the subsequent events at Toulon and Marseilles. It is possible that some fresh light may be thrown on the history of those events, but, so far as I can ascertain, there are several facts that cannot be reconciled with the assumption that the *Sarthe* introduced the disease into Toulon; and even if she did, it is not easy to see, considering the long interval that had elapsed between the date of the cholera cases on board and the occurrence of those at Toulon, how any practicable quarantine measures could have prevented it. Later accounts state that at Marseilles some fatal cases of malignant cholera occurred last year, and some persons had been attacked this year before the first case at Toulon was reported.

There is one point which requires observation, and that is the frequency with which the inmates of hospitals are first attacked at a station, for this is a fact that arrested the attention of the present Director-General and myself whilst we were in India. The patients were under treatment for ordinary diseases, and had not been admitted for diarrhœa. Possibly the continuous occupation of the wards of a hospital, as compared with other buildings, may afford an explanation. When cholera is present as an epidemic, people may be said to be in a state of unstable equilibrium, and in the case of attendants on the cholera sick I should expect that the depression arising from confinement in a hospital, and the loss of exercise and of sleep, would have an injurious influence.

The 1884 epidemic in Europe is, to my mind, but part and parcel of that of 1883 in Egypt, as that was probably part of a movement from India, and, so far, the western limit of the same epidemic is the affected portions of the continent of Europe. Cholera, as a rule, invades the Central Provinces of India from the east. But in 1882 there was no invasion from that quarter; on the contrary, the disease came from the north out of Bengal and passed towards the south-west, rendering it highly probable that the epidemic moved in this direction towards the seaboard of Bombay, in which city the deaths had fallen in 1882 to 169. At the time that cholera appeared in Egypt, however, there was a large increase, for in the three months July, August, and September, when so many died in Egypt, there were 821 cholera deaths in Bombay city. Meantime there have been some cases of so-called *cholera nostras* in this country, which, in their clinical features, were so apparently identical with cholera as seen elsewhere that in an epidemic they would have been unhesitatingly identified with it.

I desired to have added some remarks in regard to the average duration of a typical outbreak of cholera under different circumstances, and as to the measures which should be adopted when cholera is present or threatening, such as are justified or indicated by experience; but to do this would be to extend this communication to interminable length, and I fear the patience of your readers has been already exhausted.

I am, Sir, yours truly,

J. A. MARSTON,
Deputy-Surgeon General, A.M.D.

September, 1884.

THE UNCERTAIN COMPOSITION AND ACTION OF GREY POWDER.

To the Editor of THE LANCET.

SIR,—Grey powder—hydrargyrum cum creta—is generally believed to be one of the mildest of the preparations of mercury, and as such it is often prescribed for infants and young children, its composition being supposed to be one part of metallic mercury to two of chalk. For many years I have entirely ceased to prescribe that preparation, and, with your permission, I will briefly state my reasons for discontinuing its employment. When I was in the habit of using it, I found its operation to be most uncertain and variable; at one time its action was mild, while at another it caused severe pain, vomiting, and purging. My mistrust of it was finally confirmed by a conversation which I had many years ago with Professor Redwood of the Pharmaceutical Society. The professor told me that in consequence of having heard frequent complaints of the uncertain and often violent action of the drug, he had analysed a number of specimens, and the result was that all, or nearly all, were found to contain a variable proportion of the two oxides of mercury. The last number of the *Pharmaceutical Journal* (Sept. 20th, p. 230) contains an interesting report and discussion on the strength and condition of commercial specimens of hydrargyrum cum creta and other mercurial preparations. Out of twelve specimens of grey powder analysed, not one was found free from the oxides of mercury. One sample contained as much as 2·2 per cent. of mercurous oxide and 4·67 of mercuric oxide; and another had 6·15 of mercurous oxide with 2·8 of mercuric oxide. The presence of so large a percentage of the oxides of mercury explains the occasional violent action of the drug. The mercuric oxide meeting with hydrochloric acid in the stomach would be at once converted into the poisonous perchloride.

From the discussion which followed the reading of the paper it would appear that the variable proportion of the oxidised mercury depends, not upon the manner in which the ingredients are rubbed together, whether by hand, with a mortar and pestle, or by steam-driven machinery, but upon the length of time during which the drug has been exposed to the air after its preparation; so that, while a freshly prepared specimen might contain no oxidised mercury "in a month," as Mr. Tyrer, a manufacturer, said, "a difference would be perceptible, in three months still more, and so on until a point was reached when the oxidation ended, though what that point was he was not prepared to say."

My object in this communication is to direct the attention of the profession to the uncertain composition and operation of this commonly employed drug, and especially to point to the occasionally distressing results of its administration to young children.

Many years ago, during a consultation with Sir Benjamin Brodie, he asked me how I would treat syphilis in an infant. I replied, "With grey powder;" upon which he said, "And the result would be that you would gripe and purge your patient to death."

I am, Sir, yours truly,

Savile-row, Sept. 22nd, 1884. GEORGE JOHNSON.

THE CHOLERA FUNGUS AND SULPHUR TREATMENT.

To the Editor of THE LANCET.

SIR,—At the International Medical Congress, Tommasi Crudeli (Rome), in his paper on Cholera, mentioned that æthiops mineralis had been used in Italy for the treatment of cholera, thus supporting Pacini's view that cholera was dependent on a fungoid organism. I am sure it will interest Dr. Crudeli to know that sulphur was employed in 1847-48 as a remedy in epidemic cholera by Dr. John Grove, the father of the germ theory. Grove published his observations in a pamphlet, entitled "Sulphur as a Remedy in Epidemic Cholera," published by Ridgway. He believed that cholera was caused by a fungus, and in THE LANCET, 1849, pp. 427, 451, are to be found two articles by him, headed "The Vitality of the Cholera Fungi Demonstrated." In the same journal, at p. 428, vol. ii., 1849, are some drawings of this fungus, which Grove believed to be the cause of cholera. They are rudely drawn, and are, I believe, torulæ. There are some comma-shaped bodies which cannot be so classed. Dr. B. Ward Richardson has declared that Grove was the first in modern times to advocate the hypothesis that living germs were the exciting agents of epidemic and infectious diseases.[1] He was evidently in advance of his time. In a letter to me, Nov. 5th, 1881, Dr. Grove wrote: "The only merit that I can claim for my work is that I endeavoured to lay a foundation for more definite ideas as to the nature of morbid agencies on the vegetable as well as the animal kingdoms, and to suggest remedies, as sulphur for cholera, acetic acid for typhoid fever." Pacini's and Koch's observations prove that Grove was on the right track. Some other names deserve to be added to that of Dr. Grove in relation to the fungoid causation of cholera—viz., Dr.

[1] Vide Nature, Oct. 25th, 1880.

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Brittan, who condensed the air of rooms in which cholera patients had died, and detected cholera cells, Dr. Swayne, Dr. Cowdel, Dr. Mitchell (Philadelphia), and Dr. Budd. It would save much discussion as to priority if you would republish the following abstract of Budd's paper, which appeared in THE LANCET, in 1849, vol ii., p. 271. Many of his suggestions stand good at the present time.

Abstract of Dr. Budd's Paper.

"An announcement was lately made by Mr. Brittan of the discovery that peculiar microscopic objects exist constantly in the characteristic rice-water discharges of persons affected with cholera, and in the atmosphere of infected places. The particular objects in question were first seen by two or three members of a committee appointed by the Bristol Medico-Chirurgical Society for the microscopic observation of subjects connected with cholera. The first drawings of them, together with the great variety of other objects generally to be met with in the rice-water discharges, were made by Mr. J. Swayne and Mr. F. Brittan in the second week in June last. These drawings, together with specimens of rice-water, were exhibited at the next meeting of the committee. At that meeting there were present Mr. J. G. Swayne, Dr. Bernard, Mr. Neild, Mr. A. Prichard, and myself. Numerous other drawings of the same kind by Mr. J. G. Swayne and Mr. Brittan were shortly afterwards laid before the Bristol Medico-Chirurgical Society. The laborious observations subsequently made by Mr. Brittan and Mr. Swayne, and laid from time to time without reservation before the Bristol Medico-Chirurgical Society, certainly did much to show that some very important relation existed between these bodies and malignant cholera. Shortly afterwards, and being at the time aware of this discovery, I detected the same organisms in great numbers in almost every specimen of drinking-water which I was enabled to obtain from cholera districts. This led me to examine a great number of specimens of water from healthy quarters, and although I often found in it a good deal of matter of various kinds, organic and other, in no single instance did I see anything resembling the peculiar bodies in question. These considerations and others have led me to the following conclusions:—1. That the cause of malignant cholera is a living organism of distinct species. 2. That this organism, which seems to be of the fungus tribe, is taken, by the act of swallowing, into the intestinal canal, and there becomes infinitely multiplied by the self-propagation which is characteristic of living beings. 3. That the presence and propagation of these organisms in the intestinal canal, and the action they there exert, are the cause of the peculiar flux which is characteristic of malignant cholera, and which, taken with its consequences, immediate and remote, constitute the disease. 4. That the new organisms are developed only in the human intestine. 5. That these organisms are disseminated through society: first, in the air, in the form of impalpable particles; secondly, in contact with articles of food; and thirdly and principally, in the drinking-water of infected places. 6. That these organisms may probably be preserved for a long time in the air with their powers unimpaired, but that in water, which is doubtless the chief vehicle for their diffusion, they soon undergo decay; and, moreover, sharing in this the common fate of their tribe, become the prey of beings of a higher order."

The conclusions taken together enable us to account for all the chief phenomena of the disease. They lead, besides, to practical references of the utmost importance. By acting upon this knowledge now, although we may not be able to stay the plague, we may yet much abridge its sojourn among us. The means by which the mitigation may be accomplished are obvious. The objects they include are two-fold:—1. To destroy from this time forward all the poison which continues to be generated in the bodies of infected persons; and (2) to prevent, as far as possible, the poison which has already escaped from us from taking effect. The first of these objects may be attained by the simplest means. All that is required, in fact, is to receive henceforth the discharges from the sick into some chemical fluid known to be fatal to beings of the fungus tribe. Nothing more is necessary than to choose among these agents the cheapest and the most convenient. I content myself merely with suggesting that the solution of chloride of zinc possesses strong recommendations, if it should be found, as I believe it would, effectual for the end in view. The second object, that of preventing the poison which has already been cast loose from taking effect, is more difficult to accomplish. But for this, too, a great deal may be done. As water is the principal channel through which this poison finds its way into the human body, a fact already established by the researches of Dr. Snow, and of the discovery of which he must have the whole merit, so is the procuring pure water for drink the first and most effectual means of preventing its action. From this day forward let the people of infected districts be supplied with water from healthy quarters or from sources beyond the reach of contamination; and if this be not feasible, let steps be taken to rid the water they are compelled to drink of the deadly poison it holds. This might be done by very simple means. It is probable even that the act of boiling water would suffice; but if boiling the water should not succeed, it might be distilled. To no part of the comunity is the need of an immediate supply of pure water more urgent than to the immense floating population of the port of London. The importance of preventing the disease in sailors will be more apparent when we reflect on the unquestionable fact that ships are great instruments for its diffusion.

I am, Sir, yours truly,

Halifax, Sept. 19th, 1884. T. M. DOLAN, M.D.

BICYCLE RIDING AND PERINEAL PRESSURE: THEIR EFFECT UPON THE YOUNG.

To the Editor of THE LANCET.

SIR,—I have read with great interest the article with the above heading in your issue of last week, by Dr. Strahan. I quite agree with everything that he has said, and am even prepared to go further than he has done, and to assert that bicycle and trycicle riding will produce stricture of the urethra.

During the last year I have had two cases under my care which were distinctly traceable to the effects of continuous riding on such a saddle as that described by Dr. Strahan. The first case came under my notice in January last, the patient being eighteen years of age. He had been racing for the last twelve months, more or less. He never had gonorrhœa, nor had he practised masturbation. Normal calibre of urethra 32 min.; dense stricture defined by No. 17 bulb at 4½ in. from meatus. The second case consulted me about the end of March. He was a middle-aged man, who had taken to tricycling for about three years before I saw him. He came to me complaining of perineal pain and difficulty of micturition. In this case the stricture was accompanied by an enlarged and tender prostate. Normal calibre of urethra 30 min.; stricture of 15 min. at 5 in. from meatus. Both these cases were treated by internal urethrotomy, and made satisfactory recoveries. It appears to me that the stricture produced by cycling approaches very nearly in character to a traumatic stricture, and good results can only be obtained by cutting. I think it possible that the bicycle saddle could be so constructed as to throw the weight only upon the tuberosities of the ischia. If this could be managed, one of the greatest objections to a most healthful form of exercise would be removed. As it is, however, with the saddle now in use, I am afraid that the present generation of surgeons will find a lamentable increase in the number of these stricture cases.

I am, Sir, yours truly,

GEORGE HERSCHELL, M.D. Lond.

Moorgate-street, E.C., Sept. 22nd, 1884.

To the Editor of THE LANCET.

SIR,—Allow me to ask Dr. Strahan, through the medium of your valuable journal, if he, during the last ten years of his professional career, has met with a single case of perineal mischief, either in young or old riders, the direct effect of bicycle or tricycle (with saddle) riding? If so, I shall be glad to hear of such. I have carefully read Dr. Strahan's interesting paper published in your issue of Sept. 20th, but I must say, with all due respect to that gentleman, that he appears to have imagined certain evils which, as far as I know, have not yet made their appearance from the causes so lucidly described by him. There are many men who have been great cycle riders from the times of the old "dandy horse" to the present period, and who have ridden every kind of machine, from the above to the old "bone-shaker" and its various grades of development, up to the

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now beautiful, comfortable, and almost perfect machines. Yet although these men have ridden nearly every day for the last thirty or forty years and have often covered long distances in a single day, even on the "bone-shaker" with its hard saddle and rigid spring, they are now living examples of the value of cycling, and are in the enjoyment of remarkably good health, both of mind and body—instance Viscount Sherbrooke, one of the oldest bicycle riders. That the pressure on the perineum, from causing congestion of the prostate, &c., will lead to masturbation and early sexual indulgence is a statement which I am inclined flatly to deny. I maintain that the healthy out-door exercise, the exhilarating movement, the pleasures of companionship, the constant change of scene in bicycle-touring, as well as the healthy rivalry of the race-track, have a tendency to take a young man out of himself, and to induce that condition of mental and physical equilibrium antagonistic to the state of nervous weakness and irritability which leads to sexual abuses. Let anyone look at the members of the various clubs from all parts of the country assembled at some great "meet," and he will at once admit that a finer, healthier-looking, jolly set of young fellows are seldom seen together. Rarely will one detect amongst them the peculiar physiognomy of the masturbator or the sensuous aspect of the indulger in early sexual pleasures. Such individuals usually seek other resorts or avoid the gaze of the crowd.

I have been tempted to write the above remarks, as I think it is a pity that statements should be made which are only theoretical, and which are entirely unsupported by facts, and which are calculated to deter many from taking to the health-giving pleasures of the wheel, and, besides that, to injure an industry which is giving employment to thousands. Trusting you will favour me by the insertion of this letter,

I am, Sir, yours faithfully,

H. A. ALLBUTT, M.R.C.P.E., &c.,
Representative Councillor, Cyclists' Touring Club; Hon. Medical Officer, Leeds Harehills Cycling Club.

Park-square, Leeds, Sept. 23rd, 1884.

OVER-PRESSURE IN SCHOOLS.

To the Editor of THE LANCET.

SIR,—In the instructions to inspectors of schools in England and Wales, issued from the Educational Department of the Government, Sir F. R. Sandford, secretary of the Educational Department, communicates the following official information:—"*Many well-founded complaints have been made of undue pressure on backward scholars by keeping them in after school, by long home lessons, or by an injudicious use of emulation.*" These words have acquired additional significance since the date of their issue, August 9th, 1882, and in the face of the criticisms of this subject in the chief daily journal of the past week. When the secretary of a Government Department makes such an assertion as is here quoted, and this receives confirmation from a consensus of opinion in the medical profession, the subject cannot be readily dismissed in its medical aspect. Either Sir F. R. Sandford must be giving needless instructions to the inspectors of his department and making an exaggerated statement in justification of these instructions, in saying that "*many well-founded complaints have been made of undue pressure,*" or Mr. J. G. Fitch, one of the inspectors of schools, must be in error in throwing doubt on this subject, and must differ greatly in opinion from the secretary of his department, who, presumably in his official capacity, expresses the conjoint opinion of a large majority of inspectors, and the matured conclusions of the chief officers of the Educational Department, as embodied in the words quoted. A general uneasiness is displaying itself in the public mind, which is not likely to be set at rest till some farther reassurance is given that over-pressure is not converting our schools into intellectual forcing houses, to the detriment of the physical and mental constitution of the scholars.

Nor can the bearing of this question be confined to the elementary schools of the country. Private schools, grammar schools, and the higher grade public schools, are all engaged in a great educational struggle, necessitated by the prevailing system of competitive examination for entrance into every intellectual sphere of life. It is quite contrary to the nature of things that such competition should be entered into without the risk of undue effect on the part of some emulous students, and undue pressure on the part of ambitious teachers. While in such a struggle it is only a minority, and perhaps a very small minority, who suffer so much in health as to increase the numbers in our lunatic asylums, or to add to the death-rate from cerebral diseases directly referable to mental strain in early life, yet there may be a very great impairment of mental and physical vigour such as only can be cognisant to and duly estimated by the medical practitioners of the country. Such knowledge scarcely admits of a statistical classification or proof, but the opinion in the profession is weighty enough to justify the belief that there is danger ahead unless some modification of the existing system is adopted having a greater regard for health at the educational period of life. Some impatience will in all probability be manifested by both the managers and the inspectors of elementary schools at the prospect of the introduction of some medical direction and authority on matters of education beyond what has hitherto prevailed; and a still greater impatience on the part of the authorities of the higher institutions of the country may be expected. But in these days of educational struggle some restraining influence is necessary here and there to advise when the more emulous should be checked, to guard against over-pressure of the less intellectual in their struggle for distinction, and to weed out that residuum on which it is a waste of power to attempt to do more than to teach the most elementary subjects in the most elementary way. The general acquiescence by parents and schoolmasters alike in the existence of a necessity for the great educational struggle which prevails to meet the requirements of the modern competitive system places almost beyond the sphere of controversy the question of "over-pressure," voluntary or imposed, in the educational system of the day in every grade of school. Scarcely a practitioner in the country can be devoid of experience of the evil; but the problem remains to be solved how it can be judiciously, yet successfully, met and rectified with no more interference with our national educational system than is absolutely necessary. It is an anomaly in our laws that while the regulation of the physical labour of the young in our factories is subjected to medical supervision, the mental labour at an earlier period of life is not so. The mental strain of the one should have the same protection and regulation as the physical strain of the other.

As a family practitioner my experience is that the school vacation time and the return of pupils to their homes never come round without bringing me some school boys as patients with debility and cachexia, for whom I advise *less work*. During the twenty-four years I was medical officer at Wellington College (sixteen years of which I taught the experimental sciences there, and therefore had some personal insight into the effect of school work on pupils and teachers), I do not remember a term passing in which both boys and masters were not *jaded* by the work of the term, and the examination at the end of it. Boys grew wan and intolerant of discipline, and masters (even the best of men) become irritable and querulous among themselves. What can this be but over-pressure? The vacation passes and both return invigorated. What other duty in life so jades as to make three or four months' rest out of the twelve a necessity? The question naturally arises to the medical mind, can the human brain be subjected to such an educational *over-pressure* and rally sufficiently to leave no permanent traces behind?

I am, Sir, yours truly,

Wokingham, September 25th, 1884. J. G. BARFORD.

LUNACY LAW AGITATION AND SUICIDE.

To the Editor of THE LANCET.

SIR,—Agitation against existing lunacy laws, without the present possibility of substituting any other method of procedure in dealing with persons of unsound mind, is producing its natural results. Members of the medical profession, who do not wish to encounter the possibility of being subjected to harassing and vexatious litigation by complying with the requirements of these laws on behalf of their patients, have in many cases, with the writer of a recent letter in a medical contemporary, made their resolution "they will not sign any certificate for anyone, rich or poor." As a consequence of this resolution the public has, much sooner than could have been anticipated, realised how much greater an evil it is to

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have numerous persons of unsound mind left at large than for one error in procedure to take place.

On June 28th last you did me the honour to insert a letter, in which I discussed this evil from a social, statistical, medical, and legal point of view, with particular reference to suicidal deaths, and your leading article of the 20th inst. once more directs attention pointedly to the alarmingly increasing number of suicides. These do not appear to be confined to any particular class of society, as reference to the following cases taken from *The Times* of the last few days will show, and some of them seem all the more deplorable because the exercise of unfettered medical skill, combined with prudent care and forethought, would assuredly have prevented such distressing consequences:—Sept. 11th, C. C. drowned himself in the Thames; Sept. 11th, M. A. A. cut his throat with a razor; Sept. 13th, H. W. poisoned himself; Sept. 15th, G. D. drowned himself in a duck pond; Sept. 16th, A. W. C. strangled himself with a leather strap; Sept. 17th, F. W. drowned himself in Hampstead Ponds; Sept. 17th, M. A. M. drowned himself in a tank at the rear of a house; Sept. 18th, P. C. smashed his skull by springing over a staircase; Sept. 18th, P. M. shot himself; Sept. 20th, F. S. cut his throat.

There is little doubt that in the majority of these, and other cases of suicide, the fatal act was induced by an existing condition of melancholia or other form of brain disturbance, the manifestations of which may have been active or passive, accompanied by delusion or hallucination, or otherwise; but still the well-recognised mentally diseased but easily curable condition in the early stages, "melancholia," in which the aspect of everything to the unfortunate sufferer becomes as it never was to him before—completely changed—and life under this infliction becoming "flat, stale, and unprofitable," he hastens, it may be with his diseased condition only as yet imperfectly realised by his relatives, and while still without proper care or treatment, successfully to shake off its trammels.

Compare those results of everyday experience with regard to unsoundness of mind in persons at large, under care at home, or under care as single patients with or without certificates, with the results obtained under recognised and properly constituted care and treatment. Out of a total number of 78,528 persons registered as of unsound mind during the past year, only fourteen succeeded in committing suicide while under such care.

Apologising for the length in which I have already intruded on your valuable space, I would ask you to allow me to conclude this letter in the words of your reviewer of the last report of the Commissioners in Lunacy: "It would be desirable that some record should be made of suicides by insane persons not under certificates. If such cases were reported by the coroners to the commissioners, the latter, it may be predicted, would by investigation obtain some valuable information in regard to the action of the present law of certification in preventing insane persons being placed under proper care." I am, Sir, yours obediently,

Harley-street, W., Sept. 20th, 1884. JAMES ADAM, M.D.

"CHOLERA IN MARSEILLES."

To the Editor of THE LANCET.

SIR,—I notice a letter in your issue of the 20th inst. from Dr. Drysdale, an *officier de santé* of Mentone, in which he tells us that "there were cases of cholera in Marseilles last autumn"; and he at the same time throws some sidelight on the system of *suppressio veri*, which appears to have been in vogue to prevent the fact of the existence of Asiatic cholera leaking out. This tendency, perhaps, is not the sole privilege of Marseilles. However that may be, the following information, gleaned from a conversation I had the other day with a French naval officer who was a fellow-traveller with me on the Paris, Lyons, and Marseilles Railway, might, I venture to think, tend to prove suggestive. He told me, and very frankly, that there were cases of undoubted cholera on board his man-of-war, lying in the harbour of Toulon early this year, at a time, I might recall attention to the fact, when the French press was seized with a sudden frenzy for the imposition of rigorous and irksome, but futile, quarantine on all arrivals from the far East, on account of the prevalence of cholera in Bombay and Egypt. This French war-ship had, albeit, come from Tonquin, where she had been actively engaged in operations, but this, and other unwelcome facts or items of intelligence, were carefully kept in the dark from eagerly inquiring "special" and "own" correspondents of the English press.

Now, whether the comma bacillus of Koch and others be, forsooth, a common or garden bacillus, pure and simple, or a myth, it is but fair to Dr. Koch that the medical press should hold over its verdict till the other side of the question is also before the profession in its present phase. It can scarcely be gainsaid that the sanitary arrangements of Marseilles were, and even are, anything but *sans reproche*, and the same may likewise be pronounced of many of the Italian ports. The obvious indication, therefore, is that the sooner the authorities on the Continent set to work in this direction and discard *in toto* the futile and absurd *fiasco* of quarantine the better would it prove in the interests of the public. Your pictorial contemporary, the *Graphic*, not long since favoured us with some amusing and humorous but telling sketches of how quarantine, fumigation, &c., are carried out; and, I think, it would do good if medical artists like Mr. P. Teale ("Dangers to Health: a Pictorial Guide to Domestic Sanitary Defects," J. and A. Churchill, London) were to delineate in like manner all insanitary places as well as the sanitary ones, and exhibit them in some Health Exhibition like the one now open in South Kensington.

I am, Sir, yours very truly,

London, Sept. 22nd, 1884. JOHN C. LUCAS.

MANCHESTER.

(From our own Correspondent.)

THE WATER-SUPPLY AND THE REMOVAL OF NIGHT-SOIL.

As a result of the dry warm summer we have had two important matters connected with public health come prominently into public notice. First, the water-supply appeared to be getting within measurable distance of real scarcity, several of the reservoirs approaching a dangerously low condition, and a great outcry was for a time raised, especially in some parts of the city, as to the quality of the supply. It was stated by numerous correspondents in the newspapers that the water was turbid and ill-smelling, particularly after being boiled, and there certainly seems to have been some foundation for these complaints; but it was apparently the water from one reservoir in particular that was chiefly at fault, the cause of it being, not any unusual contamination, but the low state of the reservoir, and this with a hot sun pouring steadily down on an almost stagnant shallow layer of water had given rise to the conditions complained of. Since the heavy rains of the last two or three weeks all complaints have ceased, and our water-supply is now in its usual satisfactory condition. Another public grievance has, however, called forth loud and bitter complaints. Manchester, as many of your readers are aware, has, during the past ten years, adopted to a very large extent the dry system of earth-closets, removing regularly the night-soil and other refuse of the city to a large depôt situate on the outskirts of the town, where elaborate works and machinery are in operation for converting it into a marketable manure, which has been attended with a very large measure of success. But to remove the enormous mass of material constantly and quickly from so large a population as this necessitates the employment of a large number of waggons to convey the contents of the closets &c. to the above works. Specially constructed pans, with tightly fitting lids, and waggons specially built for the purpose of holding these, are in use, and hitherto have not given rise to much annoyance, but lately the papers have teemed with complaints of the nuisance arising from these carts in passing through the streets and from the removal of the pans during the daytime, and it has been suggested that the work should be done at night instead of being carried on all through the day. At one time it was done at night, but the greatly increased cost and the difficulty of efficiently supervising the men engaged in it, led to the nightwork being abandoned. Probably now that the hot weather has passed by for the present season, we shall hear less of any nuisance being caused. If it be chiefly a matter of cost, this ought not to stand in the way, for although the Health Committee, upon whom this work devolves, is always being reproached as the spending depart-

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ment *par excellence*, still public opinion is daily advancing in matters relating to sanitary work, and few will complain that money is ill-spent that tends to make our cities and large towns more healthy.

ACCOMMODATION FOR INFECTIOUS DISEASES.

The authorities here have lately been active in providing accommodation for infectious diseases. At the last meeting of the Barton Rural Sanitary Authority plans were submitted for providing a temporary infectious hospital for eight patients, at a cost of £290. The Manchester guardians also had before them plans of a temporary hospital for infectious diseases, which was estimated to cost £2326, and at a meeting of the Salford Guardians sanction was received from the Local Government Board to a proposal to subscribe £500 per annum towards the maintenance of the Salford Borough Fever Hospital. The expediency of this step is, however, doubtful, for it is certainly undesirable to mix the pauper class of patients with these of a better station in life, and will tend to prevent the latter from making that use of these hospitals which is so desirable if anything like isolation of infectious disease is to be attempted; added to which it has but lately been reported that Salford Hospital had not sufficient room for the cases which already come under the notice of the health authorities there.

THE SHIP CANAL SCHEME.

The ship canal scheme, which appeared totally wrecked on its rejection by the Committee of the House of Commons, is showing, if possible, increased vitality, and its promoters are determined to bring it forward again in the next Parliamentary session. In connexion with it there is a question which has not received much public attention—viz., what provision is to be made to prevent the canal and docks in the neighbourhood from becoming a source of nuisance and danger by stagnation of the water, as the flow therein will be of very limited amount, and if any sewage finds its way in a very undesirable state of things may result.

VACANT MEDICAL APPOINTMENTS.

Several important medical appointments have recently fallen vacant here. At St. Mary's Hospital the Resident Obstetric Surgeoncy has been relinquished by Mr. A Winterbottom, after some three years' tenure of office. The posts of Resident Medical Officer and that of Resident Surgical Officer at the Royal Infirmary are both vacant, the former by the unexpected resignation of Dr. Grant, and the latter by the expiration of the appointment of Mr. B. Pollard; Mr. Pollard has held the post of Resident Surgical Officer for the past two years to the satisfaction of all who have the management of the Infirmary, and the Board would fain have retained his services for a longer period if he could have been prevailed on to remain. The above are some of the most valuable and important of provincial hospital resident posts.

LIVERPOOL.

(From our own Correspondent.)

THE NORTHERN HOSPITAL.

THIS hospital was established just fifty years ago, and the present building was erected in 1834, on a site which was then at the north end of the town, but has now become nearly central. It has for years been found wholly inadequate to the increasing demands made upon it, but at present it is impracticable to rebuild it upon its present site or to remove to a new one. As, however, increased accommodation was urgently required for the nursing staff, a new building has been erected on a site closely adjoining the hospital. It is constructed chiefly of galvanised iron lined with varnished pine, approached by a covered bridge, and contains accommodation for twenty-six nurses and the matron. It was opened on the 17th inst. by the Mayoress (Mrs. Holder), and, at the same time, the number of beds in the hospital was increased to 150 by the opening of a new ward. These alterations will prove of immense benefit, but the erection of a new hospital cannot be long deferred.

SMALL-POX EPIDEMIC AND HOSPITAL ACCOMMODATION.

At the last meeting of the Health Committee, held on the 18th inst., it was announced that the temporary small pox hospital erected on the Park Hill estate was now ready. It was resolved that the hospital should be opened for the reception of such patients suffering from small-pox as are now removed under the instruction of the medical officer of health to the workhouse hospitals. There was some opposition to the resolution, which was only carried by a majority of one. Thus the principle contended for in THE LANCET has been practically admitted, and it may be assumed that in future the workhouse hospitals will be reserved for strictly pauper cases. At the same meeting it was stated by the medical officer of health that the death ratio was 24·8 per 1000.

MEDICAL FACULTY, LIVERPOOL UNIVERSITY COLLEGE.

The winter session will commence on Saturday, October 4th; Lord Derby is expected to preside and to distribute the prizes. The success of the students during the past year at the examination was very marked, and, judging by results, the local school of medicine under the new *régime* promises to be more successful than ever. Dr. Waters, having resigned the chair of Physic, is succeeded by Dr. Glynn, who has for some years past been well and favourably known to the students as a most successful clinical lecturer and teacher at the Royal Infirmary, to which he was elected physician fourteen years ago.

CRIMES OF VIOLENCE IN LIVERPOOL.

On the 17th inst. the body of a girl twelve years of age was found floating, perfectly nude, in the Leeds and Liverpool Canal, under circumstances strongly suggestive of criminal violence. On the the 20 h inst. a female brothel-keeper was stabbed in the chest by a Russian seaman, death taking place very shortly. Within the last few months four girls, their ages ranging from seven to fourteen, have been admitted into the Lock Hospital suffering from disease following alleged criminal assaults. Violent assaults on the police are of almost daily occurrence. Whether all these are commensurate with the increase of population or not is doubtful, but that they cause much uneasiness is beyond doubt. In spite of the advance of temperance there is still a fearful amount of drunkenness prevalent here, arising quite as much from the quality as the quantity of drink imbibed. If the adulteration of beer and spirits could be prevented, a reduction would almost certainly take place in crimes of violence, many of the prisoners arrested being drugged as well as drunken.

IRELAND.

(From our own Correspondent.)

THE SANITARY CONGRESS AND EXHIBITION, DUBLIN.

IN a few days the Exhibition and Congress, held under the auspices of the Sanitary Institute of Great Britain, will be open. The former, located in the suburbs, will continue for three weeks, while the Congress will have its meetings in Trinity College, and will last a week. The Exhibition will be formally opened by the Lord Mayor, who has also issued cards for a conversazione to be held at the Mansion House on October 1st. Bands, concerts, flower show, fêtes, illuminations, promenades, and other attractions, will be offered to visitors, and the Exhibition, it is expected, will prove extremely popular. Besides papers by Dr. Cameron and others, Surgeon-General De Renzy will contribute one on the Conditions under which Cholera is Prevalent in Northern India, and Dr. MacCabe, Local Government Board Inspector, on the Water-Supply and Drainage of Small Towns. Surgeon-Major Jones will read a communication on the Insanitary Condition of Small Towns in Ireland, while Dr. Flynn will contribute a paper on the Circumstances attending the Discharge of their Duties by Medical Officers of Health in Ireland. Other subjects will include Ambulance Work, Temporary Hospitals, Isolation, and Ventilation. On October 2nd a public banquet will take place in the Shelbourne Hotel, and on the following Saturday three pleasure trips have been arranged.

DUBLIN HEALTH EXHIBITION HOSPITAL FETE.

In connexion with this Exhibition arrangements are being made for a hospital fête for the benefit of the Dublin city hospitals to be held in the Exhibition on Saturday evening,

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October 4th. The hospitals which will participate in the amount obtained comprise twelve general and five special hospitals; and it has been arranged that nine-tenths of the net proceeds of the receipts shall be divided in equal proportions among the twelve general hospitals, and one-tenth among the five special hospitals. The committee have appealed to the owners of gardens in the vicinity of Dublin for donations of evergreens and the loan of plants for decorating the hall, and also for cut flowers and bouquets for sale at the fête, or for distribution among the hospitals. His Excellency and the Countess Spencer have signified their intention of being present if possible.

THE LIFFEY.

As the weather gets cooler less complaints are heard about the abominable effluvium which arises from this foul cesspool, but that it is a dreadful nuisance and should not be permitted to exist in the centre of a large city is acknowledged without a dissentient. A correspondent in one of the daily papers has this week made a suggestion which, if adopted, would probably be of service in mitigating, if not entirely removing, the evil. The plan he proposes for cleansing the river is to narrow its passage considerably by the construction of two stout walls of masonry, one on either side from Kingsbridge to Carlisle Bridge, with apertures at various points for discharging sewage, the almost certainty being that through this narrow channel the sweep of the tide would be rapid and sufficiently strong to carry the sewage well down the river, and so prevent any considerable deposit of the filth in the Liffey bed. The river so cleansed should be arched over with tubular iron plates or brickwork, as has been done by the Corporation of Belfast with what was as foul a nuisance as the Liffey, viz., the Blackstaff River. The cost would be very large, but any measure that would abate the evil and promote the health of the citizens should be welcomed.

The salary of the consulting sanitary officer of Lismore Union has been reduced by the guardians from £20 a year to £5.

ITALY.

(From our own Correspondent.)

SCARCELY will the cholera have disappeared when that most characteristic of its sequelæ—controversy—will be fanned into full blast. Already we are having a foretaste of this bequest, the disputants ranging themselves round three groups of questions. First, as to whether or to what extent the comma bacillus of Koch is pathognomonic of cholera; second, as to the hygienic measures best fitted to repel a future visitation, and the order in which these should be commenced; and, third, what remedies or what methods of treatment are most worthy of the serious consideration of the profession in its fight with the actual disease. Unfortunately, there is in all these questions a debatable margin wide enough for any number of controversialists, and, regarding the second in particular—that of hygiene—the phenomena witnessed and attested in Naples are perplexing enough. For example, the narrow, ill-ventilated streets intersecting blocks of buildings in which the population teems like rabbits have been precisely those in which cholera has numbered least victims; while the dwellings which, from their amplitude and situation, the freely aired thoroughfares dividing them, are in marked contrast to the preceding have contributed the heaviest contingent to the hospital and the cemetery. Again, the ill-fed, badly clothed, unwashed inmates of the rookeries have come off very lightly in comparison with the well dieted, comfortably clothed, not uncleanly bourgeoisie. "Partly because by nature," says the correspondent of the *Opinione*, whose letters from Naples have given the best account of the epidemic, "we have something of the Arab, partly because the facts above stated reinforce the sentiment of fatalism which is at the bottom of our southern character, our populace laughs to scorn all the admonitions of the authorities and devours figs, capsicums, tomatoes, more or less unripe, does everything in fact which it has means to indulge in, though forbidden by the profession. As to soup kitchens, it will have none of them; 'these,' it says, 'are for the sick, and we are quite well.'" Another fact is also significant: the troops—including the volunteers of the civil population, who have laboured so heartily in the work of isolating the sick—are now suffering severely from cholera, though every precaution in the matter of food, drink, and sleeping accommodation has been observed on their behalf. Then, as to the hygienic reforms to be effected in Naples, there is one party eager to begin by pulling down the *fondaci* and housing the court-and-cellar population in properly lighted and ventilated apartments; while another party, which has a good deal to say for itself, would commence operations by bringing in pure water in place of the contaminated and insufficient supply apportioned to the city. To carry out the first the drain on the national exchequer will be enormous, insomuch that it is seriously proposed to suspend the undertaking for connecting Rome with Naples by faster trains and to devote the money so economised to the work of rebuilding the ramshackle quarters. New imposts, says the *Opinione*, are what Italians cannot bear, and there is no other way to meet the expense of rehabilitating Naples than by deflecting to that purpose the means set apart for less urgent enterprises. The financial difficulty is always the primary one in Italy, and will continue so until she reduces her overgrown army and ceases to build colossal ironclads, every one of which, says M. de Laveleye, involves the ruin of ten thousand of the population. So it is likely that the less costly undertaking will be the first to be completed—namely, the providing Naples with a pure and abundant water-supply, which will be one great step in the right direction.

After the hygienic controversy comes the therapeutic one. Hypodermoclysis, practised according to the recommendations of Pacini—that is, when, and only when, the patient is in the stage of collapse—has been rewarded with a large enough measure of success to ensure it against absolute professional ostracism; but the same cannot be said of the exhibition of æthiops mineralis (black sulphuret of mercury), whether used as a prophylactic or as an active remedy, a question on which an animated correspondence is now being maintained in the leading Roman journals, professional and lay. Dr. Regnoli, an eminent physician of the Eternal City, has published a treatise on the æthiops mineralis, in which he reinforces the favourable testimony of Dr. Hayem of Paris by his own experience, having found it efficacious in 95 per cent. of the 241 cases in which he employed it. Its action, he maintains, is antiseptic on the comma bacilli; and to the objection that the black sulphuret of mercury is insoluble and therefore inert, Dr. Murino asserts that its solubility has been proved in his own practice and in that of Dr. Colapietro, the sulph-hydric acid being liberated in the system and impregnating with its characteristic odour the perspiration of the patients, while the æthiops has tinged the linen black. On the other hand, it is argued that Dr. Hayem obtained no successful results with the black sulphuret in confirmed cholera, but only in the preliminary diarrhœa, while even in this latter case the efficacy of the drug may have been shared by the lemon-juice in which he exhibited it. If the antiseptic action of the drug on the cholerigenous microbe is due to the sulphur in its composition, how is it that the eminently soluble sulphate of potash has not the same effect? Again, the drug has been tried in case after case in Busca, where the cholera has been very severe, but with absolutely no result whatever, while in Naples the profession have so little belief in it that it has not been tried at all. Dr. Murino, who holds that we can make ourselves cholera-proof by small doses of black sulphuret, and who therefore enters a cholera lazaretto "with a light heart," promises to return to the charge. From the great medical school of Padua, again, we have an imposing statement of the virtues of laudanum in the early diarrhœa of cholera, Dr. Carlo Tunisi maintaining that his Neapolitan brethren have rather neglected the opportunities afforded them by the drug, which, if taken in time, arrests the disease before it reaches that algide stage in which the sole remedy yet found efficacious has been hypodermoclysis. In Naples, indeed, the only physician of note who has placed any reliance on it has been Professor Semmola, but his partial success has been mainly among the civil population, where the medical man is apt to be called in too late, while Dr. Tunisi, practising on soldiers in barracks and prisoners in gaols, where every stage of the malady is under prompt surveillance and where the primary diarrhœa is immediately met by the opiate, never yet had a case which, after the exhibition of laudanum, drifted into the condition of collapse. And so

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Naples, Rome, and Padua are engaged in something like a "triangular duel" over the efficacy of rival modes of treatment which have long been partially reconciled, with a certain measure of success, in India, namely, the exhibition of calomel and opium in doses of two grains to one grain, or two grains to half a grain for an adult. The communication of Mr. Johnson Martin to THE LANCET of August 23rd might be studied in Italy with much advantage.

There are certain phenomena peculiar to this outbreak of cholera in Southern Europe which should form the theme of careful official inquiry. After the outburst of the malady in Toulon its direction was much less northwards than southwards. Again, both in Italy and France it visited great seaports most heavily, while in Italy this curious spectacle was witnessed—it selected alternate seaports for attack. For example, it overleaped the populous and not over-cleanly Genoa, and alighted heavily on the less populous and not more insanitary Spezia. Again, it overleaped the less populous and decidedly insanitary Leghorn, and exploded with fearful violence in the more populous, though not very much more insanitary, Naples. What was its principle of selection? How is it that Messina and Palermo, seaports so severely scourged by it in former visitations, escaped so cheaply on this occasion? And how is it that the great provincial capitals—Turin, Milan, Venice, Florence, and Rome herself, all of them the scenes of virulent outbreaks on previous occasions—have hardly had one case? Able and experienced investigators like Professors Tommasi Crudeli and Moleschott might make a study of these questions and teach us a great deal. Meanwhile, an eminent authority, writing to the *Opinione* from Genoa, contends that Spezia and Naples were both made candidates for an outbreak of cholera by the Italian Government, who established a permanent lazaretto in the immediate neighbourhood of both seaports.

Rome, Sept. 22nd.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Sept. 18th:—

Armson, Frank Greasley, Yoxall, Burton-on-Trent.
Barker, W. J. Townsend, Redland-road, Clifton.
Chamberlain, C. Basham d'Eyncourt, Univ. Coll. Hospital.
Jones, Isaiah Henry, Maida-vale.
Simpson, G. A. Garry, Maryland-road, Sutherland-gardens.

At the Preliminary Examination in Arts, held at the Hall of the Society on Sept. 11th, 12th, and 13th, the following candidates received certificates of proficiency in General Education:—

SECOND DIVISION (in alphabetical order).—Alfred Alexander, John Hampden Barker,* F. Wells Beville, Edward Walter Brunton, P. M. Robertson Bryant,* Aubrey Conway,* Basil Wiseman Conway,* Frank Gillett Cory, Sydney Robert Cross,* Horatio Nelson Crossley,* Ernest Buxton Cutting, John Halliwell,* William Hindle, William Robert Howard, A. Talman Hott, David Owen Jones, J. Howard Jones, Arthur Edwin Joscelyne, Percy J. Kingston, C. R. Maitland, Francis R. Septimus Milton,* Eustace Ayton Payne, John W. George Prince, Ernest James Reynolds, Reginald G. W. St. Cadd, Eleanor Sophia Warner,* Richard Millbourn West.

* Passed also in Elementary Mechanics.

The following candidate passed in Greek alone:—

Herbert William Telmer Crew.

The following passed in Elementary Mechanics alone:—

Charles Stanger Bowker, Charles Edwin Cornwall, Stuart A. Charles Dallas, John Edward F. Hosking, Richard J. O'Halloran, Robert E. Franklyn Pearse, Nigel Alan Allison Trenow, Leslie Herbert Walsh.

JACOB H. STEWART, M.D., of St. Paul, Minnesota, who, in 1879, was appointed by President Hayes, Surveyor-General of Minnesota, died recently at the age of fifty-six.

A NURSE of the Wonford House Asylum, Exeter, has been fined 1*l.* and costs for slapping the face of a patient and for giving her a second bath as a punishment.

A NEW street paving has been introduced in Berlin, and is said to be superior in many respects to wooden blocks. It consists of layers of bricks impregnated with asphalte.

IN spite of the protestations of the Turkish authorities that the plague has ceased at Bagdad, the Persian and the Russian Governments are taking strict precautions against the possible introduction of the disease into their territories by pilgrim migrations.

THE discussion of the disease termed "miryachit" has been conducted with so much warmth in Naples, that an editor of one of the Neapolitan medical journals is said to have sent a challenge to a *brother* editor to decide the dispute by mortal combat.

A CENTENARIAN.—A man named Griffith Williams has, it is stated, just died at Bangor, having attained the age of 105. He was in receipt of out-door relief from the Bangor Union, and on the official list last year his age was returned as 102.

THE OTOLOGICAL CONGRESS.—The third International Otological Congress was held at Bâle from the 1st to the 4th inst. About forty papers and demonstrations of much interest to aurists were presented and discussed, and the Congress, in the proceedings of which some eighty members took part, may be described as having been most successful. The next Congress is to be held at Brussels in 1888.

METROPOLITAN FREE HOSPITAL.—A working-class demonstration in aid of the funds of this institution was held on the 21st inst. at Hackney. Between 4000 and 5000 members of various friendly, temperance, and trade societies assembled, and after the procession had marched through several streets, a charity sermon was preached at St. Paul's Church, Ball's-pond. Collections were held after the sermon and during the march of the procession from the church, and it is hoped that the demonstration will result in a sensible addition to the funds of the institution.

UNIVERSITY OF SYDNEY.—At the July meeting of the Senate of the Sydney University, the following resolutions were agreed to:—"That the lecturers in Clinical Medicine and Clinical Surgery, when appointed, shall hold their appointments only so long as they shall hold a clinical appointment in their particular departments in a recognised hospital." "That it be remitted to the Faculty of Medicine to consider and report on the whole questions of the status of the degrees in medicine granted by the University, and the registration of students in medicine."

SANITARY INSTITUTION OF GREAT BRITAIN.—The autumn Congress will sit at Dublin the whole of next week, excepting Monday. The Exhibition of Sanitary Apparatus and Appliances in connexion with the Congress will be held in the Royal Dublin Society's Buildings, Ballsbridge, from September 30th to October 18th. Congress tickets will be issued entitling the holder to admission to all the meetings, addresses, conversazione, and the exhibition held in connexion with the Congress. The price of the Congress tickets is half-a-guinea each. A reception room will be opened at the Royal Dublin Society's Buildings, on Monday, September 29th, at 1 P.M., and on the following days at 9 A.M., for the issue of Congress tickets, which may also be obtained previous to the meeting, on application to the Secretary of the Institute, or to the Honorary Local Secretaries, 42, Dame-street, Dublin. The lectures to the Congress, the sectional meetings, and the general meetings will be held at Trinity College, Dublin. The opening address will be delivered by Sir Robert Rawlinson, C.B., on Tuesday, at 8 P.M.

Medical Appointments.

Intimations, for this column, must be sent DIRECT to the Office of THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BIRD, F. DOUGLAS, M.B., M.R.C.S., has been appointed Demonstrator of Anatomy to the Melbourne University.

BONSAR, THOMAS WALKER, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Bishopton District of the Sedgefield Union, vice Thompson.

BRAINE, G. M. P., M.R.C.S., L.R.C.P.Lond., has been appointed Second Assistant Medical Officer to the Worcester County and City Lunatic Asylum, vice J. H. Beaty, M.R.C.S., L.S.A.Lond.

BRODIE, WM. HAIG, M.B., C.M.Ed., has been reappointed Medical Officer and Public Vaccinator for the Seal and Tongham District of the Farnham Union.

DENNING, C. ERNEST, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Senior Assistant Medical Officer to the Salop and Montgomery County Asylum, Shrewsbury, vice W. H. Packer, M.D., resigned.

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DIXSON, CRAIG, M.D., C.M.Ed., has been appointed Honorary Surgeon to the Sydney Hospital.

DOUTY, J. H., M.R.C.S., L.S.A.Lond., has been appointed Senior Assistant Medical Officer and Deputy Superintendent to the Worcester County and City Lunatic Asylum, vice R. Atkinson, F.R.C.S.Eng., resigned.

FLECK, WILLIAM, M.D., M.Ch.Q.U.I., has been appointed Medical Officer to the Workhouse of the Wycombe Union, vice W. G. Hayden, L.R.C.P.Lond. & M.R.C.S., resigned.

GOODWYN, H., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator to the Newton Abbot Union, and Certifying Factory Surgeon for the District of Bovey Tracey.

HALE, CHARLES H., L.R.C.P.Lond., M.R.C.S., has been appointed Junior Assistant Medical Officer to the Salop and Montgomery County Asylum, Shrewsbury, vice Denning, promoted.

HOUISON, JAMES, M.D., C.M.Ed., has been appointed Visiting Medical Officer to the Grafton Hospital, New South Wales.

KITE, EDWIN W. D., M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the West Bromwich Hospital, vice R. K. Delaney, resigned.

MARTIN, JAMES P., M.R.C.S., has been appointed Junior Assistant Medical Officer to the Wilts County Asylum, Devizes.

ROBBES, CHARLES E., B.Sc.Lond., B.A.Camb., M.R.C.S., has been appointed House-Surgeon to the Gravesend Hospital, vice R. J. Bryden, M.R.C.S., resigned.

SHERATON, GEO. ROBERT, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Sedgefield District of the Sedgefield Union, vice Thompson.

SMART, DAVID, L.R.C.P.L., M.R.C.S., has been appointed Medical Officer to the Bermondsey Workhouse, vice Cuolahan, deceased.

STIRLING, CHARLES, M.B., C.M.Glas., has been appointed Medical Officer for the No. 2 District of St. Olave's Union, vice Cuolahan, deceased.

WILLIAMS, CHARLES, L.R.C.P., L.R.C.S., L.S.A.Lond., has been appointed Admiralty Surgeon and Agent at Fort Isaac, Cornwall, vice Fulford.

Births, Marriages, and Deaths.

BIRTHS.

ALDERTON.—On the 20th inst., at Barnoldswick, Yorkshire, the wife of H. C. Alderton, L.R.C.P.Lond., &c., of a son.

BEATTIE.—On the 14th inst., at Ardmore House, Dewsbury, the wife of Robert Beattie, M.D., of a daughter.

BOTT.—On the 24th inst., at Kennington-park-road, S.E., the wife of W. Gibson Bott, L.R.C.P. & M.R.C.S., of a son.

CARPENTER.—On the 20th inst., at Trevathian, Beckenham, the wife of E. Carpenter, M.R.C.S. &c., of a son.

COLEMAN.—On the 20th inst., at Hill View, Streatham-common, S.W., the wife of Charles A. Coleman, M.D., of a daughter.

O'MALLEY.—On the 15th inst., the wife of Fleet-Surgeon O'Malley, H.M. Dockyard, Portsmouth, of a daughter, stillborn.

PENNY.—On the 22nd inst., at 194, Downham-road, Islington, N., the wife of William Lowry Penny, M.B.Cantab., M.R.C.S.E., of a son.

ROBINSON.—On the 20th inst., at 12, Albion-street, Hull, the wife of Arthur H. Robinson, M.D., of a daughter.

MARRIAGES.

FENN—COOK.—On the 19th inst., at Holy Trinity Church, Tottenham, Edwin Fenn, M.R.C.S., of Camden-crescent, Dover, to Mary Catharine, third daughter of G. K. Cook, of Grove-terrace, Tottenham.

KENDLE—COWAN.—On the 18th inst., at St. Nicholas' Church, Sutton, F. Wellesley Kendle, M.R.C.S., eldest son of F. Kendle, Esq., of King's Lynn, to Alice Annie, youngest daughter of George I. Cowan, Esq., of Moray House, Sutton, Surrey.

THALLON—DICKER.—On the 18th inst., at St. Paul's Church, Camden-square, William Morrison Thallon, M.D., son of the late Robert Thallon, of Brooklyn, U.S., to Emily Constance, eldest daughter of John Dicker, of Camden-square, N.W.

DEATHS.

KIMPTON.—On the 14th inst., at Cambridge-terrace, Burnt Ash-lane, Lee, S.E., John William Kimpton, M.R.C.S., L.S.A.Lond., in his 76th year.

PALMER.—On the 12th inst., Charles Palmer, M.R.C.S.Eng., L.S.A.Lond., of 44, King-street, Great Yarmouth, aged 54. No cards.

PROBYN.—On the 8th inst., at Reyharan, Hants, of diabetes, John Sutherland Howell Probyn, M.R.C.S., L.S.A.Lond., L.F.P.S., aged 44.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, September 25th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia. in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sept. 19	30·31	E.	59	58	97	69	57	..	Cloudy
,, 20	30·14	S.E.	63	59	100	72	57	..	Cloudy
,, 21	29·84	S.W.	64	61	104	72	55	..	Cloudy
,, 22	29·79	N.W.	57	54	103	66	54	·04	Cloudy
,, 23	30·19	W.	55	51	90	64	49	·01	Fine
,, 24	30·24	S.W.	58	53	85	64	51	..	Overcast
,, 25	30·20	W.	55	53	95	66	49	..	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

ONE OF NATURE'S LITTLE WORKS.

MR. F. A. PALEY, in an article entitled "Sea Sand-grass as a Land-winner," published in *Longman's Magazine* for October, gives an interesting explanation of the cause of the sea-dunes to be seen on various parts of the British coasts. On the sites of these hummocks grows a little plant known as marram grass (Psamma arenaria), the roots of which are very long and tough. By capillary attraction, moisture is conveyed along these roots to the surface of the area on which the plant grows, and thus serves to arrest loose sand blown by the wind. By this means the dune gradually increases in size, and is firmly compacted by the interlacing roots of the grass.

Mr. Albert W. Graham.—The practice varies in different places. Our correspondent should ascertain from one of his friends the local custom.

Mr. Berne (Huddersfield).—By the phrase "bronchitic asthma" we understand spasmodic attacks of dyspnœa occurring in the course of "chronic bronchitis." The phrase is convenient, not scientific.

"WHY TROPICAL MAN IS BLACK."

To the Editor of THE LANCET.

SIR,—In your kind notice of my paper on the above subject, you conclude with these words—"The reasoning by which pigment, like the breath in the fable, is made to play the part of hot and cold, does not seem to be perfectly free from objection."

In this condensed criticism pigment is spoken of in relation to heat only, and undoubtedly pigment *per se*, whether immediately behind, or immediately in front of, a nerve ending could only have the effect of increasing those vibrations which are induced by heat waves; but it must not be forgotten that the skin of a negro and the skin of a European both measure 98° in temperature, owing to the interposition of a layer of surface moisture which by evaporation renders latent the excessive heat waves, and that it is this layer of surface moisture which thus protects the nerve endings from the excessive action of these heat waves, just as the layer of pigment protects the nerve endings from the excessive action of the light waves; consequently, the pigment is not called on to play the contradictory part of "hot and cold."

I am, Sir, yours truly,

NATHL. ALCOCK,
Surgeon-Major A.M.D.

Sept. 24th, 1884.

Mr. Donald Macrae.—Probably the successful candidate did not put the prefix to his name, which may have misled the committee as to the qualifications of our correspondent. It is not clear that he has any satisfactory means of redress; but the question is a purely legal one.

R. O. M. is referred to a general notice at the head of this column.

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CHEAP DINNERS.

Apropos of our remarks on this subject on the 6th inst., our attention has been called to a pamphlet by Mrs. De Vere Mathew, published by Simpkin and Marshall, which has already reached a fifth edition, and the cost of which is eightpence. A glance at the contents of the little work is sufficient to show that it is likely to be very useful in straitened households, as well as to those who are engaged in the benevolent work of providing cheap and nutritious meals for the poor.

Mechanic.—We would advise our correspondent to refrain from rushing into print on a subject upon which his information is evidently very incomplete.

"WHAT IS A MINIM?"

To the Editor of THE LANCET.

SIR,—The letter which you were good enough to print under the above heading in your issue of Sept. 6th has received notice in a quarter, certainly most appropriate, with which, however, I was not acquainted. The Editor of the *Chemist and Druggist* has obligingly sent me a copy of his issue of Sept. 15th, in which I am editorially whipped (in a way that does not hurt much, happily, albeit he misspells my name), and, I hope rightly, instructed. The question involves more than I was aware of, and, if you permit, I will pursue it somewhat further.

The substance of the additional information supplied by the Editor of the *Chemist and Druggist* is contained in the italicised portions of the following definite statements:—"The minim is the 1·480th, and the fluid drachm is the one-eighth, part of *a fluid ounce, which is the 1·160th of an imperial gallon.* The *fluid* ounce, at the temperature of 62° Fahr., with the barometer at thirty inches, *weighs 437·5 grains.* These figures are not theory, but are statute law. They were given in an Order of Council issued in accordance with the Weights and Measures Act, 1878." I will not stop to pick holes in this, though the statement as to temperature and pressure inclines me to think that the "Orders in Council" referred to must be an interesting source of information, but should be glad to know whether the assurance about "statute law" applies to *both* of the preceding sentences. In that case the "fluid ounce" is in both said to be, by law, *equivalent to the ounce avoirdupois*, while the earlier states it to be also equal to 480 minims (? by law) Without actual reference to the "Orders in Council" I may not dispute this statement, but I may be permitted to feel very much surprised. Certainly, it falls in with something I have "heard say"—viz, that the fluid ounce is the twentieth part of an imperial pint (and therefore the 160th part of the imperial gallon); but, *per contra*, it falls *out*, most decidedly, with all tradition. The "wine gallon" is our oldest, and was quite recently the most uniformly recognised, standard of fluid measure. Even were all other evidence wanting, I think it would be hard to set aside that which I adduced from Thomson's Conspectus as to the relation in former days between the minim and wine gallon. As it happens, however, I have been furnished by a private correspondent with an extract (which he was kind enough to copy and send to me in answer to my letter in THE LANCET of Sept. 6th) from Hooper's Medical Dictionary, too long to quote *in extenso*, and too closely reasoned to bear mutilation, but which ends with these words: "The subdivision of the wine pint has therefore been extended to the sixtieth part of the fluid drachm, which is termed *minim*; and glass measures, expressive of such subdivision, have been adopted by the College." From what precedes this sentence of the extract it appears that there was a time when the measurement of small quantities of liquids was effected without the needful precision, through want of a recognised subdivision, and here we see how this want came to be authoritatively, though not legally, satisfied; but it was by the subdivision of the recognised wine gallon, not of the imperial. If, therefore, the Editor of the *Chemist and Druggist* is right in his reading of the "Orders in Council"—we need say nothing of statute law at present—that the fluid ounce which makes 480 minims is the same as the fluid ounce of which twenty go to the *imperial* pint, and *not* (mark this) the fluid ounce of which sixteen go to the *wine* pint, then, I think, we have as pretty a piece of conflict of authority as one could wish to see as the issue of discussion.

I am, Sir, your obedient servant,

Collingwood, Hawkhurst, Sept. 22nd, 1884. J. HERSCHEL.

P.S.—Since the above was not only written, but despatched, I have seen your issue of the 20th inst., containing four replies to my query about the minim, to acknowledge which I hope you will allow me space for a few more lines. It is plain that the conflict of authority which I point out above is both real and capable of easy explanation. It appears that the change of standard—if I may so call it—by which the "fluid ounce" ceased to be the sixteenth part of the old *wine pint* and became the twentieth part of the more modern *imperial pint*, was the definite act of those responsible for the London Pharmacopœia of 1836. The history of this change would no doubt be interesting, but I am not in a position at present to pursue the inquiry. For the moment I must be content to express my thanks to the Editor of THE LANCET for admitting my inquiry and to the gentlemen who have assisted in tracing the apparent error to a satisfactory origin. That the matter was not altogether unworthy of examination may, I think, be inferred from the fact that no one was prepared to reply "right away" that the minim of Thomson's Conspectus, which *was*, indeed, the measure of 57·60ths of a grain of water, was abolished in 1836, and superseded by the minim of 54⅔ grains (nearly) to the drachm, which is now in current use, although Mr. Martindale does *in effect* say so much, and more.—J. H.

Sept. 24th, 1884.

PUNISHMENT OF CRIMINAL LUNATICS IN CHINA.

THE subjoined extract from the *Pekin Gazette* of June 19th, 1884, as translated in the *North China Daily News*, throws a painful light on the condition of legislation in the Chinese Empire:—"Ts'ên Yü-ying reports the execution by the 'slicing' process of a lunatic who murdered his grandmother with a vegetable knife in a paroxysm of madness. The maniac, who was an orphan, was in charge of his grandmother, and though entreated by her relations and neighbours to place him in official custody she was too fond of her grandson to consent. One night a paroxysm of mania came on, and the maniac rushed into his grandmother's room, flourishing a vegetable knife and dancing about. His grandmother tried to take the knife away from him; he then stabbed her repeatedly, and she fell to the ground. The neighbours came to her rescue on hearing her cries, and seized the lunatic; but the wounds he had already inflicted were so severe that after lingering a few days she died. The grandson was then tried upon the capital charge, when it was conclusively proved that the crime was committed during a fit of insanity. The penalty for parricide or matricide being death by the 'slicing' process, this sentence was inflicted summarily upon the lunatic under the authority of the standing Imperial Death Warrant."

DISCOVERY OF A ROMAN VILLA, BATH-ROOM, AND BATH, WITH OTHER ROMAN REMAINS, AT LINCOLN.

To the Editor of THE LANCET.

SIR,—Recently Mr. Roseby's ironstone miners, in the process of opening up a new mining shaft in the Greetwell Fields, about half a mile from Lincoln, came upon the remains of a Roman villa, two or three feet below the surface of the ground. From the nature of the diggings much unavoidable damage had been done to the remains; but this much can be made out from the present excavations: that between two walls, running a considerable distance north and south and fifteen yards apart, several apartments existed, as indicated by walls, tessalated pavements, and large tile pavements. From these apartments three or four steps led down to a bath-room. The bath-room seemed to have been the front and most advanced basement room of the villa, and looked southward. From east to west the room measured about fifteen feet, and from south to north ten feet. From the east end of the north wall of the room the bath extended seven feet southwards along the east wall. The bath was between three and four feet in breadth, and its sides rose from the floor about two feet. The floor of the bath-room was formed of a beautifully white tesselated pavement, the tesseræ being about an inch square. The tesseræ of the bath-room were made of a white china clay, and were set in concrete. Tesseræ resembling those of the floor were extended up the sides of the walls for several inches, to form a dado. I am told that a dado has not been hitherto found in any other Roman building in England. In this case it was probably placed round the room to protect the lower part of the walls from the bath water. Tesseræ were also extended up the outside of the bath; the inside of the bath was formed of the same material as the tesseræ, but was quite smooth. The floor of the room, the dado, and the bath must have produced a fine effect, and must have looked like Parian marble. The well-plastered walls of the room were painted a creamy white, and the bordering of the walls and other decorations were painted with the greatest neatness and precision in fine reds, yellows, greens, blues, and blacks. On one piece of plaster I noticed the picture of a swallow, nicely drawn and painted. Two or three feet north of the bath-room, but in a different apartment, is a very deep well seven feet in diameter, which is still in a comparatively good state of preservation. The water of this well no doubt was used in the bath-room, and from the bath-room a well-constructed drain-pipe carried off the waste water. The house must have been the property of a Roman gentleman of taste and opulence. The site was well chosen; but, in consequence of the villa being built on the brow of a hill, the lower rooms were on different planes. The ancient Romans evidently had remarkably good ideas of sanitation. This villa was built on a mass of three layers of different kinds of concrete, to the depth in some places of upwards of three feet; and the drainage of the whole premises seemed, as the workmen remarked, to have been perfect. I may mention that the miners, in clearing away the soil immediately outside the villa, came upon a skull and some human bones, among which I found a tibia presenting a united fracture. I venture to think there is hardly a pathological museum in the United Kingdom which can boast of anything like this specimen of ancient surgery—a united fractured bone of an old Roman who lived, and certainly limped, seventeen or eighteen centuries ago.

I am, Sir, yours truly,

Lincoln, Sept. 5th, 1884. WILLIAM O'NEILL, M.D., M.R.C.P.Lond.

J. G. L. (Carlisle).—Among the descriptions of epidemic visitations the *chefs d'œuvre*, in a literary point of view, are those of Thucydides, Boccaccio, De Foe, and Manzoni, the highest merit belonging to the first and the last of these authors. The "Italia Militaire" (Florence, 1869) of Signor Edmondo d'Amicis contains a vividly dramatic account of the cholera-panic in Sicily in 1867. The narrative of the plague in "John Inglesant" has indications of power, but it is painfully elaborate.

Mrs. K. M. E.—We regret we are unable to assist our correspondent.

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ANOTHER EPIDEMIC.

THE alarming spread of magnetic girls, says *Gaillard's Medical Journal*, deserves the immediate attention of sanitary authorities. Since the first case appeared, in the person of Miss Hurst, four more Georgia girls have been attacked, and are now on their way north, breaking umbrellas and otherwise displaying the terrible symptoms of magnetism. The disease is evidently assuming an epidemic form in Georgia, and it will spread throughout the country unless strong measures are promptly taken.

Mr. S. F. Cater.—1. We quite see our correspondent's difficulty, which we think, however, he overrates. The certificate of a medical man is understood to express merely an opinion where from the nature of things he cannot speak with certainty. There is nothing to prevent our correspondent amplifying the printed form by the addition of explanatory sentences. Whether a company can be sued on an ordinary written certificate depends entirely upon the terms of the contract. If no mention is made in the agreement that a particular certificate must be presented on application for a claim, the company have no power to dictate their own terms in the matter.—2. Wilson's Handbook of Hygiene and Sanitary Science, 5th edition, 1883; Bailey-Denton's Handbook of House Sanitation, 1882.

Mr. E. Seton Pattison.—The handbill is beneath contempt.

PROFESSIONAL AMENITIES ON BOARD PASSENGER STEAMERS.

To the Editor of THE LANCET.

SIR,—A is a medical officer on a first-class passenger steamer; B is a surgeon returning on the same to Europe on furlough. B prescribes for a saloon passenger, and requests A to make up the medicine, representing that the patient was known to him (B) at one of his stations. A obliges B by dispensing the prescription. The case being protracted, A suggests to B that he should be called into consultation, which B declines. Subsequently B sees other saloon passengers, and demands of A to make up the medicines, which A refuses to do unless in consultation with B.

1. Was A in the right in making up the prescriptions of B all through the case No. 1, as he had in the first instance obliged B by dispensing on the understanding that the patient was a friend of B's, even though B declined a consultation?—2. Would A have been within his right to have refused to make up B's prescriptions, either from the first or after he (A) had requested a consultation with B?—3. Suppose two or three saloon-class returning, and each wished to prescribe for some friend also returning, would A be in his right to point-blank refuse to make up any of their medicines, and to state that he was not their dispenser, and that he would not dispense unless he was in consultation?—4. Is it not contrary to all medical etiquette for passenger surgeons to prescribe for fellow passengers when there is a ship's medical officer on board?

I am, Sir, yours truly,

Sept. 15th, 1884. ENQUIRENS.

*** It is not necessary to give too categorical an answer to our correspondent's questions. Clearly, though in exceptional and slight cases such demands as B made may be acceded to with grace, it is not fair to treat the responsible officer of the ship as if he were the mere dispensing assistant of medical passengers.—ED. L.

Dr. F. Gerger.—In Austria the practice of medicine is, we believe, restricted to graduates of Austrian universities. The practice of foreign medical men may, however, be permitted by the Government after special application.

Walter should put the question to his medical attendant.

MEDICAL OFFICERS OF HEALTH AND GENERAL PRACTITIONERS.

To the Editor of THE LANCET.

SIR,—Will you be good enough to inform me whether it be a usual course to adopt, and in accordance with medical etiquette, for a medical officer of health to visit and examine a patient of another medical man, but in his sanitary district, when the case is reported to be one of infectious character by the sanitary inspector.

I am, Sir, yours truly,

Sept. 16th, 1884. BREAD TRAY.

*** It is impossible that any general rule as to this can be laid down. Whilst it is quite clear that, in virtue of his office, a medical officer of health has no legal right to visit any patient without his consent or the consent of his friends, and whilst it is not very often that an actual examination of a patient is necessary to the performance of the duties of the officer of health, it is at times of importance, in connexion with an inquiry he is making, that he should see one or more patients suffering from infectious disease. Such visits should, however, generally be made in harmony with the medical practitioner in attendance, and when this is done no difficulty need be experienced.—ED. L.

Medicus (Croydon).—Thanks.

Bob.—We know of no book that will serve our correspondent's purpose.

AN OBSCURE CASE.

THE following statement of an obscure case, given in the words of the patient, has been forwarded by a member of the profession, with a request for its insertion, and in the hope of obtaining an opinion upon it by some of our readers:—"I caught cold while bathing in the sea about three months ago, and completely lost my smell and taste. I continued to bathe occasionally for about a fortnight, when I became ill with what I believe was inflammation of the nerves and membranes of the head, eyes, and nose, and suffered intense pain. These nerves and membranes are naturally very delicate, and I suffer very much at times in my eyes and head. I have now been in my usual health for about two months, but have not recovered my smell and taste."

Enquirer.—1. Gowers' Diseases of the Spinal Cord, or Ross's Treatise on Diseases of the Nervous System.—2. As a matter of fact, such appointments are regarded somewhat with disfavour, but we are not prepared to say with what justice.

Mr. Gorham (Tunbridge).—We shall be happy to receive the paper.

MEDICAL ATTENDANCE ON THE FAMILIES OF MEDICAL MEN.

To the Editor of THE LANCET.

SIR,—On April 4th, 1884, Mrs. S——, a widow lady, and a complete stranger to me, called at my house and inquired for me. I saw her, and she said her daughter, who resided in London, wished to come home for her confinement, and asked me if I would attend her. I acceded to the request, and booked the engagement. A few weeks afterwards Mrs. S—— called to introduce her daughter, Mrs. F——. In due time the confinement took place, which I attended. A day or two subsequently the husband came, and introduced himself as a medical man. This was the first intimation I had received of the fact, no mention having been made either at the time of engagement or the subsequent visit of introduction, nor even during the confinement. The subsequent attendance was long and anxious; for the child ultimately died when about five weeks old. Mrs. S——, after my attendance, gave me to understand that I should be paid for my services, and asked me to be as lenient as I could. Accordingly I sent in my account to Mrs. S—— (not to the husband, Mr. F——); but a few days afterwards Mr. F—— wrote to me, saying that he considered it very unprofessional of me for charging a medical man for services rendered to his wife and child. Now, what I should much like to know is—1. Was I right, or wrong, in making a charge, considering the circumstances of the case, Mr. F—— being a total stranger and a non-resident?—2. If I had been expected to attend gratuitously ought I not to have been made aware that I was to attend a medical man's wife, instead of being told of the fact after my services had been rendered? I have been in practice for over ten years, and have frequently attended the families of medical men, and have never made any charge; but these were acquaintances, or else living in the same town, and I knew I was attending a fellow practitioner's wife or family.

I am, Sir, yours truly,

Sept 15th, 1884. M.D., &c.

*** Agreeing with our correspondent, we cannot admire the uncandid way in which he has been treated. A medical man has never more reason to be thankful that he is a medical man than when a patient in his own family gives him anxiety and he finds that he can command without fee the willing and kind help of medical neighbours or medical consultants. But there is reason in all rules, and a good rule is not to be unreasonably used. If the lady did not wish to be confined in London, and the amenities of the profession were to be substituted for the usual fee, the very least that ought to have been done was that the husband of the lady should have written beforehand, and in the first instance, to the gentleman on whose kindness and time a serious demand was to be made. This is so obvious that we will not further insist on it. We insert the letter that in future a gracious custom may be ungrudgingly, and not brought into discredit.—ED. L.

Microscope.—The foreign microscopes have hitherto been preferred on account of the better quality of their objectives. The disparity between English and foreign instruments is much less now than formerly.

ERRATUM.—In the communication from Italy, published last week, p. 524, first column, line 25 from the foot, "lettuce or an olive" should be *lettuce or endive*.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Risdon Bennett, London; Dr. Purcell, London; Mr. Rea Edwards; Dr. O'Reilly, London; Dr. Drysdale, Liverpool; Prof. Wharton Jones, Ventnor; Dr. H. Cooke, Preston; Dr. Wiltshire, Gowes; Mr. Cater, Dufftown; Dr. Herschell, London; Dr. W. A. Duncan, London; Mr. D. Macrae, London; Dr. Jamieson, Shanghai; Dr. Hunterick, London; Dr. Taylor, London; Mr. Charles Hawkins, London; Mr. Gamgee, Birmingham; Dr. Geo. Johnson, London; Dr. Lewis Marshall, Nottingham; Dr. Wharton Hood, London; Dr. R. W. Reid, London; Dr. Findlater, Dufftown; Dr. Sawyer, Birmingham; Dr. Robinson, Ely; Mrs. P. Hount; Pett Elizabeth; Dr. Saundby,

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Birmingham; Dr. Jas. Adams, Ashburton; Mr. Batterham, Wolverhampton; Mr. Barwell, London; Dr. Paramore, London; Mr. C. E. Jennings, London; Brigade Surgeon Oughton; Mr. J. C. Lucas, London; Mr. Kesteven, London; Dr. Savage, London; Dr. W. T. Brooks, Oxford; Dr. Dolan, Halifax; Messrs. Avery, Birmingham; Dr. J. Adam, Malling; Mr. Algar, London; Mr. Berne, Huddersfield; Dr. Campbell Pope, London; Mr. Austin, London; Mr. H. A. Allbutt, Leeds; Dr. Addinsell, London; Dr. Macewen, Glasgow; Surgeon-Major Alcock; Mr. James Startin, London; Dr. Braidwood, Birkenhead; Mr. Davidge, London; Mr. H. A. Reeves, London; Mr. M. Clifford, London; Dr. Darier, Paris; Mr. Wheeler, Dublin; Dr. Girdlestone, Biarritz; Dr. A. J. Harries, London; Major Upton, Exmouth; Mr. C. E. Cassal, London; Mr. E. H. Schroeder, Berlin; Mr. Woodward, Birmingham; Mr. Whitley, London; Messrs. Bell and Bradfute, Edinburgh; Mrs. Napper, Bournemouth; Mr. Luchi, Gallicia; Messrs. Robertson and Scott, Edinburgh; Messrs. Keith and Co., Edinburgh; Mr. Cornish, Manchester; Dr. Bristowe, Chippingham; Mr. Sandsford; Mr. Pierse; Mr. Wohlman, Hertford; Mr. Webb, Bury; Mr. Edgar, Hackney; Messrs. Macmillan and Co., Cambridge; Mr. Gilder, Hereford; Dr. McNaughton Jones, London; Mr. Stamford, London; Miss Down, New York; Mr. Smale, Bournemouth; Dr. Squire, London; Mr. Miller, Clapton; Mr. Jesse, Henbury; Mr. Abbs, Dewsbury; Mr. Freeman, London; Messrs. Arnold and Sons, London; Mr. Storey, Leicester; Mr. Stone, Banbury; Mr. Adams, North Shields; Mr. Wright, Leeds; Mr. Ness, London; Mr. D. Buxton, London; Mr. Fitzroy Benham, London; Mr. Barford, Wokingham; Nemo; P., Southampton; Fiat Justitia; Whitworth; F.R.C.S.Exam.; Dr. R., Weston-super-Mare; A Constant Reader; Bab; M.M.; Bread Tray; M.D.; Medicus; Volunteer Surgeon; Enquirens.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Williams; Rev. K. W. Smith, Ely; Dr. Beattie, Dewsbury; Messrs. White and Chignell, Havant; Mr. Fowby, Chipping Norton; Mr. Moxon, Yarmouth; Mr. Tallack, London; Mrs. Chapman, Clapham; Mr. Wood, Bromgrove; Mr. Harrison, Liverpool; Mr. Andrew, Chorlton-on-Medlock; Messrs. Smith and Son, Manchester; Mr. Mackay, Mayfield; Mr. Austin, Faversham; Mr. Marsh, Fulham; Mr. Moore, Belfast; Miss Holroyd, Cambridge; Mr. Buller, Ely; Mr. Townsend, Exeter; Dr. Veitch; Mr. Herschel; Mrs. Ellis, St. Catharine's, Canada; Miss Buckler, Brighton; Mr. Offord, London; Dr. Rosser, Croydon; Mr. Williamson, Farnham; Messrs. Armfield and Sons, London; Dr. Masters, Thrapston; Messrs. Pope and Sons, Downham Market; Mr. Probyn, Lymington; Mr. Brown, London; Mr. Jackson, Bradford; Mr. Matheson, Edinburgh; Mr. Saunders, Camden-town; Mr. Penny, Islington; Mr. Entwistle, Manchester; Mr. Peters, Belfast; Mr. Gantby, Hull; Mr. Alderton; Mr. Gaton, Swansea; J. H. W., Earl's Barton; B. P., Chilwell; Surgeon, Birkdale; M.D., Arlington; Medicus, Swayton; L.R.C.P.; Medicus, Ebbw Vale; H.E.B., Royston; Medicus, Bridlington; Boar, West Brighton; M.D., Birmingham; Medicus, Hampstead; Alpha; A. B. G., Liverpool; H. H., Birmingham; Delta, Llanrwst; Medicus, Clapham Junction; Medicus, Camberwell; Examiner; Neurosis, Bembridge; Vendor; J. M.; S. Y. R.; Alpha, Ealing; S. P. Q. P.; B.A., M.D.; B. S. J.; M.D., Swanage; Practitioner; Scalpel, Shepherd's Bush; Meta, Folkestone.

Scotsman, Aberdeen Daily Free Press, Bath Argus, Western Daily Mercury, Melbourne Herald, Kimberley Independent, Dutoitspan Herald, Liverpool Daily Post, Prescot Reporter, Tyneside Echo, Kimberley Diamond Fields Advertiser, Calcutta Englishman, Leicester Daily Post, Liverpool Courier, Richmond and Twickenham Times, Bradford Observer, Bournemouth Observer, Bournemouth Visitors' Directory, The Schoolmaster, Philanthropic Guardian, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, September 30.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, October 1.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, October 2.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, October 3.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. President's (Mr. F. Lawrance) Address, and a Case of Foreign Body Impacted in the Foot.—Mr. Bernard Pitts: Foreign Body in the Air-passages, followed by Abscess of the Lung; recovery.—Mr. A. Litton Forbes: Pharyngeal Deafness—its Pathology and treatment, with Analysis of Cases.—Mr. Gunton Alderton (for Mr. M. Thompson): Case of Retention relieved by Railroad Catheter; fever; death in three days.

Saturday, October 4.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M

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An Inaugural Address

DELIVERED IN

ST. THOMAS'S HOSPITAL,

At the Opening of the Medical Session 1884-85,

BY SIR J. RISDON BENNETT, M.D., LL.D.,
FELLOW OF THE ROYAL SOCIETY.

GENTLEMEN,—It was, I believe, a saying of Dr. Johnson that "to judge rightly of the present we must oppose it to the past." Certainly, to judge rightly either of St. Thomas's Hospital and its School, or of medical science of the present day, it would be needful to look back, I will not say to bygone centuries, but at all events to the beginning of the present century. And to one standing in the position of him who has the honour of addressing you on this occasion there are many temptations to take a retrospective view and indulge in past memories. Nor should I despair of making such a retrospect interesting to many, perhaps to most, of my auditors. The history of such an institution as this cannot be devoid of either interest or instruction, not merely to members of our profession, but to all thoughtful men, to all true lovers of their country and mankind. For what would be the character of such a history? Would it not be the history of a long series of benevolent efforts to succour the destitute, heal the sick, and alleviate the ills of mankind? Would it not be the history of men whose lives were devoted to doing good to their fellow-creatures—of men whose efforts had been spent in investigating the secrets of nature and making every advance in science available for the benefit of humanity? Would it not be the history of one of the grandest and most venerable of those institutions which are the direct outcome of our common Christianity and the glory of our land?

But I do not propose to offer you any attempt at such a historical sketch, whether for the purpose of congratulating you on the present position and prospects of your hospital and school, or at the risk of posing as a *laudator temporis acti*. I wish rather to be allowed to ask you, as I asked myself after my former pupil, your distinguished and respected Teacher and Dean, had requested me to give the address on the opening of the present session, what is it that those who are entering on the medical profession are about to undertake? What is comprised in the preparation needed for rightly fulfilling the duties that will devolve upon them? These, surely, are questions that every one entering our profession should put to himself. But how few do so or give to them due consideration. It is only when we have entered on the duties of our calling, and by experience are made aware of the magnitude, nobility, and responsibility of the office we have undertaken that in our thoughtful moments we become to any adequate degree sensible of the requirements which our profession demands. The subject is far too extended and serious to be adequately treated in a brief address. But some very general considerations on a few points admit of being submitted for future thought; and if these should help you in any measure more adequately to realise what it is that you who are entering on your profession have undertaken, I shall be satisfied.

The poet tells us that "the proper study of mankind is man." But man is in a special sense our study; man in his entirety, physical, intellectual, and moral; man not only as the highest type of the animal kingdom, a constituent part of the created universe, and therefore subject to its laws; but man also as an intellectual and moral agent, subject to other and higher laws of the Great Lawgiver, of Him whose will is the one and only source of all law, whether physical or moral. Like all other living beings, we are subject to those laws and conditions on which life depends, and as intelligent and moral beings, members of a society of fellow-beings, subject to laws whose maintenance is essential to social life, not to mention those higher laws by which we are linked to a higher and more enduring life. All of us, therefore, must become more or less practically acquainted with the conditions under which we live, whether as individuals or members of society, and must learn, more or less accurately, the consequences of infringing the various laws to which we are subjected. The degree in which such knowledge is essential will differ in different circumstances and callings in life, but absolute ignorance is incompatible with either individual or social life. We, whose office it is especially to study all that relates to the life and health of our fellow-men, have to study man not only as an organised being in all his relations to the external world, but also as endowed with reason and a mental constitution with which his physical nature is combined, by which his material organisation is constantly influenced, and by which he is capable of influencing and is influenced by his fellow-men.

It requires but a very slight acquaintance with the practice of our art to learn how greatly the equilibrium of health depends on the due regulation of psychical as well as physical causes, and how much the influence and success of the medical adviser depends on the exercise of those subtle powers which are not to be weighed by grains and ounces. In common with all men, we are bound to be just, manly, gentle, and loving towards all men with whom we have to do; but as members of a high and noble calling, to whom not only the lives and health, but to a large extent also the private and social interests, of our fellows are entrusted, we are under moral obligations of special and solemn stringency. We must learn not only how to regulate our own mental and moral powers so as to exercise our art with the fullest benefit to our patients, but must make it an important part of our study to watch, analyse, and estimate aright the various and ever-varying mental manifestations of our patients. It would be a great mistake to suppose that mental and moral philosophy, the study of the intellectual powers, were required for those only who intend to devote themselves to psychiatrics. Nor is it merely as contributing in no small measure to our therapeutic power that such studies are important. In the more strictly scientific departments of the investigation of disease—etiology, diagnosis, and prognosis—they are of equal moment. There is good reason for believing that in our present state of civilisation many more of our most important diseases than we have hitherto imagined have not merely a nervous, but a strictly mental origin. Happily, through the labours of such men as Bell and Marshall Hall among others, and by means of experimental physiology, our knowledge of the nervous system has been greatly advanced. The influence of mind over body is indeed no new discovery, though of late much more has been affirmed than can be proved of the influence of the material on the immaterial. Where the initiatory steps in the production of disease take place, and what is their precise nature, are indeed questions which physiologists and pathologists alike confess to be involved in mystery. But that in many instances their first manifestation is in the nervous system there is good reason for thinking, and that mental states and impressions do not only induce functional disturbance even to the extent of sudden arrest of function and consequent death we have abundant proof. The action of the heart, respiration, and secretion are all greatly influenced by mental states. Moral emotions that may cause the death of the mother by sudden arrest of the heart's action may also destroy the life of the infant at her breast by poisoning the nourishment that she supplies. The effects of remedies are largely determined by mental states. They become potent, modified, or inert, according to the mental state of the recipient, and this constitutes no small difficulty in determining their true action.

It is therefore not merely as a part of that general culture and preliminary education required of all who claim to be well educated that it behoves us to give mental philosophy or study of the intellectual powers a place in our curriculum. Nor is it merely as members of society and fellow-workers that we are bound to be guided by sound views of moral philosophy or ethics. For the direct purposes of our profession we need to give due regard to the reciprocal influences exerted between mind and body, to the moral powers with which we are endowed, and the modes in which they can be brought to bear on the welfare of our patients. The will, the imagination, emotions, affections, and desires, hope, fear, moral habits and conscience, all exercise an influence on the aspect, course, and final issue of disease. They require each in their turn due consideration from him who would rightly fulfil all that duty demands; or ensure his own success.

How often do we not see an ignorant empiric succeed in cases that have baffled the efforts of legitimate scientific

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physicians, whilst we perhaps merely pity the credulity of the patient or sneer at the ignorant pretender to science? His so-called remedies have probably been absolutely inert, but he has called into action powers to which we have attached too little importance, or have altogether neglected—the stimulus of hope, the sedative of confidence, or the mere diversion of the attention from objects which, by their absorbing and depressing influence on the mind, have enfeebled and exhausted every vital power.

But if on the part of our patients and in the ordinary intercourse of life it is important to avoid the two extremes of credulity and scepticism, it is doubly so for us who are engaged in investigating the complicated phenomena of life and all that concerns its maintenance on the one hand, and on the other all that relates to the origin, nature, and prevention of disease. How vast is the field of our observation. How varied, intricate, and often mysterious are the subjects of our investigation. How numerous the fallacies and errors to which we are exposed. How difficult to elicit even the most fundamental truths that are to be the basis both of our science and our art. How important is it that we should be provided with all that constitutes a well-trained and regulated mind, in order to secure and make available for our great purpose in life truth and truth only.

Both our science and art are largely based on the observation and collection of facts. Now, there is a great difference in the observing powers possessed by different individuals; but we all require to carefully cultivate these powers, and by habits of close and continual practise render them both quick and accurate. Having ascertained, as carefully as may be, the certainty of our facts, the utmost care and honesty of purpose are required in tracing their mutual relations and drawing conclusions from them. All prejudice and preconceived notions must be excluded in determining whether any two facts stand in the relation of cause and effect, and in deducing general principles from any number of facts. Habits of close reasoning and the exercise of sound judgment are essential to our success. In medicine the difficulties are far greater than in the physical sciences in applying the strict rules of philosophy to the investigation and determination of truth. We have far greater difficulty in determining the uniformity of phenomena arising both from their greater variety and complexity, and also from our imperfect acquaintance with the influence of external agents on the living organism. We must still submit to be taunted with the uncertainty of medicine; but may, I believe, affirm with confidence that this uncertainty is daily decreasing, and may rest assured that it is only by the steady pursuit of knowledge along the strict lines of philosophical investigation that truth and certainty are to be attained. Let me here ask you to listen to what Lord Bacon says of the mental qualifications for the study of truth.

"For myself I found that I was fitted for nothing so well as for the study of truth; as having a mind nimble and versatile enough to catch the resemblance of things (which is the chief point), and, at the same time, steady enough to fix and distinguish their subtler differences; as being gifted by Nature with desire to seek, patience to doubt, fondness to meditate, slowness to assert, readiness to reconsider, carefulness to dispose and set in order, and as being a man that neither affects what is new, nor admires what is old, and that hates every kind of imposture."

Now, gentlemen, do not suppose that by such observations as these I am anxious to lead you into the barren fields of metaphysical speculation, and encourage you to form theoretical views of medical science, and become speculative practitioners. Far from it. I would rather warn you against wasting your time and muddling your brains by so-called systems of philosophy, which minister questions that are insoluble and are fertile only in raising doubts and spinning ingenious fancies and impossible theories. Such things may have a charm for some minds as affording intellectual recreation, and as possessing, indeed, a show of reason, but which for the real purposes of life are little better than verbal and vain janglings.

I wish simply to impress you, on the very threshold of your studies, with the importance of entering on them with that knowledge of your own intellectual powers and those principles of mental philosophy which are essential in all scientific pursuits. I wish you to keep in mind that in the practice of your art you have to do with the intellectual as well as the physical constitution of man, that you have moral relations to your patients of the highest importance both to their and your own welfare. If I might venture to recommend any particular books on these subjects, I would mention those of Abercrombie, particularly his admirable and instructive "Treatise on the Intellectual Powers."

When entering on the investigation of man's physical constitution as the highest type of organic life you will soon be made aware how intimately connected are anatomical or structural studies with those relating to function, both healthy or physiological, and perverted or pathological, and you will soon learn that whilst acquaintance with the principles of almost every department of physics and natural science is required rightly to understand the structure and actions of the human frame, we have at the bedside to do with something that cannot be studied in the dissecting-room and on the post-mortem table. The history of medicine sufficiently demonstrates indeed how little could be ascertained of vital actions or the nature of disease so long as the structure of the body and the physical alterations effected by diseased action were unknown. But with all the progress that has been made in recent times in our knowledge of our bodily organisation, and the flood of light thrown on the nature of those actions by which life is maintained through the advance in physical science, we are encountered at every step in our studies by evidence of the existence of powers and actions which all our physical science has hitherto proved inadequate to explain. Life is still the great mystery. And life, as we know it here, is ever passing into death. The very actions, so far as we know them, by which life is maintained are ever working by sure and inevitable steps to the destruction of life. All we can do is in some measure to modify those actions, and avert those causes that interfere with life, and so to prolong for a short space its continuance, and render it at the same time a more unalloyed source of enjoyment, a means of greater benefit to our fellow-men, and of fulfilling the great end of our existence. Day by day we are learning more and more how inadequate is our most intimate knowledge of structure to explain the real nature of those vital actions by which our frame is built up with materials obtained from without the body, and dead matter converted into living, and how small a portion of that pathological knowledge we so much need is derivable from the examination of morbid structures. But, happily, we have acquired much, and hope to obtain more, knowledge of the exciting causes of many diseases, and can in numerous cases arrest their action. We can understand much of the ways in which perverted nutrition and altered structure interfere with healthy function and endanger life. We can effectually remedy some of these things, and in important degrees diminish the perils arising from others. We can alleviate the pain and inconvenience associated with many diseases, and can save many lives from immediate and inevitable death. By our knowledge of the influence of external agents on living organisms we can diminish their danger to life and health, and make many otherwise impossible occupations compatible with human welfare. We can prolong the duration of human life, and have added to its sum total. We can comfort many an aching heart, solace many a weary mind, and bring joy and gladness into many a home in a way that no other body of men can. The benefits that we can confer, the good that we can do by our science and art are as extensive as humanity, and all ranks and conditions of men in ages yet to come will have cause to bless our Harveys, Hallers, Hunters, and Jenners.

But why do I venture to indulge in this strain of seeming self-laudation? Because I do not wish that you should be discouraged by the extent, variety, difficulties, and mysteries of the studies on which you are entering, but rather that you should congratulate yourselves on having adopted a course of life worthy to engage all the highest powers of man, and capable of conferring the greatest blessing on mankind. A life it is that will indeed not be free from care, anxiety, toil, and self-abnegation, but fraught with pleasures and satisfaction of the purest kind.

The connexion and relative importance of the different departments of your studies and the present aspect and position of our science you will learn from their respective teachers. The facilities and advantages which you possess in the present day for carrying on your study in the various subjects that lie at the foundation of all your professional education are very great; but with all these aids you must be prepared to find some of them at first irksome and devoid of much apparent interest. By industry and resolution you will soon get beyond those first steps that are always more

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or less rough and difficult. As you advance your progress will be easier, and if you are at all worthy of your calling each step will be found of increasing interest and delight. On the actual position and prospects of our science in its various divisions I shall not attempt to enter. In some the outlook is more encouraging than in others. In some of the special subdivisions the practical application of our science has been followed by results of the most gratifying and salutary kind, whilst with respect to others sceptical outsiders are prone to exclaim "*Cui bono!*"

On one or two points I venture to offer a few remarks. Histological investigations have for some time been pursued with great ardour and diligence, and with undoubted and important increase of our knowledge both of function and structure, but whether with a corresponding augmentation of our therapeutic powers may be doubted, and whether such studies have not too much diverted our attention from the general laws of disease and the broad principles of practice is a grave question. At all events it is, I think, not a needless caution in the present day to warn you against coming under the description of Goldsmith's "puny pedant, who finds one undiscovered property in a polyp, or describes a hitherto unheeded process in the skeleton of a mole, and whose mind, like his microscope, perceives nature only in detail." I am speaking to those who are supposed to be preparing themselves for the practical duties of their profession rather than to scientific investigators. Again, many of the subjects of scientific inquiry in the present day are of such surpassing interest, and I may say fascination, as well as importance, that they are calculated to occupy the student's mind so as to interfere with other topics, and give a colour to his views both of science and art detrimental to his therapeutic success. Still more do we need to be on our guard against being influenced by the mere fashions and notions of the passing day, and taking up the endless whims and baseless theories that happen to have gained the ear and secured the patronage of the public.

It is certainly remarkable how little of our most trustworthy therapeutics has been the direct deduction from our scientific knowledge. Nay, how many of our most valuable and best-tested remedies have been acquired by accidental observation! How entirely ignorant are we of the mode of action of some of the most reliable! Quinine or bark from the time of its discovery has held its place as one of our most valuable and certain remedies, and we have recourse to it with the utmost confidence in intermittent fevers and neuralgias, knowing nothing of the real nature of its operation. The most philosophical physician, and one of the best of men, whom I have ever known, the late Professor Alison, at whose feet I had the privilege of sitting, and under whom I acted as clinical clerk, gave it as his opinion that we must look mainly for the advance of practical medicine to more accurate knowledge of the exciting causes of disease, and to the discovery of fresh specifics which may exercise the same influence over diseased actions as cinchona in intermittent fevers, citric acid in scurvy, and vaccination in small-pox. Two remedies that have come into use since his day, iodide and bromide of potash, approach nearest to the claim of being considered as specifics, and have proved of inestimable value; but their employment has not resulted from scientific induction either from physiology or pathology. It is also deserving of remark that in proportion as any medicine is found to be adapted to any particular morbid state, it is well borne by the economy, to the extent even of entirely masking or overcoming its ordinary physiological action. But experimental physiology and pathology have thrown much light on the action of many medicines, and we have thus gained no small amount of reliable information on the means at our disposal for modifying vital actions and controlling disease. The danger to life and the destructive course of disease are in many instances mainly referable to excess or defect of particular functional activities, which admit of being controlled by remedies proved to be capable of exercising the required influence. The incalculable blessings conferred by anæsthetics have been obtained by experimental investigations into their chemical constitution and influence on the nervous system. These and other instances of important augmentation of our therapeutic resources are a sufficient answer to the objections now so frequently and mischievously raised by mistaken opponents of experiments on the lower animals. Again, in the case of parasitic diseases, our knowledge of their true causes and nature has led to the discovery of appropriate and efficient remedies. And there can be no doubt that in other and more complex forms of disease, in proportion as we know their essential nature, our therapeutic powers will be increased.

Although there cannot, I think, be any doubt that by a judicious combination of medicines we often obtain advantages that could not be gained by single drugs, polypharmacy has been a great evil; but its days are well nigh gone, and the greater simplicity of our present practice is no doubt conducive to more accurate knowledge of the real therapeutic value of medicines. But whilst admitting the urgent need of still further careful observation and experiment in this field of inquiry, and though far from underrating the power of controlling, and even curing, disease already afforded us by many drugs, I would urge you ever to remember that therapeutics are no more comprised in the due administration of drugs than is pathology in a knowledge of morbid structures. It is well that young practitioners should see and appreciate the truth and depth of meaning in the dictum of Celsus, "*Optima medicina est non uti medicina*," a maxim which a certain class of practitioners have very dexterously turned to their own no small advantage.

Therapeia with the ancients comprised all that related to the care of the sick with a view to their comfort and relief; and in the present day hygienic rules, diet, and regimen are comprised under the head of therapeutics. It is here that we have met with most success and have won our greatest triumphs. It is here that all our labours in the investigation of structure and vital action have borne fruit; it is here that we have been able to profit by all the advances in physical sciences. Fuller knowledge of the exciting causes of disease has enabled us to make important steps towards their prevention; a more intimate acquaintance with the laws of morbid action and the natural history of disease has enabled us to foresee results and promote or obviate their occurrence. A closer acquaintance with nature's powers in maintaining health and repairing injuries has helped us materially in promoting her efforts and warding off all those influences that tend to interfere with or frustrate them. Surgery perhaps affords us the most signal and indubitable evidence of this; but some of the most complicated, and still in some respects inscrutable, forms of disease that fall under the care of the physician—specific fevers—might also be cited. More attention to the influence exerted on the aspect and course of disease by different circumstances and conditions of life, by differences of season and general epidemic character, has shown us the fallacy of supposing that the same disease is always to be treated in the same way, and thus leading us to prescribe for a name rather than for the particular case under view. If we take so common a disease as pneumonia, for example, of the nature, course, and general management of which we know more than of many other diseases, how different is its mode of access in different cases, the degree and kind of danger attending it; how different its progress; how different the constitutional condition of the patient, his hygienic and moral circumstances. Manifestly the plan of treatment and the action of remedies must correspondingly vary. Theoretical or scientific views of pathology and therapeutics must here give place to the sagacity, experience, and judgment of the physician, even at the risk of his reputation, by running counter to popular views and received rules. It is evident that when encountering new forms of disease, or which are new to us, we must be guided by analogy rather than by definite rules.

It may perhaps be questioned how far the varied aspects presented by disease at different periods will account for or justify the abandonment of remedies and plans of treatment that have been found successful in other times; or how far we are influenced consciously or unconsciously by theoretical views into which we have been led by recently discovered scientific facts. In practice we must still to a large extent be guided by those broad general principles that have been best established by observation, and stood the test of long experience. In our art, *vixerunt fortes ante nos;* and we have but to look to the records of the past to be convinced how large a part of our most trustworthy practical knowledge has been transmitted to us by men who have gained the admiration and gratitude of their posterity by their sagacity and powers of patient accurate observation rather than by the theoretical views and systems associated with their names. Systems of medicine have passed into limbo, and we are happily free, in the present day, from their shackles; but we cannot ignore or neglect knowledge accumulated in the past, because we cannot make it harmonise with

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our more advanced physiology or the marvellous discoveries in the field of microbiology.

During your studies here you will have but little time for reading beyond what is comprised in text-books, and that little had better be devoted to general literature as a source of mental recreation from professional occupations. But the leisure hours of future life will be profitably employed in learning what has been thought and done by the great men of the past. In the history of medicine you will find much to interest as well as to instruct you. Stores of wisdom are to be found in the writings of bygone observers that may be made practically available at the present time, and assistance often obtained on questions of the day by learning the errors and mistakes, as well as the discoveries, of the past.

In practice each individual case of disease to which we are called must be made a special study. It is not enough to ascertain that we have to do with gout, pneumonia, or typhoid fever, whichever it may be; each example of disease and each patient must be made a special study. We have to take into consideration all that relates to the climate, season, hygiene, and social condition of the patient, his hereditary and constitutional characteristics, his idiosyncrasies and past history, so far as we can learn them. And in the management of each case there is scarcely any circumstance, however trivial apparently, that may not exert an influence on our success, any and every source of irritation, whether bodily or mental, the position of the patient or his bed, the aspect as well as the nature of his food, his prejudice in respect of a particular medicine, his liking or aversion for a particular attendant and all that relates to the nursing and economy of the sick room.

It is not enough to lay down rules of diet. You require to know that the food is properly prepared as well as its special adaptation to the patient's case; and to these ends you must know the principles of the science as well as the art of cookery. For cookery is a veritable science as well as an art. Among the poorer classes there is not only grievous waste from ignorance or neglect of the right methods of obtaining the full amount of nutriment from each variety of food, but many unfounded and hurtful prejudices against the use and best modes of preparing such food as is needed in sickness. You will render no mean service to your poorer patients by instructing them on such points, and will greatly enhance your therapeutic powers by a knowledge of the chemistry of food and the best means of preparing it for the purposes of nutrition. Your personal influence in the sick room will be more or less in proportion as you learn to exercise in each case the precise moral control that it requires; and whilst to secure the confidence, good opinion, and gratitude of your patients are in all cases legitimate objects, their real welfare and the fulfilment of your duty must ever override all considerations of your own social success. Assumed and affected manners are to be deprecated, whilst a kind and sympathetic manner should be sedulously cultivated. Gentleness should be combined with firmness, cheerfulness with sobriety, caution with confidence, and a general deportment consistent with the gravity of your office, and the particular requirements of the sick should be your habitual study.

In such a profession as ours every well-conducted and fairly qualified man may look with confidence to a certain amount of social success and opportunity of benefiting his fellows, may secure the esteem of the worthy and the blessing of such as were ready to perish. It is not indeed given to all to make discoveries in science, or effect important advances in our art; but each may do something, and it is imperative on all to make it an object, and consider it a duty, so to live that those who come after us may be the better for our labours. Some by the particular circumstances in which they are placed may have opportunity for special observation and investigation of particular [illegible] which should not be lost. All by careful [illegible] observation of nature and truthful records of work may contribute somewhat to the common stock of knowledge; but such records must be made, not with a view to a fleeting reputation or the gratification of personal vanity or ambition, but with the object of eliciting truth that shall prove to be for the good of man's estate. Whatever the genius of some or their special advantages may enable them to effect, it is by that close observation of nature, which all may and are bound to cultivate, that most of us can [illegible] what should be the desire of everyone.

"Now this natural logick prevails not, artificial too often faileth," says that quaint old philosopher, moralist, and physician, Sir T. Browne; "where nature fills the sails the vessel goes smoothly on, and where judgment is the pilot the rate of insurance need not be high; where industry builds upon nature we may expect pyramids; where that foundation is wanting the structure must be low. They do most by books who could do much without them, and he that chiefly ows himself unto himself is the substantial man."

Introductory Lecture

DELIVERED AT

UNIVERSITY COLLEGE, LONDON,

On October 1st, 1884,

BY W. R. GOWERS, M.D., F.R.C.P.

GENTLEMEN,—My first and chief duty to-day is a simple one. It is to bid a hearty welcome, in the name of my colleagues and myself, to those of you who are here to commence or to resume your studies. Of your choice of a profession I may have something to say hereafter. Of your choice of a place of study I need say little. For more than half a century University College has shown other schools how medicine should be taught. Almost every important step in medical education has first been taken by her. Thanks to her example, she now has many rivals, but remains surpassed by none and equalled by few, whether the test of comparison be that of method or quality of result.

With this word of welcome, my chief duty being done, I would gladly end. But an unhappy custom lays its heavy hand upon me, and compels me to introduce you to your work by the first of the many lectures to which you will have to listen. In doing so, I do not propose to pass beyond the immediate occasion that brings us together. I have too much sympathy with the interests that are foremost in your minds to-day to be able to inflict upon you any scientific dissertation. So I shall limit what I have to say to the work that lies before you and the profession you have chosen, even though I risk the accusation, so freely levelled at introductory lecturers, of talking platitudes. I confess the charge lies lightly on my conscience. For, gentlemen, what is a "platitude"? A platitude, dictionaries tell us, is "something flat." Well, this world of ours seems a flat place to people who are up in a balloon; but to those who have to live and work upon it—to climb its shelving slopes—to thread its mazy labyrinths, and rest beneath their shade, the world has characteristics which the epithet of flatness fails to epitomise.

And so I will begin with the most common-place of questions, and ask why you are here, and will anticipate the most common-place of answers, that you are here "to study Medicine." Would, for your sakes, that the act were as simple as the words. Even in outline the process is somewhat formidable. I have said that this is the first of many lectures to which you will have to listen. I am almost afraid to tell you how many they are, lest the prospect should be too much for your resolution. It is certainly, however, within the mark to compute the number of lectures and class meetings that you will have to attend, at not less than two thousand. It is not our fault, gentlemen. It is ordained and prescribed by the powers that be that you shall learn all things by oral instruction. Many subjects could not be taught otherwise. As regards others, I for one think that more laxity might be shown, and that the method by which knowledge is acquired might be left, in larger degree, to the choice of the student.

Nor is the prospect less formidable if the nature of your work is looked at. Those of you who aim at the higher qualifications will have to learn something of about half the sciences into which human knowledge has been divided, and of many you have to acquire not an elementary, but a practical knowledge. Besides the sciences that you are expected to study, many others have applications to the subject of disease, its prevention, and its treatment, although those applications are not so direct or so extensive as to make their study compulsory. Indeed, the sciences that

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have no such relation are few. Almost every branch of knowledge, whether it deals with earth, or air, or water, with the physical properties of matter, or with the phenomena of organic life, with the processes of thought, or the social economy of communities, touches at some points the varied problems that present themselves to the practitioner of medicine. Nor can it be otherwise. For what is the work to which you address yourselves to-day? What is this Medicine to which you propose to give such strength as you possess and such life as may be before you? Let us try for a moment to gain a wider view of it, and see how vast is its significance, how extensive are its relations. Your life work is to be the prevention, cure, or alleviation of the diseases of man. Whatever else man is, he is at least this—the highest and most complex phenomenon yet discovered, or likely to be discovered, in the material universe; that in which the interactions of force and matter attain the greatest elaboration known to us or, indeed, conceivable by us. The highest form of matter, the most delicate adjustment of force, are in a nerve-cell of the human brain. Of the slow, never-resting tide of creative development, sweeping on, through ages far behind us, ebbing and flowing, and yet with sure advance—moulding into new forms and higher phases the mysterious elements on and in which it works,—it is with the ultimate result, the highest product, that your work lies. Physically man is part of the material world, inseparable. The phenomena of life are continuous with those outside the living organism, depending for their existence on that continuity, acted on by, and reacting upon, all the strange waves of varied forces, which, in their blending interaction, weave what we call the outside world. But elevation entails instability. The exquisite capacities of organic bodies are obtained by a complex adjustment of forces, held in restraint, ever striving to gain some lower and more stable state, kept in check by delicate counterpoise, in equilibrium that is destroyed by the slightest change, is indeed in constant process of destruction and renewal. By altered constitution or action the human body responds to every external variation, to every change in temperature, mechanical force, chemical constitution of its surroundings, and doubtless also to every alteration in electrical and magnetic states. No cloud can form, no rain can fall, without its influence. Each motion of our rolling world, each wave of light that reaches us from the far-off sun, each wind that bears to us the warmth of tropic seas or cold of mountain snows, determines some change in us. An alteration in the soil on which we live may modify altogether the processes of life. Hence we may see how wide must be laid the foundation of at least a general acquaintance with the sciences that deal with the material world, before an intelligent superstructure of special knowledge can be reared. With increased exactness in the study of the human frame, that necessary foundation has to be made wider and deeper. We are only beginning to see the application to physiology and pathology of the physical sciences. The structure of the body abounds with mechanisms and its action with processes, both in health and in disease, that can only be comprehended by a knowledge of the sciences that deal with the precise relations of constant forces, with the action of energy in solids and liquids, with the laws of light and of sound, and with the changing forms of force. Mathematics have a future application to human physiology and pathology of which only one province, the functions of the eye, affords at present an adequate illustration. You cannot properly understand the higher forms of organic life without some knowledge of the lower, in which the problems are simpler, and can be more readily comprehended, even if they cannot be solved. Moreover, the very lowest forms of life have been lately found to have the closest connexion with our work. Nature is always surprising us by the union of extremes. The labours of pathologists have added to the realm of biology a new province where it was least expected, and we may say least welcome. When I was a student the Professor of Zoology, whose genial enthusiasm will never be forgotten as long as his pupils live, commenced his lectures on the animal kingdom with an account of the corpuscles of the blood, and I presume our esteemed Professor of Botany will soon have to save his subject from its threatened exclusion from the curriculum by devoting half his course to bacteria, unless—which perhaps is more probable—a new chair has to be founded of, let us say, bacterio-phyto-zoology. When you have gained a knowledge of the sciences on which medicine rests, unfortunately, indeed, at the same time, you have to enter on the more special studies to which most of your time will have to be devoted; the study of those combinations which are so far distinct as to constitute, currently at least, separate sciences, and which we call by names that properly have wider meanings—"anatomy," or the art of cutting up; "physiology," or the science of the nature of things; "pathology," or the doctrine of deep feeling; "medicine," or the art of healing; "surgery," or handiwork. Around these chief divisions of the knowledge you have to gain are others of subordinate position, although scarcely of subordinate importance. Some of this preliminary knowledge you have doubtless already acquired, but that which remains is sufficiently vast in extent, intricate in arrangement, and complex in nature, to make the 2000 lectures only too few, and the four years you devote to the work only too inadequate. The task before you can only be accomplished by strenuous labour, pursued with even tenour, allowing no alluring pleasure to divert you, or idleness to hinder.

The mode in which the various studies should be pursued, will be sufficiently explained to you by those whose task it is to teach them. I would only impress on you one general principle, that should be ever kept in conscious view. It is a trite observation, often repeated, familiar enough in abstract but never enough familiar in daily effort, that the object of study is twofold. You are here for education as well as for instruction. You are here to acquire the knowledge of fact and rule and theory that you are to apply hereafter in the daily work of your lives, but you are here also to obtain the mental training needful for that application, needful to enable you to use your knowledge under conditions that are ever new and ever changing, to distinguish fact from fancy when they present themselves in unfamiliar aspect and often in borrowed garb—to trace new facts, new laws, among the manifold combinations of phenomena that will be around you in every day's work. Happily in each department of science the mental training needed to pursue it may be gained in the acquisition of the facts already known. No separate education is needed. If you study well, both wisely and thoroughly, the subjects that form your course, you will be, at the end of the time, qualified not only in the diplomatous, but in the fullest, sense of the word to enter on independent work. But the extent to which you obtain this training rests largely on yourselves. It is at once an important, perhaps the most important, part of your work, and it is that in which your teachers can do least for you. They can put before you fact and reason, but they cannot, or can only in small degree, compel you to observe, to realise for yourselves the value of evidence, to distinguish fact from theory, and to be on guard against the fallacies that lurk on all sides. They can test your knowledge: they or others can "coach" you and "grind" you, but the process of the instillation of facts, represented by these somewhat inapt metaphors, may leave you wholly untrained for subsequent work. Your "coach" may carry you through the lofty portals of Lincoln's-inn and Pall-mall, or the lower archway at Blackfriars, and leave you altogether unfitted for independent progress. Your "grinder" may pass you through his mill with such success that you emerge a flabby mass of factitious atoms kept in the semblance of form by the sack of a diploma, but it is only by your own continuous effort that you can gain cohesion and the power of organic growth. And this effort must be made from the commencement of your studies. Each of the subjects that occupy your earlier years has its own method, and yields you a separate training. In each facts are ascertained and theories are verified in a different manner, and this you should endeavour to keep before you in your daily work. This subject has been often dwelt on, and once here with an ability that I cannot hope to rival. I would refer you to, and urge you to study carefully, an introductory lecture that you will find in the library, bearing the revered name of Parkes, and I will content myself with a few instances to show you what I mean. The training given by the study of anatomy is chiefly that of observation—at once the most fundamental, and I might say the most difficult of all the mental processes involved in medical work; difficult, partly because it seems so easy, and a first clear impression is allowed to deter from thorough investigation; partly from the well-known tendency to confuse observation and inference, and to lose sight of the sources of error that the latter introduces; partly because facts have an inconvenient habit of presenting themselves where they are not expected, and when the attention of the observer

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is otherwise engaged, often in some manual occupation. This is a fertile source of error and omission. It cannot, from the nature of the case, be altogether avoided, but it may be to a large extent lessened by careful training, such as that which is supplied by the study of anatomy. This, if properly used, is of inestimable value. The facts are simple, in that they are of one class only. They are limited; it is possible to make an observation thorough and complete. But much of the value of anatomy as a training is lost because the student is content to separate too completely, often endeavours to separate, the two parts of his work, the process of dissection and the process of learning. During the processes of tracing and cleaning, largely mechanical, he allows his mind to be occupied with other subjects, and when the task is over, sits down to learn his part as from a picture or a model. But by keeping his attention constantly fixed on his work, by noting over and over again, and in a systematic manner, the relation of the parts he is tracing, he may not only almost know his dissection by the time he has completed it, but he may gain the power of seizing every fact as it presents itself, although his attention is at the time occupied by the work of his hands; a power of inestimable value, especially to the surgeon and pathologist. Microscopic anatomy takes the student to a fresh range of facts of greater complexity, and ascertained by a more complex method of instrumental, instead of simple, observation, and experiment by means of reagents plays a minor but important part in the processes of identification of structures, an introduction to the use of experiment in its simplest form. He should endeavour to analyse the steps by which each conclusion is reached, since by this training in simple methods he will be better able to trace the process, far more complex, by which inferences are drawn, and so detect the dangers of fallacious reasoning, in the more complex sciences that constitute his later studies. So in chemistry, in which experiment attains its highest development, and the training in exact reasoning which it affords to the student is of inestimable value. It is unfortunately unavoidable that most students should study these three subjects simultaneously, but it is a wise modification of the older order that study of inorganic chemistry should precede that of physiology.

So large has become the cargo of knowledge with which the course of medical study has become charged, that the question has been necessarily raised whether the overladen vessel cannot be lightened by throwing overboard at least one subject, and by common consent Botany has been selected as that which may with least loss be spared. The loss, it seems to me, would be greater than is commonly assumed. From the point of view of education, as opposed to mere instruction, the value of botany to the student is very great. No elementary subject in the whole curriculum is capable of supplying in equal degree the training in the methods of his ultimate work. Structural botany supplies an additional and most useful training in observation; the practice of describing plants, so admirably systematised as it is in the teaching here, is an excellent education in note-taking, afforded by no other subject in the earlier course; while the process of the identification of plants, involving as it does exact observation and comparison of characters and the estimation of evidence, is almost the same in method as that of the diagnosis of disease.

If the student has duly profited by these earlier studies, he is prepared to enter with advantage on the study of physiology, in which he is introduced to the chief methods of ascertaining and verifying facts that are employed in the ultimate subjects of medicine, pathology, and therapeutics. Although the methods are, in part, the same, the higher degree to which experiment can be applied renders the conclusions of physiology far more certain than those of medicine and pathology; although far be it from me to suggest that everything in physiology is free from doubt. The value of this study as a mental training was insisted on not long ago, with characteristic ability, by one of whom University College is justly proud—Professor Michael Foster of Cambridge—and his main conclusions must command universal assent. But the student can only utilise physiology properly after the training afforded by the earlier studies I have mentioned, and its proper place is between those and pathology.

When you come to the practical study of the subjects that are to constitute your later work, and especially to clinical medicine, surgery, and therapeutics, you will feel the value of your earlier studies if you have properly used the training they afford. Strive in all your work after exactness, thoroughness, and keenness in observation; endeavour to analyse the process by which each fact is reached, remembering that the processes are always more complex than they seem; look out for every opening by which fallacy can enter; strive by every method you can think of to gain the utmost certainty attainable, in whatever it be, whether the diagnosis of a disease or the action of a drug; or, at least, relentlessly expose, and candidly admit to yourselves, the degree of uncertainty. It would be a help to the student if at the beginning of his career, instead of sometimes at its close, he had to acquire some knowledge of formal logic, but the steps of reasoning can be effectively traced, and the value of conclusions duly estimated, almost as well without the aid of formal logic as with it, provided the student uses every opportunity of acquiring the art, and begins with the simpler instead of the more complex processes. It would also be a great assistance if the methods of reasoning adopted in each science could be explained and illustrated to him in a systematic and formal manner when he commences its study.

I have ventured thus to insist on the importance of deliberate and conscious effort on your part to obtain to the full the mental training that your studies afford, because I can do so here without any qualms of corporate conscience. Although you have, alas, no longer the privilege of listening to one, whom here I need not name, through whose unrivalled teaching his pupils learned the importance of exact reasoning by the most masterly example of method ever presented to students of medicine; still I believe that there is no other medical school in which so much is done to educate as well as to instruct, to train the student as well as to propel him through his examinations. And I have ventured to insist upon this subject, because if we look around us, and read much of the medical literature of the day, it is difficult to avoid the conclusion that there is, to put it mildly, room for improvement. To put it more exactly, there is no department of science in which there is so much imperfect observation, hasty generalisation, and fallacious reasoning as there is in medicine. I was going to say, "there is no department of intellectual work," but as that would include politics, which is supposed to be intellectual work, the statement might be open to question; so I will leave you one comforting comparison. But in medicine, almost every day, fancies are formulated as if they were facts, theories are elaborated on data absurdly inadequate, and almost every conceivable error in reasoning is gravely perpetrated, and what is more, these things are welcomed with acclamation, when in any other department of science they would be put by with a smile. This is no doubt due in part to the large number of workers in medicine. There is of course some admirable work, researches as brilliant, and reasoning as exact, as any department of intellectual work can show. I do not say that the bad is out of proportion to the good, but I am sure that the bad would be less if more could be done to utilise the mental training afforded by the course of study.

There is another and very different province in which self-training is desirable. When you come to the practical study of disease, strive to acquire the habit of entering into the feelings of the sick, and into their modes of thought, to such a degree as to ensure considerate tenderness in dealing with them. Never forget that a "patient" means one who suffers, and that you come in contact with the tenderest parts of human nature. Remember that in those in whom pain, disease, and death are stern and trying realities of the present or the nearer future, the mental tone is altogether changed; and do not judge the sick by the standard of the sound. "Invest suffering with the reverence that is due to its sad mystery. It has its roots deep down beneath the surface of our life, and reaches, in each one, the inner depths of calm or storm, in a region into which you cannot pass except by tender sympathy and thoughtful care."

It is true that to enter fully and deeply into suffering, with the sympathy that is not only intelligent but "with-suffering," is impossible. A doctor's work would then be simply beyond human endurance. To him, as to no other, the darkest side of human nature is ever open; in his ears the deep undertone of sadness rings through every chord and melody of human life, now in the wail of pure distress, now in the discord of passion, now rising into the sweet but still sad music of patient resignation and self-sacrificing

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love. Well is it for the world that it is possible to understand without enduring, or the helpers would be few. As it is, our lives are often saddened by the suffering that we cannot but share. No statement more untrue was ever uttered than that familiarity with the sight of suffering destroys the capacity for sympathy in medical men. It is one of the many statements that are made by crotchet-mongers and others in the present day regarding the members of the medical profession, their feelings, actions, and motives, which could not be made in public if the character of the profession as a whole and the value of its work were duly appreciated.

It has always seemed to me that the value of that work to the community is underrated in public estimation, and that its character is inadequately recognised. I do not say that it is so in the individual relations of practitioners, but the frequent depreciation of our efforts, the misconception of motive, deliberate or unconscious, the bitter and unjustifiable attacks permitted upon individuals, even in journals otherwise respectable, could not be made, because they would not be tolerated, if the public knew what our work as a whole is. Of course, in a body of men so large as that of which our profession consists, there are and must be some who disgrace the colours with which they serve. For their exposure we may be grateful; and if humour hunters us, we may join in the smile that it excites. But the cases to which I allude, examples of which must occur to the minds of many of you, are very different from these.

Consider one or two aspects of our work. Take the service it renders directly to the community. Attempts might be made to estimate the money worth of the lives that are saved, but the data are too imperfect to show more than how large it is. In Great Britain and Ireland there are about 20,000 medical men in actual practice. Most of these have scores, some have hundreds, of patients under treatment every week. I do not think it is an over-estimation to assume that each practitioner in active work is instrumental in saving one life a week. If you consider the varied cases that come under his care, the acute diseases, accidents, the double perils of childbirth, the dangerous maladies avoided by timely treatment, I think that this assumption is below the truth. But halve this estimate; assume that he saves two lives a month, or twenty-five a year—and many practitioners demonstrably save this number in childbirth only. In the aggregate even this low estimate amounts to half a million of deaths prevented every year. Is not this a service to the community before which most others, and many far more highly honoured, pale? And to this must be added the cases of slighter disease and suffering prevented and relieved, many times exceeding in number the deaths prevented, even when every allowance is made for the cases in which, alas! the resources of our art are still powerless. Take again the progress of sanitary science, which is adding so much to the health and longevity of the nation. To whom is this due? Sanitary work has passed so largely into special hands, that few remember that the movement is all but entirely due to our profession. It is to medical science that all the knowledge of the causes of disease is due, which has shown the way for prevention. It is to the efforts of practitioners of medicine that we owe the stirring of public opinion, by which the progress of sanitation has been rendered possible, and which has produced outside the ranks of our profession noble workers—only too few,—who have aided our efforts and advanced our cause. And to-day, in town and country, over the face of England, in the gloom of crowded cities, and in the fairer cottage homes, where Nature spreads her beauty over man's neglect, it is the members of our profession who labour untiringly in the cause, against the obstructions of ignorance, prejudice, and almost criminal apathy—obstruction too often successful, until the warnings given receive some fearful emphasis, as by such an outbreak as that at Kidderminster, or the awful avalanche of Death that has fallen on the city—of all in Europe the fairest and most foul. And in this labour, which is a part of the ordinary work of medical men, their motive is pure benevolence. The inverse ratio of the prosperity of the doctor and the health of the people has passed into a proverb. If all the efforts that the members of our profession are at this moment making, with all the energy they possess, were to be crowned with success, immediate and complete, one-half of the practitioners of medicine must starve or find some other calling. Search where you will, in the wide scenes of the present or the narrowing vistas of the past, and you will not find another instance of such a body of men making it a main and constant object of their lives to deprive themselves of half their livelihood. But the fact, of course, excites no surprise, because every man who enters the profession, in so doing, puts self and self-interest aside so far as his work is concerned, and places the welfare of others before his own. To approach his work in any other spirit would be monstrous and intolerable, if it were not inconceivable. The vast majority of our fellow-workers subordinate not only their own interests, but their own feelings and their own lives, to the welfare of others in constant and uncompromising self-sacrifice. And this being a matter of course to us is taken by the public as so much a matter of course to them, that it is almost ignored in the public estimate of the profession. Medicine is ranked the lowest of those callings that are by courtesy termed learned, and the highest social dignity that is conferred on her most honoured members is the lowest that could be offered.

It has been objected that many of the lives we save are worthless to the nation, and lessen instead of augmenting the common-wealth. But when every allowance is made for these the residue of useful workers saved, of those whose existence is the nation's strength, is vast enough to startle the most indifferent if it could be assessed at the lowest estimate of its money worth. But the objection carries us to a wider survey of our work, at which I can only glance. If we look, not at the individual or the nation, but to the race in general, what are we to say as to the influence of the art of medicine? The question is but part of a subject of the highest interest, but also of profound obscurity—the part played by disease in the physical progress or degradation of man. Few questions in the whole range of science have an equal interest, perhaps no one is involved in greater difficulty. We can get glimpses of the outlines of the problem, hardly any of its solution. And yet it is a question towards which many lines of discovery converge, and its elucidation would be their grandest crown.

It is sometimes suggested that the influence of our art upon the race is to promote its physical deterioration. We save from death many sufferers from constitutional maladies, or from actual disease many who possess a morbid tendency, and by them that tendency is passed on to their offspring, and thus the area of liability is slowly widened instead of being lessened by the early death of those affected. It has even been urged repeatedly that the tendency of modern civilisation and of the medical art as part of it, by enabling the weaker to endure, is to cause an infraction of the great law of the survival of the fittest. The last assertion is an example of the inability of even brilliant thinkers to grasp a problem beyond their own familiar province. Fitness is here a purely relative and not an absolute term. If the conditions of life are so changed that the weaker may survive, the change in the conditions at once transmutes unfitness that would be fatal to a fitness that secures survival. The great doctrine of the survival of the fittest seems to me less a law that has to be proved than an axiom, as self-evident as that two straight lines cannot enclose a space. And it must be remembered that whatever be the influence of medicine in favouring the hereditary extension of morbid tendencies, it is simply an instrument of the moral force, which, in range and in effectiveness, progresses with the advance of humanity, the force that finds its expression in benevolence and philanthropy. Absent from savage life, these have now become recognisable and increasing factors in the influences that are moulding the future of the race, and they appear likely to gain in force in ever-increasing ratio. But I think it is open to question whether the gloomy forebodings to which I have referred are justified. It is easy to gather facts in support of the opinion; but it is very easy to look only at one side of the question. Our knowledge of the influence of heredity in the causation of disease is constantly increasing, and we are apt to hastily assume that the influence itself is increasing; but of this there is no proof. The strict evidence is equally consistent with the assumption that the influence of heredity is unchanged, or even lessening. For, be it remembered, the facts on one side of the question are obtrusive; on the other they are inconspicuous, however numerous. Even in families with strong hereditary predispositions, it is the common rule for many more to escape than to suffer, and this in every generation. There is a constant tendency for the race to clear itself of disease, just as a polluted river purifies itself while it flows. Were it not for this, man, or at least civilised man, would long ago have disappeared

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from the earth. And is it too much to hope that the growth of social wisdom, and the progress of medical science, may succeed in augmenting this influence to a far greater and more effective power than it is at present?

In another province—that of zymotic disease—the promise of the future is still more distinct. One of the elements of their origin seems almost within our grasp, and few can doubt that the investigations that are even now in progress and the discoveries already made, which have added a fresh lustre to medical science, discount them as you will, must soon be followed by practical results of the first importance. But we must not forget that the nature of the specific material in which these diseases apparently consist is but one element in the phenomena. On the other, the strange fact of specific liability, no light has yet been thrown; and yet, in its relations to individual, race, and species, it is at present far more strange, and may ultimately be found even more important, than the other. The familiar facts of the protection afforded by an attack of disease, a protection which bears no relation to severity, the virulence of disease in races which constitute a virgin soil, and the strange manner in which new diseases arise and develop into prevalence, suggest problems of the present and questions of the future to which no answer or solution can be offered, but they need not lessen the hope that is raised by the discoveries that are now in progress.

Such are your studies in the nearer future; such your labours in the years the distance hides; and what is your reward? Small enough, as recompense is weighed in the common balance. A living; that is something. Bread—and cheese, perhaps—for each who wisely selects and patiently pursues his course of work; placing duty before pleasure, fitness before inclination, permitting no errant impulses, no distaste for steady labour, to determine his career, or any fancy-fledged ambition to tempt him to a flight beyond his powers, a flight in which he cannot hope to soar, but must from inherent weight and by all-potent gravitation, quickly fall. For every steady worker there is perhaps a more sure prospect of what is called "earning a living" than any other profession or occupation presents, with less risk of a disastrous failure from causes outside his own control. Moreover, you have other rewards if you do not wilfully close your eyes to them. Much of your daily work may be drudgery; some may be repulsive; but the subjects that engage your energies are of transcendent interest. The world is not to you as it is to most other men. To you the book of Nature lies open. The knowledge you have gained has, or should have, given to you a new interest in the world of living creatures of all kinds—ay, and in what we call dead matter too. Human life, in its development and decay, and the ever-varied phenomena of disease, present problems of the highest interest and of never-failing succession. For you, as well as for the great student of Life to whom they were addressed, the poet's lines are true, if you will make them so:—

> "Nature, the old nurse, took
> The child upon her knee,
> Saying, 'Here is a story-book
> Thy Father has written for thee.'
> And whenever the way seemed long,
> Or his heart began to fail,
> She would sing a more wonderful song,
> Or tell a more marvellous tale."

But greater still as a reward for your labour should be the consciousness of the character of the work you are doing. To relieve suffering, to cure disease, and, above all, to preserve health—these are the objects of your life. It is to achieve these that your energies are taxed, your drudgery bestowed, your days and your nights devoted. Each hour's work sees, or should see, these ends in some measure achieved. Failures must come, and, baffled in many a struggle, you may at times despond; but remember that the good you do is always far more than you can see. Our failures are obtrusive; our greatest triumphs often imperceptible. "Nature effected a cure" we or others say, and say correctly, but it is certain that Nature would often effect a death were it not for the guiding influence of medical treatment; an influence that we often cannot trace in the unit, but which comes out clearly enough in the aggregate. In the region of preventive medicine the results, however vast, are, taken separately, quite invisible. We can no more trace the influence that keeps a man in health, who would have otherwise have died of fever, than we can trace the breeze that wafts a cloud across the summer sky. Hundreds of persons every day are saved from disease without the fact being known to them, or to those who save them. Is it no reward to have the consciousness that life and ease and health follow your daily path? I know that cavillers may object that motives relatively low may compel your work; that the maintenance of your own existence may be an object in prolonging that of others. But this does not influence the intrinsic character of your actions. The choice of a sphere of work you make or ratify to-day will leaven your future life, and the knowledge that the world is bettered for each hour's labour may be, and should be, to you a constant and enduring satisfaction.

There may be—nay, there must be—many here to-day to whom words of farewell are more appropriate than those of welcome with which I commenced. Your student life is almost over; the graver work for which you have been training is close at hand, and soon in town or country, upon sea or shore, you will have entered on it. Wherever your lot may be cast—it may be near, it may be far away, under strange stars, in unfamiliar scenes—your College looks to you, and will not look in vain, to keep her name unsullied, to make your plane of study a passport among members of your calling, a guarantee of honour and trustworthiness. She looks to you, and will not look in vain, to carry on the high traditions of her past—to keep the torch she hands you brightly burning, to lighten the dark places of human life. She looks to you, and will not look in vain, to take your part, humble or high, in the great contest with disease and death, in the great work of gathering the knowledge that is power, and the wisdom that is life. Vast is the field of labour: no hand unwelcome, no effort to be spared. Fierce is the contest, unremitting; ever spring afresh the hydra-heads, and for no moment can the sword be sheathed. But it is not for ever; not, at least, in present inequality. Who that reads, with thoughtful eye, the signs of this century's advance, can doubt the issue? Though still the storm-clouds gather and the sky is dark, yet far away, and slowly coming nearer, there is light. Not we nor our successors for many generations yet to come may see it, save in glimpses few and faint. But come it will, and you may aid its advent. You may lessen the present gloom, and you may hasten the dawn, which, now flushing only here and there a mountain peak, shall surely broaden into perfect day.

ON PREPUCE GRAFTING.

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AMONG the disadvantages which may be urged against the practice of skin grafting taught us by Reverdin are the pain and scarring the patient must suffer to provide himself with the cuticular fragments required to close his granulating wound. Whilst working men yield up their arms without murmur to supply cuticle for other parts, with women the difficulty of obtaining skin increases, and with children it becomes a cruel torture which no surgeon would willingly subject his patients to if he could obtain good results by other means. It is, therefore, at children's hospitals that the difficulty of obtaining skin to cover the enormous granulating surfaces often left after burns is especially felt; and my object in this paper is to point out that at these institutions there is a plentiful supply of skin removed which may be usefully turned to account. The number of children that are brought to these hospitals for phimosis is so great that many days will never elapse without the surgeon being called upon to perform circumcision. In recommending that the skin of other patients be used to assist in the closure of wounds, I cannot too strongly urge that the surgeon should use every precaution, never to lay himself open to the charge of having thereby communicated disease. But in the prepuces of children there is seldom any danger. When, however, balanitis is associated with phimosis I always make it a practice (for the sake of the child to be circumcised) to cure the balanitis before removing the foreskin. The surplus skin of this part, from its suppleness, thinness, and vascularity, appears to be peculiarly adapted for transplantation, so that I have found grafts from this source adhere when those from other parts

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have failed. And again, wounds whose granulations appeared coarse and ill adapted for grafting have accepted prepuce grafts when I little anticipated a favourable result. About three years ago a case of acute cellulitis of the lower extremity, which came under my care, resulted in extensive loss of skin both in the thigh and leg. In this case, when the granulations had assumed a healthy appearance, grafts from various sources were placed upon the wound, and I was then favourably impressed with the superiority of the prepuce skin. The coarse skin with dry cuticle upon it, which may be obtained from amputated fingers, is far less satisfactory, adhering with less certainty and growing with less rapidity. The time which may be allowed to elapse between the removal of the skin and its application in the form of small grafts to a wound I have not accurately determined, but it is probable it may be extended till signs of putrefaction begin to appear. I have not hurried to place these pieces of skin on the wound, and from half an hour to an hour may sometimes have passed before they were made use of. In no case have I placed them in hot water or made any provision for maintaining them at the temperature of the body. If the recipient for the grafts lived at a distance from the person yielding the skin, I believe the skin might be conveyed in a small glass bottle or wrapped in gutta-percha without loss of vitality for some hours. The following case, which has recently been under my care in the Evelina Hospital, will illustrate the value of prepuce grafting in children. It was reported by Mr. Milligan, the registrar to the hospital.

"M. B——, aged two years and a half, was admitted into the Evelina Hospital for Children on November 23rd, 1883. The child had been severely burned on the abdomen twelve days previous to admission. It was taken after the accident to a medical man, who applied some dressings to the wounds, but from that time till the child was admitted the dressings had been left untouched. When taken in it was in a most foul and stinking condition, as might be imagined after dressings had been left twelve days. In parts the granulations had literally grown into the dressings, and were torn in removing the lint. The size of the granulating surface was six inches in transverse measurement, and four and a half in vertical diameter. After the wound had been cleaned it was dressed with carron oil. The child was ordered milk, beef-tea, and an ounce of port wine in twenty-four hours. On November 26th, as it was sleeping and eating well, it was put on fish diet. On December 17th it was noted that the wound, though decreasing in size, was healing very slowly, the granulations being much too vascular and large, bleeding freely at every dressing. Caustic was applied from time to time. On December 30th the report remarks that the healing was progressing slowly. On January 16th, 1884, there was still an ulcer three and a half inches in transverse diameter and an inch and a half or more in vertical measurement, the edges of which were much raised, and the granulations vascular and unhealthy. Mr. Lucas took the prepuce of an out-patient, whom he had circumcised about half an hour previously, and cut from it about twenty-eight grafts, which he applied so as to form bridges across the wound. These bridges were protected by strips of green oil-silk, secured by strapping. Lead lotion was applied on lint over the wound and gutta-percha tissue externally. The grafts were protected for five days. On Jan. 23rd it was evident that nearly all the grafts were growing. The wound was divided up by bridges, from which cuticle was rapidly extending. On Feb. 1st the wound was very much diminished in size. On Feb. 14th the child was discharged cured."

It is possible that some surgeons may take a sentimental objection to this method of healing large granulating sores; but any such feeling should yield to the excellent practical results which may be obtained by it. The only reasonable argument against it is that disease might by careless grafting be introduced into the system of a healthy child; but this is so remote that with ordinary caution it would be impossible. On the other hand, I believe the prepuce of a child posseses a germinal vitality, which renders it peculiarly serviceable for grafting.

Finsbury square, E.C.

PUBLIC PARKS AND OPEN SPACES.—On the 28th ult., the two verdant spaces enclosed within Canonbury-square, Islington, were thrown open to the public.—A new public park, situated in the central part of Huddersfield, was formally opened by the Mayor on the 27th ult.

CASE OF GLIOMA OF THE PONS VAROLII.

By H. FRENCH BANHAM, M.A., M.D. CANTAB,
PHYSICIAN TO THE SHEFFIELD GENERAL INFIRMARY.

THE subject of this case, a boy aged twelve, was admitted into the Sheffield Infirmary on Oct. 30th, 1883, and the following notes were taken at the time. Until quite lately he has been an intelligent lad and successful at school. He had measles five years ago, since which time he has been somewhat deaf, had a discharge from both ears, and been in delicate health. The discharge from the ears ceased a year ago. Slight alteration of his speech was noticed three months since, when also he began to complain of headache. Six weeks afterwards some squinting was first observed, the left being the affected eye; and he began also to be troubled with giddiness, from which indeed in walking he occasionally fell. He has not had any cramps or convulsions, or fits of any kind. He is not known to have had any injury to his head. His father died at the age of thirty-six from phthisis.

Condition on admission.—He is deaf with both ears, more especially with the left; quite conscious, but so emotional that he seems disposed to cry when any question is put to him. His utterance is drawling and indistinct. There is paresis of the right arm and leg, the movements of these members being limited, slow, and interrupted. The deep reflexes in both legs are exaggerated, but there is no ankle clonus. The superficial plantar reflexes are almost absent, especially on the right side. There is facial paralysis of the left side, and the orbicularis palpebrarum is so far affected that the eye can be only half closed, and there is congestion of the outer part of the left conjunctiva. There is extreme left internal strabismus, the right eye cannot be everted beyond the middle line, but there is no evidence of paralysis of the right internal rectus, as has been sometimes noticed in cases of paralysis of the internal rectus of the other eye. The pupils are equal and act to light. There is nystagmus of both eyes. The ophthalmoscopic examination gives evidence of commencing optic neuritis. The tongue on protrusion deviates to the right. Taste (tested with alum, sugar, tartaric acid) is rather defective. Respiration is somewhat sighing. There is no "tache cérébrale." The muscles of the paralysed parts, including those of the face, give a normal electrical response. The lungs and abdominal organs appear to be healthy. There is no pyrexia.

Nov. 8th: Since the patient came under observation, the chief changes that have taken place are: (1) his intelligence is somewhat clouded; (2) the deafness has so increased that it is now difficult to make him hear; (3) the paralysis of the arm and leg is more pronounced; and (4) he has emaciated somewhat.

The first thought that naturally suggests itself in connexion with this case is that there is a chronic abscess of the brain associated with some disease of the internal ear. I am, disposed, however, to think, from what I can learn from the boy's mother, that until lately the deafness has been somewhat slight, and might be accounted for by some catarrh of the external meatus. The pronounced deafness which at present exists is, I believe, of central origin. It is scarcely possible now to prove this by any of the ordinary tests. I am inclined to favour the hypothesis that we have here to do with a cerebral tumour, and that it is a tubercular mass or a glioma seems not unlikely. Its locality is probably in the left half of the pons Varolii on a level with the nucleus of origin of the sixth and seventh nerves. It is possibly more extensive than this, implicating, it may be, the cerebellar peduncles, or perhaps the upper part of the medulla oblongata, and involving the restiform bodies. In the position of the pons Varolii that I have indicated, the resulting paralysis would be due to the compression of the pyramidal tracts previous to their decussation, while the facial paralysis and that of the external rectus would be upon the side of the lesion. The diagnosis of tumours of the brain is beset with difficulties arising from our imperfect knowledge even now of the functions of the different parts of the brain, from the fact that tumours and abscesses occasion not only local effects by pressure and displacement, but also by the congestion, hæmorrhage, and softening which sometimes take place in adjacent structures, and also owing to effects produced in remoter parts of the brain by transmitted excita-

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tion, emboli, &c. Still another source of confusion is the co-existence in some cases of several tumours in different situations.

The above notes were brought before the Sheffield Medical Society in November last. The patient's condition from the date of his first introduction to the infirmary continued (as it has done apparently from the commencement of his illness) to become progressively worse; the paralysis deepened, the deafness became absolute, and for several weeks he lay restless and almost motionless, so that it was difficult to say at any time how far consciousness was intact. Death took place January 23rd, and the following day a post-mortem examination was made.

Morbid appearances.—The only part of the brain that presented any morbid appearance was the pons Varolii. This externally was of almost more than ordinary whiteness, was enlarged to fully twice its normal size (the left lobe being much larger than the right), and the consistence of the whole was greatly increased. The transverse fibres stood out with unnatural distinctness. In the left lobe and extending inwards to near the median raphe was a semi-translucent mass about the size of a hazel nut, and presenting to the touch the feeling of firm jelly. It was of a reddish-grey colour, and merged by insensible gradations into the surrounding tissue. In the right lobe of the pons was seen a somewhat similar mass, but smaller, and of a light-grey colour. This was probably a more recent formation.

Our house-surgeon, Mr. C. Atkin, has prepared some admirable microscopical sections of the tumour, which show its minute structure to be such as was expected from its naked-eye characters. The tumour seemed to merge so gradually into the surrounding healthy tissue that it was difficult to mark out its exact limitations.

Sheffield.

THE TREATMENT OF RUPTURED KIDNEY.

By H. A. REEVES, F.R.C.S. Ed.,

SENIOR ASSISTANT-SURGEON AND TEACHER OF PRACTICAL SURGERY AT THE LONDON HOSPITAL, ETC.

THE following very interesting case presents in its history and post-mortem results a very good text on which to base my views as to the management of similar cases. The comments form part of a clinical lecture recently delivered at the London Hospital.

T. W——, aged nineteen, fell from a cart, and was admitted into the London Hospital on the same day (May 13th). His seventh and eighth right ribs were fractured near the costal cartilages, and there was localised surgical emphysema. He complained of pain on the right side of the abdomen and loin, but there was no external evidence of injury. The same evening his urine contained a little blood, but only just enough to make it smoky. Between the 13th and 22nd the pain in the abdomen and flank diminished, and abdominal discomfort was only complained of occasionally, while the hæmaturia remained the same as on admission. On the morning of the 23rd he became suddenly faint, and passed a pint and a quarter of nearly pure blood, and during the next four days he passed a large quantity during each twenty-four hours. His pulse was rapid and feeble, temperature high, and surface pallid. He complained of pain over his bladder, in which region there were dulness and tenderness, so a catheter was passed, and a good deal of bloody urine and some small clots withdrawn. There was considerable vesical tenesmus, and the lad seemed to ease himself by pressing on the end of the penis. During the second week the urine became ammoniacal. On the 27th hæmaturia entirely ceased for twenty-four hours, when he had another attack which lasted until a terebinth mixture every two hours was prescribed, followed next day by subcutaneous injections of sclerotic acid. These stayed the external hæmorrhage for a few days, or perhaps it would be more correct to say appeared to stay it, for internal bleeding must have been going on, as was shown by the large quantity of blood and clots found post mortem. The abdominal and lumbar tenderness increased; the muscles on the right were very rigid. There was great pain over the region of the right kidney and over the hypogastrium, and in the former situation there was a distinct sloughy fulness. The tongue became dryish and brown at centre, the pulse and temperature indicated inflammatory mischief, and his countenance became anxious. Dr. Langdon Down and Dr. Stephen Mackenzie saw the case, in consultation with me, on the Friday of the third week of his admission, and agreed that if the lad did not improve it would be justifiable to perform nephrectomy next day. On the Saturday he was no worse than on the previous day, though in a low condition. He was seen by a senior surgical colleague, in deference to whose opinion the intended operation was not done. During the remaining week of his life there was little or no hæmaturia, but the lumbar tenderness and pain increased, and the symptoms of peritonitis supervening, he died a month after admission.

Necropsy.—This was made by Dr. Charlewood Turner, and only the important points are here given:—Body exsanguine. Rigor mortis moderately well marked. No external sign of injury. The seventh and eighth ribs were the only ones fractured. No injury to the diaphragm could be made out, and there was no pleurisy. The abdomen contained a moderate quantity of blood-stained serum, and at its right posterior aspect was a fluctuating swelling of considerable size, on cutting into which a very large quantity of blood and broken-down clots was turned out. There was much difficulty at first in recognising the kidney, but on cleansing the parts its remains were made out, and it was found that only a small portion of its upper and lower ends was left, and this was much blanched. The remains of the kidney substance formed a broken-down pulp. It could not be clearly made out if the renal vessels were torn, but the pelvis and upper part of the ureter, though severed in part, still remained attached to the organ. There was a rounded venous-looking tumour in the neighbourhood of what was taken to be the hilum, and Dr. Turner kept this for dissection to ascertain if it were a traumatic aneurysm. He has since informed me that the tumour was a false aneurysm of a branch of the renal artery. The bladder was distended to about the size of two moderate fists. On removal its coats were found much thickened and there was severe cystitis. It contained three large partly decolourised clots, the largest of which resembled a good-sized kidney potato. There was also some broken-down blood and offensive urine. The left kidney was found to be in an early stage of interstitial nephritis.

Remarks.—A noteworthy point is that an accident comparatively so slight should have produced so extensive an injury to the kidney. The lad simply fell on the ground and did not strike his side against anything, neither the cartwheel nor anything lying on the ground, and there was no evidence of a rib being driven into the kidney. The eleventh and twelfth ribs were quite intact. The cessation of hæmaturia was most likely due to hæmorrhage in the loin, and to clots in the ureter, and when either, or both, of these causes of arrest of bleeding into the bladder were removed, hæmaturia recurred. During the latter stage anæmia was, doubtless, the reason for the cessation of bleeding. Hypogastric distension, pain, vesical tenesmus and ammoniacal urine indicated clots in the bladder and cystitis; lumbar fulness and tenderness pointed to blood in the loin and advancing inflammation; and abdominal soreness with rigidity of the right abdominal muscles, indicated incipient peritonitis by contiguity with the broken-down blood-clot and decomposing fluid blood in the loin.

The history of this case seems clearly to point to the following line of treatment in similar cases. Directly it is found that bleeding is not controllable after trial of every known means, and before the patient is too weakened by hæmorrhage, and also before septic phenomena have been allowed time to develop to an uncontrollable extent, a lumbar incision should be made over the kidney, and all clots, effused blood, and débris removed, and the cavity thoroughly cleansed. Then if it be possible to make out the remains of the kidney and to find the renal vessels and ureter, these should be tied and the renal remnants removed; but as in a case like the present, such a proceeding would be tedious and dangerous, the better plan would be to introduce a drainage-tube into the loin and perform anterior nephrectomy by incising the linea semilunaris. This being completed, the abdomen and pelvis can be cleansed if there be need, and the peritoneum on the posterior wall closely stitched up to shut off communication with the external opening into the loin. The abdominal wound is then to be closed and bandaged and external urethrotomy or lateral cystotomy performed, so as to empty the bladder of all clots, to wash it out, and to drain it. Though these three operations at one sitting seem severe, yet, under the circumstances, I do not

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see what less would suffice. The lumbar incision and external urethrotomy are not major operations, and of themselves need cause no great anxiety; but when complicated with an intra-abdominal operation the risk would be undoubtedly greater, though not so great as through leaving the patient alone. The urethrotomy seems called for not only on account of the inflamed condition of the bladder, but also because vesical tenesmus might seriously interfere with recovery from an abdominal operation. I believe Mr. Rawdon has recorded a case of nephrectomy in a youth for ruptured kidney, in which the patient recovered from the operation, but died not long after from septicæmia, which the post-mortem showed was due to the condition of the lining of the bladder. This gives another reason for performing urethrotomy or cystotomy; for if the bladder be well washed out and drained the chance of vesical septicæmia is considerably minimised or even annulled, to say nothing of the great prospect of rapid recovery from cystitis, which in such a case it affords.

A few weeks since, assisted by Dr. Carter, and by my friend Dr. Crabb of Holloway, whose patient the lady was, I performed lumbar nephrotomy on the right kidney for pyonephrosis, and before operation we discussed the propriety of making a permanent opening per vaginam into the bladder to relieve the conditions of ulcerated mucous membrane and contraction and hypertrophy of its walls; but after passing a large drainage-tube into the kidney it was hoped that very little pus would pass into the bladder, and this was so. The inflamed lining of the bladder, however, secreted a large quantity of pus, and this condition of the organ gave much trouble after the operation. I mention this case here because it and other similar cases I have operated on teach the necessity of draining and resting the inflamed viscus, and also that most cases of pyonephrosis are complicated with cystitis of a very severe form, and that the treatment of this is as important as that of the kidneys.

Grosvenor-street, W.

ACUTE HYDRONEPHROSIS OR DILATATION OF THE PELVIS OF THE LEFT KIDNEY;

RUPTURE OF SAC AND EXTRAVASATION OF URINE INTO THE PERITONEAL CAVITY; OPERATION; RECOVERY.

By JOHN W. TAYLOR, F.R.C.S.,

OUT-PATIENT SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

As it is very rarely, if ever, so far as I am aware, that the abdomen has been opened for extravasation of urine into the peritoneal cavity, this case seems worthy of permanent record.

E. H——, a girl, aged fifteen, came under my care at the end of July, 1883. For a week or more she had been suffering from great pain in the left side of the chest and abdomen, with frequent vomiting. On examination I found a fluctuating tumour on the left side of the abdomen, midway between the ribs and pelvis. It was bounded above by the false ribs, below by the crest of the ilium, and a line of resonance about two inches and a half above Poupart's ligament: on the outer side it was lost beneath the muscles of the loin; on the inner side it reached to the middle line. On the morning of Aug. 1st the patient had a rigor, and the temperature rose to 101° F. Vomiting continued at frequent intervals. I diagnosed the case to be one of acute hydronephrosis; and, thinking that operative measures would probably be necessary, asked Dr. Savage to see the case with me. He kindly did so on the next day (Aug. 2nd), agreed with me as to the advisability of opening the abdomen, and we fixed on Aug. 4th for the operation. The next morning (Aug. 3rd) about 8 A.M. I received a message that my patient was dying. I saw her at 9 A.M., found her with legs drawn up, pinched and anxious face, crying out with pain, and constantly vomiting. She said that she felt as if something was "running away" from her. No external discharge, however, had taken place. On examination, I found the outline of the cyst had disappeared, but fluctuation was still more evident on the left side than on the right; the abdomen was generally distended and very tender. I saw that the cyst had burst, and that no time was to be lost, as the girl appeared to be rapidly sinking. I hastily arranged for immediate operation, to which Dr. Savage and Dr. Gosling kindly came. The latter gave ether for me. About 11 o'clock I opened the abdomen in the middle line, sponged out the urine from the peritoneal cavity, emptied what was left in the cyst with a trocar and cannula, as I could not find the point of rupture, and sewed the opening in the cyst to the margins of the incision, placing a piece of gutta-percha drainage-tubing above and another piece below the cyst-opening. The stitching the sac to the margins of the wound was the most difficult part of the operation, as it was exceedingly vascular and was with great difficulty prevented from tearing. At one part the passage of the silk suture caused a rent, and the sewing had to be repeated below this opening. The operation lasted rather more than an hour. The wound was dressed with absorbent wool, and an abdominal bandage applied, the patient being replaced in bed as soon as possible, with hot-water bottles to her feet and sides. On recovering from the anæsthetic the patient expressed herself as much more comfortable for the operation, and continued so during the remainder of the day. By the next morning, however, considerable peritonitis showed itself, and for two or three days there appeared to be but little chance of recovery. Matters, however, gradually improved; by the sixth the vomiting had ceased, the pulse, which had been very weak and thready, felt fuller, and a little flatus passed from the rectum. Some of the urine from the left kidney appeared to find its way into the bladder, as on several occasions it contained blood, and the patient complained of pain on micturition. I had not passed any drainage-tubing into the cyst, but had been content to sew the opening in it to the abdominal wall. As it had to be drawn considerably out of position to fix it in the middle line, I found that I had acted unwisely in not keeping the opening patent by tubing. After a week or ten days hardly any urine came from the opening, and the sac began to refill and enlarge with corresponding aggravation of symptoms. Knowing the thinness and brittleness of the cyst wall, I did not attempt to make any very forcible reopening of the original channel, but on August 18th made a second abdominal section to the outer side of the rectus, opened the cyst again, sewed the opening in the cyst to the margins of the incision, and passed in a glass drainage-tube. From this point the patient steadily improved. She has worn the glass tube ever since, passing urine freely through it. In this condition she remains at present. As soon as she was thoroughly convalescent I thought that matters might be made more clean and pleasant by corking the tube and allowing the urine to escape at intervals of three or four hours into a vessel instead of allowing it to constantly run away. But I found that this did not answer, slight rigors and pain returned, and the urine from the cyst, which up to this time had appeared occasionally to find its way into the bladder, from this date ceased to do so. This was inferred from the fact that the urine passed by the urethra had previously, at irregular intervals, been offensive—at these times containing a little blood and pus. From this date the urine passed by the urethra has remained perfectly free from any abnormality. I have not attempted any further operative interference since, except probing or sounding the channel to see if I could find any calculus. This was fruitless. For the last eight or nine months the girl has remained in very fair health, although her urinary fistula is of necessity a source of great discomfort to her. Every now and then the interior of the glass drainage-tube becomes encrusted and choked with deposited urine salts, when it has to be removed and cleansed out; otherwise no treatment has been required.

The following points seem worthy of notice in connexion with this case. 1. The advisability of immediate operation in similar cases where urine or other noxious fluid is extravasated into the abdominal cavity. 2. The possibility of success, although the operation may be incomplete. I did not find the point of rupture in the cyst, and therefore for three days mourned over my operation as logically incomplete and useless; nevertheless the emptying of the cyst and cleansing the peritoneal cavity were sufficient to bring about the recovery of the patient. 3. The question of further treatment. This seems to me to be a question of great difficulty. I think there is no doubt that the left ureter is now completely stopped, all the urine from the left kidney passing by the tube. Both kidneys are perfectly healthy and secreting freely. If the obstruction be a calculus, I cannot find it from the cyst, or the channel which is the remains of the cyst. If the obstruction be due to a valvular fold or coil of the ureters, as in several cases collected by Dr. Roberts of Manchester,

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the only resource appears to be extirpation of the kidney. This, however, in addition to being a grave operation, is rather contra-indicated by the consideration that the abnormal tendency to obstruction would probably exist on both sides, and if a healthy kidney were removed there would be but little chance for the patient should obstruction at any time occur on the right side. Probably, if the patient became seriously dissatisfied with her present state, as I think is likely, and asks for something further to be done for her, the best course will be to make an exploratory incision in the loin, and if no calculus can be found, to remove the kidney.

In conclusion, I wish to add that my best thanks are due to Dr. Savage for his kindness in helping me with his presence and advice both at the time of the first operation and afterwards.

Birmingham.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL HOSPITAL FOR WOMEN AND CHILDREN.

COMPLETE INVERSION OF THE UTERUS OF NINE YEARS' DURATION; REDUCTION BY AVELING'S REPOSITOR; CURE; REMARKS.

(Under the care of Dr. WILLIAM DUNCAN.)

FOR the following notes we are indebted to the resident medical officer, Dr. Sutherland:—

Mrs. H——, aged thirty-three, was admitted on Sept. 1st, 1884, complaining of constant flooding. She had always been a healthy woman till the present illness. Catamenia appeared when thirteen years old, her periods being regular. She was married at twenty-three, and has had three confinements. The first was premature, when eight months pregnant, "due to a fright"; the second was also premature, a year later, when seven months pregnant; the third was at full term, fourteen months after the second. She was attended by a midwife, and the labour lasted about two hours. After the child was born the patient says she "swooned away, and did not come round for some hours." She does not remember if she flooded then. About four days afterwards a large substance came away from her which she describes as being like "liver." She got up on the eighteenth day, but felt very weak. She suckled the child for eleven months, during the whole of which time she had a discharge, worse at times, principally blood, sometimes offensive. This discharge continued almost without intermission up to the time of admission, but was much more profuse every fourteen days, when she sometimes passed clots.

On admission she was well nourished, but very blanched from loss of blood. On examination a rounded smooth red mass, about the size of a large green fig, was found in the vagina. Its upper end was narrower than the lower, and the finger passed from its surface on to the vaginal roof without being able to detect any dip or groove whatever. There was no trace of the os uteri, and the sound could not be passed. Abdomino-rectal examination showed the absence of the uterus from its normal position, and the sound in the bladder could be made to touch the finger in the rectum without any difficulty. The mass could be drawn down to the vulva by means of a pair of vulsellum forceps. This caused no pain whatever, and then the finger in the rectum felt the round depression of the inverted fundus. The orifices of the Fallopian tubes could not be seen, as the vagina was very narrow, but two depressions (one on either side) were felt, and evidently corresponded with them.

Sept. 2nd, 4 P.M.—The cup of Aveling's repositor was introduced into the vagina, and a moderate amount of elastic pressure applied in the usual manner on the stem. A hypodermic injection of morphia (one-third of a grain) was given.

On Sept. 3rd the patient had slept well, and appeared comfortable. Temperature 99·8°; pulse 96. There was no hæmorrhage during the night, but for two hours a considerable amount of blood had been lost. The repositor was then found to have slipped in front of the uterus; it was replaced, and fixed not so tightly as before, and a few carbolised plugs were put into the vagina. The urine was drawn off twice by catheter. In the afternoon the repositor was removed, when the uterus was found to be *in statu quo ante*. After the vagina was well syringed out with carbolised water, the repositor was reinstated, the vagina plugged all round it, and considerable pressure applied, the patient being ordered to be kept under the influence of opium.

4th: The patient had a little pain during the night, but slept well. In the morning the stem appeared to have entered the vagina further, but was allowed to remain undisturbed until Dr. Duncan's visit. 4 P.M.: On removing the plugs the uterus was found not only to be completely reduced, but the cup of the repositor was in the uterine cavity, and the os uteri tightly contracted on the stem. The patient was placed under the influence of chloroform, the os dilated as well as possible by means of Barnes's bags, but even then great difficulty was experienced in extracting the cup, owing to a very tense ring of fibres which resisted the force of the hydrostatic dilators. The stem was unscrewed from the cup, which latter was then seized sideways with a strong pair of lithotomy forceps, and after considerable and prolonged traction it was extracted, but not before there was some tearing of the uterine fibres. Previous to this an unsuccessful attempt was made to divide the cup with strong bone forceps. From the laceration there was sharp arterial hæmorrhage, so the cavity was mopped out with a strong solution of iron. A hypodermic injection of ergotine (one grain) was administered, and the vagina was plugged with glycerine and iodoform. The patient was ordered to be kept well under the influence of opium. A third of a grain of morphia was at once given hypodermically, and a one-grain opium pill three times a day.

On the 5th she was comfortable but felt very low; looked excessively pale; some sickness; pulse 120, small; temperature 100°. Plugs removed and uterine cavity syringed out with a one in fifty carbolic solution at a temperature of 105°. Ordered five grains of quinine three times a day. In the afternoon she was free from pain but felt uncomfortably warm; temperature 102·4°; ordered two ounces of brandy, lemon-juice, and ice.

6th: Slept little during the night; was sick after taking some milk; no pain; syringed as before; morning temperature 101·4°; evening 100·8°.

On the 7th she felt better, having passed a good night. Only complained of sickness after taking milk. Ordered a nutrient enema every four hours of beef-tea and egg. Patient asked for some beer, so was allowed one pint daily. Uterus again syringed out, but the os was so contracted that a catheter had to be used instead of the ordinary uterine nozzle. Temperature, morning, 100°; evening, 101°.

On the 8th there was a great improvement, some colour appearing in her lips, and there was no sickness or pain. Fish allowed for dinner. This was retained and enjoyed. Vagina to be washed out twice daily and an iodoform plug inserted afterwards. Ordered a mixture with ergot and tincture of perchloride of iron three times daily. Temperature, morning, 100·8°; evening, 99°.

12th: Gaining strength and colour in face; uterus rather retroverted; replaced easily; length of cavity two inches and three-quarters. Not the least hæmorrhage since the uterus was reduced on the 4th inst.

18th: Patient practically well but still weak and anæmic; uterus normal in length and direction but the os was somewhat patulous.

Remarks by Dr. DUNCAN.—This case is a very interesting one, and teaches some useful lessons. 1. It shows the absolute necessity in every case of hæmorrhage from the vagina of insisting on making an examination, even though there be hæmorrhage at the time. Over and over again have women applied at the out-patient department with this symptom, and naturally refuse examination "as they are unwell." My rule is to prescribe an ergot mixture, and tell the patient that if the loss continue at her visit the following week, unless she then consents to submit to an examination I positively refuse to have anything more to say to her. The result is she sees the necessity and readily acquiesces. If medical men would make this a rule they will save their own reputations and their patients' health, and even life, in many cases, for it is by no means infrequent to see a woman

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with cancer of the uterus, too far advanced perhaps for operation, whose life might have been prolonged for years if only her medical attendant had insisted on an early vaginal examination. The patient whose case I have recorded had been losing blood for nine years. She had consulted doctors both in London and the country, who prescribed physic until, as she says, she could no longer pay for it, and yet, inconceivable as it may appear, they did not attempt to find out what she was suffering from. Surely no language would be too strong to reprehend such trifling with this poor woman's life. 2. The diagnosis was easy, although the marked insensitiveness of the uterus when laid hold of with a vulsellum was a little deceptive, as it simulated the behaviour of a polypus under a like treatment. The unusual condition is, I think, explained by the chronicity of the inversion. 3. In any case of inversion of the uterus, where Aveling's repositor is used, it is highly important that frequent examinations of the position of the stem be made in order to avert the complication which occurred in this case, for there is no difficulty in removing the cup from the uterine cavity provided the os uteri be not given time to contract over it.

ANCOATS HOSPITAL, MANCHESTER.

CASE OF FRACTURE WITH DISLOCATION OF THE ASTRAGALUS; DEATH FROM PNEUMONIA ON THE TWENTIETH DAY; DESCRIPTION OF FOOT.

(Under the care of Mr. E. STANMORE BISHOP.)

JAMES H——, aged thirty-four, married, painter, on July 30th, whilst painting a wall, standing on a ladder thirty-six feet from the ground, felt the ladder slipping along the wall against which it was placed, and to save himself jumped off, coming to the ground upon his feet. He does not know whether his heel or his toes touched the ground first, but as he slipped and fell backwards, cutting the back of his scalp, it is probable that he lighted first upon the heel.

The patient was admitted about 5 P.M., when the scalp wound was brought together. He was suffering great pain in his foot, which presented the following appearances. On tracing down the tibia and fibula no fracture could be detected; the points of the malleoli were perfectly well marked, but the anterior line of the external one had not the defined outline of that of the other leg; there appeared to be some fulness anterior to it. The scaphoid tubercle could be felt in its normal position, and the distance between the base of the fifth metatarsal bone and the tip of the external malleolus was normal. The post-tibial and the dorsalis pedis arteries pulsated naturally, and the foot was warm. There was marked inversion and apparent shortening of the inner side of the foot, which was in the position of slight equino-varus. The skin was not broken, but the dorsum was much bruised and ecchymosed. There was crepitus on movement. On the dorsum, mainly outside the median line of the foot, and directly in the line of the medio-tarsal joint, there was a projection about half an inch wide, over which the skin was tightly stretched. It was bounded by straight lines behind and before, slightly converging outwardly, and on the inner aspect and to the inner side of the median antero-posterior line of the foot by another straight line at right angles to the two first mentioned. The fingers passed clearly down behind the projection, between it and the anterior surface of the tibia. The upper surface was smooth and bevelled off towards the outer side of the foot. The heel was slightly displaced inwards, forming with the leg an angle of 135°. The muscles were spasmodically contracted. Chloroform was given. The ankle-joint now appeared abnormally movable, especially inwards, and the foot could be drawn easily downwards in the axis of the leg. Crepitus was very distinct, and occurred on flexion, extension, abduction, or adduction. Extension in the axis of the leg being kept up, pressure upon the prominence in a direction backwards, downwards, and inwards caused it to disappear with a sudden movement, and flexion and extension could now be made easily, and apparently almost to a normal extent. The bruised skin was covered with collodion, and the leg put up on a back splint with footpiece at right angles and short side splints. The whole was then slung to the cradle.

On recovering from chloroform the patient expressed great relief from pain and perfect ease as regarded the foot, nor did he again complain of any pain there except from a bandage which was applied rather tightly some time after. This being loosened there was no further complaint.

Next day and for three or four days afterwards crops of bullæ rose on the dorsum of the foot, and on the outside of the heel, filled with serum, which were emptied and dried up. The foot remained warm. There was much troublesome constipation, and the patient was rather restive under confinement to bed.

All went on apparently well until Aug. 14th, when he became more restless, with dry tongue, quick and shallow breathing; temperature 102°. There was dulness on percussion over the right chest in front, over the two upper interspaces, and behind below the level of the sixth rib. He was ordered ten grains of an effervescent saline with ipecacuanha and quinine three times a day; whisky and milk, beef-tea, &c.

On the 15th the foot was easy, and on removing the splints appeared to be in good position, except that the extensor tendons were more prominent over the ankle than normal. There was no prominence in front of the bone in the place where it was felt at first. A large bulla on the outer side of the heel had been broken, and there was some superficial purulent discharge from the raw surface exposed. Foot quite warm. Temperature 103°. Breathing was still very rapid. The dulness had not increased. The patient had brought up some frothy sputum, tinged with blood.

16th: Temperature 103·4°. Breathing easier. More food had been taken, and the patient had slept a little. He complained of some pain in the chest, none in the leg. To have an enema for constipation.

17th: Temperature 103·6°. Breathing very quick and short. Tongue drier and browner in centre. To have chloric ether, ammonia, and ipecacuanha. Quinine to be continued, one dose of twenty grains given.

18th: Temperature 102·4°. Patient appeared rather easier this morning. No pain in foot or leg. No œdema; foot perfectly warm. Breathing very short, however, and dulness increased over the front of the chest; some dulness and pain on the left side. Patient not taking much food, but some whisky and milk. He became rapidly worse and died the same night.

Necropsy, eighteen hours after death.—As permission was only given to examine the leg, no other part was opened. An incision was made from the base of the fifth metatarsal backwards and curving round behind the external malleolus, ending two inches above its tip, another at right angles to this across the dorsum, and the soft parts reflected. These were infiltrated with dark blood, but there was no rupture of the extensor tendons or of the anterior tibial vessels or nerve. The extensor brevis was torn. The middle part of the external lateral ligament was merely a shred connecting the broken tip of the external malleolus to the os calcis; the anterior part was intact, but stretched and attached to the posterior fragment of the fractured astragalus. The dorsal calcaneo-scaphoid and the dorsal calcaneo-cuboid were ruptured entirely with the exception of a few fibres at the lower edge of the latter. The superior talo-scaphoid was torn through; but the internal talo-scaphoid was intact, and had acted as a pivot on which the anterior fragment of the astragalus had rotated. The strong internal lateral ligament of the ankle was intact, and the tendon of the tibialis posticus passing over it was in its normal position. The ligaments between the tibia and fibula were normal, and there was no sign of any attempt at separation between the bones. Of the bones, only the external malleolus, astragalus, and cuboid had suffered. The os calcis, tibia, scaphoid, and cuneiform were not injured. The external malleolus, a wedge-shaped piece of bone, the base external and involving the tip, attached by the posterior portion of the external lateral ligament to the posterior fragment of the astragalus, slightly by periosteum to the fibula, and by the remains of the middle portion of the external lateral ligament to the os calcis, lay pretty much in its normal position to the fibula, but behind the astragalus. The astragalus was divided into two main portions by a fracture which passed obliquely backwards and inwards, and from above downwards and forwards, along the line of the interosseous ligament, which was utterly destroyed. The posterior and outer fragment, which had given a feeling of fulness in front of the external malleolus, was attached to the external malleolus by the posterior and anterior portions of the external lateral ligament, the anterior portion of which, after the fracture of the posterior and inferior edge of the fibula, having carried it slightly outwards as it was jerked forwards by the original force. By the passage forwards of the astragalus, the posterior edge of the tibia and fibula were approximated to the os calcis, the

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posterior ligament being intact and doubled in. The anterior and inner fragment, of which the articulating surface for the scaphoid had formed the prominence first seen, was attached solely by the internal talo-scaphoid ligament, and upon that as a pivot it had rotated in such a way that its anterior surface or head looked upwards, forwards, and outwards—its fractured extremity downwards, backwards, and inwards. A portion of its articular surface looking towards the internal malleolus was torn off and still attached to that bone by the internal portion of the deltoid ligament; by which, also, the fragment was retained in its normal position. The cuboid was crushed badly, lines of fracture extending through its external and anterior aspects, but its internal surface still articulated firmly with the external cuneiform and its posterior surface, though loosened by partial rupture of its ligament, from the os calcis, was uninjured.

Note by Mr. BISHOP.—As the fracture appeared to be reduced at the time, I presume that the movement of carrying the body from the ward to the mortuary after removal of the splints, which was done without my knowledge, reproduced the original condition. The case is recorded mainly in order to describe as minutely as possible the condition produced by the injury. The bones were removed, and are in the museum of the hospital.

Medical Societies.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

AT the annual meeting of the above Society, held on July 4th last, Dr. J. L. W. THUDICHUM, President, delivered an address. He said the Society might look back upon the session just ended with satisfaction and pride, and take from its success the assurance of a future in which its usefulness will increase and its importance develop. Their proceedings have not been tinged by the slightest discord; on the contrary, there had been a universal concurrence of goodwill on all sides. He had received from the officers, the council, and from the Society at large the most generous support. In founding the Cavendish Lecture the Council laid down the principle that it should be dedicated not only to medical but also to general philosophical objects. Perhaps it might be thought that a man whose life was mainly devoted to the elucidation of facts should not be made the patron of philosophical ideas; but this doubt will vanish when it is considered that such work as Cavendish performed is imperishable as well as luciferous. True, Cavendish remained an adherent of the doctrine of phlogiston to the end of his life, which occurred in 1810, at the age of seventy-nine. But stability was the tenour of his mind, and when he studied an object he seized it with tenacity, and held it as long as it yielded any results by the most varied treatment. Unlike Priestley, his great contemporary, he was of a retiring disposition, and several of his discoveries were not published early enough to secure him his well-earned priority. Many of the questions in chemistry, raised by Priestley's observations, Cavendish treated successfully as regards the discovery of new facts, although the phlogiston theory did not allow him to develop their correct bearing. But what he found allowed at once the truth to be seen, says Kopp, as soon as it was considered by an inquirer like Lavoisier, whose view was no longer dimmed by that splendid hypothesis. Cavendish confirmed Black as to the peculiarity of fixed air (carbonic acid), in 1766. In the same year he showed that the combustible air from metals is also a specific body. He found hydrogen by bringing zinc or iron in contact with dilute acids, and found stoichiometric relations: equal weights of zinc, with sufficiency of either of different acids, gave equal volumes of gas. Equal weights of different metals, zinc and iron, gave unequal volumes of gas; the relations of these to each other were estimated with remarkable accuracy. He found the burning air explosible when mixed with common air; he observed its lightness, a low specific gravity, as one-eleventh of common air (correctly, one-fourteenth). This led to the consideration of the specific weights of gases as a means of their distinction from each other. He dried his gases, and, when measuring this volume, observed pressure and temperature. He used mercury as isolating liquid. He examined, chemically, water from a London well (1767), and discovered incidentally the solubility of lime carbonate by an excess of carbonic acid. In 1783 he published an analysis of common air; this was so accurate that he stated air to contain 20·8 vols. of dephlogisticated air (oxygen), actually 20·9. In 1781 he investigated the cause of the disappearance of dephlogisticated air; the phenomena of the oxidation of metals, the combination of sulphur and phosphorus. When he exploded a mixture of combustibles with common air he obtained moisture; when he exploded two volumes of combustible with one volume of dephlogisticated air he also obtained moisture, and no air was left. Thus the composition of water was discovered. In 1875 he found the formation of nitrous and nitric acid by the agency of the electric spark. He retired from the active pursuit of chemistry after the new views had prevailed over the hypothesis of phlogiston. Let us hope that a future Cavendish lecturer may make his discoveries and their experimental illustration his subject. The speaker then alluded to the influence of Darwin on facts and theories, and deduced as the main result that our endeavours must be to establish firm data before constructing any far-reaching hypotheses or theories. In this endeavour our future is secure of results which will advance our science.

ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the subsection of Anatomy and Physiology, Professor J. M. Purser in the chair,

Mr. KNOTT read a paper for Dr. J. M'Donnell on the Development of the Eye in Vertebrata and its bearing on the Darwinian Theory. In the absence of the author, the paper was not discussed.

Mr. KNOTT read a note on a specimen of the Musculus Sternalis. He said he had some weeks before met with a bilateral specimen of the musculus sternalis of perfectly symmetrical arrangement. Arising from the cartilages of the third, fourth, and fifth ribs, and the edge and front of the sternum, it passed upwards to be blended with the sterno-mastoid of the same side. Twigs of the intercostal nerves were traced into it. The various homologies of this anomalous muscle which had been advocated by different authorities were then noticed; and, while admitting that each might satisfy the observers in certain cases, he feared that anatomists, in endeavouring to connect the structure in all cases with the same stratum or group of muscles, had fallen into the same difficulty as the travellers in the desert who came to loggerheads on the subject of the colour of the chameleon. He had no doubt that in the present case it could be more distinctly referred to the sterno-mastoid than to any other muscle. It was sometimes directly continuous with the rectus abdominis, and in others appeared, as in the series of specimens exhibited by Mr. Abraham, to be a part of the great pectoral, a view so ably advocated during the present session by Professor Cunningham. The idea of its relationship with the panniculus carnosus presented probably the greatest difficulties to its acceptance. Its depth of position, thickness of stratum, presence of strong tendinous extremities, and powerful attachment to bone were all against this hypothesis, which, the speaker thought, should be entirely abandoned. He believed that the anomalous muscle was of variable origin, and might in individual instances be referred to any of the other sources given, or even be a muscle *sui generis*, but the hypothesis of a community of origin for all the aberrant specimens described and figured by various observers under the name of musculus sternalis could not bear close investigation.—Professor CUNNINGHAM remarked that since he had first recorded the source from which the musculus sternalis receives its nerve of supply, he had been so fortunate as to meet with three additional cases. In all these the same nerve was found, although in two instances its continuity from origin to termination had not been fully made out. One of these cases he had mounted as a permanent specimen. He had traced the terminal twigs of the intercostal nerves into the musculus sternalis, but had always managed to follow them through it as they passed to the surface. In no case had he observed them giving filaments to the muscle. They pierced it in the same way as they pierced the pectoralis major. The argument which Dr. Knott adduced against the musculus sternalis belonging to the same group as the platysma could not be entertained for a single moment.

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It was true that the platysma shows little or no bony attachment; but attention must not be confined to man, in whom this group of muscles is but feebly developed. In quadrupeds portions of the panniculus carnosus shows strong attachment to bone, and even in some cases are concerned in producing direct movement of the humerus at the shoulder-joint. Whilst repudiating this argument, however, he agreed with Mr. Knott in considering that the musculus sternalis has no relationship with the platysma myoides. He drew his proof from its nerve of supply.—Mr. ABRAHAM said the evidence of Mr. Knott was negative rather than positive as regarded the nerve supply, and Mr. Knott had not stated whether the specimen was dissected by himself or was simply shown to him after partial dissection and destruction by students. He corroborated what Professor Cunningham had said about his last muscle. The thoracic nerve was quite distinct.—Mr. KNOTT, in reply, observed that what Professor Cunningham was pleased to call "his proof" proved absolutely nothing, as the nerve supply from a common origin in some cases merely increased the probability that it belonged in those instances to the pectoral group, which had been fully admitted. With regard to the bony attachments of the panniculus carnosus, they could not for a moment be compared in strength and firmness of union with those of the deeper muscles. In reply to Mr. Abraham's remarks, he admitted that part of his evidence was negative, but he saw no reason to doubt that the muscle was wholly supplied in his specimen by the intercostal nerves. They were found entering the muscle and branching in it. Nothing more could be made out without microscopic examination.

Mr. ABRAHAM exhibited Six Chinese Skulls, concerning which he read a communication.—Professor CUNNINGHAM said he had measured the six specimens in Trinity College. These were casts, but still of course they served equally well for working out the cephalic index. All, with one exception, were in the mesocephalic group. One, however, was markedly brachio-cephalic, well within that group, which was a curious point.—Mr. ABRAHAM remarked that skulls of one race differed among themselves in every point, and valid results could only be obtained by taking a large series for comparison.

Reviews and Notices of Books.

The Science and Art of Surgery, &c. By JOHN ERIC ERICHSEN, F.R.S., LL.D., F.R.C.S., Surgeon Extraordinary to Her Majesty the Queen; Emeritus Professor of Surgery and of Clinical Surgery in University College, &c. Eight Edition. Revised and edited by MARCUS BECK, M.S. and M.B. Lond., F.R.C.S., Professor of Clinical Surgery in University College, London. Two volumes. London: Longmans, Green and Co. 1884.

A Manual for the Practice of Surgery. By THOMAS BRYANT, F.R.C.S., Lecturer on Surgery at Guy's Hospital; Member of the Council of the Royal College of Surgeons. Fourth Edition. Two volumes. London: J. and A. Churchill, 1884.

WERE the general merits and qualities of these two works less known and recognised the simultaneous issue of a new edition of each would afford a convenient opportunity for instituting a comparison and a contrast of their respective virtues and value. Happily (for the critic), this has now become a work of supererogation. Mr. Erichsen's treatise appears with the prestige of thirty years' approbation and success, and Mr. Bryant's manual with that of twelve years. The place of each in professional estimation is more or less permanently fixed; judgment has been given, the justice of which is not likely ever to be seriously impugned. It may at once be unreservedly said that each is, in its own peculiar way, pre-eminent, and that both are equally creditable to their authors, and indeed to English surgeons. So firmly are both these works established in public favour, that under ordinary circumstances it would perhaps have been enough to announce that Mr. Erichsen's had reached an eighth edition, and Mr. Bryant's a fourth edition: but the circumstances are not ordinary, at least, so far as concerns the former. What constitutes the chief peculiarity we shall consider presently. Without more ado we may here take leave of Mr. Bryant's book by congratulating the author upon the continued and increasing success of his work, adding the assurance that the new edition exhibits no abatement in the careful efforts to make the revision genuine and complete, and to keep it up to the level of the best contemporary knowledge. Novelties of fact and of suggestion have been discriminately recorded and intelligently criticised; previous utterances have been honestly reconsidered, and if necessary, expunged or amended, and at the same time no pains have been spared to give clearness and precision to every statement whether of deed or of doctrine. By its style and arrangement, by the comprehensiveness of its survey, and by the nature and quality of its subject-matter, both as to text and illustrations, and by virtue of embracing the principal specialties of diseases of the eye and the ear, the new edition of Mr. Bryant's work may be confidently recommended as an excellent manual for the student, and as a safe, sure, and not too garrulous guide for the practitioner to every department of surgery.

The circumstances under which the new edition of Mr. Erichsen's treatise makes its appearance are so altered and unusual that they will justify a more detailed and critical examination than it has been thought necessary to bestow on Mr. Bryant's new edition; indeed, they seem to demand it. For more than five-and-twenty years "Erichsen" has, in this country, been the most approved text-book on surgery for the abler or more advanced student, and the "liveliest pledge of hope in fears and dangers" for the practitioner; while its own intrinsic merits, conjoined with accidental and extraneous circumstances, have secured for it the honour of being the chief, if not sole, representative of English surgery abroad. Time, which has brought deserved fame and honours to the author, has likewise enhanced the reputation of his works, and now, in spite of the appearance of powerful competitors and rivals, "The Science and Art of Surgery" stands as high in professional favour and confidence as at any period of its existence. But time and honours have their drawbacks; famous men have scanty leisure, and tasks which they were wont to accomplish single-handed call at length for coadjutors. So it has happened to Mr. Erichsen, for though still evidently keeping control and supervision over the main character of his work, he has deputed to Mr. Marcus Beck the labour of preparing a new and revised edition. Not that this is the first time that Mr. Erichsen's work has had the advantage of Mr. Beck's learning and literary skill, but it is the first time that this gentleman's name has appeared on the title-page as the avowed and responsible editor. This notification presumably implies a greater scope and licence to the editor than heretofore, though the original author (in his preface) remains surety and sponsor for the whole.

It is needless to remark that Mr. Beck's editorship affords at once a substantial and sufficient guarantee that the revision has been conscientiously and painstakingly performed, and that everything that is best and everything that is newest in surgical knowledge and literature has been laid under contribution. And as a matter of fact it would be difficult to praise too highly the greater part of the work that more obviously proceeds from Mr. Beck's head and hand. Every page shows marks of his improving touch, of his wide knowledge, his rich experience, sagacity, and research. The illuminations of his knowledge and intelligence is, however, most conspicuous in the domain of pathology, and more especially in those places that take in the facts and doctrines of inflammation, of septic and infective diseases, and of surgical diseases of the kidneys and other urinary organs. It would be surprising if, in a work so extensive, no error or mistake should occur. Doubtless some of both

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may be found. In the interpolated historical notice of the operation of amputation, for example, it might be objected that the description of the Hippocratic plan of dealing with a gangrenous limb is misleading if not positively incorrect; that the title of James Yonge's work is given as "Currus Triumphalis e Terebinthino" instead of "Currus Triumphalis e Terebintho"; that Guido de Cauliaco is called "Guido di Cauliaco"; that the name of the English surgeon Lowdham, who was one of the first to suggest the plan of cutting a flap, is several times given as "Lowndham." These are, however, comparatively unimportant and venial faults. We may confidently repeat the conviction that Erichsen's "Science and Art of Surgery" will continue to hold its place as the best exposition in the English language of those branches of surgery with which it deals.

We should have been glad if we could have ended this notice of Mr. Erichsen's new edition in a strain of unqualified approval and praise; but the requirements of critical justice will not so easily be satisfied. And, first of all, we must enter a protest against the mercilessness with which every succeeding edition is augmented in bulk. The seventh edition contained nearly four hundred and thirty pages more than its immediate predecessor, and now the eighth edition contributes a further addition of four hundred and fifty (allowing for the omission of the chapter on Eye Operations), making an aggregate increase of nearly nine hundred pages in two editions. If this tendency is not checked, "Erichsen" will soon become impracticable for most students. To the student of these days there is a serious meaning in the adage *Μέγα βιβλιον μέγα κακόν*, which freely translated is "a big book's a great nuisance." Already the student shows a willingness to adopt the expedient of "cramming" the smallest manuals that pushing teachers and enterprising publishers can be found to supply. It is useless to oppose this tendency unless authors will learn to distinguish between *addition* and *edition*. What an example did Syme set in this respect. Each succeeding edition of his work is said to have got fuller of matter and smaller in size. Doubtless it is a hard and not altogether agreeable task for an author to erase what a few years before he had prepared with such approving pains; but it is still harder to make the student a victim of an author's complacency, want of leisure, or literary vanity. It is unreasonable to expect a student to read two thousand three hundred and thirty-four pages of a work which deals with general surgery only, and which compels him to seek his knowledge of the literature of diseases of the eye, the ear, and the skin from separate and special works. This is a view of the matter we earnestly commend to the consideration of Mr. Erichsen and his colleague. We do not advocate the introduction of chapters dealing with the diseases of the eye, the ear, and the skin; we merely plead in the interests of the student that the rest of the volumes should be correspondingly reduced in bulk; and when we speak of the interests of the medical student, we mean, in the case of Mr. Erichsen's work, the interests of surgical education.

Turning to the second chief fault of the new edition, it is impossible to ignore an alteration of tone and temper as regards some controversial matters. In speaking of the preceding edition of Mr. Erichsen's work, we said: "There are no random statements, no scientific fopperies, no dallyings with fashionable pathological doctrines merely because they are fashionable." It would not be possible, without considerable reservation, to repeat this language. For example, there is no concealing the fact that the state of mind in which the question of "Listerism" is now considered is no longer the judicial and impartial state to which Mr. Erichsen had accustomed us, but rather that of indiscriminate partisanship. We do not for a moment wish to question the truth of the doctrine that underlies the method of "Listerism," nor to gainsay the alleged success of the plan. It would be altogether out of place to do so here, even if our faith were less than it is. What we disapprove relates neither to the truth nor the error of this or that theory, but only to an extravagance of language unbecoming a scientific exposition. We need only to mention to condemn them such terms as "absolute prevention," "perfectly," &c., in speaking of "Listerism," and the "very uncertain" or "fails completely" of rival modes. The use of such terms is perilous alike to those who employ them and to those who read or hear them. How perilous the following may show. The treatment of fractured patella by opening the joint and wiring the fragments is thus spoken of (vol. i., p. 613):—"In this country it was first suggested by Lister as being free from danger, provided strict antiseptic treatment was adopted. ..... The operation has been performed now a considerable number of times, and *all recorded cases have so far been successful*" (the italics are our own). This statement is allowed to appear in September, 1884, or ten months after the discussion at the Clinical Society of London, and after a special and detailed report (which appeared in our columns) of a fatal case due to septicæmia in King's College Hospital, in spite of strict Listerian precautions (THE LANCET, Nov. 17, 1883, pp. 856 and 860). About the time that the subject of fracture of the patella was being debated at the Clinical Society, we announced that M. Chauvel, in a discussion at the Société de Chirurgie, had referred to a collection of thirty-eight cases, four of which had been done without antiseptics, before the year 1877. Out of the thirty-eight cases there were twenty-eight good results, and ten were not successful. Three deaths were recorded, two from septicæmia and one from carbolic acid poisoning; and in one case amputation had to be performed (THE LANCET, Nov. 24th, 1883, p. 917). The truth seems to be that on the score of mortality alone the treatment of fracture of the patella by wire suture is nearly as hazardous as the operation of ovariotomy. The climax of enthusiasm is, however, reached in the following passage: "However much the details of the *Antiseptic Method* may be varied in the course of time and by the introduction of new chemical agents, the grand principle which sub-lies [*sic*] it, and on which the whole superstructure of its details is built, will run on intact and unchangeable. ..... The Principle [with a capital P] itself is immutable" (vol. i., pp. 3, 4). This is Finality indeed. It reads like a dictum of a modern Athanasius, and one looks instinctively for the words, "Which Faith except everyone do keep," &c. Mr. Erichsen had already told us that the operative part of surgery had attained almost finality, and we believed him; and now Mr. Beck (are we right in saying so?) assures us that the science of surgery has also reached its utmost limit. Must we believe this too? How does an "immutable" principle work in other departments of natural science? Take optics, where the data are most numerous and least conflicting. There is almost an overwhelming amount of evidence in support of the truth of the undulatory theory of light, but did it ever enter into the mind of Thomas Young or of John Herschel to declare this theory "intact, unchangeable, and immutable"? The last-named philosopher laid it down that "the grand and indeed only character of truth is its capability of enduring the test of universal experience and coming unchanged out of every possible form of fair discussion." Has this so-called "immutable" principle underlying "Listerism" stood this test? Does it compel the universal assent of scientific experts? Are all practising surgeons convinced of its truth? Mr. Bryant is far more modest in forecasting the future: "In fact, it may now be said that the Listerian mode of dressing has had its day, though the principle upon which it is based survives, and is likely to do so" (vol. i., p. 58). It is, however, but fair to state that Mr. Erichsen (for the sentence

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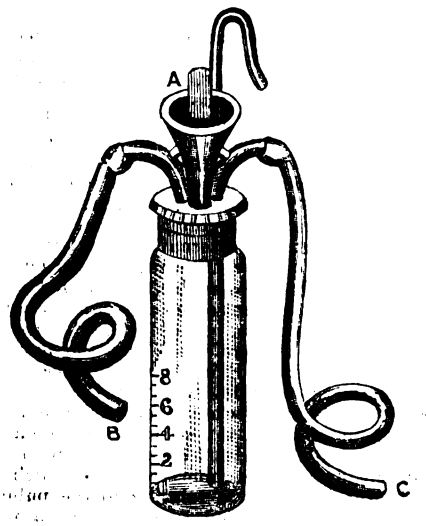
must be his), with characteristic good nature, is unwilling to abandon all non-Listerians to the pains and penalties of helplessness and despair. He tells the surgeon, "If he is not in the land of 'spray-producers,' 'protectives,' and 'guards' of iodoform and salicylic acid wools, let him not despair—cold water and clean linen rags will do much to supply their place." These are gracious words; from them all heretics and unbelievers may draw courage and consolation, and in them will we rest and be satisfied.

New Inventions.

A MODIFICATION OF DR. JUNKER'S INHALER.

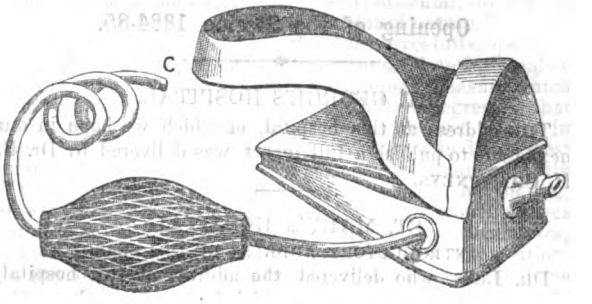
WHATEVER may be the future of the agent commonly called bichloride of methylene, or shortly methylene, I do not propose to discuss here. The valuable memoir of Reynauld and Villejean must go far to shake the belief of those who regard the preparation commonly sold in England as anything but a mixture of chloroform and alcohol. In the meantime there are many who prefer that anæsthesia should be induced by methylene, and this is especially the case with ovariotomists. Dr. Junker's inhaler has long been used as a convenient one for the exhibition of methylene, but those who have used it at all largely have found that it has several drawbacks which go far to restrict its use. Practical experience of its use and shortcomings has led me to attempt to remedy these; and the modified form that Messrs. Mayer and Metzler have constructed for me answers its purpose well, and obviates all the disadvantages of Dr. Junker's

FIG. 1.



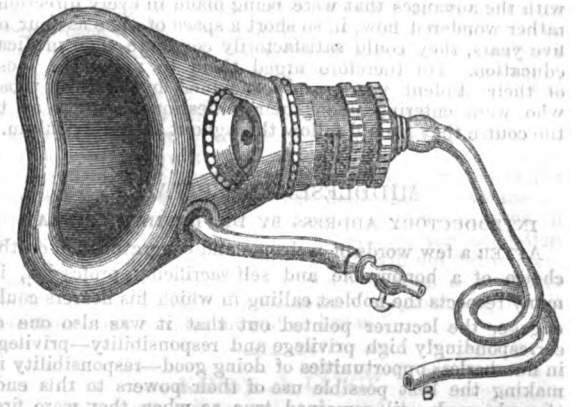
apparatus. In all prolonged operations it is necessary to refill the methylene receiver, an act accomplished with delay and difficulty in the older apparatus, as the top has to be unscrewed and readjusted. This, unless the narcosis is profound, will allow the patient enough air to partly regain consciousness—a result harmful to the patient and the operator. In the old method both hands were engaged, so that the pulse could be but imperfectly studied, while the conjunctival reflex could be tested with difficulty. Further, the administrator often found himself greatly inconvenienced in other ways for lack of a free hand. In the modified form refilling can easily be performed by the administrator himself. The celluloid stopper is removed from the feed-hole (A, Fig. 1), the methylene introduced, and the celluloid peg simply fixed by a turn of the fingers. The second difficulty, that of using the hand-injecting bag, is obviated by employing the flat-faced pedal. The straps fix this firmly to the foot, allowing the administrator to step from one side of the table to the other, if needful. The tube C (Fig. 2), of course, as in Dr. Junker's, supplies air which is forced through the receiver bottle, while Fig. 3 shows the two ends of the tube which conveys the air-diluted vapour to the face-piece. The coils of tubing have been omitted to save space in the drawing. It is important that the inlet tube should be upon the upper surface of the pedal, otherwise it becomes choked with dirt. In my inhaler I have replaced the rigid face-piece, which I have found cuts and incommodes the patient, by one made of leather and having an air cushion adjustment around its face surface, which enables one to fit it very accurately to the inequalities of the countenance. This is

FIG. 2.



supplied with an expiration valve allowing for free disposa of respired air. I find that it is quite easy to have a series of face-pieces of varying size, which may be so arranged as to either get into gear with Clover's ether inhaler or my methylene inhaler, and thus dispenses with the necessity of having a double set of face-pieces. Further, the face-piece can be removed entirely and replaced by a V-shaped tube which screws on. To the limbs of the V are attached soft

FIG. 3.



catheters, which answer admirably for giving the anæsthetic in operations about the mouth, in which, of course, a face-piece cannot be employed. The catheters pass right to the back of the nares, and so throw the vapour into the pharyngeal cul-de-sac about the larynx. I find Mr. Milles employs a somewhat similar contrivance.

DUDLEY W. BUXTON, M.D., B.S., M.R.C.P.,
Administrator of Anæsthetics at the Hospital for Women, Soho-square.

HOSPITAL SATURDAY FUND.—At a meeting of the board of delegates of this fund, on the 27th ult., it was stated that the total of the last street collection would probably prove to be, when various outstanding amounts were received, about £2800; and seeing that this, notwithstanding the wet weather which prevailed last Hospital Saturday, was £500 in excess of the 1883 collection, the idea of having a supplementary collection had been abandoned. The managers of the fund intend carefully to consider the advisability of the collection being made in June or July, instead of early in September, on account of the greater prospect of fine weather on the earlier date.

KILLED ON THE RAILWAY.—Mr. Thomas Williams L.R.C.P. Ed., whilst walking on the railway between Mold station and his residence was knocked down by a Chester train and killed instantaneously. Deceased was between seventy and eighty years of age.

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Abstracts
OF
INTRODUCTORY ADDRESSES
DELIVERED AT THE
MEDICAL SCHOOLS OF LONDON
AT THE
Opening of the Session 1884-85.

ST. GEORGE'S HOSPITAL.

THE address at this hospital, of which we hope in our next issue to publish a full report, was delivered by Dr. F. H. CHAMPNEYS.

ST. MARY'S HOSPITAL.

INTRODUCTORY ADDRESS BY DR. LEES.

DR. LEES, who delivered the address at this hospital, referred to various comments which have been made on the subject of introductory addresses to medical students, in which the remark was made that they were sinking into lower depths of commonplace and platitudes, but, in reply to that statement, he observed that such addresses were not intended for the general public, but for the students alone. Those who addressed them had been students, and they wished to impress upon them that art was long and time was fleeting. They who knew something of the extent and variety of knowledge which it was needful for them to acquire, and found it difficult for themselves to keep pace with the advances that were being made in every direction, rather wondered how, in so short a space of time as four or five years, they could satisfactorily complete their medical education. He therefore urged them to make the most of their student years, and concluded by advising those who were entering upon their professional studies as to the course they should follow throughout their curriculum.

MIDDLESEX HOSPITAL.

INTRODUCTORY ADDRESS BY DR. DAVID W. FINLAY.

AFTER a few words of welcome and congratulation on the choice of a honourable and self-sacrificing profession, in many respects the noblest calling in which his hearers could engage, the lecturer pointed out that it was also one of correspondingly high privilege and responsibility—privilege in numberless opportunities of doing good—responsibility in making the best possible use of their powers to this end. Cicero's words still remained true as when they were first uttered:—"Homines ad deos nullâ re propius accedunt quam salutem hominibus dando." What constituted, as it appeared to him, the chief attraction of the medical profession was that it satisfied both the intellectual and sympathetic side of our nature, for while the field for acquiring experience and also for research were boundless, the results arrived at were made directly serviceable in the treatment of our fellow-men, in relieving pain, in restoring function, and in saving life. A wide field was open to them for its exercise both at home and abroad. But no prosperity or distinction, nor anything else worth having, would be gained without honest and steady work, and he besought those especially who were commencing their curriculum to make a good start by cultivating habits of application and industry and method from the very beginning of their studies. He would urge upon them all the sentiment contained in one of Ovid's couplets:—

"Quæritur Ægisthus quâ re sit factus adulter
In promptu causa est; desidiosus erat."

The idle man's mind was open to attacks of all sorts of folly, and temptations to idleness and worse than idleness abounded in every large city. There was no surer way of keeping clear of all such entanglements as might lead in the end to moral loss and wasted lives than to have their minds preoccupied with something that was good and useful. Habits of idleness were too often acquired in the first year, and if the subject of them ultimately made up for lost opportunities it was only after a grievous expenditure of time and irksome labour. He did not propose to say much as to the way in which they should study particular branches, but with regard to anatomy it was hopeless to expect to acquire any useful knowledge without regular and careful dissection; and he would warn his hearers against the error of supposing that demonstrations could ever take the place of personal acquaintance, if he might so put it, with the parts of the human body themselves. In this, as in all other departments of knowledge, they must remember that—

"Study is like the heaven's glorious sun,
That will not be deep search'd with saucy looks."

He would also remind them of the paramount importance of physiology and pathology, and the necessity of unremitting attendance in the post-mortem room, where they would see and handle the results of disease.

In addressing them last year his predecessor had expressed the hope that by this time the long-looked-for Medical Bill would have become an Act, but this hope had not been realised, and legislation seemed further off now than it was then. And if they regarded the mischief that had been and was likely to be worked on the Bill of compromises actual and proposed before it arrived at its last surviving stage, they need not perhaps greatly regret that the vessel had foundered before reaching port. At the same time all the labour expended upon it and the daylight which had been let in upon some of the licence granting bodies had not been fruitless. Many of the corporations had been led to set their houses in order; and a scheme for the conjunction of the two Royal Colleges of London for the purpose of granting qualifications would probably soon be put in force, in accordance with which they would have only one examining body to face in order to gain a double qualification. If by some change in their constitution these bodies could only obtain power to confer degrees in medicine and surgery, the scheme would be complete; but there were always vested interests and difficulties to be overcome in the way of all such reforms.

No one contrasting the state of medical science now with what it was twenty, or even ten, years ago could fail to see that in this, as in other things, they lived in an age of progress. In illustration of this he might point to the discoveries which had been made in the field of bacterial pathology; to the development and extension which had taken place in connexion with abdominal surgery; to the greater precision which had been given to diagnosis in the matter of cerebral localisation; and, as regarded therapeutics, to the rapidly extending antipyretic treatment of febrile diseases, both by internal and external remedies. And in the domain of preventive medicine or public health, no less activity had been observable. He was led to refer more in detail to this department of medicine, mainly on account of its growing importance, because it had been brought so prominently before the profession and the public in connexion with the Health Exhibition, and because students, as a rule, appeared unwilling to give it the attention which it deserved. In pleading for a greater amount of attention to this department of study, it would be a strong argument if it could be shown that a notable diminution in the death-rate had already resulted from the work which had been done under the various Acts relating to the public health. The lecturer then proceeded to show that a remarkable decline in the general death-rate of England and Wales had indeed taken place, especially since 1875, the year in which the great consolidating and amending Act relating to public health had been passed, illustrating the point by charts which showed a fall from 22·8 per 1000 of population in 1875 to 18·9 in 1881, and 19·6 in 1882. Figures were also adduced to show that the total number of lives saved above the average of the ten years 1866-75 amounted to no less than 329,000. An argument was also drawn from the diminished mortality of the late cholera epidemics which had visited this country in favour of the claim made on behalf of sanitary organisation. Certain zymotic diseases were then referred to and compared with each other, the decline in mortality of those which were regarded as most preventable tending to proof in the same direction. A further argument was furnished by a comparison of results in the case of rheumatism and diseases of the respiratory system on the one hand, and typhus and enteric fever on the other, charts being referred to which showed that there was no average tendency to decline in mortality in the case of the former, while in the latter there was an almost unbroken progress downwards from first to last. Other considerations also pointed to the same conclusion;

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and taking all together, they were such as to compel the belief that in the main improved sanitation and the advance of the country in the ways of health stood to each other in the relation of cause and effect. But there must be no resting in the conflict with disease and dirt, and they might cherish the hope of as great an advance in the future as there had been in the past. There was plenty of good work yet to be done, and opportunities were likely to occur in the practice of everyone. It must not be forgotten that there was personal as well as public hygiene, and that even inculcating cleanliness and the value of ventilation upon those classes of patients who were little likely, without such teaching, to be impressed with their importance, would not be done in vain. But even with the most sanguine anticipations realised, disease, like the poor, would always be with us. Hence curative medicine would always retain its importance, and there was surely room for improvement also here. With increased precision in diagnosis, which they might hope for, they must attain to more successful therapeutics. "In conclusion," said the lecturer, "let me say that there are noble traditions connected with the school which you have chosen as the home of your study; where, to speak only of the illustrious dead, Sir Charles Bell, Campbell de Morgan, and Charles Murchison have laboured and taught, and we look to you to keep those traditions bright and to reflect credit upon your foster-mother and your profession wherever your lot may be cast. If I may repeat anything I have said it would be to urge you again to earnest work; remembering that whether your talents be ten or one you will have to give an account of the use you make of them to a higher than any earthly power, and that although 'art is long, life is short.' In the words of the oldest and best of text-books, 'Whatsoever thy hand findeth to do, do it with thy might; for there is no work, nor device, nor knowledge, nor wisdom, in the grave, whither thou goest."

In the course of the address a sympathetic tribute was paid to the memory of the late Dr. J. Hall Davis, who had for more than twenty years held office in the Middlesex Hospital and School; and reference was made to the loss sustained by the cause of preventive medicine in the comparatively early death of Mr. Netten Radcliffe, one of the most indefatigable and ablest workers in the field of epidemiology.

WESTMINSTER HOSPITAL.

INTRODUCTORY ADDRESS BY DR. HUGHES BENNETT.

AFTER congratulating the students on the honours they had won, Dr. Bennett remarked that it was prudent for those about to enter on a practical career to pause at the outset to consider the ultimate object for which they now strived, and to endeavour to determine whether the means they employed were calculated to attain the end desired. It was stated as a general axiom that the final aim of every human being, considered from a worldly point of view, was to extract the largest possible amount of felicity from his existence. How this aspiration was to be best secured has always been a matter of individual opinion; and various and innumerable are the attempts which have been made to effect its consummation. The accumulation of money forms a common means by which mankind strives to reach the goal; but it was admitted that the mere acquisition of fortune did not by itself conduce to that true happiness and contentment of spirit which it was the ultimate hope of humanity to realise. To reach this end, besides mere sensuous gratification, the intellectual cravings of man must be satisfied. It may therefore appropriately be asked how far the profession of medicine affords a suitable sustenance for temporal wants and at the same time supplies intellectual occupation and gratification, the successful combination of which two elements is undoubtedly necessary for the attainment of happiness. Whatever personal qualifications deserving of respect the physician may possess, from his calling itself he gains little prestige. There is no item in the expenditure of a household more grudgingly bestowed, more liable to be questioned, or more tardily settled than the doctor's bill. There is no vocation so imposed upon, so largely called on to perform gratuitous labour, or so unthankfully acknowledged as that of the medical man. If the claims of the medical profession to public recompense and private fortune are inadequately recognised, its followers must look to another source of satisfaction as an equivalent for all their sacrifices. This, if properly sought for, will be found in the study of medicine for its own sake, in the appreciation of its intrinsic merits, and in its cultivation as a science. The truth of the axiom that knowledge of all kinds brings with it its own reward has been amply demonstrated. From the earliest ages, and among all nations, the search for and the acquirement of information have always been regarded as a source of fascination to the intellectual mind. If this is true with regard to learning in general, it applies with augmented force to the study of science in particular, for dealing as this does with the positive phenomena of nature, it affords facilities for the culture of all the faculties, gives full scope to the imagination and every opportunity for the display of originality and invention. There is probably no human pleasure which is so permanent, or which reaches so lofty a degree, as that which emanates from an ardent and successful career in scientific research and discovery. Medicine in its highest sense may be looked upon as a science. It treats not only of the prevention, relief, and cure of disease, but of life, growth, and decay, in all their bearings. Its scope involves not only the administration of remedies for abnormal states, but an acquaintance with the structure and composition, the physical and vital properties, of all substances. Medicine may, in short, be said to be that science which attempts to fathom the mysteries of life and death. This opens out a boundless and inexhaustible field of inquiry to him who searches after mental occupation, and offers an endless supply of material, which if properly cultivated cannot fail to return an abundant harvest of intellectual fruit. These considerations are all the more important when it is remembered that the path of advancement is steeper and more thorny to-day than ever before in the history of the world. Never was competition in every calling so fierce, and never did prosperity, even in a moderate degree, demand for its attainment such a union of physical and intellectual qualities. It cannot therefore fall to the lot of all to meet with great prosperity in life, and the man who is most to be pitied under failure is he whose happiness and misery entirely depend on such outward circumstances. On the other hand, he who is in love with philosophy will think lightly of sufferings and privations which to another would be intolerable. If such a one is poor in one sense, he may become affluent in another by the acquisition of valuable mental endowments, for, as Shakespeare says, "It is the mind that makes the body rich." Those therefore who deliberately embrace an intellectual career, who are imbued with the tastes which harmonise with its pursuit, and who possess the education necessary for its successful cultivation, will not fail to recognise those higher capabilities of the profession of medicine which offer such ample opportunities of gratifying in all directions every form of mental ambition.

KING'S COLLEGE.

INTRODUCTORY ADDRESS BY THE REV. DR. WACE.

AFTER some introductory personal remarks, in which reference was made to the baronetcies recently conferred upon two members of the staff, Sir W. Bowman and Sir Joseph Lister, Dr. Wace offered some observations on an aspect of medical work which it was the honour of King's College to bring prominently forward—namely, the union which their organisation established between their medical school and other departments of education, and the manner in which they were thus led to realise how closely they were all bound together in that great work of human culture and civilisation which was the immediate purpose of a liberal education for any profession. More lives were wrecked and careers disappointed by moral than by intellectual failures. "Mens sana in corpore sano" was a good maxim; but he had heard men quote it with much satisfaction whose whole attention was directed to the sanity of their bodies. Their profession would instruct them how to keep a sound body; but they could not safely disregard others if they would keep a sound mind. The address concluded with some congratulatory remarks on the position of the department and with a welcome to the new students.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

INTRODUCTORY ADDRESS BY MR. DYER.

THE inaugural sessional address was delivered by Mr. THISELTON DYER, who remarked that his own experience

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of the examination room, if it brought some satisfaction, brought some disappointment. He could see clearly enough now why it was so—viz, paying too much attention to some things and neglecting others. In checking this tendency to wander about the fields of knowledge, which ought instead to be systematically tilled, the ordeal of an examination is not to be despised. The grammar of a science must for practical purposes be as thoroughly and laboriously learnt as the grammar of a language.

CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THIS annual compilation has just been published by the Council of the College; from it we make the following analysis:—It appears that there are no less than 1166 Fellows on the *rôle* of the College, of whom 611 obtained the Fellowship by examination, five were elected as Members of twenty years' standing under Section 5 of Charter 15 Vict., and three are *ad eundem* Fellows. There are 16,509 Members. The Licentiates in Midwifery remain at 969; the Licentiates in Dental Surgery number 553.

The Board of Examiners in Anatomy and Physiology consist of nine members, annually elected by the Council from the Fellows of the College. It conducts the Primary Examinations in Anatomy and Physiology for the diplomas of Fellow and Member, and during the past Collegiate year has held eight meetings for the Fellowship, and forty-seven for the Membership; at the former there were 134 candidates, of whom only 56 passed, 78 being referred for six months. For the Primary Examination for the Membership there were 1108 candidates, 733 of whom passed, whilst 330 were referred for three months and 45 for six months. The fees received from candidates for this examination amounted to £61397*s.*, of which sum the Board received £2618.

The Court of Examiners consists of ten members, also elected by the Council from the Fellows of the College, all of whom, however, are members of the Council, except Dr. Humphry. During the past year the Court has held two meetings for the Fellowship, and forty-five for the pass examinations for the Membership. At the former there were 45 candidates, 30 of whom passed, 15 being referred for twelve months. For the Membership there were 804 candidates, of whom 348 were successful and 303 were rejected. The fees paid by the candidates amounted to £10,431 5*s.* The fees paid to the Court amounted to £4707 12*s.* The Board of Examiners in Dental Surgery has held three meetings for the examination of thirty candidates, twenty-two of whom received their diplomas. The sum of £346 10*s.* was paid by them in fees, of which the Board received £110 5*s.*

The income of the College from all sources during the past year amounted to £22,111 10*s.* 9*d.*, derived principally, as already shown, from fees paid by candidates for the diplomas of the College—viz., £16,917 7*s.* Rents from chambers produced £1530 18*s.*; fees paid by Members of the College on admission to the Fellowship produced thirty guineas; dividends on stock yielded £1182 19*s.* 3*d.*; from members of the Council and Court of Examiners on their election, £63. The expenditure of the year amounted to £20,046 7*s.* 4*d.*, the largest item being in fees paid to members of the Court and the Board of Examiners—viz., £7435 17*s.* The next largest amount appears in salaries and wages for the officers and servants of the College in the three departments of the library, museum, and office—viz., £3784 14*s.*; taxes, rates, diploma stamps, and insurance absorbed the large amount of £1469 9*s.* 3*d.* In the extraordinary expenditure, £700 was devoted to honoraria to Dr. Goodhart and Messrs. Trimmer and Doran. Under miscellaneous items, £431 11*s.* 6*d.* appears as having been expended, leaving a balance at the bankers of £2965 3*s.* 5*d.* The metropolitan hospitals are represented on the Council by Messrs. J. Cooper Forster (President), T. Bryant, and A. E. Durham, of Guy's; St. Bartholomew's, by Sir J. Paget, W. S. Savory (Vice-President), H. Power, and T. Smith; St. George's, by Mr. T. Holmes (Vice-President); University College, by Messrs. Erichsen, Marshall, C. Heath, and M. B. Hill; King's College, by Sir J. Lister and Mr. Wood; the London, by Mr. J. Hutchinson; the Middlesex, by Messrs. J. W. Hulke and G. Lawson; St. Thomas's, by Sir W. Mac Cormac, Messrs. J. Croft and S. Jones. Sir T. S. Wells, Bart., and Messrs. W. Cadge, W. Allingham, and E. Lund are not attached to any of the recognised metropolitan hospitals. The oldest Fellow of the College is Mr. J. M. Arnott, F.R.S., a late President of the College, who was admitted a Member so long ago as April 4th, 1817.

THE EPIDEMIC IN KIDDERMINSTER.

THE epidemic of enteric fever in Kidderminster has continued during the past week, but some abatement in its severity has now shown itself. The last reports, especially, show that the number of fresh attacks has undergone diminution. The visit which Dr. Parsons paid to the town, on behalf of the Local Government Board, was singularly brief in view of the magnitude of the epidemic, a circumstance which probably finds its explanation in the fact that the department is undermanned as regards its medical staff. The general impression which has been gained is that Dr. Parsons viewed the water-service and the relation of one of the wells to the sewage farm with grave suspicion in connexion with the origin of the epidemic, and the measures of precaution which may be taken in order to exclude any possibility of water-pollution will need to be based on skilled investigation of all the conditions liable to affect the well in question. No official report has, as yet, been issued.

At a meeting of the medical profession, held on September 26th at the Town Hall, present Dr. Roden (in the chair), Mr. S. Stretton, Dr. Langford, Messrs. D. Corbett, J. W. Colbourne, J. L. Stretton, and Dr. Measures, a prolonged discussion ensued, with minute investigation of all circumstances having bearing upon the causes of the present epidemic, when the following resolutions were unanimously agreed to:—1. That while we are unable to state positively the cause of the epidemic, we are of opinion that it was primarily caused by the water-supply, and that it has been aggravated by the imperfect drainage system and other insanitary conditions, and that there is no evidence against the milk-supply. 2. That from the evidence produced we are of opinion that the well at the sewage station should be closed immediately, and not used again under any condition whatever. 3. That proper provision should be made for the certainty of pure water in the reservoir, including the raising of the surrounding wall, and the adoption of a proper covering. 4. That immediate steps be taken to provide an additional supply of pure water at a distance from the town. 5. That the drainage system be investigated by an eminent sanitary expert; all levels, catch-pits, and ventilations to receive his especial attention. 6. That all junctions with the main sewers be examined, and certified as being in rigid order by the corporation officials. 7. That a public abattoir be constructed without delay, and that all intramural slaughter-houses be abolished. 8. That all middens and privies be abolished, and that no pigsties be allowed in the close confines of the borough, and that some measures be taken to investigate the emanations from obnoxious trades. 9. That in the meantime the free use of disinfectants should be proceeded with, including the flushing of all drains, and the watering of the streets with the same. 10. That the infectious hospital be placed at the disposal of the medical men for the admission of all cases they consider desirable, and that such admission be obtained with the greatest possible ease. 11. That a thousand handbills be printed for distribution amongst fever cases, with suggestions for the care of the patients, nursing, disinfection of secretions and linen, proper feeding, and dealing with the milk and water supply. That a fund be started for the provision of sick nurses, to devote their time to visiting the sick poor, under the direction of the medical men.

At the same meeting a letter was read from the borough member, J. Brinton, Esq., expressing his deep regret at the suffering of those afflicted with typhoid fever, and enclosing a cheque for £20 towards the subscription to provide nursing relief, under direction of the medical authorities.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 4, 1884.

IT is scarcely possible that the Medical Council can on the 6th inst. hold a purely formal meeting, or one for the mere election of a President. It has to face an altered state of facts as compared with those of any recent period. The legislation which has been long expected has not been realised. Not only has it not been realised, but the circumstances of failure are significant, and constitute a subject for the serious attention of the Medical Council. The Council has never been considered very ardent in its desire for medical reform, except on one point. But on this point it has generally been consistent. The point we refer to is the necessity for the creation of Conjoint Boards. Since the time of the famous inquiry into medical education, when Professor PARKES and Professor SYME took so deep an interest in the whole question of examinations, the one subject on which the Council has given a public-spirited and decided vote has been the consolidation of the bodies for licensing purposes. The following is the resolution of the Council, on Feb. 26th, 1870, moved by the late Dr. THOMSON, and seconded by Dr. (now Sir RISDON) BENNETT, and agreed to by a majority of seventeen to one, that one, of course, being the late Sir DOMINIC CORRIGAN, who dearly loved to be in a small minority:—

"That this Council is of opinion that a Joint Examining Board should be formed in each of the three divisions of the kingdom, and that every person who desires to be registered under any of the qualifications recognised in Schedule A to the Medical Act shall be required previously to such registration to appear before one of these Boards and be examined on all the subjects which may be deemed advisable by the Medical Council, the rights and privileges of the Universities and Corporations being left in all other respects the same as at present."

On the 28th of the same month a further resolution was agreed to, on the motion of Dr. PARKES, seconded by Dr. ANDREW WOOD, to the effect that the Universities and Corporations in each division of the kingdom should be requested to concert a scheme for the formation of such a Board.

These are the fundamental principles of the Medical Council in regard to the basis of new medical legislation. They accord with the views of thousands of the profession, ascertained over and over again by memorial even *ad nauseam*. They have been endorsed by a Royal Commission. They have been adopted by every Government for fourteen years, including the present Government, which in two successive sessions has embodied them in a Bill, which Bill was on the eve of passing when a mine was sprung affecting the very fundamental part of the Bill, in the form of an amendment by Sir LYON PLAYFAIR, giving power to the Medical Board in any division of the kingdom to accept in lieu of a final examination under a Conjoint Board the examinations of a University, or of two or more Corporations, provided (*a*) that the Medical Council shall be satisfied, and (*b*) that in every substituted examination a number of examiners not exceeding half the total number of examiners shall be appointed by the Medical Board.

The Medical Bill, like many other Bills, perished under the weight of talk, chatter, and obstruction which now degrade Parliament, and take the place of legislation; but it was not concealed that the Ministers in charge of the Bill were prepared actually to abandon the principle of compulsory conjoint action on the part of existing authorities, and to agree, under the pressure of Sir LYON PLAYFAIR, to a system by which a great multiplicity of licensing authorities would be maintained; and to bolster up such a discredited system by creating new examiners to watch the work of the old ones, doubtless at the expense of the profession, who already pay too heavily for their examining mercies.

This is the *terminus ad quem* of all the efforts of the Medical Council and of successive Governments to establish a sound Conjoint Scheme in each division of the kingdom. And this is the altered situation in which the Council finds both itself and the questions upon which it and its best committees have spent so much of their time. It would be outrageous to create more examiners, when the very grievance is that we have too many already. The new examiners must either be maintained at the expense of the present examining bodies, in which case they will not be independent; or at the expense of the unfortunate students, who are already heavily mulcted in the process of becoming qualified, and who have a right to look to the Medical Council to protect them from further exactions. We cannot believe that the Council will view the existing situation with satisfaction. There may be sections of it which see in the present failure of legislation some security for the continuance of privileges which have no foundation in reason or in the respect of the profession; but the disinterested members of the Council who have at heart the true interests of the profession will see only the perpetuation of weak bodies, tempted by the love of money to trade on their high functions, and of a Medical Council incapable of controlling them, and increasingly at the mercy of the representatives of the lowest bodies. Under all these circumstances we look forward with anxiety to the action of the Council, and of those members of it which represent its best traditions.

ADVOCATES as we have ever been of the much deplored custom of delivering inaugural addresses at the opening of the winter session, we see good cause for satisfaction in the series of addresses which have been given this October. It would not be easy, perhaps, to enumerate the reasons for the scoffing manner often affected when any suggestion, however remote, is made of repairing to the theatre where an introductory address is to be delivered. It is obvious that we are now referring to the average man and the average lecture; naturally a great name will infallibly attract an audience. One of the reasons for the *nil admirari* tone of the scoffer at inaugural addresses may possibly be found in the superior intellect of the jeerer; a superiority of mind, however, which fails to appreciate not very subtle differences and an excellence which some among us may regard as of morbid origin. We cannot be accused of seeing the beautiful where it does not

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exist if we assert that a study or perusal of the introductory addresses as a whole is not altogether unprofitable. It has occurred to us to get some impartial competent person of education—a perfect stranger to all concerned—to read all the addresses, and then to infer what manner of man the author of each inaugural address might be. Such a task would possess not a little interest and curiosity. The address which has given us most cause for meditation was that delivered by Dr. GOWERS at University College. Both in form and matter the oration was of a type and an excellence all its own. Nor did it lack a humorous aspect. "Your coach may carry you through the lofty portals of Lincoln's-inn and Pall-mall, or the lower archway of Blackfriars, and leave you altogether unfitted for independent progress. Your grinder may pass you through his mill with such success that you emerge a flabby mass of factitious atoms, kept in the semblance of form by the sack of a diploma," &c. The importance of deliberate and conscious effort in attaining to relative perfection in the art of observation was urged on his hearers, and the value of the practical study of anatomy, histology, and botany as aids in the development of the art of observation, was insisted upon. Another and very different province, in which self-training was rightly regarded as desirable, was the cultivation of conscious sympathy with suffering, at least to the extent of enabling the doctor to enter into the feelings of the sick, and, in a degree, into their modes of thought. The value of medical work to the community and to the State was another subject on which Dr. GOWERS spoke. Attempts to estimate in money the worth of the lives that are saved by the medical profession might be made, but the data are too imperfect to show more than how large it is. However, at the lowest estimate, it was computed that half a million of deaths were prevented every year. The most philosophical section of Dr. GOWERS' address was that in which he dealt with the part played by disease in the physical progress or degradation of the human race. Whether the influence of our art upon the race is to promote its physical deterioration or not is of course an open question. But there is one side of the question which may fairly receive consideration. It cannot be denied that the genius of progress has stamped a higher value on the products of cerebral action as compared with more purely muscular power. The subject is an intricate one, and requires more space for elucidation than we have now to spare. But it is obvious that so long as the vital forces are kept in action in the body of a hypothetical man who possessed the most useful and the most excellent mind, so long would that man be of more value than any single individual, and therefore more worthy of preservation. The survival of the fittest is a law as unalterable as any other law of nature. The phrase has, however, frequently been misconstrued. "The great doctrine of the survival of the fittest is less a law that has to be proved than an axiom, as self-evident as that two straight lines cannot enclose a space," as Dr. Gowers puts it.

Sir J. RISDON BENNETT delivered a thoughtful and able inaugural address at St. Thomas's Hospital, commencing with a saying of Dr. JOHNSON, that "to judge rightly of the present we must oppose it to the past." The various and ever-varying mental manifestations of patients were pointed out as a fit subject for earnest study. "In the more strictly scientific departments of the investigation of disease—etiology, diagnosis, and prognosis"—mental manifestations are of great moment. Sir RISDON was of opinion that many more of our most important diseases than we have hitherto imagined owned not merely a nervous but a strictly mental origin. Indeed, perhaps the most valuable portion of Sir RISDON'S lecture related to the unfolding of his thoughts on the agency of the mind in the production of disease and in the recovery from illness. A remedy might owe a large portion of its beneficial effect to the mental state of the sufferer. It has become almost proverbial to have faith in one's doctor, one's remedies, and one's good luck. And we are not so taken up with the demonstrable that we cannot understand how mental effort may exercise an influence for weal or woe.

In writing an address for such a composite assemblage as may be found on the opening day of the medical session, it is an almost impossible task to please everybody. There is no denying the fact that an oration which sparkles with cheerful, not to say light, thoughts is by common consent that which takes for the nonce; though it is no less true that when perused afterwards, as many addresses are, its intrinsic worth may be not so great as that of one which was less brilliant in delivery. At St. George's Hospital Dr. CHAMPNEYS gave a lecture which for a judicious combination of merry wit and sound sense, certainly could not be surpassed. "He was undecorated, except by the judgment of the highest court of appeal, that of his peers," a sentence used in the eulogy of Mr. CÆSAR HAWKINS, has something in it which recalls the vein of humour one is accustomed to encounter at the Savoy Theatre. Some good advice was administered at the Middlesex Hospital by Dr. FINLAY, who touched upon most of the topics which now interest medical science. Dr. LEES, at St. Mary's Hospital, read an instructive address which commanded much attention; and the meeting at the Westminster Hospital listened to the words of welcome and knowledge which Dr. HUGHES BENNETT uttered. At King's College, the excellent address by the Rev. Dr. WACE abounded with appropriate similé, and was received with acclamation.

THE friends of the Hospital Sunday Fund have much reason to be thankful to Mr. JAMES LANE for raising the one question possible as to the advantage of Hospital Sunday to the great cause of hospital support. Has the establishment of Hospital Sunday had the effect of diminishing the number or amount of personal subscriptions to individual hospitals and dispensaries? It has often been surmised to have this effect; and Mr. LANE, in a happy moment, set about analysing the facts of St. Mary's Hospital, and, as he thought, proving that while it had received from the Fund £600 a year more than it used to get from local church collections, it had lost annually in donations, during the time of the Fund, £1745. Mr. LANE'S letter was the more valuable as written in a tone of moderation, and with obviously no ill-will to the Hospital Sunday Fund. The next day, however, *The Times* published a letter by Mr. BURDETT in answer to Mr. LANE. It was not so much an answer as a very complete and through finishing of that which Mr. LANE had only begun—viz., the analysis of the facts. It is so easy in hospital matters to make round statements and to arrive at hasty conclusions, but it is difficult to go deeply into

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facts. Mr. BURDETT, however, comes to close quarters with the facts of the case, and completely pulverises the conclusions at which Mr. LANE had too hastily arrived, by showing that the defection in later years of the subscriptions to St. Mary's had other and ample explanations without any reference to the Hospital Sunday Fund; amongst others, that in the earlier period, prior to the establishment of the Hospital Sunday Fund, an anonymous and generous donor was sending £1000 a year to the hospital, which ceased in 1873. Then during the first decade very strenuous exertions were made by the hospital to raise funds to defray the expenses of new buildings; also that during that period a Hospital Fund dinner was annually held and very actively promoted, so that it yielded an average income of £1280 a year. This source of income has been allowed to dwindle, till now nothing remains of it in the hospital accounts but an average annual expenditure of £86 put down to the festival dinner. Mr. BURDETT completes his destruction of Mr. LANE'S statistics by showing that, comparing the subscriptions of the two decades, the falling-off in the latter one is only £31 per annum. Unless Mr. LANE can show that the loss of the munificent annual donation of £1000 was due to Hospital Sunday his discomfiture is complete, and it only remains for him to be thankful that the Hospital Sunday Fund has made the financial position of the hospital better by £600 a year than it would otherwise have been.

The fact seems to be this—that the older and more established hospitals are a little defective in energy and ingenuity. The very establishment of Hospital Sunday may have increased this defect, by making them feel less self-reliant. Their claims are magnificent and unanswerable; but times are bad, and claims of all sorts are multiplying, so that even charitable men readily find excuses for not supporting hospitals. The Hospital Sunday Fund is the best friend of hospitals. It stamps with religious sanctions and considerations the case and the claims of hospitals. We do not mean that the Council has yet achieved what it ought to achieve. It is too self-complacent. It makes one annual effort, and then folds its arms in satisfaction and does nothing more to raise the sunken condition of medical charities for another year. It needs to be roused to much more effort and ingenuity in the use of its great influence. By all means let it be criticised, and that severely. But it is destined to remain an institution to remind rich men of every church and synagogue that their sick brother is in their keeping, that they have to make his bed in his sickness, and that if they fail to do so an ominous and crowning condemnation will be heard—"I was sick, and ye ministered not unto me."

No one—and least of all Dr. KOCH himself—could have imagined that the discovery he declared of the specific choleraic organism would be accepted without challenge. Nor could it be expected that in a matter of such universal interest the public mind should not be awakened by the intelligence of this discovery, and should be keen to follow the arguments and facts adduced against it. We have already spoken of the conclusion arrived at by Dr. LEWIS, and of the detection by Drs. FINKLER and PRIOR of Bonn of the "comma bacillus" in cases of sporadic cholera. This was made a subject for discussion at the Scientific Congress at Magdeburg, when it was stated by Dr. FINKLER that KOCH himself admitted the morphological resemblance between the organisms he found in Asiatic cholera and those found by FINKLER in cholera nostras. It is possible to admit this, as well as Dr. LEWIS'S facts, without materially affecting the standpoint assumed by KOCH. Again, we learn by a telegram to *The Times* last Monday that the English Commission is already at work at Bombay, and that Dr. KLEIN, to testify his utter disbelief in the specific nature of the comma bacillus, had swallowed the cultures. Might it not be possible that the ingestion of the bacillus itself does not suffice to induce cholera in a healthy man? The experiment has been made before, quite apart from any question of a bacillus. Does every human being who is exposed to the source of infection take the disease? We can imagine Dr. KOCH reproaching his fellow-scientist with having performed an experiment without fulfilling all the conditions necessary to ensure its success. For KOCH himself is careful to point out that there must be disposing conditions to account for the manner in which the cholera develops; and would be prepared to receive the intimation that the bacillus can be swallowed with impunity without his faith in his discovery being shaken. Then we have the elaborate report of the French Commission, which whilst admitting the presence of the comma bacillus, denies its pathogenic property, and seeks for changes in the blood as the initial cause of cholera—a statement supported by inoculation experiments. That the blood is profoundly altered, and that this alteration is the main cause of death in this disease, few will deny; but Dr. KOCH may well reply that the effects of choleraic poisoning have here been mistaken for causes, and he will not be unsupported in such an assertion. For our own part, we must endeavour to keep an open mind on the question, and leave it to those who are engaged in the actual research to reconcile their differences as best they may. We may, however, venture to express the hope that our English Commission will not rest content with a demonstration of the fallacies of Dr. KOCH, but will search diligently in every direction for a solution of the problem which can explain the facts of the disease in an even more satisfactory manner than he has done.

Annotations.

"Ne quid nimis."

THE OPENING OF THE WINTER SESSION.

ONCE more the cumbrous wheel of medical education has finished its annual revolution, and once again the well known cycle has commenced its usual course. Would that the beginning of the new session had taken place under the auspices of a new Medical Act! But, alas! fate has destined otherwise. Everywhere we see around us the old familiar signs of activity at the schools and hospitals. The faces of first year's men, strange in the new light which has dawned upon them, are to be seen side by side with those of the older students, ready, if not eager, for new work in new departments. The members of the medical and surgical staffs, too, greet one another and the students with kindly looks and genial manner. It is in the first few days of the new session that the mind really appreciates the value of the long vacation. Everything seems for a while to wear a new aspect, though we feel at the same time that there has been no real change.

The teaching at our hospitals and schools is a theme

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on which we may say a few words. Our students want more teaching and less coaching. Growth of memory requires repression in favour of development of reason. Clinical work is perhaps the department in which students display most ignorance at the final examinations, and unfortunately a premium is still placed, even in the higher examinations, on mere book work. Clinical knowledge can only be gained by long and patient observation, and two years is too brief a time even when the student is most diligent and gifted. We do wish that students would leave their books and visit the wards. And where the students are, there should the teachers be also. Every school ought to have clinical professors who can afford the time for exposition, and it naturally follows that the junior members of the permanent staff are, on the whole, the most competent for the posts of clinical teachers. What we have urged in connexion with medicine and surgery holds good also of the teaching of chemistry, physiology, and anatomy, with th ir related subjects. Students as a mass do not work half enough at their dissections, their physiological demonstrations, or their histological preparations. Any humble but wise student who happens to have spent his time in the more practical paths of his career cannot help inwardly blessing the influences which led him to see for himself rather than trust to the descriptions of other observers. Such a one may not come off brilliantly at examinations, but he has no cause for despair. Patience and perseverance after, on the same lines as before, qualification cannot fail to raise such a one, whether he stay in town or go into the country or elsewhere, to the highest dignities which his profession is able to confer. He may be patronised for a while by his more brilliant (at examinations) *confrère*, but the time will surely come when the latter will own the former's worth. We have not the least wish to cry down success at examinations. Far from it. Experience has shown that many of the examinationally distinguished are also those who have gained their knowledge from direct observation; but at the same time it cannot be denied that many who have obtained the highest honours at examinations are sometimes failures in later life. In harmony with the preceding thought, we would urge all who can avail themselves of the time and money to spend as long a period as possible in their education over and above that required by the different examining boards. We are not entirely in agreement with those people who believe that the future general practitioner should make haste to rid himself of his hospital ways. There is time enough for this alteration, with the average student, after he has completed his medical studies. After he has obtained his diploma, let him for a time, if possible, continue his clinical studies. Indeed, most of us have heard "men" say that they learn far more real medicine and surgery after being qualified; and the reasons for this plain statement are not far to seek—excessive book work, the result of over-examination, being the main one.

A PREMIUM ON INFANTICIDE.

"A PREMIUM on Infanticide" is the not too sensational heading of a most forcible and faithful letter written by "M.R.C.S. Eng." to the Editor of *The Times*. We have frequently had occasion to deplore the excessive loss of infantile life. Whilst approving for the most part the arguments contained in the letter referred to, we should yet be inclined to take exception to the opinion that infant mortality, so excessive and unnatural, cannot be satisfactorily accounted for. It seems to us that most of the causes of this excessive mortality may be said to be fairly well known to medical men, though probably not fully appreciated by the public. The case which "M.R.C.S." regarded as typical of the [illegible] will undoubtedly find its parallel in the practice of every observant practitioner. The system of insuring infant life may justly be stigmatised as pernicious, as it virtually places a premium on the destruction of infant life. It is true that the "policy" of insurance falls through if the infant perish within a period of three months, but such a limitation is certainly an insufficient and ineffectual protection against crime. Nor do we think that it is always insurance money with tempts to the commission of infanticide. The poor labourer who finds himself burdened with many children feels most acutely the misery which a large family entails. If he be an honest, sober man the difficulties of making both ends meet are well nigh insurmountable; how must it be then if the breadwinner be thriftless and intemperate? Under such circumstances opiates, disguised as "soothing syrup," "carminative," "cordial," and even laudanum itself, find a ready sale. Further, the sale of patent medicines is totally unrestricted, and these nostrums are dangerous weapons indeed. Being advertised in a reckless fashion as "perfectly harmless," these patent medicines, to all appearances approved and commended by a Government stamp, find an easy sale in large and poisonous quantities. The "accidental" administration of a fatal overdose of the compound relieves the parents of further responsibility and the insurance office of a small portion of its wealth. The difficulty of remedying this state of affairs is unquestionable. An insurance system providing against the natural exigencies of infant life cannot be wholly condemned, and, indeed, with proper precautions may be made to be much more a blessing than a curse. One path at least is clear, and that is the application of certain restrictions to the sale of every patent medicine the composition of which is at all doubtful.

SANITARY CONDITION OF CALCUTTA.

SINCE we last brought to the notice of our readers the very unsatisfactory condition of Calcutta, from a health point of view (THE LANCET, Aug. 23rd), the differences between the Lieutenant-Governor and the municipal corporation have widened and given rise to the necessity for action on the part of the Government. The offer made by Mr. Rivers Thompson to appoint a mixed committee, of which the corporation should be represented by two of its members, for the purpose of drawing up a scheme for the sanitary and structural improvement of the town and suburbs, was rejected by the municipal body as being impossible for them to accept "without an entire loss of self-respect." Mr. Harrison, in his capacity of chairman of the Commissioners, addressed to the Lieutenant-Governor a letter which fills eight columns of the *Englishman*, in which he discusses the grounds upon which the necessity for such a committee was presumed to be founded, and puts forward a claim for the Commissioners that they had done already more than they were required by the Act to do, and that none of their acts furnished any justification for the appointment of a committee by the Lieutenant-Governor. In a very able letter, from the Secretary to the Government, the various points advanced by Mr. Harrison are considered, and the opinion of the Advocate-General as to the legality of the course followed is given. In consequence of the refusal of the corporation to join in the appointment of a mixed committee, the Lieutenant-Governor, in the exercise of the power vested in him by Section 28 of Act IV. (B.C.), has appointed a committee consisting of the Sanitary Commissioner of Bengal, a member to be appointed by the Commissioners, and the Hon. H. Beverley of the Bengal Civil Service, who are to report, before Dec. 1st, "Whether they are of opinion that the cleaning and the conservancy [illegible]

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town are defective to an extent likely to be prejudicial to the health of the inhabitants of the town, or of any part thereof; and if they shall be of such opinion, shall specify in their report what further provision should be made for the cleaning and conservancy of the town up to the end of the year 1885–86, and shall submit an estimate of the cost of the said further provision." On the publication of this Order thirty-two of the Commissioners resigned their seats at the board. The other Commissioners were anxious that their chairman, Mr. Harrison, should represent them on the committee, but he declined to do so, and after some discussion, it was resolved to ask the Town Council to nominate a member. It cannot but be matter for regret to all who take an interest in the sanitary condition of one of our great Indian cities that the Municipal Commissioners should have persevered in their refusal to take adequate measures for the protection of the population, and especially the poorer members of it who are unable to protect themselves, against the ravages of preventable diseases. We have gone very carefully through the published correspondence, and have come to the conclusion that the Lieutenant-Governor was bound to take action in the matter, that the course he proposed in the first instance was one which ought to have met with support from all who were entrusted with the superintendence of the health concerns of the city, and that the duty of putting in force the provisions of the Act was forced upon him by the refusal of the Commissioners to make adequate and suitable provision for the cleansing and conservancy of the town. We trust that the result may be the preparation by the Committee of such a scheme as may meet with the support of all classes and prove effectual in reducing the amount of sickness and mortality among the population of the city and its suburbs. That great and immediate improvement is necessary must be admitted if the description by the health officer be correct of the water-supplies in some of the localities in Calcutta, that they are "twice as bad as London sewage," or if it be true, as stated in an official document, that the inhabitants in some of the plague spots in the city "live their lives in the midst of filth, sleep on filth, bathe in filth, drink filth, cook in filth, and wash their clothes in filth."

MODERN MUMMIES.

A SUBJECT which has important bearings on the vexed question of cremation was broached at the recent meeting of the Social Science Congress, in a paper by Mr. Thomas Bayley of Birmingham. In spite of much that has been said and written to the contrary, the practice of burning the dead must, in our opinion, and as we have stated elsewhere, lack the sanction of law so long as it does not afford a further guarantee than that required in cases of burial that death has not resulted from foul play. The paper alluded to recognises this difficulty, and proposes a plan by which it may be met. It is the following. The bodies loosely but completely enveloped in cotton-wool, and placed within air-tight cases, are exposed, in a subterranean gallery lined with cement, to the action of cold air, which is chemically dried, and purified by filtration from putrefactive bacteria. After a time dry air at a higher temperature is used in the same way. The result is mummification, the integument remaining white. Bodies which have undergone this process may, it seems, be kept for an indefinite period without evidence of change, if protected from damp; may, if required, be submitted to examination by analysis or otherwise in an adjoining cool and dry mortuary chamber; may be cremated or otherwise disposed of. Mr. Bayley's plan has considerable merit on the ground of its philosophical ingenuity. We are not informed whether its efficiency has been practically tested. If experiment should prove that it is a trustworthy safeguard, one solution of the judicial difficulty has certainly been found. At the same time, we cannot but think that the advocates of cremation would find the addition of a complex preliminary process of mummification a hindrance rather than a help to the working of their own system.

PERIODICAL CHANGE OF COLOUR OF HAIR.

A YOUNG girl, aged thirteen, of an idiotic type, was admitted into the asylum at Hamburg on April 1st, 1880, and died there in 1882. At the age of three years she began to be affected with spontaneous movements like those of St. Vitus' dance, which were chiefly confined to the head and upper limbs. Between her fifth and sixth year she had become the subject of well-marked epilepsy. She was able when four years old to run round a table, but her powers of progression steadily diminished and the lower limbs passed into a condition of chronic stiffness. When in the asylum of Dalldorf (Hamburg) she had epileptic fits about every eight or fourteen days; besides, it was observed that she experienced alternations of agitation and calmness, each of about a week's duration. In the period of agitation the turgescence and redness of the face were most pronounced, the pulse was full, the skin warm, and actively transpiring, at the same time that the mental condition was one of extreme obstinacy. Further, it was often remarked that the colour of the hair underwent decided changes; sometimes it was blond and at others red, whilst the depth of these colours also varied. The alterations in colour occurred in the brief space of two or three days; the first appearance of change was observed at the free ends of the hairs; the same tint of hair persisted for seven or eight days. Each of these periods of change of colour of hair coincided with a phase of agitation or sedateness. During the state of excitement the hair always had a red colour, whilst pending the phases of stupidity the blond tint prevailed. The case appeared to be one of genuine pathological change. The paler hairs differed from the darker ones only in the presence of more numerous air spaces. The structure of the brain and spinal cord was much altered.

HONORARY HOSPITAL SURGEONS IN BOMBAY.

THE appointment of unpaid or honorary surgeons to the Goculdas Tejpál Hospital in Bombay, to which we called attention in THE LANCET of November 2nd, has proved a complete failure. In January last the Surgeon-General with the Government of Bombay called upon Surgeon-Major Hojel, the medical officer in charge of the hospital, for "a full report of the working of the system of supplementing the hospital staff by unpaid or honorary surgeons," which had been under trial for upwards of eighteen months. Surgeon-Major Hojel reported very unfavourably, his chief complaint being of great irregularity in the hours of attendance of the honorary surgeons, "who come and go as they like, and as a consequence the work is performed very perfunctorily." His remonstrances on this subject, as responsible head of the hospital, made both verbally and in writing, were unheeded, and he was in consequence obliged to "take the house surgeon from his legitimate work in the hospital and send him to prescribe for the out-patients," who were waiting for the arrival of the honorary surgeon. As regarded two of these gentlemen, Surgeon-Major Bonstead fully confirmed this report of irregularity in attendance; the third was on leave during the time he was in charge. These reports having been brought by the Surgeon-General under the consideration of His Excellency the Governor, he was pleased to direct that Mr. Blaney and Mr. Pesikáka should be reappointed for a further term of six months. The Surgeon-General was directed to inform

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these gentlemen that although their services are gratuitous, it is not the less necessary that they be rendered under rule and with scrupulous observance of punctuality; and the surgeon in charge of the hospital was to be requested "to fix the hours of attendance of the honorary assistant-surgeons, and to report if they are not observed." Mr. Khamkáta, who had been reported as the most unpunctual of the three, was not reappointed. We understand that the two gentlemen who were reappointed have since resigned. There has been much violent abuse of Mr. Hojel in the local press for the unfavourable report he made on the subject; but we fail to see how he could have done otherwise when called upon by the head of his department to state his opinion and the grounds on which it was formed. The Government of Bombay was evidently satisfied with the manner in which he discharged this disagreeable duty, as they refused him permission to take legal proceedings against any of the papers which had maligned him. We trust that it will now take the necessary steps to appoint an adequate and efficient paid staff to this hospital. In the interests alike of the profession and the patients we desire to see the surgical appointments filled by men of superior qualifications, who will devote their best energies to the treatment of the poor entrusted to their care, and will give to their professional brethren the results of the observations which they may be enabled to make in such a wide field as that afforded by the practice of the Goculdas Tejpál Hospital.

THE DIAGNOSIS OF GASTRIC DISEASE.

WE have frequently called attention to a prolonged investigation, which is still in progress, on the mensuration of organic nutrition, especially in relation to diseases of the stomach, by M. Rommelaere. This chemist and physician has come to definite conclusions concerning the amounts of urea, chlorides, and phosphates discharged by the urine in cases of gastric disease, conclusions which warrant, in his opinion, the diagnosis of this or that affection of the organ in question. His latest contribution deals with the discharge of phosphates in the urine in cases of simple ulcer of the stomach. In this affection, when healing, he finds that the "azoturia" is rather more than usual, which excludes the diagnosis of cancer; the "chloruria" is normal, and so is the "phosphaturia." It will be remembered that Dujardin-Beaumetz and others have not confirmed Rommelaere's results concerning the amount of the discharge of urea in cancer of the stomach. Dealing with the discharge of phosphates in the urine, the author believes that there are two varieties of hypo-phosphaturia—one due to inefficient alimentation; the other consequent on the retention of phosphates in the economy. The first variety has not much significance from the point of view of diagnosis. When hypo-phosphaturia is lasting, the prognosis of the case of gastric disease is very grave. The clinical importance of hypo-phosphaturia is only of value in cases where the patient is not starved by the seat of the gastric lesion. In pyloric obstruction there is hypo-phosphaturia from inanition. The form of diminution of phosphates not due to inanition is of much clinical importance. When it occurs in the course of an ulcer of the stomach, it heralds the termination of the period of phagedæna. When the ulcer is about to heal there is hypo-phosphaturia with increased and increasing discharge of chlorides in the urine. When the work of cicatrisation is proceeding regularly the "chloruria" rapidly returns to the normal, and the phosphaturia also, but more slowly. Hypo-chloruria denotes advancing ulceration; hypo-phosphaturia indicates the reparative tendency. In the progress of ulcer of the stomach there is, then, a correlation between the chloruria and the phosphaturia. The chloruria sinks to a low level in cases of imminent suppuration; it rises when suppuration is established, and approaches the normal notwithstanding the persistence of suppuration. Phosphaturia is increased in cases of commencing suppuration, is lowered as soon as reparation begins, and returns to the normal in cases which heal properly. The retention of phosphates, leading to hypo-phosphaturia, characterises a favourable condition of the system, tending to heal the ulcer.

THE ETIOLOGY OF SCARLET FEVER.

IN his last annual report on the health of the borough of Maidstone, Mr. M. A. Adams, the medical officer of health, draws attention to an outbreak of scarlet fever, attacking thirty individuals and causing two deaths, which was clearly due to the consumption of a special milk-supply, but in which it was impossible to connect the milk with any infection of scarlet fever. The outbreak, like others of the same description, was a mild one; and Mr. Adams, having conferred with Mr. Power, of the Local Government Board, on the subject, refers to the views which have been expressed by the latter observer, which are to the effect that a disorder is liable to occur in cows which is able to affect the milk yielded by them so as to produce a disease in persons consuming the milk of the nature of and indistinguishable from ordinary scarlet fever. In this case nothing is stated as to the health of the cows, and we have no facts bearing upon the view in question, except the one showing that the source of scarlet fever infection was not detected. There have, however, been a certain number of scarlet fever outbreaks in connexion with the use of a particular milk which have baffled all who have sought to detect any source of infection coming from a previous case of scarlet fever, and all the outbreaks have certain characteristics in common, such as small mortality. Much more experience is needed before any decided opinion can be expressed on the subject; but, in the meantime, the Maidstone case, investigated as it has been by two skilled observers, may be added to the list of these outbreaks which have some bearing on the question of the transmissibility of disease from the lower animals to the human subject.

LONDON CABS.

IT is no less unaccountable than it is disgraceful that this great city, whose vast population is ever on the move in pursuit of business or pleasure, should still be unprovided with a decent four-wheeled public carriage. The name of the inventor of the hansom cab will probably live when far greater men are forgotten; it is fortunate for the designer of the "four-wheeler" that his is not known, or it, too, might go down to posterity—but with the reverse of blessings. The improvement in the hansom has of late years been notable, and there is now little to be desired with regard to this very convenient cab, which, however, is in our opinion mainly adapted for use in the warmer months, and is not suited to the requirements of all. The chief objection to the ordinary hansom lies in its imperfections as a closed carriage. The front window, when shut, generally either fits too loosely, and so admits the rain, or by fitting too tightly excludes the air. Even when some attempt at ventilation is made in it, the space in which the "fare" (or worse, "fares") sits is so limited as to cause an unpleasant "stuffiness"; while to a timid person the situation must be trying, and certainly the prospect of the possibility of a collision or an upset while thus "cabined, cribbed, and confined" is far from pleasant. In wet weather, too, the cushions of the seats are very liable to become damp. We are aware that one or two faint-hearted attempts have been made to provide London with improved four-wheeled hackney carriages, but nothing has ever come of them. Why it is difficult to say. The large provincial towns and popular sea-side resorts are not satisfied with such

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ramshackle accommodation. London alone seems content. There is no doubt that a comfortable four-wheeled cab would be appreciated and employed by many to whom a closed carriage is a consideration in fine cold as well as in wet weather. It would certainly soon supersede the present objectionable "growler" and be patronised by many who now use the hansom. Mr. Forder and others have achieved great things for the comfort of the public by improving the hansom. It is high time they turned their attention to the "four-wheeler."

KNEE-JERK IN DIABETES.

THE introduction of one new condition into any existing arrangement cannot take place without producing more than one alteration. The phenomenon of the knee-jerk which may practically be said to have been introduced into the sphere of clinical medicine during the past decade bears testimony to the above generalisation. The investigation of the condition of the knee-jerk may seem to some medical men a somewhat novel application of a reflex action. M. Bouchard made a distinct impression by his paper on the subject at the French Association for the Advancement of Science recently held at Blois. The presence or absence of the knee phenomenon in diabetes mellitus is said to possess much importance both from a prognostic and diagnostic point of view. Forty-seven cases observed during the last three years by M. Bouchard were found to have the patellar tendon reflex, and of these cases only two died, or about 4 per cent. Nineteen cases were collected in which the knee-jerk was absent, and of these six were fatal, or about 33 per cent.; the mortality in the latter group may have been still greater, since some of the number were lost sight of. The members of the second category also had a cachectic aspect. M. Bouchard believes that the disappearance of the knee phenomenon in the course of diabetes indicates the entry into a grave and perilous state. It is perhaps lending too much value to the knee-jerk to say that the absence of it has given the cue to the diagnosis of diabetic coma; a statement to this effect may be found in the report from which we abstract our information on M. Bouchard's paper. An infant was found comatose with dry cracked lips and absolutely afebrile; none of its antecedents could be ascertained. The knee-jerk was absent and the coma resembled that met with in cases of intoxication, and of uræmic or diabetic toxæmia. There was the odour of acetone in the breath; some balano-posthitis and intense thirst. A washing from the child's underlinen reduced Fehling's solution. M. Bouchard thinks it necessary to state that the absence of the "tendon reflex" does not favour the nervous theory of diabetes.

CREMATION AT ILFORD.

AT a late meeting of the Commissioners of Sewers for the City of London at the Guildhall, an interesting discussion took place on the benefit or otherwise to be derived from the practice of cremation, and on the need of erecting a crematorium in Ilford Cemetery. On the part of the Sanitary Committee, it was proposed that the latter project be postponed until the whole subject had received Parliamentary sanction and regulation. An amendment to this motion advised that the Committee be asked to reconsider their proposal. After an animated debate the amendment was carried by twenty-six votes to sixteen. The supporters of the amendment based their action on the following considerations. That cremation afforded the most perfect sanitary method of disposing of the dead, that it did not offend religious principle, that it need not imply illegality, and that radical change was called for in the present system of burial. They further asserted that all science was on their side, and that since the law was not compromised regulation by Government was uncalled for. By the other party the practice was condemned as barbarous, too costly for general adoption, and unnecessary, inasmuch as it had not been asked for on behalf of any inhabitant who had recently died in London, while experience had proved that the earth in every quarter of the globe was still much more than able to perform in a satisfactory manner the ultimate object of the crematorium, which was therefore a superfluity, as it was on several grounds a public nuisance. The strongest points in the case brought forward by the cremationists are the unquestionable statement that burial reform is necessary, and the moderation of their request that the opportunity of burning their dead may be afforded to such of the public as may desire it. It cannot of course be expected that the older custom of interment should ever be completely superseded by the method of immediate combustion, and it seems very doubtful whether the comparative value of the latter can ever be so clearly proved as even to lessen materially the proportion of earth burials. The practical utility of cremation therefore is not very evident. Another statement which was made on its behalf at the recent meeting should not pass unchallenged—namely, that it had the support of all science. No party argument was ever more unfounded. It is true that decomposition in the earth is a slower process, and that it has not in all cases been successfully carried out; yet it must not be forgotten that its failures have been due entirely to the meddling mismanagement of human sentiment which buries the dead to preserve them in a putrid state, or to careless misplacement, or overcrowding of cemeteries, for which there is not even a sentimental excuse. Let the earth have its dead, and be allowed to do its work on them, and the process of decomposition of man, as of innumerable lower animals, will be, though gradual, completely successful, and wholesome to the earth itself, its atmosphere, its vegetable life, and to the inhabitants which people its surface. The highest point to which cremation can hope to attain in the national economy is, in our opinion, that of a permitted practice, but before this can happen a special guarantee is required that it may not be used to destroy the evidence of murder by poison.

SUCCESSFUL RESECTION OF THE HEAD OF THE HUMERUS FOR ANKYLOSIS.

PROFESSOR ALBANESE reports in the *Archivio di Ortopedia* for April an operation for ankylosis of the shoulder, performed in the surgical clinique of Palermo, in the presence of Professor Tommasi-Crudeli. The patient, Maria B——, aged twenty-one, had during the preceding twelve months suffered pain in the right shoulder-joint, which gradually became immovable. The appearance on admission, as shown in an accompanying illustration, suggested downward dislocation of the head of the humerus. The acromion was prominent and the deltoid flattened. The patient could not touch her head with the right hand, and the corresponding olecranon could not be brought nearer than eight inches from the chest wall. The patient being under chloroform, Professor Albanese made an L-shaped incision, three inches and a half in extent, along the spine of the right scapula into the shoulder-joint. The sides of the wound being held open with strong hooks, the head of the humerus was severed by two blows with the chisel on a level with the anatomical neck. The surgical neck, dislocated outwards, was rounded off with gouge and file, so as to fit in a hollow made with a spoon, in the head of the humerus, which was adherent in the glenoid cavity. A drainage-tube was introduced, and the wound closed with interrupted sutures. An antiseptic dressing was applied according to Listerian precepts. Recovery was rapid. The temperature remained normal throughout, the wound was

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healed within a fortnight, and the patient discharged at the end of a month, with perfect symmetry of the two shoulders. Two months after the operation the patient could bring the elbow to the side, move the arm in all directions, and dress her own hair.

SUICIDE FROM INSANITY.

THERE have been many suicides of late in which no sort of doubt can exist as to the insanity of the self-murderers. In the majority of these lamentable cases there has been neglect on the part of friends, or there has been procrastination as to the adoption of measures of safety. The real cause of this evil is the obstacle which the law throws in the way of prompt treatment by confounding matters which are totally distinct—namely, medical care and legal disfranchisement. There will always be delay and reluctance both on the part of friends and patients hovering on the borderland between mental health and insanity so long as certifying precedes treatment. What the emergency demands and requires is perfect freedom as to treatment; the privilege which is now stoutly denied to the subject of conscious mind worry and weakness of placing himself or herself voluntarily under treatment, as a sick man seeks rest and medical care for his bodily ailments in a hospital, public or private. Why should this obvious recourse be closed against the subject of mental disorder or disease? We have no hesitation in asserting that in nine instances out of ten the patient is self-conscious of the malady before it becomes apparent to those around him. On this point we are absolutely certain, and it would not be difficult to prove this position by facts. If asylums were *hospitals*, and nothing more, there would be comparatively few suicides, and the proportion of admissions to recoveries would be sensibly reduced.

PROGRESSIVE MORTALITY OF MEASLES IN PARIS.

THE first article in the *Archives Générales de Médecine* for this month is one of exceptional interest to sanitarians. Its author is Professor Auguste Ollivier, physician to the Hospital for Sick Children in Paris, and his observations are embodied in a report to the Prefect of Police, who is *ex officio* president of the Council of Public Hygiene for the department of the Seine. Without attempting a literal translation of the article, its salient facts and conclusions may be thus summarised. That measles is a necessary and not serious eruptive fever is a popular fallacy. Of 57,024 deaths which occurred in Paris in 1883, 1058 were due to measles, equivalent to 18·55 per 1000, or nearly 2 per cent. In the same year measles came immediately after diphtheria (1951 deaths), amongst diseases universally admitted to be contagious. Whereas diphtheria is nearly equally fatal at all ages, the gravity of measles decreases as years advance. In 1000 deaths from measles, only 8·57 were in persons above fifteen years of age; below that, the number was no less than 991·43. Hence the practical precept, to protect infants from one of the most serious diseases which can attack them. The longer the attack can be deferred, so much less will be its seriousness. Of late years the ravages of measles in Paris have been steadily on the increase. In 1865 it was the cause of 343 deaths, in 1869 of 540, in 1873 of 561, in 1879 of 917, and in 1883 of 1058. This regular gradation might be supposed to be attributable to a corresponding increase of population, but it is not so. Reckoning the proportion of deaths from measles in 100,000 inhabitants, it is proved that in 1865 that ratio was 18·8, whereas in 1883 it was 47·1. Consequently the present mortality from measles in the French capital is nearly three times as great as it was twenty years ago. A single word suffices to explain the nature and the spread of the disease: contagion. Infant nurseries (*crèches*), schools, dispensaries, and the out-patient departments of hospitals, are the great centres for the propagation and diffusion of the disease. The increase in the number of cases of measles in Paris admits of explanation by the growth of the scholastic and hospital population, and by the insufficiency of means for isolation. The medical inspection of all schools is a matter of the first importance, so that the earliest symptoms of the affection may be detected at once. In hospitals for sick children, applicants for relief should be inspected in a reception hall by a specially appointed medical officer, by whom cases may be at once classified, and those presumably contagious isolated immediately and effectively.

CHOLERA IN INDIA.

THE epidemic wave of cholera which swept down from Bengal and invaded the Madras Presidency in 1881 has lingered somewhat longer than usual, but is now showing signs of dying out. The rich Collectorate of Tanjore has suffered very severely, and its persistence in this territory led the Government lately to send down their sanitary commissioner to investigate the causes of its continuance. Dr. Farnell is of opinion that the severity and persistence of cholera in Tanjore are owing to the peculiar water-supply of the district, which is faulty in the extreme. The people of even the large towns, and it is invariably so in the villages, are dependent upon tanks for their drinking water. These tanks are defiled in every conceivable manner. People wash their bodies, clothes, and even the clothes taken from people who have died of cholera, in the water, and take home the fluid thus defiled to cook and use for drinking purposes. The sanitary commissioner has recommended that wells should be sunk in all villages, and looked upon as Government wells, rigorously watched and kept from defilement. Then the people should not only be taught, but compelled, to obtain their drinking water from these wells, using the tanks only as bathing and washing places. He points out that where this has been done, notably in Guntur, cholera epidemics, once so frequent, have entirely ceased. These views, which have for some years past been strenuously advocated by the Madras Sanitary Commissioner, are in accordance with Dr. Koch's recent discoveries.

MYSTERIOUS DEATHS AT LAMBETH.

ON Monday, Sept. 22nd, John Warren, a labourer, aged fifty-five, and Martha Warren, his sister, aged sixty-four, were found dead at Webber-street, Waterloo-road. The body of the former was discovered in the sitting position in the watercloset, the door of which was fastened on the inner side by a piece of string. That of the woman was dressed, lying on its back in the bedroom. There was nothing in the external appearances to indicate with certainty how death had occurred in either case, but from the advanced state of decomposition it was clear that the woman had been dead for some time. At the inquest it was shown that although Warren and his sister were impecunious, both food and money were found in the house, a fact which seems to negative the supposition that they had succumbed to starvation. The surgeon who had instructions to conduct a post-mortem examination did not carry them out because he "felt himself too old to perform it." He gave it as his opinion that the oozing of blood from the mouth of the woman was due to apoplexy, to which he ascribed the death, and that from the hands of the man being open he thought he had died from syncope. Upon this evidence the coroner put it to the jury whether they thought it advisable for a post-mortem examination to be held. They considered it was not, and accordingly returned a verdict

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of "Death from natural causes." The finding of the jury was "in accordance with the medical evidence"; still for all that, we unhesitatingly affirm that it was not only advisable, but necessary, that a searching investigation should be made. Here were the bodies of two adults who had evidently died at or about the same time, a coincidence strange in itself; there was no proof that either had met with any violence, or suffered from disease likely to be suddenly fatal. The interpretation of the facts made by the medical man may or may not have been correct, but to our minds the oozing of blood from the mouth was far more likely to have been the result of cadaveric putrefaction than of apoplectic effusion. Again, even had the man died from syncope, the question still remains, What was the cause of the syncope? Our experience leads us to the conclusion that the position of the hands is of little value in itself. The absence of the smell of alcohol or other poison is negative testimony of very small moment, seeing that death had taken place some considerable time prior to the finding of the bodies. If such cases as the one just related are allowed to pass into the category of "death's mysteries" without a reasonable examination into the circumstances, crime will not diminish for lack of encouragement.

ACTION TO RECOVER MEDICAL CHARGES AT POOLE.

The Bournemouth Visitors' Directory contains the report of an action by Mr. Herbert A. Lawton, of Poole, to recover £21 from Mr. Henry Mitchelson, bank clerk, of London, for attendance on Mrs. Mitchelson for seven months. The case was one of renal disease, with affection and ultimate loss of vision, which all medical men know too well to be not uncommon. The husband of the patient on two occasions, about Christmas and Easter respectively, expressed himself completely satisfied with the treatment. In fact all seemed satisfactory till the bill was sent in. Thereafter dissatisfaction was expressed not only with the bill but with the treatment. All sorts of charges were made against the medical man for which no kind of justification could be made out. The judge was assisted by Mr. Wyke-Smith, acting as an assessor. He repeatedly advised the defendant—whose case was conducted by the patient herself in the unavoidable absence of the solicitor, who, by the way, was severely reflected on by the judge, for writing such letters as he had done to the plaintiff—to withdraw the accusations against the doctor and accept the account. The reasonableness of the charges, amounting to about 3*s.* 6*d.* a visit, was, he said, incontestable. But the lady would not take the advice kindly and repeatedly proffered to her, and the judge gave a verdict for £21 and costs.

CRÈCHES AND EPIDEMICS IN FRANCE.

As disinfection in cases of contagious fevers &c. is not enforced in France, it is not surprising that institutions such as a crèche are accused of spreading disease. Undoubtedly epidemics have broken out in crèches, but it is a question whether the children would not have been exposed to greater dangers if left at home. Nevertheless a certain amount of feeling against the crèche, as an institution, has been manifested on the other side of the Channel, and in self-defence the Société Française des Crèches commissioned Dr. René Blache to seize the earliest opportunity of pleading in favour of the institutions it is their mission to promote. Dr. René Blache consequently delivered a lengthy statement on the subject before the International Congress of Hygiene, pointing out that the crèche only took the children during work hours. Twice a day the mothers should come to feed their children; but, unfortunately, they did not always observe this rule. In certain trades, indeed, this was almost impossible, and it was therefore necessary to give the children a mixed diet, and the result was consequently unsatisfactory. The epidemic question had been discussed at Amsterdam, and in many great centres. A special report was drawn up on the subject for the Paris prefect of police, and several crèches had to be closed in consequence of diphtheria. But Dr. René Blache contended that wherever children congregated together there was danger of contagion. A crowded street was more dangerous than a crèche, for in the latter institution the strictest watch was kept, and the first slightly suspicious symptom sufficed to ensure the exclusion of the child. An epidemic generally came from the street to the crèche, and its spread was stopped by the closing of the institution. The crèche was a moral school as well as a school of health: it taught the mothers that it was their duty to nurse their children, and helped them to obtain indulgences and facilities from their employers. The crèche also combated the ignorant superstitions with respect to the nursing of children and taught the gospel of cleanliness, thus reducing the probabilities of epidemics. In a word, so long as mothers are obliged to work and abandon their children during the day, the crèche is a good institution. But the question arises whether the existence of a crèche does not encourage mothers to abandon their domestic duties and seek for employment. This must of necessity tend to flood the labour market, and reduce the wages of the men as well as of the women who were previously at work. With a reduction of wages come a lowering of diet and the overcrowding of tenements, followed by a general falling off in the health of the majority—that is, of the industrial population.

"A GIGANTIC CESSPOOL."

SUCH is the very startling description of Windermere Lake given by Lieut.-Colonel Sandys. In answer, it is not denied that sewage enters the lake, but it is pointed out that its effects are unappreciable, as the greater portion is passed through tanks which retain the solid matter. It is stated that 150,000,000 gallons of water pass through the lake daily, and that Windermere virtually renews itself once in eight months. Lieut.-Colonel Sandys, who is said to be the owner of a neighbouring lake, has been requested to justify in writing his charges. Mr. S. J. Smith, the Local Government Board inspector, met a number of residents at Bowness on Tuesday, and strong representations were made to him by those who deny the statement concerning the lake. After the interview the inspector visited Windermere, and will, it is understood, report to the Local Government Board on the subject. The allegation is a serious one, and demands prompt investigation.

MOSQUITOES AND YELLOW FEVER.

THE following propositions, which give in a condensed form the chief conclusions of Dr. Carlos Finlay's work on Yellow Fever, deserve consideration. Ordinary yellow fever is inoculable by means of the bite of the mosquito (Culex mosquito) on the third, fourth, fifth, and sixth days of its natural evolution. The disease cannot be transmitted by the agency of the insect before the third day or after the sixth, no matter what the severity of the disease. The period of inoculation of this experimental inoculation varies as widely as that of natural yellow fever. The duration and severity of the fever produced by inoculation by the mosquito appeared to be proportional to the number of the bites, and presumably to the quantity of matter contained in the insect's fang. The inoculation with one or two bites of the insect has never been followed by phenomena other than those usually met with in benign yellow fever. The results obtained up to the present lend hope to the suggestion that the inoculation

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by means of one or two *piqûres* of the mosquito may confer immunity from the severe forms of the disease to those who have to dwell in its midst. The inoculability of the disease by the agency above indicated points to the value of guarding patients suffering from yellow fever against the bites of mosquitoes in order to prevent the spread of the malady.

AN IMPUDENT DEFENCE OF CANNIBALISM.

THE *Catholic Times and Catholic Opinion*, in an extenuating notice of the act of the captain and sailors of the *Mignonette* in killing the boy to keep themselves alive, uses a strange argument, which we call upon our contemporary either to withdraw or to justify. He alleges with much assurance that doctors administer drugs to persons dying of painful diseases, which will not only allay pain but will "also surely hasten death." We deny this. Pain such as he contemplates is a deadly thing. There are, mercifully, remedies which relieve such pain. But the effect of such remedies is rather to prolong than to shorten life by destroying the pain which kills—and kills cruelly. Our contemporary must find some better argument on which to base a justification of two or three men killing a weak boy. We are quite prepared to recognise extenuating circumstances; but it will be a bad day for the reputation of British sailors if such acts only excite ingenious and false arguments in defence. Life at sea—the life of the young and the weak—needs to be regarded with exceptional sacredness.

THE IMPORTATION OF RAGS.

THE orders of the Local Government Board prohibiting, except under certain conditions, the importation of rags from France and Italy until Oct. 1st, have been further extended for the period of one month, and Spain has been added to the list. It seems rather a feeble proceeding to issue these orders for so short a period, and one which certainly tends to induce shippers to hold their freights in the hope of a free entry. In this sense it is unfair to them, and likely to cause the very mischief it seeks to avoid. The only exception is where the sanitary authority or their medical officer is satisfied that the rags have been shipped from some part of the country where no case of cholera has occurred. Inasmuch as rags are collected in very small quantities over large tracts of territory, it seems very difficult to understand how anyone can be satisfied as to the place of collection unless a responsible certificate accompany every piece of rag, and we trust that medical officers will seriously consider the possibility of admitting infected material into the country.

POLICE SURGEONS' FEES.

WHILST hearing a charge of assault at the West Ham Police-court on September 21st, the magistrate, Mr. Phillips, made an important announcement as regards the payment of fees charged for attendance by the district surgeon. It appears that attached to the charge sheet was what a court official described as "just a form" provided by the Police Commissioners, but without any statement or certificate from the surgeon as to the nature of the case he was called to see. The magistrate intimated that in future he should disallow the fee unless there was evidence that the doctor had done something to earn it. We cannot justly complain of this innovation, because it is only fair to the accused that the surgeon should either attend the court and testify to his observations and opinion, or record the same in writing. Moreover, we hold that if a person is suffering from the effects of an injury of such gravity as to require medical aid, the administration of justice demands all the assistance that skilled professional knowledge can afford.

PLEASURE STEAM YACHTING IN THE MEDITERRANEAN.

MORE than one medical correspondent has sent us [illegible] from which it appears that the Pleasure Steam Yacht [illegible] pany offers "the usual fee of five guineas" to medical [illegible] fares taken through their recommendation. This offer [illegible] discreditable to the Company, and is certainly not [illegible] to the medical profession. Medical men are suppose[d] paid for their advice by those who consult them. [illegible] should be paid by a commercial company for advice [illegible] able to the company would not increase the confidence [illegible] public or of their patients. We trust we shall hear [illegible] of such a system of touting. We have, of course, not [illegible] say against such a pleasant adventure as an escape [illegible] winter climate in a large well-found pleasure yacht, [illegible] duly qualified medical man on board.

COCAIN AS A LOCAL ANÆSTHETIC.

DR. BEER of Vienna has favoured us with a [illegible] cation from which we extract the following note. [illegible] recently Dr. Koller, of the Vienna General Hospital, [illegible] covered in cocain a valuable agent for the production [illegible] anæsthesia. He found that the introduction of [illegible] three drops of a 2 per cent. watery solution of cocain [illegible] the corneal chamber rendered both the conjunctiva [illegible] cornea completely insensitive, so that, for instance, [illegible] cornea could be partially gouged without exciting any [illegible] action or sense of pain. The same fact was demonstrated [illegible] by Drs. Brettauer and Becker at the recent Ophthalmic [illegible] Congress. Koller in his first report mentioned the [illegible] ment of the same agent in the production of anæsthesia [illegible] the larynx.

THE HOSPITAL FÊTE.

ON Wednesday the Lord Mayor received the following letter from the Duke of Buckingham and Chandos:—

"International Health Exhibition,
South Kensington, S.W., [illegible]

"MY DEAR LORD MAYOR,—I am glad to be able to [illegible] a further sum of £500 arising from the Hospital Fête. It is possible that a further small amount may still be found for the Hospital Sunday Fund after the final expenses have been paid.—Yours very truly, BUCKINGHAM AND CHANDOS, Chairman, Executive Council."

A meeting of the Council of the Fund is, we understand, fixed for the 10th inst., to distribute the money realised from the fête.

ACETONURIA AFTER POISONING BY SULPHURIC ACID.

ACCORDING to the *Birmingham Medical Review*, Hoppe-Seyler has recently described a case of poisoning with concentrated sulphuric acid, in which, six days after the accident, an acetone-forming substance appeared in the urine, which smelt of acetone and gave a red colour with ferric chloride. The excretion of this chemical body [illegible] in diminishing quantities for four days, during which the patient took scarcely any food. The substance disappeared from the urine after the ingestion of food by the stomach.

THE BOARDING OUT OF PAUPER CHILDREN.

THE Holborn guardians have almost unanimously resolved to call back the children they had put out to board. The resolution was consequent on a discussion raised by the clerk's report of the state of one of the children who had been sent back in a very dirty and neglected condition. The Rev. N. Davies, in whose resolution the children were sent, seconded the motion. It is not remarkable that the

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guardians should have felt something like indignation at this case, nor that they should have acted as they did. But it would have been more satisfactory to have had a complete report of the state of all the other children boarded out. Everything in the boarding-out system depends on the faithfulness of those who undertake to watch the children; and in this case they seem to have neglected their duty. The case only came to light accidentally, as the child proved unmanageable by its foster parents and had to be sent back. The Holborn Union guardians have spent large sums on their schools at Mitcham, where the children are taught trades, and so are more averse to the boarding-out system.

THE report of the examination made by Colonel Sir Francis Bolton of the water supplied by the several metropolitan water companies during the month of August, states that the Thames water sent out by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies again exhibited the comparatively small proportion of organic matter which has characterised the samples collected since April last. With the exception of the Lambeth Company's water, which was slightly turbid, all the samples were clear and bright. The water drawn from the Lea was of the same quality as in the previous month, and contained less organic matter than any of the Thames waters.

MR. WILLIAM BATES, B.A., M.R.C.S., Classical Professor at Queen's College, Birmingham, and Surgeon to the Borough Hospital, died somewhat suddenly a few days since. Mr. Bates' literary attainments were well known, and his loss will be greatly felt in other circles than the medical, in which he was held in high esteem.

DURING October Mr. Watson Cheyne will give three special demonstrations on Bacteria at the Biological Laboratory, Health Exhibition. On Tuesday, Oct. 7th, at 4 P.M.: "Methods of Preparing and Sterilising Cultivating Media." Tuesday, Oct. 14th, at 4 P.M.: "Methods of Cultivating Bacteria." Tuesday, Oct. 21st, at 3.30 P.M.: "Methods of Demonstrating Bacteria (Staining &c.)."

DR. EDWARD T. WILSON has issued a card entitled "Disinfectants, and How to Use Them," which is calculated to be extremely useful, especially to householders and managers of public institutions. A large amount of information is compressed into a small space, and is arranged in a form convenient for ready reference.

MR. FREDERICK TREVES, F.R.C.S., has been elected surgeon to the London Hospital, in the place of Mr. James Adams, who has resigned on account of continued ill-health.

SMALL-POX in a virulent form is stated to have broken out at Trieste.

PLUMBING.—On the 26th ult., a representative meeting of gentlemen interested in the art and trade of plumbing was held at the Guildhall, to consider the desirability of action being taken by which the status of the trade might be advanced, and the interest of the the public protected from evil arising from bad work and bad workmen. Resolutions were passed requesting the Plumbers' Company to communicate with the National Health Society, the Sanitary Institute, and otherwise to arrange for the conference of metropolitan and provincial plumbers to be held at the Health Exhibition from Oct. 15th to 20th.

THE

BIOLOGICAL LABORATORY AT THE HEALTH EXHIBITION.

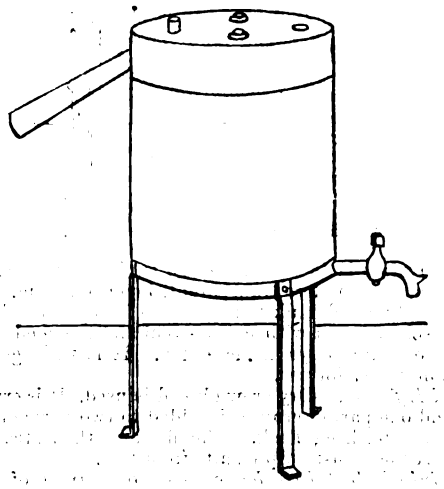
No. V.

CULTIVATING MEDIA.

Potatoes are very good material for the cultivation of many forms of bacteria. In preparing them they are first thoroughly scrubbed with a nail brush, removing the dirt, but leaving the skin whole. They are then soaked for ten minutes in a solution of corrosive sublimate (corrosive sublimate 1 part, water 1000 parts), and after this they are steamed for half an hour. When cool they are cut in half with a knife heated in a flame, and the halves laid with the cut surface upwards in one of the dishes above described. The dish has been previously sterilised by being rinsed out first with the corrosive sublimate solution, and then with methylated spirit. Round the interior of the dish blotting-paper soaked in corrosive sublimate solution is arranged, and this maintains a moist atmosphere. When they are quite cool the potatoes are inoculated by means of the inoculating needle, which is dipped in some growth of the organism to be cultivated, and then drawn over the cut surface.

Meat Infusion.—This is made from meat which is as far as possible free from fat. To make one litre of infusion one pound of meat is taken, and chopped up into mincemeat. This may then be set to simmer in a litre of water for one hour, after which the solid parts are separated by straining; or it may be soaked in the water for twenty-four hours in an

FIG. 22.



Apparatus for sterilising blood serum.

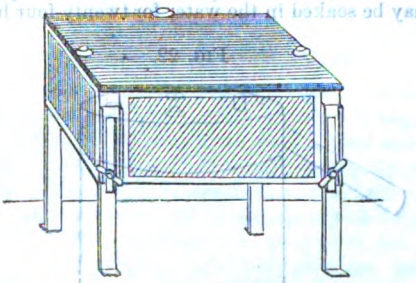
ice-safe. At the end of this time the liquid part is poured off and the meat is pressed so as to extract all the juice from it, and this is added to the rest of the liquid. The remaining part of the process is the same in either case. If a neutral solution is required, the liquid is neutralised with sodium carbonate and sodium phosphate (Na_2PO_4), the latter salt being used to complete the process. When a peptonised solution is needed the peptone is stirred in and dissolved at this stage. The liquid is then boiled to coagulate the albumen, strained and filtered, and then steamed for half an hour. After this it is filtered and steamed again, and if it is not quite clear the process is repeated. When clear the liquid is introduced into one of the flasks above described, and then steamed for three days in succession for half an hour each time. This is Tyndall's method of sterilising a fluid. Before it is first strained the infusion contains micro-organisms, both spores and active forms. The latter are killed by the first steaming, and during the first interval the spores have time to develop into active forms, which are killed at the second steaming. The third steaming kills any which may not have developed at the first interval. Infusions so treated

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may be kept, in well closed vessels, clear and sweet for an indefinite length of time.

Coagulated Blood Serum.—This may be used for cultivation at the body temperature. Sheep's blood is the best to use. Immediately after it is taken from the body it is poured into tall glass vessels where it is allowed to coagulate. The froth is carefully removed from the top of the liquid, and any blood which there may be on the upper, empty part of the vessel is wiped away. It is best to keep the vessel in an ice safe while the serum is separating. After thirty-six hours the serum is carefully drawn off by means of a syphon and received into a flask. From this it is transferred to sterilised test tubes. The serum is sterilised in the apparatus represented in Fig. 22. It consists of a cylindrical box with double sides, floor, and lid which contain water. The lid has a process by which it may be heated separately from the rest of the box. There is a central pillar in the interior and four vertical partitions passing from it to the sides. These are for the purpose of supporting a number of test tubes in a vertical position. The test tubes containing the serum are placed in here and sterilised by being heated for six days in succession, to a temperature of 58° C. for one hour a day. In order to coagulate the blood serum the tubes are transferred to another box, represented in Fig. 23. This is a wide shallow box which also has double sides and floor, and a glass top covered with a layer of felt. The two front legs move in grooves in the side, and may be clamped in any position. By this means the floor of the box may be made to slope. The test tubes are laid on the sloping floor of this box and heated to a temperature of 65° C. until the serum is coagulated. The object of placing the tubes in an

FIG. 23.



Apparatus for coagulating blood serum.

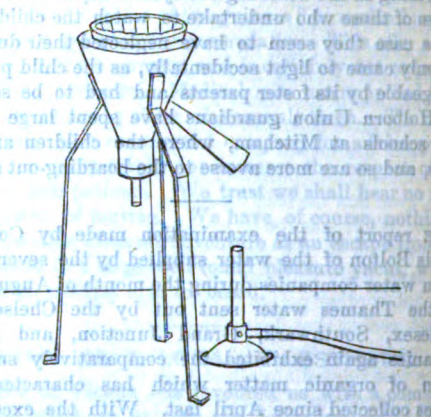
oblique position is to obtain a large surface for inoculation, and a thin, and so more transparent, layer of serum.

Milk.—Skimmed milk is introduced into previously sterilised vessels plugged with cotton-wool and steamed for half an hour on three days in succession. It is then generally sterile and ready for use.

Bread Infusion.—Dry brown bread is used. It is crumbled finely and one part of crumbs is added to two parts of water, in a small sterilised flask. The flask is then steamed as usual. A fine moist pulp results from this.

Gelatinised Meat Infusion consists of extract of 1 lb. of lean meat; gelatine, 50 to 100 grammes (or Japanese isinglass, 10 to 20 grammes); peptone, 30 grammes; sodium chloride, 5 grammes; water, 1 litre. The Japanese isinglass is used instead of gelatine in cases where it is necessary to obtain a material which will remain solid at the temperature of the body—the gelatine mixture becomes liquid at that temperature. The extract of meat is made in the same way as for the simple meat infusion, except that only half a litre of water is employed. The other half litre is used to soak the gelatine or Japanese isinglass. The latter should soak for twenty-four hours before the infusion is to be made. The gelatine (or Japanese isinglass) is added, with the water in which it has soaked, and dissolved in the hot extract of meat, and the peptone and salt are put in. The solution is neutralised as above described. In order to obtain a clear solution, the whites of two eggs are beaten up with some of the liquid, and then added to the mixture slowly, while it is stirred. On boiling, the albumen of the eggs rises to the surface, carrying with it the solid particles, and leaving a nearly clear fluid. This fluid is now poured off, strained, and filtered. In order to keep the liquid warm while it is being filtered, the apparatus represented in Fig. 24 is employed. It consists of a funnel-shaped water-bath, with a side process which projects over a Bunsen's burner. It is closed below by a caoutchouc stopper. The glass funnel used in filtering is placed in this bath, with its stem piercing

FIG. 24.



Apparatus for filtering gelatinised meat infusion.

the stopper. The liquid, when it is filtered, is put into one of the flasks above-described, and thence it is transferred to test tubes, which have been purified by heat. The liquid is then sterilised by Tyndall's process.

LUNACY IN SCOTLAND.

THE Commissioners in Lunacy for Scotland have just issued their twenty-sixth annual report, being that for the year 1883. It shows that on Jan. 1st, 1884, there were 10,739 lunatics under their official cognisance. Of these, 5017 were males and 5722 females. For every 100,000 of the population of Scotland there are 273 lunatics, or a proportion of 1 lunatic in every 366 of the population. The maintenance in 8985 cases was provided by parochial rates, in 1701 cases from private sources, and in 53 cases at the expense of the State. The average daily cost of maintenance of pauper patients is 1*s.* 4*d.* The substance of the report itself may fitly be distributed under three heads:—(1) The insane in asylums and other public establishments; (2) the insane in private dwellings; and (3) the use of the certificate of emergency.

1. With regard to the insane in public establishments, we find that the admissions in 1883 were greater than during the preceding year by 47 among private and by 170 among pauper patients. The mean recoveries per cent. of admissions into asylums and poor-houses was 28. The rate of mortality per cent. of the number resident in different classes of establishments for the year 1883 was, in royal and district asylums, 8·2; in private asylums, 6·4; in parochial asylums, 10·0; and in lunatic wards of poor-houses, 5·2. During the year 167 patients were discharged on probation; and we are informed that of the total number (2647) of patients discharged on probation since 1862, 483 were replaced in the asylums from which they had been removed before the expiration of the period of probation. There were 318 escapes in the year. With the exception of 38 they were all brought back before the legal period for their recapture had expired, and, in the great majority of cases, before they had been away twenty-four hours. Of the 120 accidents reported as having taken place during the year, 17 ended fatally. In 11 of these cases the death was the result of the patients' own acts, 9 being regarded as intentional suicides. One of the fatal accidents, we are told, resulted from one patient being assaulted by another. This "accident" was, presumably, a case of murder, or at least of manslaughter, as the surviving patient was placed in the Criminal Lunatic Department of Perth General Prison. In 32 cases the accidents involved fracture of bones or dislocation of joints. A most interesting table is presented of "the progressive history of patients first admitted into

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establishments in the year 1868." We gather from this that the proportion of recoveries among the 1319 patients admitted in 1868 was during the first two years something like 20 per cent. greater than the proportion of recoveries during the succeeding fourteen years. With regard to the data furnished by the number of deaths, the commissioners say: "It may safely be concluded from them that the annual death-rate among patients who have been less than four years inmates of asylums is from about 12 to 25 per cent. of the number resident, and that among those who have been more than four years and less than sixteen years inmates of asylums the annual death-rate is only an average of 5 per cent. of the number resident." This statement would attain a truly scientific interest if it were carried a step further, so as to show, upon similar lines, the mortality due to diseases of the brain and nervous system. The pathological instructiveness of a case of insanity is never completed if the patient dies of heart disease, for instance, or of peritonitis. But if the cause of death can be traced back as a progressive development, in time, of the physical condition of which the insanity is the outcome—i.e., if the insanity and then the death are traceable to the same *origo mali*—how instructive, in its unity and consecutiveness, does the pathological history become!

The commissioners speak very favourably of the generally efficient management and administration of the lunatic asylums in Scotland.

2. Overcrowding is largely prevented by the Scottish system of providing for the insane in private dwellings. On January 1st, 1884, the number thus provided for with the sanction of the Board, was made up of 128 private and 1811 pauper lunatics. This department is more especially the province of the two deputy commissioners, whose reports, given in the appendix, are thoroughly well worth perusal and attention. The experience of the commissioners themselves is entirely in favour of this domestic method of dealing with the insane, and they "have no doubt that in every case prolonged detention in an asylum ought, if possible, to be avoided, unless the interests of the patient or of the public unmistakably require it." We quite agree with this opinion, which indeed, is of the nature of a truism. The difficulty lies in getting the interests of the patients properly looked after, at low rates of remuneration, outside an asylum. If this difficulty of suitable guardianship could be met—and the Scottish practice shows that, so far at least, it can be met—there would be no lack of patients, in these days of cumulative overcrowding. But such patients should be quiet and harmless, for we do not hold with Deputy Commissioner Lawson, when he advocates the "reclamation" of "troublesome ones" in private dwellings. Here the public interests come to be at stake. The interests of the public cannot be served by the presence in their midst of a woman, who, whatever her other virtues may have been, was "restless and bouncing like a deer of the forest," whose affectionateness was "somewhat florid and fawning," who had been "very depraved in her habits," (however, "no *great* degradation in that respect in her new home"!) and who formed a "mutual attachment" with the children of a neighbouring farmer. The improvement in the condition of this woman (M. McB——) "who now speaks a good deal in a jargon which the guardian readily understands," has been very gratifying to the deputy commissioner, who informs us that he was "much struck with the assiduity of the guardian, and could not help noticing that, though she made no complaint, her strength had been taxed by incessant worry." The interests of the public and of a lunatic like M. McB—— living out of an asylum will seldom be found to run on parallel lines.

3. The use of the "certificate of emergency" is peculiar to the lunacy law of Scotland. The legal position of this certificate is shortly stated thus. It is necessary for the continued detention of a lunatic in an asylum that an order for such detention should be granted by the sheriff, and this order is granted upon a petition being presented to the sheriff accompanied by two certificates by medical men stating that the person is a lunatic and a proper person to be detained under care and treatment; but it is also provided that the superintendent of an asylum may receive and detain "for any period not exceeding three days, and without any order by the sheriff, any person as a lunatic whose case is duly certified to be one of emergency" by one medical man. It is not in practice considered that there must be imminent danger to life to constitute circumstances of emergency. The fact that to wait till an order of the sheriff could be obtained would cause undesirable delay in placing a patient under proper case is regarded as sufficient for this purpose. It consequently happens that in the majority of cases patients sent to asylums are admitted in the first instance on the authority of a certificate of emergency. We have no intention of dwelling on the question of the desirability of such certificates; but one or two points strike us in connexion with them. The "emergency" exception to the general rule of certification appears itself, on no very good grounds, to have taken the place of the rule. "Waiting for the sheriff," who, perchance, has gone for a few days' fishing, seems to constitute the "emergency" upon which the lunatic is, out of the usual course, taken from his home to the wards of an asylum. No doubt there are cases where the notion of "emergency" may legitimately be entertained, but, on the other hand, we hold that, under ordinary circumstances, provision should be made for the usual requirements of the law, in the matter of certificates, being carried out without unreasonable delay. We entirely deprecate any hot haste in having the asylum key turned upon an insane person; and the jealousy of the public eye in England is not likely soon to permit the certificate of one medical man to be the only requisite for the lodgment, even for three days, of an individual, especially a moneyed individual, in a lunatic asylum. The commissioners, however, say:—"A consideration of the whole working of the law, as we have it in Scotland, leads us to view the power of placing a patient in an asylum on the authority of a certificate of emergency with decided approval." Of all the cases so certified during the three years 1880-82, 67 were, for various reasons, discharged before the expiration of the three days during which the certificates authorised detention.

From a social standpoint, we regard this report as of immense importance, dealing as it does, outside the usual asylum statistics and detail, with what may fairly be termed extended experiments (*a*) on the speedy removal to asylums of patients in the acute stage on emergency certificates; and (*b*) on the transfer from asylums to private dwellings of chronic cases of insanity. We gladly welcome original and useful work of this kind.

DINNERS AND CONVERSAZIONES.

THE usual inaugural dinner of the past and present *alumni* of *St. Thomas's Hospital* took place on October 1st, Sir Edwin Saunders being in the chair. Dr. Ord, who was called upon to reply to the toast of "The School," took the opportunity of announcing his early retirement from the office of dean, the duties of which he felt himself no longer able to fulfil in consequence of his increasing engagements. Mr. Le Gros Clark was called upon to make a presentation to Mr. Elliott, who for thirty years has acted as surgeryman to the hospital. He remarked that during that long period Mr. Elliott had not only fulfilled his office to the satisfaction of the staff, but had in many ways contributed to the prosperity of the hospital and of the school. The dinner was a generally admitted success, largely due to the services of the honorary secretaries, Dr. R. P. Smith and Mr. Makins.

The *Westminster Hospital* annual dinner was held at the Holborn Restaurant, and, thanks to the exertions of Dr. Murrell and Mr. Barrow, proved in every way a success, being largely attended by both old and present students. Dr. Potter ably filled the chair, and alluded to a remark of Justice Willes, who had filled a similar post in the afternoon at the distribution of prizes, that the sanitary condition of the nation was the largest question of the present age. The evening was much enlivened by songs from Mr. Black and others, notably by excellent recitations from Mr. Watts Russell and Major Davis.

At the *London Hospital* in the evening of Wednesday, October 1st, the members of the Volunteer Hospital Corps gave a display in uniform before the Lord Mayor, Lady Mayoress, and a numerous assembly. After the distribution of prizes the curtains of the huge marquee, erected for the occasion, were pulled up, and by well-directed limelights the large field in connexion with the hospital was illuminated. A number of supposed wounded and dead were seen lying in all directions. First one, then a second, and finally a third body of the Volunteer Hos-

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pital Corps appeared on the field with stretchers, haversacks, and water-bottles, and proceeded at once to attend to the wounded. From the field to the dressing stations it was, on account of want of space, but a short distance. In the dressing stations, which also served as field hospitals, the sisters of the Red Cross acted as nurses. Afterwards there was a march past in stretcher detachments, followed by patients on cacolets, litters, and ambulance waggons. The Lord Mayor and Lady Mayoress afterwards visited the dressing station, and inspected the wounded. The students were of the different hospitals belonging to Charing-cross, University, St Bartholomew's, Middlesex, and the London. Surgeon-General Sir Guyer Hunter, K.C.M.G., the Commandant, allotted the directions of the movements to Mr. Cantlie, senior officer of the corps, with Dr. Squire as adjutant, to whom, and to Mr. McLure and Mr. Robertson, the complete success of the parade was due. Members of the London Scottish and Middlesex Artillery acted as patients.

No address was given to the students at *Guy's* during the day, but on October 1st a largely attended conversazione was held, several of the wards being set apart for the reception and entertainment of the visitors, whose number was estimated at 3000. In addition to many interesting microscopical exhibits and displays of surgical and other instruments, all the museums for which the hospital is celebrated were thrown open to the public. The electric light was largely used, and an instrumental concert was given. During an interval, Mr. Lushington, the treasurer, distributed the prizes gained by the students in the Medical School during the past year. Dr. Wilks, senior physician, in moving a vote of thanks to the chairman, stated that the condition of the medical school was prosperous.

The biennial dinner of the old students of *King's College Hospital* was held at Limmer's Hotel on Wednesday, October 1st. Sir William Bowman presided.

THE PROGRESS OF CHOLERA.

CHOLERA still clings with singular tenacity to Italy. In the city of Naples there has been substantial improvement, but the deaths are still from fifty to sixty a day, and the disease has spread somewhat widely over the province of Naples. But improvement in one part of Italy is again associated with extension elsewhere, and English families who have clung to the idea that the Riviera would still be open to them this winter will see with regret the serious outbreak in and about Genoa. Spezia also still remains gravely infected. Taking the entire kingdom, there has been improvement during the past week, but the daily cholera mortality certainly exceeds 200. Rome has again suffered from isolated attacks, which have at once been segregated. This action, and the modern sanitary improvements which have been carried out, have again stood the citizens of Rome in good stead, and have saved them from any extension of infection.

At Marseilles and Toulon fresh cases still occur, and hardly a day passes without one or more deaths. It may be some time yet before these two towns can be regarded as free from infection. Fortunately, there is no further spread of the disease in France.

In Spain the number of infected places does not increase, and no large mortality has occurred in any one town. The provinces of Alicante and Tarragona are, however, still seats of the disease, and much suffering is being experienced by reason of the sanitary cordons which are maintained, and which seriously interfere with trade and with food supplies.

QUARANTINE AND INFECTED PORTS.

Vessels arriving at Constantinople from ports beyond Suez and not subject to quarantine will be admitted to free pratique if they have not embarked passengers during their passage through the canal. On arrivals at Constantinople from Montenegrin ports ten days' quarantine is imposed.

The Danish Government have imposed a quarantine on all arrivals of vessels from any French or Spanish Mediterranean port or any port on the mainland of Italy, on the Gulf of Genoa, or the Sea of Tuscany, on board which any suspicious cases of illness have occurred.

Ships from Spanish ports will, on arrival in Austrian ports, be subjected to ten days' quarantine, provided their voyage has been healthy, and to twenty days' quarantine if any suspicious case of illness has occurred on board.

Vessels arriving at the Gambia from France which have occupied less than twenty days on their voyage will be placed in quarantine, the duration of which will be determined by the state of health of the crew.

In Greece, all arrivals from the coast of Tunis are subjected to five days' quarantine.

Arrivals from Bordeaux are admitted into the port of Lisbon, subject, however, to rigorous quarantine.

All arrivals in Russian Black Sea ports from Italy or Spain are subjected to fourteen days' quarantine.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Gateshead (Urban).—We have recently commented at some length on this district in connexion with Dr. Barry's official report. Dr. Green's annual report refers to many of the conditions dealt with by Dr. Barry, and it devotes some attention to the question of infant mortality. This is evidently to an important extent induced by the faulty sanitary surroundings of the children. Many children are brought up in a single-roomed tenement which is overcrowded, which being occupied both by day and by night is never adequately ventilated, and which, with its offensive air, has to act as the place in which the infants' food is kept. The ignorance of the mothers in the lower grades of the population, and the consequent exposure and neglect to which infants are subjected, can probably only be dealt with as education is brought to bear upon the parents. Cellar dwellings in the town evidently need much attention. Many are very damp, and an effort is made to hide this by boarding up the damp walls. Yards are unpaved and sodden, and much squalor prevails in some of them. Infectious diseases caused 229 deaths in 1883.

Belper (Rural).—Mr. Gaylor, in his report on the Alfreton district, refers to the difficulties in providing a portable disinfecting apparatus. These difficulties are so great that some such stoves have since been made fixtures. A portable apparatus, where dry heat is used, is not easily made so that an equable temperature can be maintained. Lyon's steam apparatus is probably as efficient in its portable as in its fixed form, but it is ponderous. It would be far better for the authority to erect the infectious hospital they have long thought about, and to bring infected things to a disinfector, than to take a disinfector to the infected things in the different villages, where disinfection can rarely be effected without some carrying about of the articles to be dealt with, even if the apparatus is close at hand. Mr. Allen, in reporting on the Belper district, urges the provision of means of isolation, regarding it as absolutely necessary to proper sanitary work in the rural area. In both districts careful supervision of conditions affecting health is evidently observed.

Huddersfield (Urban).—One of the most useful forms of sanitary work is in progress in Huddersfield—namely, a house-to-house inspection. Dr. Cameron regrets that it does not proceed more rapidly, but the reason for delay is that so many unsuspected faulty conditions of drains, privies, &c., are constantly coming under notice. Herein lies the value of the inspection, and when it is completed the tabulated records of the work will at a glance enable the authority and their officers to perceive what sanitary circumstances are peculiar to any special area that may be affected with infectious disease. We wish that more systematic inspections of the same sort were in progress. The system of notification works smoothly. The number of cases of infectious disease which thus came under notice during 1883 was 154. Seventy-three cases were admitted into the sanitary hospital, and some doubtful cases were also reported to the medical officer of health. The death-rate, in a population of 84,450, was 21·4 per 1000 for the year.

Warrington (Urban).—In this urban district the death-rate for 1883 was 21·6 per 1000 living. Scarlet fever caused 26 deaths, whooping-cough 28, and diarrhœa 52. Enteric

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fever attacked 22 persons, causing seven deaths. A full account is given of the sanitary circumstances associated with each case and of the remedial measures adopted. But after mere local conditions of premises had been dealt with all cause of disease could not be regarded as removed, and Mr. Gornall speaks very strongly as to the influence of sewer emanations in the production of this disease in Warrington, and he urges that remedial action should be taken as to so prevalent a source of danger. As the result of four years' experience, Mr. Gornall says that the system of notification of infectious diseases works most harmoniously. The injury to members of the medical profession, he declares, has been only fancied; private practitioners notify apparently most willingly, and this without any existing good relations between them and their patients being, so far as he can learn, in any way disturbed.

Liverpool (Urban).—Much has recently been said and written as to Liverpool as one of the principal centres of typhus in England, and as to its being one of the cities which is worst off for means of isolation. These matters have also been specially reported on by Dr. Stopford Taylor, and hence in his annual report for 1883 he only incidentally refers to them. The fact that dirt in connexion with conditions of overcrowding has so special a bearing on typhus gives interest, however, to Dr. Taylor's description of house accommodation and lodging, and we are glad to observe that a long list of insanitary dwellings has been reported to the Council as requiring to be dealt with. The number of insanitary houses purchased by the Corporation in 1883 was not large considering the state of many parts of the city, for 91 only were purchased, and of these 67 were demolished. The condition of the suburban houses is also a serious matter. There are as many as 15,266 on the register and 548 more were registered in 1883. The night visits paid to these houses led to the discovery of overcrowding in 1195 cases, and to the detection of a gross amount of indecent occupation, unmarried males and females occupying the same rooms in 660 cases, the number of total occupants of the several rooms varying from three to eight. These rooms also contained 467 children between the ages of five and thirteen years. This is one of the most difficult questions which authorities have to deal with, for any strict regulations strike too severely at the common use of a room by members of the same family, and either lax rules or the absence of rules lead to the result described. In Liverpool the matter can only be met in so far as overcrowding is produced, and 940 tenants were dealt with in that respect. The death-rate in Liverpool was 26·6 per 1000 in 1883. As regards hospital accommodation, the town council have at last taken the matter in hand; a large site by the riverside has been procured and tents have been erected. We could have wished that some more permanent building had been put up, but Liverpool was at the time in face of an emergency, and when the subject is deferred until the emergency arises it is not often that substantial buildings are constructed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 27th ult., 5681 births and 3209 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which in the five preceding weeks had declined from 25·6 to 21·0 per 1000, further fell last week to 19·1. During the thirteen weeks ending Saturday the 27th ult. the death-rate in these towns averaged 22·8 per 1000, against 20·6 and 19·9 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 14·4 in Norwich, 14·8 in Brighton, 15·8 in Huddersfield, and 16·1 in London. In the other towns the rates ranged upwards to 25·1 in Manchester, 25·2 in Halifax, 26·9 in Blackburn, and 28·8 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which in the five preceding weeks had declined from 1314 to 715, further fell to 611 last week; of these, 354 resulted from diarrhœal diseases, 67 from scarlet fever, 63 from "fever" (principally enteric), 48 from measles, 42 from whooping-cough, 24 from diphtheria, and 13 from small-pox. These diseases caused the lowest death-rates in Brighton and Portsmouth, and the highest in Cardiff, Preston, and Blackburn. The highest rates of mortality from measles were recorded in Blackburn and Preston; from scarlet fever in Sheffield and Cardiff; from "fever" in Newcastle-upon-Tyne and Salford; and from diarrhœa in Derby, Blackburn, and Wolverhampton. The 24 fatal cases of diphtheria in the twenty-eight towns included 14 in London and 3 in Liverpool. Small-pox caused 10 deaths in London, 1 in Liverpool, 1 in Sheffield, and 1 in Sunderland. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which in the eleven preceding weeks had steadily declined from 1368 to 471, rose again to 536 on Saturday last; the new cases admitted were 129, against 66 and 65 in the two previous weeks. The Highgate Small-pox Hospital contained 25 patients on Saturday last, 3 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 170 and 159 in the two preceding weeks, were 162 last week, and were 57 below the average. The causes of 68, or 2·1 per cent., of the 3200 deaths registered last week in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Nottingham, Hull, and in five smaller towns. The largest proportions of uncertified deaths were recorded in Birkenhead, Wolverhampton, and Oldham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·5 and 20·8 per 1000 in the two preceding weeks, rose to 23·0 in the week ending the 27th ult., and exceeded by 3·9 per 1000 the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 19·4 and 19·5 in Edinburgh and Leith, to 24·8 in Glasgow and 25·6 in Dundee. The 554 deaths in the Scotch towns included 52 which resulted from diarrhœal diseases, 24 from whooping-cough, 20 from "fever," 14 from diphtheria, 13 from scarlet fever, 8 from measles, and not one from small-pox; in all, 131 deaths were referred to these principal zymotic diseases, against 118 and 130 in the two preceding weeks. These 131 deaths were equal to an annual rate of 5·4 per 1000, which exceeded by 1·8 the average rate from the same diseases last week in the twenty-eight English towns. The deaths referred to diarrhœa, which in the two previous weeks had been 55 and 51, were last week 52, of which 16 occurred in Glasgow and 13 in Dundee. The 24 fatal cases of whooping-cough showed a further slight increase, and included 10 in Glasgow, 6 in Edinburgh, and 4 in Dundee. The deaths from "fever," which had been 10 and 15 in the two preceding weeks, further rose to 20, of which 15 were returned in Glasgow. The 14 fatal cases of diphtheria were 6 less than in the previous week, and included 6 in Glasgow and 4 in Dundee. The 13 deaths from scarlet fever included 9 in Glasgow, where 5 of the 8 fatal cases of measles were also recorded. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns showed an increase, but were 10 below those returned in the corresponding week of last year. The causes of 91, or more than 16 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which in the two preceding weeks had been 29·4 and 28·6 per 1000, rose to 30·2 in the week ending the 27th ult. During the thirteen weeks of the quarter ending last Saturday the death-rate in the city averaged 25·4 per 1000, the rate during the same period being 20·9 in London and 17·0 in Edinburgh. The 203 deaths in Dublin last week exceeded by 24 the number in the preceding week, and included 36 which resulted from the principal zymotic diseases, against 42 and 32 in the two previous weeks; of these, 16 were referred to diarrhœal diseases, 11 to scarlet fever, 3 to diphtheria, 3 to whooping-cough, 3 to "fever," and not one either to small-pox or measles. These 36 deaths were equal to an annual rate of 5·4 per 1000, the rate from the same diseases being 2·4 in London and 4·0 in Edinburgh. The deaths from diarrhœa, which had declined in the four preceding weeks from 48 to 21, further fell last week to 16. The 11 fatal cases of scarlet fever exceeded by 6 the number in the previous week, and the 3 deaths from diphtheria were higher than in any recent week. The 3 fatal cases of whooping-cough were within one of the number in the previous week, and the deaths referred to "fever" showed an increase. Eight inquest cases and 5 deaths from violence were regis-

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tered in the city during the week, and 47 deaths occurred in public institutions. The deaths of infants showed a decline, while those of elderly persons corresponded with the number in the preceding week. The causes of 42, or nearly 21 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

MADRAS MEDICAL ESTABLISHMENT. — Surgeon-Major Robert William Cockerill, to be Brigade Surgeon.

ADMIRALTY.—Fleet Surgeon Thomas Robert Warren has been placed on the retired list, with permission to assume the rank and title of Deputy Inspector-General of Hospitals and Fleets.

The following appointments have been made:—Fleet Surgeon William J. Eames, additional, to the *President;* Staff Surgeon R. W. Biddulph, additional, to the *President;* Surgeon Otway P. Browne, M.D., to the *Asia;* Fleet Surgeon Edward Jones Butler, B.A., M.D., to the *Achilles;* Staff Surgeon James Robertson, to the *Brilliant;* Surgeon Frederick A. Trevan, to the *Indus;* Surgeon Theodore J. Preston, to the Royal Marines at Chatham; Surgeon Bowens S. Mends, to the *Téméraire;* Surgeon John L. Thomas, to the *Superb;* Surgeon David B. Bookey, to the *Hector.*

ARTILLERY VOLUNTEERS.—1st Sussex: Henry Habgood, M.D., M.R.C.S., to be Acting Surgeon.

Correspondence.

"Audi alteram partem."

THERAPEUTICAL REFORM.

To the Editor of THE LANCET.

SIR,—It is notorious that the coarse, nauseous, and bulky preparations of our official Pharmacopœia are passing out of date; and although we are anticipating the advent of a new edition, rumour says that it will not be a great improvement on the old, which no longer satisfies our requirements. There can be little doubt that it is not the dogmas of Hahnemann that attract many practitioners to homœopathy, and make it so popular with the public. It is the elegant method of administering remedies, the drop doses of powerful tinctures, and the pretty and dainty granules containing the active principles of the nauseous drugs which we employ, that entice those who administer and those who receive the treatment; these are the attractions which give life to the sect, and lend colour to their claim to a better therapeusis. The formation of a new sect is the natural result of every new discovery or advance in therapeutics, unless it is officially recognised and adopted by the profession; those who employ it become loud in their praises of it, and rapidly degenerate into quacks, indicating their possession of the new remedy by the adoption of a distinctive denomination; such persons speedily manufacture dogmas of their own to account for the miracles worked by their new idol. At the present day we see another such a sect developing before our eyes, and it is most instructive to watch its evolution. Because a certain Dr. Burggraeve has discovered a most elegant and probably useful method of dispensing the active principles of drugs in the form of granules, which are said to be accurately prepared, and to contain precise and efficient doses of the drugs, we have a new sect established, calling themselves dosimetric physicians, and issuing a journal of dosimetric therapeutics in which are recorded absurd and ridiculous accounts of how they "jugulate" disease by their new method; so that respectable practitioners are debarred from using new and probably useful drugs by the fear that they may lend countenance to those whom we are compelled to call "quacks" because they "talk noisily and boastfully" of their new method of curing disease.

Another great evil, brought upon us by the desire of our profession for improved therapeutical means and the absence of all official aid and guidance, is the shower of patent pills, pilules, and granules, poured upon us by the druggists. These enterprising gentlemen would compel us to prescribe "Messrs. Smith and Jones's No. 54 pilules," which they will dispense for us in a pretty little bottle, wrapped round with pink paper, on which are stated the various symptoms and diseases that "No. 54" and many other pills are likely to cure, so that on future occasions our fortunate patient may be able to select the number of the pill that he would prefer to take to cure the symptoms with which he may then be afflicted. Even in the case of those druggists whose dearest boast is their care for the interests and respect for the prejudices of the profession, we find ourselves introduced to a new materia medica and a complete pharmacopœia, and if we fail to commit them to heart we are denied participation in the "most recent advances in pharmacy."

It is true that these private enterprises have now provided us with excellent pilules and parvules, which profess to contain exact doses of the most active drugs and all conceivable combinations of them; but I would ask, what security have we for the accuracy and trustworthiness of these preparations? Unfortunately at present we have none, except such as may be found in the objectionable testimonials of those complaisant practitioners who are found willing, for the benefit of suffering humanity, to sing the praises of the particular druggist they employ.

Thus much of complaint, now for the remedy. An agitation has already been set on foot, having for its object the repeal of the Patent Medicines Stamp Act and the reform of the British Pharmacopœia. Both of these objects are desirable in their way, but neither of them strikes at the root of the matter. The repeal of the Stamp Act would still leave us face to face with a multitude of popular preparations of unknown composition, and with manufactured medicines of uncertain potency; while a reformed Pharmacopœia would require reforming at least every year; and although it directs how medicine should be prepared, it gives no guarantee that the medicines we use are prepared as it directs, or that they possess the potency it requires. We require to know that the preparations offered to us contain both the drugs and the exact doses described by their manufacturers, and that they are efficient and reliable. It is true that we could proceed under the Sale of Food and Drugs Act and have each specimen analysed for ourselves, but the process is a tedious and costly one, though no doubt much good might be obtained if the Act were enforced in a systematic and well-organised manner by some one or more of the medical corporations. The Government stamp which is now affixed to certain patent and imported medicines is of no advantage except as a source of revenue, and is often misleading to the public, who accept it as a guarantee of the genuineness of what is really an unknown article. Now, I would have all medicines stamped with a "hall mark" by an official pharmaceutical assay department. It appears to me to be practicable for the Government to establish an extensive analytical laboratory, in which all pharmaceutical preparations dispensed in this country, whether of home manufacture or imported, should be analysed, and if found efficiently and accurately prepared should be stamped and certified as genuine. The articles would be sent to the laboratory in bulk, a sample would be analysed, and the bottling and stamping would be performed while in bond. The charge made for stamping would be amply sufficient to cover the expenses of the laboratories, and would probably prove an important source of revenue to the State.

The examination and analysis of drugs should not be confined to the various pilules and granules offered for our use, but should extend to all imported or manufactured drugs or medicinal plants, as well as to all tinctures, syrups, extracts, cordials, &c. These, by being analysed and their mode of preparation registered, would become trustworthy and official preparations, although their manufacture might still be left to private enterprise, while the dispensing chemist would be provided with packets of drugs and bottles of tinctures on which he could rely, and which would bear upon them the data of their examination when they were found to possess the standard strength. Such a scheme as this would lead practitioners to use those attractive pilules and medicines which at present they admiringly gaze upon, but prudently hesitate to employ, preferring to rely upon the cumbersome and inelegant methods that have received official sanction and approval; it would also terminate the existence of those second-class chemists who, dealing with what are known as "second-class drugs," do not hesitate to imperil human life and render unavailing the services of the physician. The use of uncertified drugs for dispensing the prescription of a registered practitioner would become an

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offence punishable by law. At the same time it might be enacted that really new improvements in pharmacy might still be patented for a certain period, giving the druggist the same advantages enjoyed by other tradesmen of profiting by his own discoveries, but that the composition of all patent medicines should be registered and published as a protection to the health and safety of the community.

The officials in charge of this department would probably be entrusted with the preparation of a Pharmacopœia, and we might look for a much more complete and efficient one than that with which we are familiar. This system would not interfere with or in any way repress the private enterprise of the druggists, but would rather encourage it, for I have no doubt that they would find the Government certificate of the accuracy of their preparations the strongest recommendation they could offer to the profession, and the surest means of obtaining an extensive sale for their wares. While those preparations which proved valuable would readily obtain the official recognition and be introduced into the Pharmacopœia.

I believe that if this plan meets with the general approval of the profession it only requires the united action of the various colleges, halls, and licensing bodies, together with the powerful advocacy of the medical press, to obtain the attention and aid of the present or any other Government. No corporate body can so properly and so powerfully move in this matter as the Royal College of Physicians of London, for not only does its charter confer upon the College the right to "supervise and examine all manner of medicines" used by physicians in London, but (by 32 Hen. VIII., c. 40) the College is enjoined to choose four censors from "the best learned, wisest, and most discreet" of the Fellows, who "shall and may, by virtue of this present Act, have full authority and power, as often as they shall think meet and convenient, to enter into the house or houses of all and every apothecary.....to search, view, and see such apothecary wares, drugs, and stuffs as the said apothecaries or any of them have or at any time hereafter shall have in their house or houses; and all such wares, druge, and stuffs as the said four persons shall there find defective, corrupted, and not meet nor convenient to be administered in any medicine for the health of man's body, the said four persons.....shall cause to be brent or otherwise destroy the same....."

The necessity for this inspection and examination of drugs which was felt in the reign of King Henry VIII. probably exists in no diminished degree to-day, and the College may feel that, though the same machinery is no longer competent to fulfil the duties and responsibilities imposed upon the College by statute, it is nevertheless incumbent upon it either to undertake these neglected duties itself or to urge upon the Government the adoption of some suitable method directed to attain the same end.

I am, Sir, yours faithfully,

Manchester-square, W., Sept. 27th, 1884. F. A. MAHOMED.

LUNACY LAW AGITATION AND SUICIDE.

To the Editor of THE LANCET.

SIR,—In your issue of June 28th last, and in your last number, there appeared singularly interesting letters from Dr. Adam under the above heading. To be read in connexion with those letters, will you be so good as to publish the following statement of facts.

"A month ago, a lady in this neighbourhood, aged between forty and fifty, became afflicted with acute insanity, marked by various delusions, and accompanied by threats of self-destruction. Her medical attendant advised immediate removal to an asylum. The husband signed the necessary order for admission; two medical practitioners, well known and thoroughly competent men, examined and certified the patient. But the proprietor of the asylum in which it was desired to place her declined to send nurses from his establishment to remove her from her home—naturally enough, after Mr. Justice Hawkins's dictum in a recent trial as to the law of trespass and assault. The medical attendant, more naturally still, declined to move: being of opinion that, having given his best advice, and having certified his patient, his duties ended there. The husband, over eighty years of age, and feeble in mind and body, was not capable of acting with the necessary vigour. The only other person who might have acted perhaps, though not related to the patient, refused, having doubts as to the accuracy of the diagnosis. The result was that, instead of being properly treated, in a suitable place, this unfortunate lady was found, a few days later, lying upon a neighbouring railway line, mangled and dead. She had left her home as though for a morning stroll, and had deliberately placed her head under an advancing engine. Mark that the disorder was in an early stage, and (to quote Dr. Adam) easily curable.

You, Sir, have favoured us in your journal of late with many disquisitions upon lunacy law and practice, most of them, let me assure you, galling beyond measure to those gentlemen who are engaged in this specialty. Will you ponder over the occurrence which I have related, and say where or with whom, in your judgment, lies the responsibility of this death—I had almost written, of this murder. Is it in the law or in Mr. Justice Hawkins's interpretation?

I am, Sir, yours faithfully,

Laverstock, near Salisbury, Sept. 29th, 1884. H. J. MANNING.

*** The fault in this case was obviously that of the friends. The certificates being signed, it was for the friends to take the case to the asylum. If the friends of a sick woman had an order for her admission to the hospital, and while they were wasting time she became delirious and jumped out of window, no one would think of blaming the hospital staff for the accident; still less could the benevolent giver of the admission note be blamed. Surely it is no part of a medical man's business to take his patients to an asylum. It is this fussy interference with patients that discredits medicine and degrades the profession. Let practitioners remember that they are neither "touts" for asylums nor agents for the removal of refractory lunatics. It is work for which they are unfitted. The way in which insane patients are coerced or cajoled into asylums is most discreditable. The whole blame in this case rests with the friends. We think the managers of the asylum and the medical men concerned acted most judiciously. The neglect of the friends was culpable. It is nothing to the point that the husband was eighty. When a medical man exceeds his duty he lowers his professional character and places himself in a false position.—ED. L.

"BICYCLE RIDING AND PERINEAL PRESSURE: THEIR EFFECT ON THE YOUNG."

To the Editor of THE LANCET.

SIR,—Mr. H. A. Allbutt accuses me of bringing forward in my paper on this subject unfounded theories "entirely unsupported by facts." The letter of Dr. G. Herschell published by you at once disposes of this accusation. Mr. Allbutt asks whether I "have met with a single case of perineal mischief, the result of cycling, within the last ten years." In reply, I beg to inform him that I have met with such a case within the past six months. I am not in general practice, and so have little opportunity of meeting with such cases, but perhaps if a few general practitioners would be so kind as to relate their experiences in this matter, it would be found that, even at this early day in the era of cycling, there are sufficient grounds for calling attention to the *excessive* use of these machines as at present constructed by growing, undeveloped boys. I was not aware until now that a "healthy look and jolly manner" were sure tokens of virtue in young men; neither did I infer in my paper, as Mr. Allbutt assumes I did, that the results of cycling mentioned were to be found in the young-men cyclists of to-day, who were, most of them, young men before they mounted a machine. It is ten years hence that we are to look for the results of the excesses of to-day, when our boy-cyclists of ten, twelve, and fourteen have reached man's estate, or what immoderate cycling has left them of that heritage.

Mr. Allbutt's concluding argument against my paper—viz., "that it may injure an industry which is giving employment to thousands"—is weak. The "drink traffic," as it is called, gives employment to hundreds of thousands, yet I am afraid that fact would hardly be received as an argument in favour of silence on the subject of drunkenness. By-the-bye, cycling and drinking are somewhat alike. Moderate indulgence in either does little harm and sometimes positive good; in both there are great inducements to

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excessive indulgence, and when excess in either steps in health rushes out by the other door.

Whether a saddle, such as Dr. Herschell suggests, can be devised is doubtful, for when the thigh is extended, as it is in riding large bicycles, the ischial tuberosity projects very little past the posterior line of the femur; and when the hamstring muscles become tense the tuberosity as such is abolished and an almost vertical plane takes its place.

I am, Sir, yours faithfully,
S. A. K. STRAHAN, M.D.

Berry Wood, Northampton, Sept. 1884.

To the Editor of THE LANCET.

SIR,—The alarmist tone that characterises Dr. Strahan's article on cycling, and the formidable indictment it contains against a popular sport, lose much of their force when it is seen that they are due to theoretical considerations alone. Dr. Strahan may have met with cases which appear to beat out his contentions, but if so, I venture to believe that his experience is a very exceptional one. It is possible that to a youth already morbidly sensitive from past vicious indulgence the saddle friction involved in riding may be injurious. But given a fairly healthy lad there is no doubt, as Mr. Allbutt ably argues in your last issue, that the beneficial influence of cycling on the physical condition generally is more than sufficient to outweigh and to nullify any slight local excitation such as may possibly arise in a limited number of cases. As to the comparison between horse-riding and cycling, it is beyond all question that the local "stimulation" is far greater in the former than in the latter. The motion and pressure involved in equitation, especially in beginners, are distinctly more suggestive and provocative of erotic sensations than those to which the cyclist is subjected. On this point strong evidence was but quite recently adduced in my hearing by a well-known bicycle rider, who is also an accomplished horseman. With regard to the "spinal shocks," made much of by Dr. Strahan, their influence is of a still more hypothetical nature than that of the perineal pressure. Careful statistical inquiry has, I apprehend, still to be made, but speaking from a very large acquaintance with cyclists, ranging in age from five to sixty years, I agree with Dr. Allbutt in joining direct issue with Dr. Strahan. Abuse there undoubtedly is of cycling, as of everything else, leading chiefly, as in all forms of athletic exercises, to damage of the thoracic viscera; but beyond this the sweeping charges of Dr. Strahan seem to be almost devoid of support. And when it is considered that the vast majority of cyclists are middle-class men and lads, cooped up in towns and largely employed in insanitary places and occupations, it is almost impossible to overrate the advantage accruing to society from the popularisation of the sport in question. Before it came into vogue, that dreariest of occupations to the average man, "taking a constitutional," was practically the only means afforded such an individual of getting exercise. Now we have provided for us an attractive therapeutic means of combating directly some of the most prominent evils incidental to town life; under its influence dyspeptic troubles disappear, the brain clears, mental morbidity merges into optimism, a new interest in life is created; in short, unless the hobby is literally ridden too hard the result is, as far as my observation goes, wholly beneficial. In point of fact, even when indulged in to an extreme degree, cycling is singularly free from the dangers that accompany most forms of athletic exercises. As an illustration I would adduce a case I have under observation at present, that of a confirmed gouty subject, who has suffered for years from exceedingly well-marked aortic stenosis and regurgitation, yet until very recently my patient has been an enthusiastic tricyclist, without, at any rate, any subjective inconvenience whatever. In fact, he declares that at the end of several hours' run he almost invariably felt better than when he started, and is inclined to resent the embargo I have laid upon the use of his machine for the future.

Permit me to mention one other case in conclusion, that of a gentleman aged sixty, who a year or two ago was fast sinking into the listlessness and degenerative condition generally of old age. It is hardly too much to say that the judicious use of the bicycle—one of the "safeties"—has "renewed his youth"—at any rate added zest, and, in all human probability, years, to his life.—Yours truly,

Brockley, September, 1884. J. S. BOOTHROYD, M.D.

OVER-PRESSURE IN SCHOOLS.

To the Editor of THE LANCET.

SIR,—In dealing with the question of over-pressure in schools, it appears to me that in regard to elementary schools at least one very important factor has been omitted in the consideration of the question generally.

It is admitted that the alarm of over-pressure has been more brought to the front of late years, in fact, it is only for the last very few years that it has been an object of public attention. Over-pressure in reference to pupil teachers attracted more notice in the earlier days of the Education Act, and it was not without good cause that relaxations were made for the relief of these young persons.

The point that I think has been overlooked is that, owing to the compulsory attendance of all children, a great number of boys and girls are obliged to attend school who, in the absence of compulsion, would be kept at home or sent to dames' schools owing to weakness or delicacy of constitution. It is probably owing to the presence of these children in the school that so many cases of breakdown are met with at this time. It is far from being proved that the present high pressure system of teaching turns out better children than the former less pretentious system did. I call to mind numerous instances of the sons of artisans and of poorer parents than the average workman, who under the old code, and even before the code, were so taught as to enable them to take up positions of trust and importance in after-life.

My experience of over-pressure in public schools differs *in toto* from that of Mr. Barford as stated in THE LANCET last week. It is a matter of constant observation that the boys here look better and bonnier at the end of the term than they do on their return from their homes. There may be, and no doubt there are, some boys who require attention on their return from school, yet, on the other hand, there is always at the beginning of a new term a number of boys who are not well enough to return to their work. That number I find is usually greatly in excess of the number of boys out of school from illness during the term. There must, in a population of five or six hundred, whether boys or men, be a certain percentage of more or less feeble constitutions, who are ailing or on the sick list without the smallest amount of over-pressure in the matter of work.

I am, Sir, yours very truly,
Marlborough College, Sept. 29, 1884. WALTER FERGUS.

"THE UNCERTAIN COMPOSITION AND ACTION OF GREY POWDER."

To the Editor of THE LANCET.

SIR,—Many years ago, at least twenty, I called attention in the *Indian Medical Gazette* to the tendency of the mercury in this preparation to assume the dangerous form of red oxide, and especially in a warm climate. I find as a matter of experiment that mercury with magnesia is perfectly stable provided pure mercury be used and no other ingredient added to the magnesia carbonate to expedite the minute division of the mercury, which must be effected by long-continued trituration; it is immaterial whether the light or heavy form of magnesia carbonate be used. I may remark that blue pill in suspension can be most conveniently given to infants.

I am, Sir, yours truly,
Totnes, Sept. 27th, 1884. H. COOKSON, F.R.C.S., Surgeon-Major, Indian Army (retired).

SALTS OF IRON.

To the Editor of THE LANCET.

SIR,—In prescribing salts of iron for patients I am constantly met with the inquiry, Will the teeth be injured by the medicine? There is a wide-spread belief among the laity that preparations of iron are injurious to the teeth, a belief which is also fostered by dentists. In some instances the prejudice amongst patients is so strong that a great difficulty arises in the matter of treatment when iron is indicated, especially in those cases, by no means rare, in which patients declare they cannot take pills. I suppose the blackened condition of the tongue and teeth, which is often seen after salts of iron have been taken, is due to a deposit of the sulphide of iron. Is this injurious to the teeth

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if not removed? If so, what is the nature of its action? I shall be glad of any expression of opinion on the part of your correspondents. The general question of the action of food and drugs upon the teeth is an interesting and important one. For instance, is sugar injurious? What is the risk also to the teeth in taking acids as tonics? I am, Sir, yours truly,

Doncaster, Sept. 27th, 1884. JAMES W. SMITH.

*** Mr. Coleman, in his "Manual of Dental Surgery," says: "The effects of administering medicines, especially acid ones, have by some been considered important factors in producing dental caries. We believe that it has been overrated; at the same time the long continuance of acid medicines renders such secretions as the saliva abnormally acid; and the direct contact of such acids as phosphoric, hydrochloric, and nitric may no doubt in time affect the teeth, as they certainly do certain kinds of metallic fillings in them. The common practice of employing a tube when taking acid medicines is of but small advantage compared with a thorough rinsing of the mouth with a solution of bicarbonate of potash or soda afterwards." Mr. Coleman does not refer to iron, but it may almost be taken for granted that the *remedies* are not nearly so hurtful to the teeth as are the *maladies* for which they are administered. See also Tomes' Dental Surgery, second edition, page 731.—ED. L.

"THE EXAMINATION OF SURGEONS-MAJOR."

To the Editor of THE LANCET.

SIR,—I have been considerably amused at the estimate which the ex-President of the Royal College of Surgeons of Ireland has formed of the value that a knowledge of operative surgery and practical medicine is to surgeons-major in the army. He appears to consider this, in their case, to be on a parallel with a knowledge of the goose-step to a lieutenant-colonel. This would scarcely seem an adequate illustration of Mr. Wheeler's own attainments and position as the surgeon of a large hospital and ex-President of a Royal College of Surgeons. He protests against the insult to a surgeon-major implied in his having to undergo an examination to show his fitness for promotion from the executive to the administrative rank. The Director-General may fairly desire to have some assurance on this point before taking the responsibility of recommending him for promotion on the grounds of ability and merit. But then, think of testing an officer of twenty years' service as to his knowledge of operative surgery and practical medicine! The ex-President must, I imagine, have been subjected to something of this kind, so far, at least, as surgery is concerned, before he was admitted to the honour of the Fellowship of the Royal College of Surgeons of Ireland. Why do not those "elderly victims" avoid the indignity of the proposed examination by following the excellent example which he has set them in this respect? It seems to be intended that medical officers possessing the Fellowship of any Royal College of Physicians or Surgeons granted under a higher standard of qualification than that for licentiate or member, will be exempted from examination in medicine and surgery. The Director-General does not seem to have adopted the idea of a one-portal system, but, in accordance with the views of Professor Huxley, and I believe also of Mr. Wheeler himself, appears to be perfectly satisfied with the qualifications to be obtained from any of the recognised Colleges. Perhaps Mr. Wheeler is not aware that middle-aged medical officers of the German army were competent a few years ago to go through a course of operative surgery under Professor Langenbeck, and were ordered to Berlin for that purpose.

I am, Sir, your obedient servant,

September, 1884. K. Y. Z.

THE STATE OF THE WEY.—The Guildford Rural Sanitary Authority have called the attention of Messrs. Spicer to the general opinion that the poisoning of fish in the river Wey was caused by an influx of some deleterious matter from their paper mill, and have ordered a careful inspection of the river to be made by the medical officer of health.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

THE SANITARY CONDITION OF NEWCASTLE.

OUR medical officer of health, Mr. H. E. Armstrong, has just issued his report on the sanitary condition of the city during the past year. This work of Mr. Armstrong's is too elaborate to be dealt with in this letter, but it is sufficient to say that it bears every mark of industry on the part of the writer, and shows besides a full and accurate knowledge of the working and requirements of the departments under his charge. Great care is shown in the compilation of the various tables and statistics throughout the report, which is likewise accompanied by very clear maps showing the portions of Newcastle at which scarlet fever, small-pox, enteric fever, and typhus appeared during the year, distinguishing the fatal and non-fatal cases. As to infectious diseases, he reports that there had been notified to him by practitioners in the city 2032 cases, and he remarks that as far as he can judge, "the notification clauses of the Newcastle-on-Tyne Improvement Act, 1882, are working, and are likely to work, smoothly, and with the satisfaction of the inhabitants." Mr. Armstrong shows very forcibly in his report that the most striking fact disclosed in the infectious diseases inquiry is the generally imperfect character of the separation made between the sick and healthy, even in large private houses and middle-class ones, and he asks what is to be expected in the case of tenemented houses of one, two, or three rooms, of which there are several on the same stair and scores in the same street. One inference he thinks is plainly deducible from the facts brought out in his report—namely, "that the greater prevalence and tendency to spread of the diseases in question"—in the densely populated districts—"is due to the fact that for the working-classes no such thing as home isolation of the infected sick is possible," and he further asks, "Ought this to be allowed? Have the public the right to protection from the danger to which they are exposed from such a state of things? Should not those authorities who provide accommodation for the fever-stricken have the power to insist on their removal from such unhealthy areas for the good of themselves, their relatives, neighbours, and the public in general." Speaking for myself as a practitioner, and from what I know of the feelings of other practitioners who have much contact with the working classes, I would answer Mr. Armstrong's questions by saying "No" to them all. Before he gets this summary medical jurisdiction for our poor I think it will be in common justice incumbent for our authorities to provide healthy dwellings for the working classes; for in town improvements they are little considered, but every so-called "improvement" packs the poorer classes more and more, and makes their condition worse than before. Far too little prominence is given to this aspect of sanitation.

NEWCASTLE WORKHOUSE AND ITS MEDICAL OFFICER.

As might have been expected from the increase of our city population, the Newcastle workhouse and its hospital have together expanded very much the last few years. Mr. N. Hardcastle has held the arduous post of medical officer for a great many years, spending a considerable but still a necessary time every morning in the performance of his duties, and liable at any time to be summoned to attend in urgent cases. Quite lately the guardians have—as a "fad"—requested him to attend at least twice daily, but without any augmentation of his stipend. Mr. Hardcastle stated, while asking for additional remuneration, that at various unions this duty was found to be quite unusual, and in asking for consideration, he points out that the labour involved in such visit requires him to compass some 700 or 800 miles annually. Mr. Hardcastle's request is a perfectly reasonable and just one, and ought to be at once complied with, or the guardians should provide him with a resident assistant.

Since the above was written the question has come up for settlement by the guardians. The House Committee reported against any increase, and, this being supported by the "economists," was carried by a majority of one. It was mentioned during the discussion that Mr. Hardcastle had acted as medical officer to the workhouse for twenty-nine years without a complaint. The feeling I hear expressed on all sides as to the action of the guardians in the matter is surprise at their shabby behaviour to an old officer, at the

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same time it is felt and believed that ere long the board will give Mr. Hardcastle the advance he asks as an act of bare justice.

Newcastle-on-Tyne, October, 1884.

GLASGOW.

(From our own Correspondent.)

THE OUTBREAK OF ENTERIC FEVER IN THE HOSPITALS.

DR. RUSSELL'S report on the outbreak of enteric fever in the Glasgow hospitals is one of the most interesting and valuable documents of its kind ever presented to the public. It shows three things very clearly—the excellence of the methods of investigation pursued by our sanitary authorities, how entirely the Public Health Acts are set at nought by the rural authorities in Scotland, and how great are the risks to which large urban populations are exposed from the culpable neglect of these rural authorities. This outbreak occurred suddenly and simultaneously in our three large hospitals, the Royal and Western Infirmaries, and the Belvidere Fever Hospital, institutions situated at long distances from each other, entirely separate as to drainage, and agreeing only in the source of their water-supply and their milk-supply. The former (the water-supply) was excluded, as the outbreak did not extend to the city generally. The milk for these institutions is obtained through an agent from about forty different farms, and investigation showed that at one of these farms—Fergushill, near Kilwinning—all the conditions prevailed which would favour the conveyance of the fever poison in the milk sent to town. There had been a patient suffering from fever on the farm. Enteric fever had been epidemic in the adjoining villages for over two years, and the water-supply of the farm was found to be extremely defective, while the streams from which the cattle drank received the sewage of the infected villages, and had caused a considerable mortality among the farmers' cows. The chain of evidence is thus complete. This I understand to be the second occasion on which disease of this kind has been sent from the same district to Glasgow. The present epidemic has so far involved 104 persons: 44 in the Western Infirmary, of whom 10 are males; 31 in Belvidere; and 29 at the Royal Infirmary. The disease is telling with special severity on the scarlet fever patients in Belvidere. In addition to those occurring in hospital, a few have been traced in the city among persons recently discharged from hospital. After referring to the notoriety of the bad sanitary condition of Kilwinning, Dr. Russell's report to the Town Council concludes thus: "The Local Authority put the circular [issued by the Board of Sanitary Supervision specifically upon the sanitary condition of dairy farms] in their waste basket, and it has been left for you, in self-defence, to obtain these analyses. It now remains for you to forward the results to the Board of Supervision in the hope that some means may by it be found to compel the Local Authority to do their duty. It is by such by-paths that cholera will find its way into our large cities." It would be interesting, if it could be ascertained, what was the nature of the feverish disease from which the farmers' cows suffered, as there is, so far as I am aware, no authentic recorded case of typhoid fever in the cow." The situation would not have been complete without the occurrence of a squabble at the Royal Infirmary. A difference of opinion arose between the medical staff and the managers as to the infectiousness or non-infectiousness of enteric fever; but, somewhat unusually, this difference of opinion seems to have been settled in favour of the view held by the staff.

IRELAND.

(From our own Correspondent.)

SANITARY CONGRESS AND EXHIBITION.

THE Sanitary Congress commenced last Tuesday. At one o'clock luncheon took place, and at three the Health Exhibition was formally declared open. At eight P.M. the inaugural address was delivered by the President, Sir Robert Rawlinson, C.B., in the lecture theatre of the Royal Dublin Society. His Excellency the Lord-Lieutenant was present at the banquet given on Thursday evening at the Shelbourne Hotel.

A BONE-SETTER IN TROUBLE.

An important case affecting that class of the community who believe implicitly in the skill of the local bone-setter was under investigation at New Pallas, county Limerick, last week. Some time since, a boy fell off a donkey and broke his arm; the services of a bone-setter were obtained, who put up the fractured limb; gangrene, however, set in, and the boy died. Dr. John Ryan, the medical officer of Grean dispensary, deposed at the inquest that he had examined the child, and that in his opinion death had resulted from gangrene of the arm caused by extreme pressure, in consequence of the parts having been bandaged too tightly. The jury found a verdict to this effect.

THE SEWAGE OF DUBLIN.

Sir Robert Rawlinson, C.B., in returning thanks for his inaugural address as President of the Sanitary Institute of Great Britain, at the Sanitary Congress held in Dublin this week, said he had, with Dr. MacCabe, in 1879, investigated the sanitary condition of Dublin as to its sewerage and drainage, and the state of the Liffey. He did not wish to paint Dublin in colours blacker than it deserved, but he was bound to say that there was a great deal to do as regards its sanitary condition which was absolutely necessary. He was of opinion that out to sea must go the whole of the crude sewage of Dublin, because the river Liffey must be purified, and intercepting sewers, having a sea outlet, would be the cheapest remedy. No city in the world was perfect as regarded its sanitary condition, and therefore the motto of sanitation must be, "Unceasing work, unceasing care, and unceasing attention."

FREE LIBRARIES IN DUBLIN.

The seventh annual Congress of the Library Association of the United Kingdom was commenced last Tuesday at Trinity College, when the opening address was given by Dr. Ingram, librarian to Trinity College. On the following day the new Free Libraries at Capel-street and Thomas-street were formally opened by the Lord Mayor, and in the evening a conversazione took place at the Mansion House.

THE DUBLIN ORTHOPÆDIC HOSPITAL.

The supporters of this institution, in consequence of the increasing demands for admission and the absolute necessity for additional room, so as to provide further accommodation, have secured new premises. The new hospital will be in Great Brunswick-street, and provision will be made so as to accommodate fifty inmates. The necessary alterations are nearly completed, and in a short time the inmates at Ushers Island will be moved to the new hospital in Brunswick-street.

His Royal Highness the Duke of Cambridge, while on a visit to Dublin this week, inspected the Royal Military Hospital and the Female Hospital for the Wives of Soldiers. Before his departure from the latter he wrote a memorandum in the visitors' book, stating that he found it in every respect in excellent order, and most creditable to the matron and those in charge.

From the annual report of the Registrar-General for Ireland for 1883 it appears that the births registered during the year were 118,163, and the deaths 96,228, a number equal to 1 in 52·1, or 19·2 per 1000, of the population. The emigrants numbered 108,724, and the estimated population to the middle of the year was 5,015,282.

The Local Government Board has sanctioned the appointment of Dr. Donovan as medical superintendent officer of health for the City of Cork.

Dublin, Sept. 30th.

PARIS.

(From our own Correspondent.)

THE LAICISATION OF THE HOSPITALS.

M. QUENTIN, the Director of Public Assistance, has, owing to some disagreement between him and the Prefect of the Seine respecting the work of laïcisation in the hospitals, resigned his office, and is to be succeeded by M. Cazelles, Prefect of the Bouches-du-Rhône. M. Quentin wanted to complete the laïcisation of the hospitals without further delay, but M. Poubelle, the prefect, found it expedient to put a check on the operation, as the Government has found

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to its cost that the class of women from whom nurses are recruited are quite unsuited for the care of the sick in the hospitals. Several irregularities having been brought to the notice of the authorities regarding the conduct of the "infirmières," which contrasted so unfavourably with that of the Sisters of Charity, it has been found necessary to put a restraint on the extreme measures hitherto carried out in some quarters in the work of laïcisation, and an instance has just occurred at the Hôtel Dieu at Auxerre, at which the disorderly conduct of the infirmières was so notorious that the Town Council thought proper to propose their dismissal and the reinstatement of the Sisters of Charity. The most remarkable feature of the affair was that the proposition emanated from the ultra-Radicals, who are also town councillors, and which was unanimously agreed to by the commission ordered to investigate the matter. Another reason alleged for the proposed change is that in the event of an outbreak of cholera, patients and officials would be found in a painful predicament without the Sisters of Charity in the hospitals, as was only lately exemplified at Toulon and Marseilles and other cholera-stricken districts, where the Sisters were recalled and their devotion and self-denial fully recognised.

M. Waldeck-Rousseau, the Minister of the Interior, has been laid up with a rather severe attack of rheumatism. He is now convalescent, and though not yet allowed to leave his room he is sufficiently well to transact the duties of his office.

The holidays being over, the reopening of the schools has just begun, and strict orders have been given that the state of the health of the pupils returning from the provinces should be rigorously inquired into, particularly of those coming from the cholera-stricken districts.

Paris, Oct. 1st, 1884.

CANADA.

(From a Correspondent.)

ASYLUMS AND LUNACY LAWS.

THERE has been a good deal of excitement in Montreal over the case of a young woman who has been for two years in the Long Point Asylum, although some of her friends assert that she has been perfectly sane during the whole period. The case of Ward, who was imprisoned in the same asylum some time ago by his wife, is a notorious example of false deprivation of liberty. The Lunacy Law in Quebec is very lax. The Ontario law, some years ago, was almost a reprint of the British statute. It has, however, been greatly altered and improved. Formerly the finding of two physicians was sufficient for a commitment, and this could be rather easily obtained. Suppose the family physician stated the facts of the case to another physician, who, placing confidence in his statements, might at his pleasure fill up the required papers without making a personal examination at all. Now, however, the examinations must be made by two physicians independently of each other, the family physician not being eligible. These medical men must not be partners, or father, brother, or son of persons interested in the institution. Their findings are submitted to the superintendent, who makes a separate examination on the admission of the person to ascertain the truth of the statements on which the charge is founded. With regard to private asylums the law is still more stringent. There must be the preliminary examination by two physicians. For each institution there is a board composed of the county judge, the county warden, the clerk of the peace, and the Government physician. The medical superintendent must report to the clerk of the peace within six days from the admission of a patient; the clerk must submit the report to the board. An examination is then made, and if there be no good grounds for restraint, the party is released. Should there be doubt in the matter, a second examination is ordered at an early date to avoid liberating a suspected person during a lucid interval.

CANADA MEDICAL ASSOCIATION.

This Association held its annual gathering in Montreal on August 25th, 26th, and 27th. The meeting was well attended, and much interest taken in the proceedings. Undoubtedly this was the most successful meeting the Association has ever had. All were eager to hear Mr. Lawson Tait's address on Abdominal Surgery, and none were disappointed when they did hear it. Some of the more recent utterances on abdominal surgery of Sir Spencer Wells came in for rather sharp criticism. Among the visitors at the Association from the United Kingdom may be mentioned Mr. Tait, Dr. McMillan of Hull, Dr. Heywood Smith, Dr. George Harley, and Dr. Protheroe Smith of London, Dr. Struthers of Aberdeen, and Dr. MacAlister, editor of the *Practitioner*. The banquet at the Windsor Hotel was excellent in every respect, and reflected great credit upon the hospitality of the profession in Montreal. The feast was presided over by the sage professor, Dr. Hingston of Montreal. The speeches of the British members were listened to with great attention. Wm. Osler, M.D., F.R.C.P., was chosen president for 1885, and the place of meeting, Winnipeg, Manitoba.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The meeting of this Association, which was held this year in Montreal, was a grand success alike in point of numbers, in the excellence of the papers, and in the general programme of amusements. First, there came the civic welcome, delivered by Major Beaudry in Queen's Hall to a large and brilliant audience. Sir John A. Macdonald, Premier of Canada, then addressed the meeting briefly, and congratulated the Association in coming to this country and the country on being favoured by so distinguished a visitation. The Marquis of Lansdowne, Governor-General, and a member of the Association, made a few well-chosen remarks, in which he expressed the hope that so many eminent scholars coming to this country, from different parts in Great Britain, would have a strong influence in binding the Dominion and the mother country more closely than ever. The President, Lord Rayleigh, then delivered his inaugural address. He travelled over a wide field in the course of his remarks, and called special attention to the fact that they would all go back to Britain with extended views regarding the country in which they had met for the first time. He dwelt fully on the dynamo-machine, and was hopeful that the time was near when electricity would be much more utilised than at present.

Many of the members of the Association, after the close of the session in Montreal, paid a visit to Toronto, where they were greeted by a civic address of welcome. The visitors then entered upon their drive to points of interest in the city, and arrived finally at the Government House, where a garden party was held.

Medical News.

ON Tuesday last the memorial stone of the new extension to Bradford Infirmary was laid by the Mayor of Bradford.

ROYAL COLLEGE OF SURGEONS.—The Library and Museum of this institution were reopened on Wednesday last, the 1st instant.

THE master of a British ship has been fined £4 at Cardiff for concealing the fact that there was an epidemic of scurvy on board his vessel.

AT the visit of the Duke and Duchess of Edinburgh to Hull this week, their Royal Highnesses laid the foundation stones of new wings to the infirmary of the town.

THE Freemasons belonging to the several lodges in Hertfordshire have erected in the Watford Cemetery a marble cross to the memory of the late Dr. F. H. Wilson Iles, deputy provincial grand master.

THE Gresham Lectures on Physic will be delivered by Dr. Symes Thompson in the theatre of Gresham College, Basinghall-street, on Tuesday, October 7th, and three following days.

THE CARTWRIGHT PRIZE.—This prize of the Alumni Association of the College of Physicians and Surgeons of New York, consisting of $500, will be awarded at the commencement of 1885 to the authors of the best medical essay upon any subject. The essays, which must contain the results of original investigation made by the writer, are to be sent in to the prize committee, of which Dr. R. W. Amidon, 18, West Twenty-first-street, is chairman, before April 1st, 1885.

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COLLECTIVE INVESTIGATION.—A special meeting to further the above object will be held in the Board-room of the Guildford Hospital on Thursday, October 9th, at 3.30 P.M., Jonathan Hutchinson, Esq., in the chair. There will be a discussion upon the subject of "Chorea and Acute Rheumatism." Specimens of bacteria will be shown by Messrs. Beck of Cornhill. A display of instruments will be exhibited by Messrs. Arnold and Sons.

ST. JOHN AMBULANCE ASSOCIATION.—A class at Parkhurst Prison, Isle of Wight, instructed by Dr. Arthur Price, has undergone examination by Surgeon Major V. Wearne, A.M.D., and the Governor, Major F. H. Noott, and seventeen warders have been reported to St. John's Gate as thoroughly competent to render "first aid to the injured." The Countess of Strathmore presented 358 certificates to the Dundee classes on Friday, and Lord Egerton of Tatton presided at a meeting at Stockport on Saturday to open the ensuing session.

THE METROPOLITAN ASYLUMS BOARD.—At the meeting of this Board on the 27th ult., returns were presented showing that during the four weeks which had elapsed since the interim meeting of the managers 319 fresh cases of small-pox had been received into the asylums from the districts of the metropolis, as against 295 in the previous four weeks. The fever returns showed that during the fortnight 249 fresh cases of fever had been received, as against 239 in the previous month. A tender of £79,000 for the erection of a convalescent scarlet fever asylum at Winchmore-hill was, being the lowest, accepted.

SCHOLARSHIPS AND EXHIBITIONS.—At University College the examiners recommend the following for medical entrance exhibitions: £100, H. Caiger; £60, H. M. Fernando; £40, S. V. J. Brock.—At Guy's Hospital the entrance scholarship of 125 guineas in Arts has been awarded to Mr. Alfred Parkin, and that of 125 guineas in Science to Mr. James McDonald Gill.—At St. Mary's the scholarships in Natural Science of £75 each have been awarded to Mr. W. G. Holloway and Mr. F. W. Lewitt, and those of £50 each to Mr. C. Graves, Mr. A. M. Hickley, and Mr. C. G. Mack.—At the London Hospital the entrance scholarship of the value of £60 has been awarded to Mr. William S. Fenwick; and that of the value of £40 to Mr. J. H. Sequiera.

THE HAMPSTEAD SMALL-POX HOSPITAL.—At the last meeting of the Hampstead Vestry, a report from Dr. Gwynn, the medical officer of health, on the subject of the spread of small-pox in the parish since the reopening in May last of the Metropolitan Asylums Board Hampstead Hospital for the reception of small-pox cases, came under consideration. Dr. Gwynn's report showed that from May to September, 1884, eighty-nine houses in the whole parish were attacked with small-pox, thirty-three of which were within a quarter-mile circle of the hospital wards, and twenty others between the quarter- and half-mile circle, houses of all classes being attacked. Against these facts was placed a return showing that in the whole of 1881, when small-pox was prevalent in the metropolis and when this hospital was closed, only thirty-six houses in the parish were attacked, but four of which were within the quarter-mile circle of the hospital wards, and only eight others between the quarter- and half-mile circle. After considerable discussion it was resolved to memorialise the Local Government Board to hold an inquiry into the statements contained in the report.

BOOKS ETC. RECEIVED.

ALLEN, W. H., & Co., London.
Nerves and Nerve Troubles. By J. Mortimer-Granville, M.D. pp. 99.

CASSELL & CO., London.
The Elements of Physiological Physics. By J. McGregor-Robertson, M.A., M.B., C.M. pp. 528, with 219 Engravings.

CHURCHILL, J. & A., London.
A Practical Treatise on Disease in Children. By Eustace Smith, M.D. pp. 844.
A Few Suggestions to Mothers on the Management of their Children. By a Mother. pp. 144.
The National Dispensatory. By Alfred Stillé, M.D., LL.D., and J. M. Maisch, Phar. D. Third Edition, thoroughly Revised, with Additions. pp. 1755, with 311 Illustrations.
Lectures delivered at the Royal College of Surgeons of England on some Important Points connected with the Surgery of the Urinary Organs. By Sir Henry Thompson, F.R.C.S. pp. 147, with Illustrations.
The Practice of Surgery. By Thomas Bryant, F.R.C.S. Fourth Edition. 2 vols. 750 Engravings.

EFFINGHAM WILSON, London.
The Social Code, 1884. Compiled by Geo. Ager, LL.D. pp. 224.

HIRSCHWALD, A., Berlin.
Handbuch für Madeira. Von Prof. Dr. Paul Langerhans. S. 206.
Beiträge zur Pathologischen Anatomie und zur Pathologie der Dementia Paralytica. Von Dr. Franz Tuczek. S. 151.
Untersuchungen über Spaltpilze im Menschlichen Blute. Ein Beitrag zur Allgemeinen Pathologie von Dr. G. v. Hoffmann. S. 82.

KIMPTON, HENRY, London.
Surgical Handicraft. By Walter Pye, F.R.C.S. pp. 544, with 208 Illustrations.

LEWIS, H. K., London.
On the Use and Abuse of Pessaries. By G. Granville Bantock, M.D. Second Edition. pp. 173, with Illustrations.

LONGMANS, GREEN, & CO., London.
The Handbook for Midwives. By H. Fly Smith, B.A., M.B.Oxon. Second Edition, thoroughly Revised. pp. 176, Illustrated.
On Sclerosis of the Spinal Cord. By Julius Althaus, M.D., M.R.C.P. pp. 394, with Illustrations.
The Science and Art of Surgery. By J. Eric Erichsen, F.R.C.S. Eighth Edition, Enlarged and carefully Revised. With numerous Engravings.

OPPENHEIM, R., Berlin.
Anatomische Vorlesungen für Aertze und ältere Studirende. Von Dr. Ad. Pansch. S. 220, mit 70 Holzstichen.

RELIGIOUS TRACT SOCIETY, London.
Leaders in Modern Philanthropy. By W. Garden Blaikie, D.D., LL.D. pp. 319, with 15 Portraits.

REMINGTON & Co., London.
Life in the Soudan. By Dr. Josiah Williams, F.R.G.S. pp. 338, Illustrated.

ROKKER, H. W., Springfield, Illinois.
Fifth Annual Report of the State Board of Health of Illinois. pp. 633.

SIMPKIN, MARSHALL, & Co., London.
Arithmetical Physics. 1. Acoustics, Light, and Heat. 2. Magnetism and Electricity. By C. J. Woodward, B.Sc. pp. 82-53.

SMITH, ELDER, & Co., London.
Clinical and Pathological Observations on Tumours of the Ovary, Fallopian Tube, and Broad Ligament. By Alban H. G. Doran, F.R.C.S. pp. 189, with 32 Illustrations.

TRÜBNER & Co., London.
Lessons for the Instruction of Deaf-and-Dumb Children in Speaking, Lip-reading, Reading, and Writing. By W. Van Praagh. Two Parts. pp. 51-61, Illustrated.
Materia Medica, Physiological and Applied. By several Authors. Vol. I. pp. 726.

URBAN & SCHWARZENBERG, Wien and Leipzig.
Pathologie und Therapie der Frauen-Krankheiten. Bearbeitet von Dr. Aug. Martin. S. 419, mit 164 Holzschnitten.
Grundriss der Operativen Geburtschilfe. Von Dr. Fried. Schauta. S. 259, mit 30 Holzschnitten.

Fifth Annual Report of the State Board of Health of Illinois.—The Treatment of Diabetes Mellitus; by Austin Flint, jun., M.D.—Index Medicus, Vol. VI., Nos. 7 & 8. (Trübner, London.)—Proceedings of the Naval Medical Society, Washington.—Dress of Women and Children; by Francis Vacher.—Cerebral Localisation in relation to Insanity, with Cases; by J. M. Carnochan, M.D. (Vail, New York.)—Etude comparée sur le Lait de la Femme, de l'Anesse, de la Vache, et de la Chèvre; par H. Fery.—La Lutte contre le Choléra; par H. Hanhart. (Baillière et Fils, Paris.)—The Poor-law Medical Service, its Past, Present, and Future; by T. M. Dolan, M.D.—The Leavenworth Case; by A. K. Green. (Routledge.)—The Human Element in Sex; by Dr. Elizabeth Blackwell. Universal-Pharmakopöe; von Dr. Bruno Hirsch; Guy Patin, a Medical Study; Maupertuis and Contemporary Pessimism; Some Comments on Lethargic Stupor or Trance; The Origin of Contagia; by A. M. Brown, M.D.—Cryptorchidism; by R. W. Johnson, M.D.—Medical Communications of the Massachusetts Medical Society, Vol. XIII.—An Examination of the Theory of Aerial Dissemination of Small-pox Infection; by Mr. D. Makuna.—Le Choléra et les Quarantaines, par le Dr. Dutrieux-Bey.—Ars Medici; by J. H. Clarke, M.D.—The Saxon Invasion and its Influence on our Character as a Race; by J. F. Palmer, L.R.C.P.—Remarks on Hernia and Intestinal Obstruction; by J. R. che, M.D.—On the Application of Dental Science in the Detection of Crime; by Robert Reid, L.D.S.E.—Illustrated Catalogue of the Chinese Exhibits at the International Health Exhibition.—Annual Calendar of the Faculty of Medicine of McGill University.—Disinfectants, and how to Use them; by E. T. Wilson, M.B.Oxon. (H. K. Lewis.)—Abstract of Cases &c. at the Monsall Fever Hospital.—Longmans' Magazine, October.—Good Words, Sunday Magazine, October.—Boys' Own Paper, Girls' Own Paper, Leisure Hour, Sunday at Home, October.

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Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BODY, H. MARTEN, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Tedburn St. Mary District, St. Thomas's Union, Devonshire, vice Renwick, resigned.

BULL, G. COULSON R., F.R.C.S., M.B., L.R.C.P.L., has been appointed Resident Pathologist and Registrar to the General Hospital, Birmingham.

CARNELLEY, MATTHEW, L.R.C.P.Lond., M.R.C.S., has been appointed Certifying Factory Surgeon to the District of Ruddington, Notts, vice Hall, deceased.

COOPER, ALFRED, F.R.C.S.Eng., L.S.A.Lond., has been appointed Consulting Surgeon to the West London Hospital.

CRIPPS, C. COUPER, M.B., M.S.Durh., M.R.C.S., has been appointed House-Physician to the Hospital for Women, Soho, vice Felix Vinrace, M.D., resigned.

DEAN, FRANCIS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Workhouse, Northleach Union, vice Webb, resigned.

FLECK, WILLIAM, M.D.Q.U.I., M.Ch., has been appointed Medical Officer to the Workhouse, High Wycombe Union, vice Hayden, resigned.

FURSE, EDWIN, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Workhouse, South Molton Union, vice Flexman, resigned.

GINDERS, ALFRED, M.D. St. And., L.R.C.P.Ed., San. Sci. Cert. Camb., has been appointed Government Medical Officer and Public Vaccinator for the District of Tauranga. Also Health Officer for the Port of Tauranga, Bay of Plenty, New Zealand.

KELTY, WILLIAM, M.B., Ch.M.Aber., has been appointed Government Medical Officer and Vaccinator for the District of Carcoar, New South Wales.

MOXON, HENRY JAMES, L.D.S.Lond., has been appointed Dental Surgeon to the London Female Penitentiary.

ROBINS, GEO. NORMAN, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Rippingdale District of the Bourn Union, Lincolnshire, vice Adams, resigned.

ROGERS, WILLIAM HENRY, L.F.P.S.Glasg., has been appointed Surgeon to the Cobar Hospital, New South Wales.

SCOT-SKIRVING, ROBERT, M.B., Ch.M.Ed., has been appointed Hon. Physician to Prince Alfred Hospital, Sydney.

SHONE, WILLIAM JAMES, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer and Public Vaccinator for the Little Marlow District of the High Wycombe Union, vice Hayden, resigned.

Births, Marriages, and Deaths.

BIRTHS.

HOLMES.—On the 30th ult., the wife of Dr. Gordon Holmes, of Finsbury-square, E.C., of twins.

MARSH.—On the 22nd ult., at Penn-hill, Yeovil, the wife of Charles J. Marsh, M.R.C.S. &c., of a son.

PARNELL.—On the 28th ult., at Forest-hill, S.E., the wife of G. C. Parnell, Surgeon, of a daughter.

UPTON.—On the 18th ult., at Rio Lodge, Brighton, the wife of Alfred Upton, L.R.C.P.Lond., M.R.C.S., of a daughter.

MARRIAGES.

BROWN—MURRAY.—On the 24th ult., at St. Mary's, Hulme, Manchester, J. Macdonald Brown, F.R.C.S.Eng., of Edinburgh, to Caroline Helen, third daughter of the late Alderman Adam Murray, J.P., of Apsley House, Ardwick, Manchester.

MORTON—BARRON.—On the 25th ult., at St. Pancras Church, by the Rev. Andrew Welch, Vicar of St. Mary Cray, Kent, uncle of the bridegroom, assisted by the Rev. W. E. Oliver, LL.D., Shadforth Morton, M.D., of Wellesley-villas, Croydon, son of the late Shadforth Giles Morton, Esq., of Sunderland, to E'la May, eldest daughter of Edward Jackson Barron, F.S.A., of Endsleigh-street, Tavistock-square, and of Lincoln's-inn-fields.

SHERBURN—BAILEY.—On the 25th ult., at St. James's Church, Hull, by the Rev. A. Boyd Carpenter, M.A., Vicar, assisted by the Rev. W. J. Mallish, M.A., Rector of Winestead, Holderness, John Sherburn, M.B., C.M. Edin., of Hull, to Louisa Ainley, youngest daughter of the late Wm. Bailey, J.P., of Winestead Hall, steamship owner.

DEATHS.

BEACH.—On the 29th ult., at Maryville, St. George's-road, Cheltenham, Henry John Beach, Brigade Surgeon, Her Majesty's Indian Army, retired, in his 52nd year.

CORY.—On the 25th ult., at West-mall, Clifton, very suddenly, William Gillett Cory, B.A., M.D., aged 57.

DONOVAN.—On the 1st ult., at Marine Villa, Monkstown, co. Cork, Mary Jane, beloved wife of Dr. Denis D. Donovan, of King-street, Cork. R.I.P.

JACKSON.—On the 24th ult., at Longsight, Manchester, Francis Edward Jackson, M.D., late Colonial Surgeon, Straits Settlements, aged 32.

MASH.—On the 27th ult., at St. Giles's-square, Northampton, James Mash, F.R.C.S., aged 87.

ROE.—On the 28th ult., at his residence, Kensington-crescent, W., Edward Thomas Roe, M.D., aged 64.

WILLIAMS.—On the 25th ult., at Mold, by an accident on the railway, Thomas Williams, L.R.C.P.Ed., L.F.P.S.Glas.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 2nd, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Sept. 26	29·98	W.	60	56	90	66	52	..	Overcast
,, 27	29·98	W.	57	54	85	62	49	..	Cloudy
,, 28	30·13	W.	62	58	98	67	54	·08	Cloudy
,, 29	30·11	W.	63	60	80	65	57	..	Cloudy
,, 30	30·22	S.W.	50	48	89	64	46	·10	Foggy
Oct. 1	30·06	W.	57	55	91	64	49	..	Raining
,, 2	30·11	S.W.	53	49	..	..	46	..	Hazy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

"WHAT IS A MINIM?"

ON this question *Nelson B. de S. Sizer*, B.Sc., M.D., &c., of Brooklyn, N.Y., U.S.A., writes:—"The weights and measures of the United States Pharmacopœia are founded on the troy ounce of 480 grains and the wine gallon. The pint is taken as weighing 7291·2 grains at 60° F. (Pereira's Mat. Med., Am. Ed., 1866). The pound is troy, containing 5760 grains, the ounce 480 grains. From these data it follows that the fluid ounce equals one-sixteenth of 7291·2 grains, or 455·7 grains; the fluid drachm weighs one-eighth of 455·7 grains, or 56·96 grains; the minim weighs one-sixtieth of 56·96 grains, or 0·949 grain. *En résumé*—The B.P. minim equals 0·91 grain troy; the U.S.P. minim equals 0·949 grain troy; the B.P. minim equals 0·96 minim U.S.; the U.S. minim equals 1·04 minim B.P. Lieut.-Col. Herschel will now perceive that the maker of his minim glass was not guilty of a 'systematic blunder' when he sent out a sixty-minim measure that contained about 54·6 grains troy, which was just what it should hold, and that the blundering, if any, must be looked for elsewhere."

Enquirens.—1. (*a*) Yes, in some cases. (*b*) An article by Dr. F. T. Roberts in the July number of the *Liverpool Medico-Chirurgical Quarterly Journal*.—2. Dr. Alexander's paper in *Brain*, vol. v., p. 170.

Nemo.—In Reynolds' System of Medicine.

TYPHOID FEVER ON BOARD SHIP FROM IMPURE WATER.

To the Editor of THE LANCET.

SIR,—Such outbreaks of fever on board ship as the one reported from Newcastle in your issue of the 20th ult. as having occurred on a Norwegian vessel used to be frequent enough in ships of all nations. The case of a ship that has put to sea with contaminated water for her only supply is terrible indeed; and the subject is sufficiently important to warrant attention being directed through your columns to one ready resource actually at hand on board British vessels to meet this emergency. In the Scale of Medical Stores the Board of Trade orders a bottle of Condy's fluid to be carried in the medicine chest of every merchant ship, and the simple addition of this to water contaminated with organic matter, as is well known, will render it safe for drinking. No simpler, more rapid, or more economical process can be imagined in such a case than the mere pouring of a little of Condy's fluid into the water in a tank and stirring it. When sufficient has been added to neutralise the impurities, the pink tint no longer vanishes, but maintains itself permanently, thereby affording a valuable indication that the water is then safe to drink. Ship surgeons would be conferring a benefit on masters and officers by informing them of this easy way of dealing with impure water when no other is available.

I am, Sir, yours obediently,

J. B. MITCHELL, M.D.

Titchfield-terrace, Regent's-park, Oct. 1st, 1884.

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Dr. James Alexander.—A certificate of having passed any of the preliminary examinations approved by the General Medical Council will be accepted by the College of Surgeons. A list of such examinations was omitted from our Students' Number from want of space, but may be obtained at the office of the Council, Oxford street.

J. Brund.—Ross's Diseases of the Nervous System will give the information.

ANILINE DYES.

To the Editor of THE LANCET.

SIR,—In your issue of Sept. 20th (page 510) I read an article respecting "Antiseptic Colours," which I was astonished to find in a scientific journal like THE LANCET. I have been in the industry of aniline colours for the last fifteen years, and therefore consider myself entitled to speak from experience. Not a single case has been brought to my knowledge which really proved that disease was caused, or any person was in any way injured, by wearing garments dyed with aniline colours. It is true that physicians frequently declare, and newspapers report on such authorities, that red hat-linings, red stockings, or blue drawers have originated serious maladies; but never has such an assertion been proved by sound arguments. You will admit that if the aniline colour did really injure the skin or the health in any way the workmen employed in our industry ought to be the first to fall victims to its influence; for not only are their garments penetrated with the dye, but their faces, hands, and arms are covered with it. They inhale the dust, and swallow the dye. Well, among about 4000 workmen employed in our own works and in the aniline colour works of our neighbours (at Mannheim, Höchst, Offenbach, Biebrich, and Griesheim) the general state of health is at least as good as that of the workmen of any other industry. The premium for insuring our workpeople against sickness is not higher than the average; and those who have been employed at our works since 1869, when we began making aniline colours, are fresh and healthy. I may add that repeatedly experiments have been made by feeding animals with aniline colours, especially with the much-calumniated magenta, and that it has been proved to demonstration that no harm whatever resulted therefrom. This is what I have to state respecting the effect of the aniline colours themselves—that is to say, the aniline colours not fixed on textile fabrics. As to the means of fixation, everyone knows that for wool and silk in most cases no mordant at all is required, and that the mordants used for cotton dyeing generally are tannic acid or sulphate of alumina, which certainly do not injure the skin even in the free state. If you compare with these harmless fixing means the ancient colours—for instance, cochineal, which is always fixed with a tin salt—you will allow that garments dyed with aniline colours must be considered at least as healthy as those dyed in the ancient manner. I have never deemed it necessary to refute the sensational accounts against the use of aniline colours as long as they appeared in common-place expressions of superficial newspaper reports; but I thought that if a journal of influence and authority like THE LANCET published an article like the one alluded to, its effect ought to be paralysed by an answer based upon the most incontestable facts.

I am, Sir, yours truly,

FRITZ GANS

Frankfurt, Sept. 26th, 1884. (of the firm of Leopold Cassella & Co.).

*** Instances of the production of a rash on the skin by wearing garments dyed with aniline colours have been observed by numerous physicians; the occurrence of such cases is beyond doubt. Mr. Gans's favourable experience may be perhaps due to the fact that our aniline contains arsenic acid, whilst his is pure. The matter, however, deserves investigation.—ED. L.

Insanity.—There is a sufficient account (for the examination mentioned) in Bristowe, last edition.

Surgical Instrument Enquirer.—The address mentioned is no doubt sufficient.

SCHOOL VENTILATION.

To the Editor of THE LANCET.

SIR,—This is a subject of growing interest, and I am glad to see it taken up by THE LANCET. I have gone into schoolrooms in which children were pent, and was glad enough to get back again into the open air. It is surely a good subject for investigation, as to how carbonic acid in different degrees affects the system; and Celsus mentions it. Not only is it important that schools which all the members of the rising generation are compelled to attend should be well ventilated, but that coal-mines should also be purified to a much greater extent than they are. In the leading article of the *Engineer Review* of Sept. 20th the writer, unable in consequence of the presence of CO_2 to light his lamp, went on working in the dark.—Yours truly,

Sept. 29th, 1884. CHAS. BROOM.

PIN-SWALLOWING.

To the Editor of THE LANCET.

SIR,—On Monday morning, about 8 o'clock, Mr. R—— came to me, stating that his boy, seven years of age, had just swallowed a pin. I recommended him to give the child plenty of bulky food, such as would tend to keep the bowels somewhat inactive, and carefully to avoid any aperient; also to search each motion for the pin. He followed this plan, and the pin, an inch and a quarter in length, was passed in a mass of fæces at 7 o'clock on the following Thursday morning.

I am, Sir, yours truly,

South Kensington, Sept. 13th, 1884. J. W.

"MODEL" BOOTS AND SHOES.

A GRATIFYING feature of the recent public awakening to the importance of hygiene generally is the increased attention which is being given to the question of the proper clothing of the feet. It is possible nowadays to meet with people who know how to protect their feet from cold and damp and rough roads without subjecting themselves to one of the most dreaded tortures of the Inquisition. In the case of children—if they are to be saved from corns and bunions, which form a life-long trouble to the majority of the members of all civilised communities—it is of especial moment that there should be some approach to harmony between the delicate anatomy of the chief organ of progression and the shape and size of the boot which is intended to cover it. These remarks have been suggested by the receipt from Messrs. Cook and Townshend, of Byrom-street, Liverpool, of a specimen of their "Child's Model Boot," which appears to fulfil the conditions necessary to ensure perfect ease and comfort in walking and running. The material is of the most pliable leather, and the shape conforms to the natural outline of the foot. By the way, we would express our preference, except in bad weather, for the shoe, as compared with the boot, for young people, as the former, by allowing easy play of the ankle-joint, permits of greater freedom of action, and favours a more lithesome motion and a more graceful carriage than can be secured with the use of the boot.

Mr. Reynolds (Castle Donington).—The proof arrived too late for corrections to be made.

"HOUSE DRAINS: A SUGGESTION."

To the Editor of THE LANCET.

SIR,—With deference allow me to question the opinion (if I understand it rightly) expressed in one of your leading articles last week *re* house-drainage. You there deprecate ground-level ventilation, and advocate a single air-shaft immediately from the house drain. I venture to doubt whether this is sufficient or sound advice. I would insist, in the first place, on distinct isolation of the house drain from the sewer by one of the many traps (their name is legion—Buchan's or Heffyer's, &c.), in which the pressure of sewer gas on the water seal, at its distal end, is taken off by a ventilating shaft near it, and carried up above the roof of the house. The shaft might be black, and as much exposed to the sun as possible. In the second place, on the proximate side of the trap I would place a good-sized ground-level grating and charcoal tray, establishing a free current of air through the drain from this point to the top of the soil-pipe ventilating shaft; all this on the house side of the intercepting trap. This part of the drain, with adequate water service, if properly laid and gradationed, would be at all times comparatively pure, while the increased pressure of the atmosphere on the low-level grating would, with what builders call "the suck of the house," tend for good in establishing the circulation of fresh air through that section of the drain immediately connected with the house.

I am, Sir, your obedient servant,

H. D. FOWLER,

Bedford, Sept. 29th, 1884. Deputy Surgeon General (h.p.).

*** If our correspondent will look again at our article, he will see that we insist as strongly as it is possible to insist on the necessity of complete "disconnection." This can only be secured by the use of a perfect disconnecting chamber. We are, however, quite as strong in our denunciation of low level ventilators, of whatsoever kind. It is all nonsense to suppose fresh air enters without the escape of impure air; the inlet pipe must come down from the roof level. Then if, as so often happens, the current be reversed, there is no harm done. As a matter of fact, if the grating over a ground-level "inlet" be tested, it will be found to be more frequently an *outlet*.—ED. L.

Dr. T. P. A. Stuart (Sydney).—The evidence before us is insufficient to enable us to express a definite opinion on the matter.

J. H. B.—We believe the test-papers are trustworthy.

G. A.—Yes.

"'HIGH' GAME."

To the Editor of THE LANCET.

SIR,—Amongst the annotations in your last issue was one on the wilful destruction of "high" game (which no doubt often unnecessarily takes place), suggesting a remedy for its correction and further preservation. Allow me to suggest another, which would, I think, be found more efficacious and easy of application—viz., to paint the tainted parts, usually the neck and chest, with a strong solution of iodine in rectified spirit, which quickly permeates the soft tissue, or any part that may be torn. It must be very "high," indeed, if this fails at once and completely to remove all taint, the solution being so volatile that not an atom, or taste, or colour of the iodine remains after cooking. On several occasions game sent me from a distance has been pronounced hopeless by the cook; but after having been dressed as above and cooked has been considered delicious, those partaking of it having no idea of its having ever been thought "high." I have also given the direction to many others, who have invariably been satisfied with the results.

I am, Sir, yours truly.

Kingston-on-Thames, Sept. 30th, 1884. GEO. MUNDIE.

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Mr. Whitworth should consult a respectable medical agent. The case should admit of easy adjustment, and our correspondent's services seem to have been such as to constitute an important element in any terms to be accepted.

PROLAPSED UTERUS.

To the Editor of THE LANCET.

SIR,—An account of the following case may be of interest to some of your readers.

On July 8th I was summoned to attend Mrs. P—— in her second confinement. On arrival I found the uterus completely prolapsed, the os and cervix being external to the vulva, and forming a tumour as large as a good-sized fist. I was told that during her first pregnancy her womb had come down, but had gone up again at the time of quickening, and that she had gone to the full time comfortably. Soon after leaving her bed, however, the uterus again descended, and remained so, although she expected that as soon as she "felt life" it would rise to its proper position, as it had done before. I may state that her first child is now five years of age, and that she has never had any treatment for her trouble. On further examination I found that the liquor amnii had escaped; the os was soft and dilatable, although as thick as two fingers, the head well down in the pelvis in the first position, and the pains regular, but with little expulsive power. I administered a few doses of ergot, and gently dilated the os with the fingers; but as the pains did not improve I proceeded to deliver with the forceps, introducing them carefully through the os, and into the cavity of the uterus. On applying traction I had a great deal of difficulty in preventing the uterus being expelled *in toto*; but by grasping the cervix with the left hand, or, rather, hooking my fingers over the edge of the os, and holding it back while I extracted the head with the right, I finally succeeded, with only a slight laceration of the cervix, in delivering the patient of a well-nourished male child at full time. Immediately after delivery I restored the uterus to its proper position, and kept the patient in bed for three weeks. As soon as the lochia had ceased I commenced Dr. R. Bell's treatment by medicated tampons. This has done a great deal of good by keeping the wound in position and reducing the size and weight of the cervix; but I fear it will not be sufficient to cure the tendency to prolapse in this case, as the ligaments must be severely strained by the long-continued displacement of the gravid uterus. I find that the tampon "loses its grip," as Dr. Bell says, about sixty hours after introduction, and slips down; so now I put in a small plug of cotton, and then introduce an ordinary circular boxwood pessary. This plan answers well, so that I have to see the patient and change the plug every fourth day only.

I think this case is remarkable, first on account of the comparatively slight amount of inconvenience caused by so severe a displacement, the patient having done all her own housework and washing during the pregnancy without having made any very great complaints of suffering; and, secondly, on account of the fact that although during the whole time the fœtal head must have occupied the cavity of the pelvis the woman did not miscarry, or even prematurely give birth to the infant; she, in fact, even states she is quite sure she was pregnant almost ten months, and from the appearance of the fœtus I should say that it is at least fully developed. In conclusion, I may remark that it was rather a novel experience for me to watch the progress of what is usually the first stage of labour after the head was fully expelled from the vulva.

I am, Sir, yours faithfully,

THOS. LEAHY, M.B.Dub.

Ashburton, Canterbury, New Zealand, Aug. 15th, 1884.

FERMENTATION AND INOCULATION.

To the Editor of THE LANCET.

SIR,—Brewer's wort, in that it is an organic liquid with saline constituents and able to support at the expense of some of these organic and saline constituents different types of low animal or vegetable life, may be roughly compared to human blood. When, as in the ordinary process of brewing, the wort is inoculated with yeast, that yeast feeds on certain organic and saline bodies in the wort, reproduces itself, runs a regular course, and in due time stops feeding and reproducing, and throws itself out of the wort. The liquid left behind, beer, is devoid of these bodies necessary to support the life and reproduction of yeast. If more yeast be put into the beer, no such action as previously described takes place; the beer remains practically unaltered. But if the beer be inoculated with one of the other ferments known to it—say, with the acetic acid germ or putrid germ of the brewer—that ferment will go on reproducing until it has exhausted all its particular food that it can find in the beer; it then becomes inert, and resigns possession of the liquid. If another dose of the same ferment be then introduced into the beer, it will not reproduce itself; but the beer remains practically unaltered.

Is it not probable that when the blood is inoculated—say as a protection against some disease (e.g., small-pox)—an analogous process goes on? Some sort of ferment which requires as its food the identical bodies in the blood which the small-pox germ also requires is introduced into the blood; it feeds on and reproduces itself on these bodies until it has exhausted them; it then throws itself clear of the blood, and no ferment requiring these same bodies in the blood for its support, can live in that blood until the last has replenished itself with them. This would, I suppose, occur in time with the blood of a living being, and then the person would be liable to again "take" if revaccinated, or if not vaccinated, to support the small-pox germ—i.e., to contract the disease.

I am, Sir, yours obediently,

Kilburn Brewery, N.W., Sept. 16th, 1884. H. G. ADDIS.

MEDICAL EDUCATION IN JAPAN.

FROM a pamphlet entitled General Outlines of Education in Japan, which has been specially prepared for the International Health Exhibition, it appears that there is only one university, called Tôkiô Daigaku, which is under the control of the Department of Education. Attached to the University there is Yobimon (preparatory department) of the Tôkiô Daigaku, which consists of two schools—viz., the principal school, which is situated within the departments of law, science, and literature, and the branch school, which is situated within the department of medicine, and intended to prepare students on such subjects as are necessary for entering this department. The length of the course of study is four years in the branch school. In the department of medicine there is a course of instruction in medicine and pharmacy, and a special course is also provided. The object of the course in medicine is to train students for the degree of Igakushi, and the length of the course of study is five years; but the object of the special course in medicine is to train students as practical physicians, and the length of the course of study is four years. The course of study in pharmacy occupies three years. In the professional schools of medicine, which are situated in various localities, the length of the course of study is four years for physicians who pursue the regular course of study, and three years for those who desire to complete their study in a short time.

An Anxious Husband had better be guided by the advice of the medical attendant in the case.

A Constant Subscriber has not enclosed his card.

AN APPEAL TO PUBLIC VACCINATORS.

To the Editor of THE LANCET.

SIR,—I appear to have alarmed one of our district lady visitors, who has written to one of my guardians complaining of the manner in which I do my public vaccination—i.e., that I produce six vesicles. The instructions issued by the Local Government Board direct us to make "not less than four good-sized vesicles." Now, I am in the habit of making six small places, and am convinced that I cause no more local irritation than when I made four larger vesicles, as I used to do formerly. I have been public vaccinator here for five years, and during that time I have twice received the Government grant, and shall be much surprised if I fail to obtain it the next time the Government inspector pays me a visit. I shall esteem it a great favour if public vaccinators who read this will kindly send me a post-card stating the size and number of their vesicles, as I am requested to obtain this information; and if I get a good number of replies I will forward the result to THE LANCET.—I am, Sir, yours obediently,

Walthamstow, Oct. 1st, 1884. THOS. SCORESBY-JACKSON, M.D.

"A NEW TRACHEOTOMY TUBE."

To the Editor of THE LANCET.

SIR,—In your impression of the 27th ult. we notice, under the heading of "New Inventions," a description of a new tracheotomy tube, made in gum elastic at the suggestion of Mr. A. Rea Edwards, L.R.C.P. We beg to inform you that we have for some considerable time made them in this material, and have supplied them to many eminent members of the profession, who have used and approved highly of them. Upon reference to our illustrated catalogue, published in June, 1883, p. 157, fig. 460, will be found illustrated and described the elastic gum tubes made by us in four sizes, with or without an aperture in the tube. In consequence of the shield of our instruments being of one continuous web, it is impossible for them to become detached, and the shield, being soft, adapts itself with much comfort.

We are, Sir, your obedient servants,

New Bond-street, Oct. 1st, 1884. C. WRIGHT & Co.

"WANTED, A DIAGNOSIS."

To the Editor of THE LANCET.

SIR,—The letter under the above heading in your issue of Sept. 20th calls to my memory the following case of lead-poisoning.

A gentleman, aged fifty, presented an increasing muscular weakness of both hands, most marked in the right one. One of the many doctors he consulted thought it might have been occasioned by a long-standing habit of taking snuff which had been kept wrapped up in lead-foil instead of tin-foil, as usual in Italy. Perfect cure following the giving up of such a way of keeping snuff proved, *ex juvantibus*, the diagnosis to be correct.

I am, Sir, yours truly,

Verona, Sept. 24th, 1884. L. C.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—I shall be obliged by your allowing me to state that the inverted commas in the last paragraph but one in my communication of last week should be at the end of that paragraph, and not after the word "day," all the words being Sir Benjamin Brodie's, written some thirty or forty years ago.

I am, Sir, yours truly,

Savile-row, Oct. 1st, 1884. CHARLES HAWKINS.

ERRATUM.—In the report of the case of sunstroke at the Radcliffe Infirmary last week, the respirations were, by a typographical error, put at 136, instead of 36.

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COMMUNICATIONS, LETTERS, &c., have been received from—Sir E. Lechmere, London; Dr. Mahomed, London; Mr. Watson Cheyne, London; Mr. Orton, Stockport; Mr. Garrett, New York; Surgeon-Major Cookson, Totnes; Dr. Sizer, Brooklyn; Messrs. Cassella and Co., Frankfurt; Mr. Stretton, Kidderminster; Deputy Surgeon-General Fowler, Bedford; Mr. C. Broom; Mr. Makuna, London; Mr. Baker, Hockley; Dr. Alexander; Dr. Finlay, London; Mr. H. G. Manning, Salisbury; Dr. Strahan, Berry Wood; Dr. Fergus, Marlborough; Mr. Storey, Leicester; Mrs. Sullivan, Leicester; Dr. Law, Kensington; Mr. Jarman; Mr. Hall; Messrs. Horncastle and Co., London; Mr. Cornish, Manchester; Messrs. Austin and Sons, Clifton; Mr. Furley, London; Mr. Fowler, Hereford; Messrs. Bolton and Paul, Norwich; Mr. Maythorne, Biggleswade; Mr. Grant, Birmingham; Mr. Williamson, Farnham; Mr. Anderson; Mr. Haywood, Manchester; Messrs. Pembs and Co., London; Messrs. Paskins and Gotto, London; Mrs. Cherry, Plymouth; Dr. Adam, West Malling, Kent; Mr. Whitehouse, Rutford; Dr. N. Kerr, London; Mr. Hunt, Hull; Mr. Birchall, Liverpool; Dr. Davies, Bridgend; Dr. Tucker Wise, London; Mr. McPherson, Middlesbrough; Mr. E. F. Neve, Edinburgh; Dr. C. S. Taylor; Dr. Wiltshire; Dr. Leahy, Ashburton, New Zealand; Major-General Boileau; Mr. Thomas Bailey, Birmingham; Mr. H. K. Lewis, London; Dr. Habgood; Dr. Gowers, London; Dr. Beer, Vienna; Dr. Young, Hounslow; Dr. Craske, London; Mr. R. F. Campbell; Dr. Gordon Holmes; Dr. Mitchell, London; Dr. Norman Chevers, London; Mr. Nankivell, Butterworth, South Africa; Mr. H. A. Reeves, London; Mr. Clement Lucas, London; Mr. J. W. Taylor, Birmingham; Dr. Banham, Sheffield; Dr. Tyrrell Brooks, Oxford; Mr. Macnamara, London; Dr. Boothroyd, London; Mr. Gruenbaum, Stratford; Dr. Scoresby-Jackson, Walthamstow; Mr. Buckeridge; Mr. Bruno; Mr. Charles Hawkins, London; Mr. S Simpson, Romsey; Dr. Leftwich; Mr. Woodman, London; Dr. Searey, Tuskaloosa; Dr. Savage, London; Messrs. Mills and Co., Borough; Mr. Rutherford; Mr. Roberts; Mr. Fitzpatrick, Norwich; Mr. Crofts, Church Gresley; Mr. Kneebone, Bedford; Mr. Gillanders, Fortrose; Mr. Lyng, Saxmundham; Messrs. Trübner and Co., London; Mr. Phillips, London; Mr. Cantlie; Dr. Saundby, Birmingham; Mr. Grote, Bristol; Dr. Ormsby, Dublin; Mr. Merlin, Sutton; Dr. Nugent; Insanity; A Disgusted One; Enquirens; Medicus, Dudley; Medicus, Bristol; Vendor; F.R.C.S., Leeds; L. C.; Moulting; J. P., Finsbury-park.

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Sydenham and Penge Gazette, Calcutta Englishman, Family Churchman, Liverpool Courier, Kimberley Daily Independent, Musical Opinion, Kimberley Diamond Fields Advertiser, Practical Confectioner, &c., received.

Medical Diary for the ensuing Week.

Monday, October 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, October 7.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, October 8.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
HUNTERIAN SOCIETY.—7.30 P.M. Meeting of Council. 8 P.M. Dr. Robert Fowler: Presidential Address.—Mr. Walter Fowler: Specimens of the Bacillus Anthracis.—Dr. Pitt: Anthrax (with specimens).
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shewn by Dr. Potter and others. Mr. Hopkins Watters: Post-partum Avulsion of the Uterus, Right Ovary, and Fallopian Tube; recovery.—Dr. Horrocks: Rupture of the Uterus and Vagina.—Dr. Potter: Retained Product of Conception.

Thursday, October 9.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, October 10.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Hadden: Certain Nerve Symptoms in Rheumatic Affections.—Mr. Croft: Preputial Calculi.—Dr. Crocker: Urticaria Pigmentosa or Xanthelasmoides.—Dr. Finlay: Perforation of the Vermiform Appendix.—Mr. Golding Bird: Dislocation of the Patella.

Saturday, October 11.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Introductory Address

DELIVERED AT

ST. GEORGE'S HOSPITAL,

On October 1st, 1884,

BY F. H. CHAMPNEYS, M.A., M.B. OXON., F.R.C.P.,
ASSISTANT OBSTETRIC PHYSICIAN TO THE HOSPITAL.

THE FABLE OF THE COCKCHAFERS AND THE PIN.

ON a certain day in the fall of the year the cockchafers were wont to assemble from all parts, and solemnly to impale upon a pin one of their number, choosing each year the next younger in succession (τὸν ἀεὶ νεώτερον). The chafer, thus impaled, buzzed round upon his pin; the greater his pain, the quicker he moved his wings, and the shriller and the louder were his buzzings. At the end of an hour he was taken off his pin (for he did not always die), and all the assembly feasted together. They pledged the recent victim in nectar, and declared each year that the buzzings were superior to the last—that is, that their "tone" was "higher." At length one of the insects, whose turn to be impaled was approaching, appealed for protection to those who had but recently been tortured; but they said, "Is it likely that we, who have already undergone our torture, should endeavour to make your lot better than ours has been?" The chafer then turned to the elders and implored them to abolish the cruel and useless custom, or, if not, to give an example to the younger by themselves willingly undergoing the ceremony, which their venerable and exalted position in the tribe would enable them to endure with a dignity unattainable by comparatively mere grubs. To him they answered: "We should have much pleasure, but our time for buzzing is past; moreover, each must have his turn; whatever has been must be; and do not you perceive that no sooner is each chafer taken from his pin than he becomes an upholder of this ancient custom?" Moral: Expect no relief of suffering in the future from those who have suffered in the past.

The fable which I have just read to you, gentlemen, has of course nothing to do with the present occasion, but, as a graduate of a "lost medical school," I have thought it not inappropriate to bring before your notice a "lost fable of Æsop," which, so far as I can ascertain, has never been hitherto translated into English.

The first part of my task consists in the pleasant duty of wishing you all a happy new medical year, and in expressing the hope that this year each of us may do his very best—whether teacher or pupil—to add to the honour and credit of St. George's Hospital. We have received great and honourable traditions, and it rests with us to add to them or to diminish them. The first cannot be accomplished without enterprise and without self-denial; the second will occur without any effort on our part—it merely requires the very common qualities of supineness and procrastination, and the result is assured. But I think I may venture to speak for all, and to say that no effort shall be wanting on the part of old or young (for we are all students to the end of our days) to do the very best in our power to uphold the honour of our school. To those who make their first appearance to-day I would give a special word of welcome, and I can tell them from personal experience that not many days will elapse before they will feel as if they had been at St. George's all their life. This result is partly due to the friendly relations between teachers and taught, which are, I think, one of the traditions of the place, and it is partly due to the moderate size of our school, which renders personal attention far more possible than in larger institutions. Among their fellow-students they are sure to find pleasant companions and plenty of such amusements as are not incompatible with—or rather, I should say, are aids to—work. The great thing is to make a good start. About this I shall say more later on.

The year that has just passed has deprived us of two members of our consulting staff, Dr. Barclay and Mr. Cæsar Hawkins. Dr. Barclay had so lately left the active service of the hospital, that he was known in that capacity to most of us as a kind, courteous, and comely gentleman of a school which is becoming scarce—of a school which studied prognosis before all things, and whose prognosis, often arrived at by different methods from those most relied on by their successors, was not seldom surprisingly correct. Our modern engines of precision, the stethoscope and thermometer, are invaluable, but while we have gained much from their use, we have almost certainly lost a little in the way of a general study of the aspect of the various forms of disease. This power in practitioners of the old school was greatly developed in proportion as it was one of their chief means of diagnosis, and therefore of treatment.

Dr. Barclay was of course well acquainted with all modern methods, but he had had the advantage of the old ones also. To the modern student the order of importance would, I suppose, seem to be (1) treatment, (2) diagnosis, and prognosis would come a "bad third" or "nowhere;" but its place is far higher, for in one view it accurately follows diagnosis, and in another it may be studied even apart from this, and in cases where diagnosis is highly uncertain, or even impossible; in any case it completes and rounds off the study of the natural history of disease, and, so to say, "proves" the sum set us to solve. Dr. Barclay added several valuable treatises on various subjects to medical literature, but it is to be regretted that a man whose mind was so cultivated, and whose education was so varied, did not accomplish even more than this. The reason is perhaps to be sought in his health, which had been for some time far from robust, or in natural temperament, which was the reverse of sanguine. His death at the last was sudden, and, to those who had seen him not many hours earlier at the College of Physicians, apparently in his usual health, unexpected. We miss the refined face and presence so long familiar to St. George's Hospital.

In Mr. Cæsar Hawkins St. George's has lost an important link with its past history. He had long ceased to have an active concern in our medical school, but was not unfrequently to be seen at meetings, and his face was familiar to most of us. His connexion with St. George's Hospital dates as far back as the year 1819, in which he entered as a student to the lectures of Mr. (afterwards Sir Benjamin) Brodie, and to those of Mr. (afterwards Sir Charles) Bell. He was intimately associated with the work of these eminent men, as well as with that of Sir Everard Home, Herbert Mayo, and others. He held in turn every office at the Royal College of Surgeons, and nearly every post open elsewhere to a surgeon, amongst others that of Serjeant-Surgeon to the Queen, being the fourth of his family to hold that office. As a surgeon I am told he was conservative in principle, but intrepid in action when necessity arose. His literary contributions were privately published ten years ago in two volumes, and are a collection of very great value, showing their author as a highly cultivated medical man. About his character there is but one opinion, and that is that he was a man of noble mind, whose strength of will and tenacity of purpose were only equalled by his sincerity and unselfishness. It is, perhaps, owing to the absence of self-seeking, which was one of his characteristics, that he died undecorated, except by the judgment of the highest court of appeal, that of his peers. Individually I regret much that my connexion with St. George's commenced too late for any personal acquaintance with him, for example is better than precept, and men such as he is described to have been are not met with every day; indeed, I would say happy is the man who has been admitted to the intimate friendship of one such person. To all of us he should be an example of uprightness and honour in a profession where such virtues are paramount, and are far more important in every sense than learning, or skill, or success. Indeed, the most chivalrous and scrupulous honour is not always the surest means to success.

Our teaching staff has been augmented by Dr. Delépine, a gentleman whose high scientific attainments will doubtless bear fruit in our medical school.

Some of us have to-day begun their connexion with the medical profession, which they have selected, or which has been selected for them, for very various reasons. A certain proportion are the sons of medical men, and naturally look to joining their fathers sooner or later. It is true, however, that the life of hard work and few relaxations often acts as a deterrent, and that the medical calling is the last chosen by those who have witnessed such a life in their fathers' houses.

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This is perhaps just as well, for our profession is not one which will satisfy those who seek for *otium cum dignitate*, nor do we want such men in our ranks. Others, again, have a hankering after the military or naval services, but having been unable to persuade their friends to allow them to enter a profession in which they will practically have to pay to be allowed to work, they join our ranks in the hope of some day healing the injuries which it was their earliest ambition to cause. Others, again, choose the medical profession because they "must do something," and think that they will dislike this less than any other occupation. To others our profession is simply and honestly the object of their choice, and they have embraced it spontaneously and with all their heart as the occupation in which they look forward to live and die. From one class we are happily free—namely, the class which selects one or two of the other learned professions simply with the view of gaining a certain status in society, and losing the identity and surroundings of the individual under the generic term of the profession to which he belongs. Much is written from time to time as to the social status of our profession, the absence of decorations conferred upon it, and its comparatively low rank in society. With regard to the latter there is at present a Grand Duke of Austria among the members of our profession, a fact on which no doubt the profession is to be congratulated, but I think his Serene Highness still more. For we must remember that among the motives which may influence men in choosing a profession are included these two—first, the hope of being stamped or marked by the profession, and secondly, the hope of leaving their stamp or mark upon it; and in proportion as we accomplish the second, we shall help to accomplish the first both for ourselves and for others. The second of these objects depends partly on eminent skill, partly (as the world is constituted) on what is called "success," but far more on the honour and uprightness, which perhaps attain their highest development in the best (not always the decorated) members of the medical profession. It is probably a distinct loss to the State that no members of our profession are selected as the official and authorised advisers of our legislative assemblies on matters so important as health and disease, and that questions of national importance concerning these departments are more or less at the mercy of class prejudice or vulgar popular oratory, and that such influences appear at times to dominate our rulers. It seems, however, as if one or two recent fiascos of this nature were likely to bear fruit in the direction of the appointment of responsible advisers whose duty shall be to instruct our rulers on medical matters.

On the whole, then, although the chief seats in our assemblies do not yet carry with them such titles as Baron Sarcoma, Viscount Strabismus, and the Duke of Anasarca, it is probable that a learned, honourable, and chivalrous doctor is not less honoured and valued than a learned, honourable, and chivalrous lawyer or clergyman, and that these qualities do meet with recognition in the world. But, after all, recognition by the world—that is, by those least able to judge—should not be the aim of anyone embracing the medical life. Laying aside the highest appeal, to which no reference will now be made, there are two other judgment seats whose commendation we may all lawfully covet. The first is the assembly of our peers, a body acquainted with our circumstances and with the details of our calling, and capable of judging our conduct as experts. But here, again, we must distinguish between the opinion of those more and those less competent to form a correct judgment, including in the latter category a considerable number of individuals whose views are interested, or who act as the *claque* to some medical journal. There still remains another forum—namely, that at which we ourselves sit, or should sit, in judgment on ourselves. The value of this tribunal will vary according to the manner in which we have trained our conscience; but, unless we have committed the heinous crime of deceiving ourselves, we may take this as the ultimate (or rather penultimate) court of appeal. This court may acquit us when the lower courts have (perhaps justifiably) condemned us; we may have been hissed, but we may applaud ourselves, like the actress Arbuscula, who said, "Populus me sibilat, at mihi plaudo"—a sentiment which, in certain cases, is quite right (begging the poet's pardon). On the other hand, we may have been acquitted by our peers, but condemn ourselves.

In any case, we should make up our minds to act in such a way as to earn our own approval, to win (in any reasonable way) the approval of our peers, and to trouble ourselves but little beyond this. If we reverse this order we may win applause in the lowest court; but we shall jeopardise our standing in the court of our peers and shall inevitably lose our self-respect. The injury which in such a case we do is not confined to ourselves; it degrades our whole profession, while the opposite course elevates it. Our profession, if used merely as a means to wealth and success, is a very low one; while on the other hand, success of the highest kind and competence, at the least, do, as a fact, usually accrue to those who seek first the unselfish honour of their calling. As a money-making concern medicine is certainly a relatively poor speculation, compared, at least, with business or with some other of the learned professions, and large fortunes made nominally by medicine are often, in fact, the result of a nucleus judiciously manipulated in the neighbourhood of Capel-court, and cannot be taken as representing real professional work. Money so acquired may be made the means of other forms of success and advancement. But this kind of business cannot be considered as part of our calling, however lawful it may be, and, generally speaking, competence rather than wealth is the financial termination of our lives. Still, it is generally true that "He that will work, likewise shall he eat." It speaks volumes for the interest and attractiveness of the profession that our ranks are constantly swelling, and swelling with men whose education and social status appear to improve every year in spite of the fact that its members are comparatively poor. There is, indeed, a means by which a large practice is sometimes made and a considerable fortune realised—namely, by a system of advertisement, more or less cleverly veiled, or not veiled at all. Those who pursue such a system sell their birthright for a mess of pottage, and in some cases make an excellent bargain, for they exchange a doubtful reputation for actual wealth, and are very satisfied with the transaction. It is sad when the exchange is made by those whose birthright is really worth something. With regard to this I would only say that we are not tradesmen; and if we practise a trade under the disguise of a profession, we cannot claim to rank even as honest tradesmen—we are trading under false colours. It rests with us, in this instance, again to remember the honour of our calling, not only by avoiding such doings ourselves, but by taking care that, as far as we are able, they shall not pay where others practise them. No single person in this theatre is devoid of some influence, and our influence will continually increase; let us see that it is used on the right side. It is not enough to encourage the good and to leave the contrary alone; if we do, the others will have the better; for they encourage themselves in mischief and actively oppose the contrary. Our influence therefore must be exerted both in the way of approval and disapproval. I must warn you, however, that honesty is not always pecuniarily the best policy, and it is certainly not a short cut to wealth. There are three things, it has been said, which a poor man cannot afford to keep: Pride, a Horse, and a Conscience. All undoubtedly involve an outlay, or, in other words, a loss of money; but it is to be hoped that all here will never part with the first and third, and will acquire the second as soon as they require and can afford it, though not before.

Having thus made up our minds that our ambition is not the acquisition of wealth, but the pursuit of an engrossing study, which our lives will be all too short to complete, and in which we can fairly expect to combine the most absorbing scientific interest with the satisfaction of feeling that as citizens we are discharging duties of the very highest importance to our fellow-men and to the State, by which we may live but for which we can never be repaid, let us next see how we can best fit ourselves for these duties.

The first thing for those who have just joined us is to lose no time in setting to work. "Well begun is half done" is a proverb so true that it exists in two ancient and at least three modern languages. Besides, they can have no idea how much they will have to learn, nor how short the time is in which they are expected to learn it; but those who have finished, or are just finishing, their studies, will tell them that, in order to omit nothing, it will be necessary for them to make the very most of their time. Time requires no killing in London; he commits suicide. They must remember, too, that they will be required to have all the knowledge asked for at their fingers' ends, and all the subjects ready at the same time. To most persons it is a necessity to learn things more than once, and it is not until they have learnt them—and forgotten them—a few times that they begin to remember them. The examiner will not accept the excuse that we knew the answer to his question once any more than

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the mistress of the household accepts the phrase that "the water has boiled" as an excuse for weak tea; to make good tea, the kettle must be "on the boil," as the saying is, and so must we to pass our examinations. It is only familiarity with our subject which will breed contempt of the examiner—or rather, I should say, of the examination. I would personally advise you to pay particular attention to the curriculum as set forth in the calendar, and to take each course in its proper order; if you procrastinate and put off this, that, or the other to the "more convenient season," you will probably find that the ground is already occupied by some other study, and you will lose one or the other. The curriculum is the result of much careful thought, and has been modified from time to time with a view to its improvement. It is not the result of arbitrary or casual dictation, and is meant to lead rather than to drive. I advise you therefore to follow its directions.

The first work which you will be given to do is to study the bones—a very dry study you will think; but it is one which must be mastered, and thoroughly mastered. Its object is at least twofold: first, to educate your powers of observation; secondly, to teach you the most important facts of the structure of the body. The first will seem to you quite simple until you begin it, you may even despise and be disposed to neglect it. I advise you to do nothing of the kind. The powers of observation which you bring to bear on a dry bone need developing, and you will find that the same powers will enable you to make a good diagnosis at the bedside, and your value as a practitioner will largely depend upon the degree to which you possess them. Most persons require to learn to "see with their eyes, to hear with their ears, and to understand with their heart," and you must make it a matter of conscience never to say you feel or see or hear anything unless you really do. To do so is to speak "the thing which is not,"—to tell a lie. The verification of the absence of one sign is as important as that of the presence of another and requires far higher education. Those of you who love natural objects, and who have been used to watch and study animals and plants and the sky in country life will probably find less difficulty in mastering a bone than others; but powers of observation, however acquired, will certainly stand you in good stead. I think some difficulty is often felt just here by those whose minds for instance have been dealing with quite a different order of facts, although their education has been superior. In an ordinary university education our reasoning powers are cultivated rather than our powers of observation. Our reasoning powers and power of working with method thus acquired will certainly stand us in good stead, and with more benefit the further we advance, but at the start we must learn to educate our senses. This comparative power of observation is easily recognised when we refer to the arts. We stand, perhaps, on a hill side by side with a painter: the same image is painted on the retina of the eye of both of us, but let each of us say what he sees, and the artist sees a thousand times as much as we do, for "seeing, we saw, and did not perceive," while he saw—and perceived. After he has pointed out to us what there is to see, we perceive it too. Or let us hear music side by side with a musician; we hear perhaps the most prominent melody and nothing more. If the music consists of many strains, none of them overpoweringly prominent, we say we hear no tune but a noise. But let our companion point out to us the "motives" of which the music is composed, we direct our attention to more than one, by degrees and by practise we gain the power of listening to all. Besides this, no doubt practice actually renders our senses acuter. All these principles enter into your first study, that of the bones.

Besides the education of our powers of observation this study also forms the backbone of our whole knowledge of anatomy; the relations of the skeleton to the various organs are such that they constantly involve the knowledge of nerves, arteries, and muscles, together with the bones. If you wish to find your anatomy easy to learn and easy to remember, know your bones accurately, nay pedantically. Dissection will educate your hands as well as your powers of observation; its chief object is, of course, to teach you the topography of the country, every inch of which ought to be known. The method of dissection will be taught you when the time comes; but I would here generally caution you that the object is not to cut *away* every part as soon as you have seen it, but to expose region after region, and layer after layer, in order to view each in turn and to learn them. You have *not* thoroughly learnt them until you can shut your eyes and see everything in your dissection in its proper order and relations, and draw them, however roughly. Your day's work is not to be measured by the depth to which you have penetrated nor by the destruction which you have wrought. Such an ambition is praiseworthy in a miner, but is not so in a dissector. The same conscientious method applied to physiology, and to your other early studies, will stand you in invaluable stead throughout your career. I purposely avoid saying how much time and how much attention you should bestow on anatomy and physiology respectively. If a man intends to be a locomotive engineer it is obviously necessary for him to know the structure of his machine and its working also. If it is necessary for him to know every rod, bolt, and nut, and to be acquainted with the properties of the metal of which each is made, he must also have a thorough knowledge of the laws regulating the combustion of fuel and the expansion of steam. Knowledge of structure and knowledge of function are both of paramount importance, and, as we we are not now settling what should be so much as what is demanded, comparisons are (surely) odious. I advise you to follow the curriculum and pay your very best attention to both. Here, perhaps, it will be as well to issue a caution against premature specialisation—against any specialisation, that is, which precedes a thorough general medical education. I think that microscopy is sometimes a snare in this way, so seductive is it, so beautiful are the objects we see by its means, that a man is liable to stop short at whittling and staining, and to forget that the whittling and staining are only humble means towards the great end of studying the tissues, healthy and morbid. He may find that others have passed him by, and that the knowledge of health and disease (of physiology and pathology) which they have gained in the course of their ordinary studies has not only enabled them to pass their examinations, but to understand the preparations that he makes even better than he does himself. This is the "microscopical man." Far removed from him, but more dangerous, is the "practical man." This person is probably rarer than formerly; his ambition is to do something to patients, generally in a surgical direction. He is not conservative in this department, and longs to remove as much of his fellow-creatures as he is allowed, or at least to produce as much alteration in their appearance as possible. On the medical side, his assaults are carried on by means of drugs, the more powerful the better. With this end in view, he despises and neglects all the preliminary studies of anatomy, physiology, auscultation, and percussion, and gets to treatment as soon as possible. He obstructs the wards and out-patients' rooms in his first session, being quite unable to understand or profit by what he sees. The preliminary part of any course of lectures in any department of medicine or surgery, which are the foundation of all that will follow, he also despises, while he may perhaps condescend to make a note on a shirt sleeve or cigarette paper, of a drug or an operation. The results are surprising in examination, and resemble an old patchwork quilt, with many a "hiatus valde deflendus." At the bedside he is "all there" in one sense and "nowhere" in another, and happy is he if he finds before he is a responsible medical practitioner that the knowledge of the course of a nerve, of the relations of one of the viscera, or of one of the simple facts in obstetric anatomy or physiology, is among the number of things which it is sometimes as well to know for the diagnosis of a disease or for the treatment of a patient.

So closely allied to the "practical man," that he may be regarded as a variety, is the man whose ambition it is to pass his examinations with the least available knowledge and the least possible trouble. His horizon is bounded by the "First College," and he disdains any information which he thinks will not be required for this ordeal. He is even angry with an instructor or lecturer who wastes his (the student's) time by endeavouring to impart any knowledge which interests him (the teacher), and is correspondingly (though but moderately) grateful for a bit of "cram" or a "tip." Such a piece of information, and such alone, will draw a note-book (if he has one) or the back of a letter from his pocket. It is even amusing to the teacher to forecast this display of energy. Of such "tips" he makes the most astounding use in examinations, since they comprise nearly all he knows, and he never understands their meaning. When questioned on the subject he quotes the name of his teacher to the examiner. Examiners are generally alive to the state of affairs, and the "things that should

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have been to his health are unto him an occasion of falling." Quite rightly too, for a man who gains his knowledge in this way is unfit to enter our profession. Let us make up our minds to it, knowledge will not come to us without an effort; it may come to the windows of our mind, like the dove to the ark, but we must reach out our hand and pull it in or it will fly away again. It will not again come in through the pores of our skin, even if we live in an atmosphere of information; and yet, were we living in a more transcendental era than the end of the nineteenth century, I should feel inclined to discuss the question whether in order to acquire knowledge it is not necessary to expose our hands to the air, at any rate I have observed an inability to absorb it on the part of those who attend classes and clinical instruction with their hands in their trousers' pockets.

I must next caution you against a weakness which is sometimes found among those whose ambition it is to appear to possess knowledge without the trouble of acquiring it. These are not often really clever persons, but frequently possess the power of smattering and imposing on their more laborious fellow students. Their great art is to conceal ignorance in a cloud of verbiage. They are fortunate if they only impose on the more simple-minded of their fellow-students, who may be heard to remark: "What a lot Garrulus seems to know, and he says he never reads!" fortunate if Garrulus himself is not included in the ranks of the deceived. His deception, however, generally ends here, for he is better adapted for spontaneous display than for withstanding the assaults of the examiner, or even of any fairly informed person, whose first questions generally have the effect of depriving him of his lion's skin and discovering beneath it—well, just *Garrulus*.

This ambition, the ambition of appearing a *roi fainéant*, is really most contemptible. Do-nothing he may be, king of men he never will be; and, indeed, how high in the animal creation are we to place one who does nothing? I am principally annoyed with him because he lords it over and terrifies many a modest and hard-working student who is not ashamed of working. Besides, he sometimes does grind very hard when he thinks no one will know, though principally with the unprofitable object of displaying his cleverness when an opportunity offers. However, he generally gets his deserts. Let us, then, not specialise too early; let us not be ashamed to work hard; let us not neglect what seem to us humble facts. The contempt for little things has been happily represented in the poem of the "Haughty Actor" [which the lecturer then read].

With a view to work, a certain amount of play will be necessary. We do not want to be "dull boys," but we must not be "idle boys." In choosing the nature and amount of our play, we must remember that we are no longer at school; that we are engaged in studies on which the whole success of our life, and even the lives of others, depend; and that all play must be regarded as a means to work. Among games which can be thoroughly recommended is football—a game which necessitates regular habits if it is to be played well, and which has the additional advantage of promoting our *esprit de corps*. The success which our comparatively small school has achieved in the football field, and the fact that some of our best players have been also among the number of our best students, speak so strongly that I need only remind you that football is not included in the subjects on which you will be examined; and that you must see that it conduces to your work. I know from personal experience that the most violent and exciting exercise need not take an hour away from the available working day. Some other amusements have to be regarded with suspicion. The worship of Terpsichore, though I have known it lead to the most interesting and happy results, is not generally conducive to work. I had far rather enunciate principles than details, but unless you can be at your work at 9 A.M. the next morning, and do as good a day's work as ever, or unless you confine your dancing to Saturdays, I advise you to regard it with caution. Some of you may think that you owe a duty to society in this respect. I advise you to remain in her debt. She will endeavour to console herself in your absence, and will not press for payment. Nay, the members of which she is composed would far rather imagine you at work with a view to their own benefit than even enjoy your company. Indeed, I would throw out as a hint for your consideration that it is just possible that the very persons who enter your name on their list of dances may at the same time enter your name at least on the tablets of their mind as a person *not* to be entrusted with the care of their health. The great temptation to idleness begins in the first summer session, when the sight of the park, teeming with the life of "the season," is apt to make us forget the seriousness of our work, and to deposit us, dressed in the latest fashion, in the cheap but luxurious depths of a penny chair opposite the Row. Pennies soon mount up, and so does the score of missed lectures and demonstrations. But we are not yet hopelessly lost, our Alma Mater has her eye on us, and while we have been slaying—or missing—our coveys of Tetraonidæ, she has, with motherly hand, been forging for us a crook (the head of which is already finished, and only needs the attachment or "adhesion" of the "staff") with which our hind leg is gently seized, and we are drawn again into the fold, so gently that but for the fear of causing *her* distress we should, no doubt, promptly repeat the experiment. On the head of the crook are engraved the letters "D.C." But, really, at St. George's Hospital we have unusual inducements to work; I doubt whether at any other medical school so many and so constantly recurring encouragements to industry are offered in the shape of prizes at every step of our career. If we have not the *vis a tergo* to which we were used at school, we cannot complain of the absence of a *vis a fronte*. Let us then make a good start and keep up the pace, with the motto, "Occupet extremum scabies."

I should not feel that I had discharged my duty did I not devote a few words to the department of work to which I am more particularly attached. And, first, I would remind you all that the various licensing bodies having a short time ago succeeded in grasping the fact in elementary statics that a body propped on two legs is almost necessarily in a state of "unstable equilibrium" have added to the two previous legs of medicine and surgery the third leg of midwifery. The result is on one hand a great addition to the stability of medical education, which is now a triped; but from your point of view it amounts to the fact that it is now practically impossible to gain possession of any respectable diploma without the acquisition of a tolerable knowledge of midwifery and the diseases of women. Whatever your line of practice may hereafter be you cannot avoid it, and in the words of the immortal showman, "You can't go in without paying, but you can pay without going in; I can say no fairer nor that." Nor, indeed, is it fair that any practitioner should be ignorant of either of these subjects, neglect of which is apt to be followed by grotesque and egregious blunders, which may prove disastrous to him who makes them. In general practice you will find that this knowledge almost more than any other other will stand you in good stead, and early in your career you may have cause to bless the nights which you spent, perhaps unwillingly, surrounded m y be by squalor, alcohol, and the Heteropters. As a subject for instruction I know none which surpasses midwifery; its problems are largely exact, involving as they do mechanical principles which can be actually demonstrated by diagrams and models; and in practice diagnosis and prognosis are quickly illustrated by the event. The nine months' cycle of pregnancy carries us into one of the most interesting regions, in which physiology is so modified as to border on, and therefore to illustrate, pathology; while in embryology (with part of which we necessarily deal) we are brought face to face with the most vitally interesting speculations. In the sub-department of the diseases of women our interests are different; this is still in its infancy and the greatest discoveries lie almost beneath our eyes, it we could only see. This subject, the paramount interest of which lies with the investigator, appeals to us therefore in a different way.

As a moral training and as a training for practice, midwifery seems to me again most valuable. The student or the practitioner is brought into close and intimate relation with his patient, and he learns to be patient with her, not to be brusque with her but considerate, even to endure reproaches, unjustly uttered, during paroxysms of agony, knowing that

> A patient in pain
> Is a patient insane—

to be patient too in waiting. No sooner will his patient be rid of her troubles than her gratitude will make up, and more than make up, for any inconsiderate utterances. And here I must testify to the patience and kindness of students—often the last to lay claim to these or indeed to any other virtues—which has repeatedly instructed me. Not once or

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twice have I known the fire lit, food bought and cooked, and the tenderest care displayed in the maternity department by students to those from whom they had nothing in the world to expect. In the course of your practice you will probably have to treat some of the poorest, and you may have to treat some of the highest. You may think it will be difficult to be ready with the appropriate manners for each. Not at all. It would of course be an error to treat a duchess like a charwoman, but there can be no harm in treating every charwoman like a duchess, and you will be right all round. To be a good practitioner you must also have "clean hands (antiseptically as well as ethically) and a pure heart," and, while recognising the fact that Nature generally manages her own affairs best in her own way, and that your duty in most cases is to watch how she does it, you must be minutely acquainted with her ways or you will not detect the first beginnings of mischief, and will not be prepared to help her when she is untrue to herself. For this reason the study of the normal anatomy and physiology of pregnancy, labour, and lying-in is of paramount importance, and cannot be too conscientiously pursued; indeed, without this your understanding of abnormal conditions and processes will necessarily be lamentably inadequate. For learning the principles of midwifery you have ample opportunities, and I advise you (as the very easiest way of learning them) to attend your lectures diligently and to take notes, copying the diagrams, schedules, and classifications which are written up for you. Moreover, I recommend you to attend the course at least twice: once in your second summer, when you will be introduced to the subject with little or no trouble to yourselves, and once as your final examinations approach, and you are able, having gained a fair knowledge of the principles of medicine and surgery, to appreciate their application to obstetrics.

Besides this, there are the classes in practical midwifery, specially intended for those about to be examined, which are going on throughout the medical year; and altogether I think that the students of St. George's have only themselves to thank if they fail to pass their examinations in this subject, or if they find themselves in practice without a fair knowledge of this branch of their profession—a misfortune to which failure in examinations is not to be compared. One other reason I would give for diligence in studying obstetrics, and that is the good of your teachers. None but teachers know the stimulating effect of an intelligent and attentive class, and especially of a class which take notes. I am, myself, constantly reminded of the passage in "La Grande Duchesse," where Fritz, having been degraded from the rank of field-marshal to that of a common soldier, is finally turned out of the army altogether. The Duchess asks him what he intends to do, he says to keep a village school. "Mais (says she) sais-tu lire?" "Non (says he), c'est pour apprendre!"

Have this consideration then for your teachers, and do what you can to instruct them.

Three stages may be described in the life of an orator, the stage of terror at his own voice, the stage of indifference, and the stage of self-admiration, in which the sound of his voice becomes pleasant to its owner. Any stage may be suppressed or may be indefinitely prolonged. Secondly, what is true of his life as a whole may be true of every speech. Thirdly, the converse is generally true as regards his audience. To apply this to the present occasion, I have long passed the first stage, and am conscious that I am rapidly approaching the third, but mindful that the converse is liable to be true as regards my audience, and also that I have now buzzed round upon my pin for forty-five minutes, I ask you kindly to dismount me in order that we may prepare to fulfil the second and more agreeable part of the ceremony.

BEQUESTS.—The late Mr. William James Patterson bequeathed £5000, free of duty, to the executive body of the Royal South Hants Infirmary, to be called "The Patterson Chaplain Fund," upon trust, for investment, the income to be appropriated as a stipend for a chaplain; £1000 to the Royal South Hants Infirmary for its general purposes; £500 to the Southampton Dispensary and Humane Institution; £250 each to the Royal Hospital for Incurables, Putney, and the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury; and £150 to St. Mary's Cottage Hospital, Southampton.

A CASE OF

SUPRA-PUBIC OPERATION (PETERSEN'S METHOD) FOR LARGE STONE IN THE BLADDER.

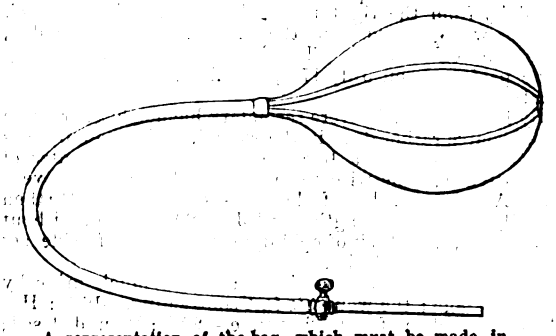
BY SIR H. THOMPSON, F.R.C.S.,

SURGEON EXTRAORDINARY TO H. M. THE KING OF THE BELGIANS, PROFESSOR OF SURGERY AND PATHOLOGY TO THE ROYAL COLLEGE OF SURGEONS, CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL, ETC.

AT the close of my final lecture at the Royal College of Surgeons in June last, I stated that I had successfully dealt with uric-acid calculi up to three ounces in weight, by means of lithotrity at a single sitting, although I by no means asserted that all such calculi were amenable to the crushing operation. And after discussing the methods which might be resorted to when, owing to the size of the calculus, lithotrity was inadequate or unadvisable, I stated that, for my own part, "I should almost certainly submit the next case for which the knife is required to the high operation with Petersen's modification."

Not a week had elapsed from the date of that observation before the following case presented itself; and I think it will appear to be one of sufficient interest and importance to merit a brief report in the pages of THE LANCET.

A gentleman aged thirty-six, formerly under the care of my friend, Dr. William Roberts of Manchester, who had observed continuous and large deposits of cystine in the



A representation of the bag, which must be made in separate gores of stiff white indiarubber to ensure firmness. A soft collapsible bag does not accomplish the purpose required.

urine for some time, came to me with severe symptoms of calculus in the bladder on June 18th last. On sounding, I immediately struck a large stone, and advised lithotrity without delay.

June 19th.—I attempted under ether to seize a large, hard, and rather rounded mass, but it escaped the grasp of my largest lithotrite. Dr. Caspar of Berlin and Dr. Pinter of Buda Pesth were present. After devoting three or four minutes to the careful examination of the calculus, both by the bladder and rectum, I determined to wait a day or two, and then to perform the supra-pubic operation. The patient had fever after this, which was unusually prolonged, and nearly a fortnight elapsed before I considered him in a fit state for operation.

July 2nd.—Mr. Moss gave ether; the gentlemen above named were present. I commenced by injecting about nine or ten ounces of a weak solution of boracic acid in water into the bladder, and tying the penis firmly with a vulcanised catheter, I then introduced the pear-shaped india-rubber bag (see fig.), folded longitudinally, into the rectum, distending it gradually with water from a large syringe until about twelve ounces had entered, when the stopcock was turned. On percussing the lower part of the abdomen, it was obvious that the bladder was now occupying the supra-pubic region, a rounded mass corresponding thereto being very clearly defined. I made the usual longitudinal incision about three or three inches and a half long in the median line, the lowest point of it reaching to the front aspect of the upper margin of the symphysis, carrying the dissection through the soft tissues down to the linea alba; then dividing on a director that structure itself, also the fibrous attachments of the recti muscles to the symphysis for nearly half an inch laterally

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on each side of the opening. The yellow fat covering the bladder then came into view, and this I divided solely with the index-finger and forceps. Scraping in a direction upwards with the nail of my right index-finger, and hooking up all the tissues therewith into the upper angle of the wound, it was easy to verify beneath my finger the distended bladder, the surface of which had thus been cleared. No artery had been divided, and a vein or two in the fat had been drawn aside, so that, contrary to what is usually met with in elderly patients, in whom the veins here are often large and liable to cause considerable difficulty by free hæmorrhage, almost no blood had been seen. Inserting a well-curved hook into the bladder, and thus giving issue to a little of the injected solution, I incised its coats sufficiently to admit my finger, when I felt lying there directly beneath it a large calculus, the position of which was, topographically considered, abdominal, and not pelvic. It was now a simple matter to enlarge the incision and remove the stone with a pair of small forceps and my finger, my friend, Mr. G. B. Browne, taking care to maintain the sides of the bladder in place by hook and spatula. I then untied the ligature on the penis and allowed the urine to flow from the rectal bag, inserting a No. 12 gum catheter and fastening it in the urethra, after which I placed a large vulcanised tube five inches long (with a single lateral aperture only, close to the terminal one) deep in the bladder, so as to ensure free drainage, and removed the bag from the rectum, completing the proceeding.

I laid the patient on his side, well supporting him in that position by numerous pillows at his back and between the legs. For I think this position an important element in the after-treatment, since it facilitates the drainage and enables the attendants to keep him dry. He should be changed once daily from the right to the left side, and *vice versâ*. The tube was removed from the bladder on the fifth day, the catheter on the sixth. The first urine passed naturally by the penis was on July 17th, the fifteenth day after the operation.

July 19th.—He had severe secondary hæmorrhage from an arterial source rather deep in the wound, which happily was efficiently stopped by a ligature within a few minutes of the occurrence; otherwise the result might have been very grave. As it was, the loss of blood was considerable. He then gradually regained strength until July 29th, when, without known cause, an attack of epididymitis in the left side set in, and again reduced him.

Aug. 8th.—He begins to sit up; passes much urine by natural passage; the wound is fast contracting.—16th: Has walked out of doors for the first time.—20th: Wound closed; holds urine three hours; appetite good; recovering strength fast; returned home on the 24th, and bore his journey to the north well.

The calculus proved to be cystic oxide throughout, was of a rounded oval form, and weighed two ounces and three-quarters.

I heard in September from Dr. Roberts that he had seen the patient, that his condition was quite satisfactory, and that no cystine was at present observable in his urine.

I shall make no remarks here on the history and nature of the operation, having given a short *résumé* of these in the lectures delivered in the Royal College of Surgeons last summer, now just published. Nor is it necessary to add anything respecting the mode of performing it, as I have been careful to point out all the important practical details necessary to be attended to in describing the procedure above. I shall merely add that having performed the suprapubic operation by the old method, on the staff, and without preliminary injection of the bladder and rectum, I have no hesitation in regarding the method here described as greatly superior, contributing as it does in no small degree to the safety of the peritoneum, as well as to the ease with which the stone is extracted.

Wimpole-street, W.

THE WATER-SUPPLY OF CROCKHAM-HILL.—On the 27th ult. a preliminary meeting of some of the residents of Crockham-hill was held to discuss the best measures to be adopted in order to procure an adequate supply of water for the village. It was stated that during the recent summer water was sold continuously in Crockham-street at the rate of one shilling for six gallons, and the villagers have had to buy it at that rate when their supply of rain water was exhausted or go without entirely. A subscription list was started to raise the necessary funds, and a considerable sum has been already promised.

ALLEGED EMIGRATION OF WHITE BLOOD-CORPUSCLES FROM THE INTERIOR OF SMALL VESSELS BY BORING THROUGH THEIR WALLS.

A REMONSTRANCE.

BY T. WHARTON JONES, F.R.C.S., F.R.S.

THIS remonstrance is addressed to professors of physiology and pathology against teaching in their writings, lectures, or occasional orations, that the white corpuscles of the blood escape from the interior of small vessels, until they have verified it scientifically by actual observations of their own as a fact in Nature. We are told that on the establishment of vascular congestion in a part, white corpuscles of the blood escape from the interior of capillaries and small veins, by boring through their walls, and that supervening on this emigration of white corpuscles, such red ones as had become aggregated and stagnant in capillaries are squeezed out through pores in the walls of these vessels by the force of the stream of blood from behind. That white corpuscles of the blood escape from the interior of small vessels is a fancy which first arose from mistaking the nuclei embedded in the walls of capillaries for white corpuscles in the act of boring through. In Plate 4 of my Essay in Guy's Hospital Reports for October, 1850, such nuclei are exactly represented, as seen under a quarter of an inch object glass;—some being nearer the inner surface of the wall, as if commencing to bore through; others more towards the outer surface, as if they had nearly bored through. As to the squeezing out of the red corpuscles, stagnant in capillaries, by the force of the stream of blood from behind, this allegation is utterly contrary to what can be easily seen—viz., that at the commencement of resolution, the said corpuscles are gradually driven on by *vis a tergo* into the venous radicles, until the congestion by stasis is dissipated and the circulation in the part re-established. Extravasation of blood does indeed sometimes occur, but this is owing to rupture of small vessels. In cases of catarrhal ophthalmia, for instance, ecchymosis of the conjunctiva is not uncommon, but does not form any part of the inflammatory process. Even when there is no inflammation, ecchymosis, it is well known, sometimes occurs.

In No. 35 of the *British and Foreign Medical Review*, published about forty years ago, I particularly insisted on the fact that at the commencement of inflammation of the cornea vascular congestion presents itself in the adjacent part of the conjunctiva and sclerotica, though not in the cornea itself, this structure being normally non-vascular. From the fact that at the commencement of keratitis there is no vascular congestion in the cornea (the vessels seen pervading its substance in an advanced stage being of new formation) Professor Virchow started the doctrine that inflammation has no necessary connexion with vascular congestion, but is in its essential nature a process of "proliferation," by which he meant an abnormal degree of cell-development in the affected part. Herein was overlooked the congestion of the vessels in the adjacent part of the white of the eye, from the blood circulating in which, in the normal state, the cornea derives its nourishment, and from which in the inflamed state the materials for "proliferation" would be derived. When the cornea is injured by incision, abrasion, or cauterisation, vascular congestion in the adjacent part of the white of the eye is excited by reflex nervous action from the nerves irritated by the injury of the cornea to the vaso-constrictor nerves of the small arteries of the adjacent part of the conjunctiva and sclerotica. In idiopathic keratitis congestion in the adjacent part of the white of the eye takes place in a similar manner in consequence of the irritation which the nerves in the cornea suffer from being involved in the commencing intrinsic morbid action.

Virchow's paradoxical announcement that inflammation is not inflammation at all according to the old definition, but merely a process of "proliferation," found great acceptance among those who are always on the look-out for some sensational novelty. "Rubor, calor, tumor, et dolor" were accordingly turned out of doors, and "proliferatio" entertained instead as the true "claimant" to be the characteristic of inflammation. Ere long, however, "proliferatio"

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was in its turn discredited. In 1867 the late Professor Cohnheim came to the front, teaching that the cells supposed by Virchow to be the produce of proliferation are in reality the white corpuscles of the blood, which, as we have seen, he alleges to escape from the interior of small vessels by boring through their walls, and that this "emigratio" of white blood-corpuscles constitutes the essential part of the inflammatory process.

Before examining further the doctrine that white corpuscles make their way from the interior of capillaries and small veins by boring through their walls, I beg to refer to the series of three papers "On the Blood-Corpuscle," published in the Philosophical Transactions for 1846, in which I described and delineated the changes of shape which the white corpuscles are seen to undergo in blood immediately that it is drawn from the living body. Many years after this an announcement of these amœba-like changes of the white corpuscles came from Germany as a "new discovery," and was ignorantly received as such in this country with great *éclat*. On this "new discovery" Cohnheim founded his doctrine that by means of the processes which they shoot out in all directions, the white corpuscles bore their way out from the interior of small vessels.

On an injury of the cornea by an abrasion, a cut, or cauterisation with a point of nitrate of silver, vascular congestion in the adjacent part of the conjunctiva and sclerotica, it is above said, quickly supervenes. This congestion, it is generally taught, is owing to a supposed primary active dilatation of the calibre of small arteries, permitting of an increased afflux of blood in the capillaries and venous radicles. According to my contention, however, it takes place in consequence of an impediment to the full stream of blood in the small arteries from constriction of their calibre (owing to contraction of their muscular walls excited by reflex action, propagated from the injured nerves of the cornea to the vaso-constrictor nerves), whereby aggregation of the red corpuscle in the capillaries and venous radicles is permitted, with stasis sanguinis as the result; the congestion being thus by accumulation from retention of blood-corpuscles, not by increased afflux of blood. But let that pass for the present. From the interior of the capillaries and venous radicles in the congested part, white corpuscles, according to Cohnheim, escape by boring through the vascular walls by means of the processes they shoot out, and then, by the same means, make their way into the interstices of the corneal substance to become pus cells.

It being impossible to examine the inflamed eye in a living frog under a sufficiently high magnifying power, all that Cohnheim and his followers have thus asserted as to the emigration of white corpuscles from the congested vessels into the corneal substance must be pronounced merely imaginary, a substitution of subjective excogitation for objective demonstration. As to Cohnheim's account of the microscopical appearances of detached portions of the corneal structure, it is equally inconclusive in a scientific point of view, because the histological elements being dead or moribund, have already undergone deviations from the appearance proper to them in the living state. With regard to the white corpuscles, the fact is that they do not shoot out processes while the blood is still within the living vessels. In the blood circulating in the lungs of the frog, as I long ago showed, and also of the newt, as I subsequently found, the white corpuscles are, indeed, less round and distended looking than in the vessels of the web, and present a somewhat collapsed aspect, but do not shoot out processes. The red corpuscles, on the other hand, appear in the vessels of the lungs somewhat more distended, soft, and flexible than they do in the vessels of the web; in which respects they resemble the red corpuscles of inflammatory blood, being like them also pale in tint.[1]

It is only in blood drawn from the vessels, as I showed in my papers in the Philosophical Transactions for 1846, before referred to, that white corpuscles undergo change of shape by shooting out processes. As the form they thus assume is more or less stellate, it need scarcely be added, therefore, that even if the white corpuscles still within living vessels did shoot out processes, the stellate form thus acquired would effectually interfere with their escape by any boring action. Many years before Professor Cohnheim promulgated the doctrine that an essential part of the inflammatory process is the escape of blood-corpuscles from the vessels which are the seat of the congestion, it had been, as mentioned above, alleged that white corpuscles may be seen in the act of boring through the walls of capillaries. A late eminent professor, who affected to be an authority on questions physiological, although he did not always think it fit in the original itself to look or even to read what had been recorded by those who had thought it fit to do so, on hearing of Cohnheim's sensational doctrine, claimed priority in the discovery for a friend of his, one of the able observers, who thus mistook the nuclei embedded in the walls of those vessels for white corpuscles in the act of emigrating. In the course of my prolonged investigation of the mechanism of the circulation in the extreme vessels and on the state of the blood and the bloodvessels in inflammation, made nearly forty years ago, my attention was constantly directed to see whether any escape of white corpuscles could be observed to take place from the interior of vessels. And again, when Cohnheim's allegations were published, I made a new and special investigation of the point; but I never could discover blood-corpuscles, white or red, escaping from the interior of small vessels—arteries, capillaries, or venous radicles. In my essay on the state of the blood and the bloodvessels in Inflammation,[2] the following observations are, however, recorded:—"In an intensely inflamed web of a frog the veins were very much dilated, and their walls sometimes no longer distinguishable. Forming the sides of such venous channels numerous colourless corpuscles were seen accumulated, whilst the blood flowed freely in the middle." "In a case in which the second web had sloughed away to a small piece, stagnation of blood still existed at the edge of that piece, but higher up a free flow of blood had now superseded stagnation. Here the walls of many of the vessels can no longer be distinguished, and the blood appears to be flowing in mere passages hollowed out in the substance of the web. All along the sides of the passages numerous blood-corpuscles are adherent. The adherent corpuscles are many of them red, but most of these red ones, again, are round."

If, in the figure given by Rindfleisch, a follower of Cohnheim, purporting to represent white corpuscles, escaped and escaping from a vein in an inflamed part, the indication of walls had been omitted, there would have been some resemblance to the reality, as was described by me. In such English manuals of physiology and pathology as have come under my notice, I have found along with imperfect and inaccurate accounts of the mechanism of the circulation in the extreme vessels, the emigration of white corpuscles from the interior of small vessels asserted as a well-established fact. In one book it is stated that white corpuscles may be seen to escape from the interior of bloodvessels and to enter lymphatics. In none of the works referred to, however, have I been able to recognise any indication that the accounts given had been drawn up by the authors from direct observations of their own. One professor, in his popular Manual of Physiology, vaguely says: "It is known that white corpuscles escape from the interior of small vessels."

Desirous of learning anything that might have escaped my notice on the point, I have asked professors of note for information as to their experience of the matter. Some could not give me any confirmatory answer, though they did not venture to question Cohnheim's assertions on account of the reputation of himself and his followers. At last I found two professors who seemed to consider themselves competent to afford me the desired instruction. One of these gentlemen assured me that he was as certain that white corpuscles bore through the walls of capillaries and small veins as he was of his own existence, and to confirm his assertion forthwith made a diagram of the alleged phenomenon. In this diagram, however, I recognised a representation merely of the nucleus in the wall of a capillary vessel such as I delineated with great accuracy in Plate 4 of my essay in Guy's Hospital Reports for October, 1850, about twenty years before the occurrence of the incident I speak of. But, letting that pass, the gentleman undertook, at my request, to demonstrate the actual fact, and politely invited me to visit his laboratory for the purpose. Here he displayed the mesentery of a frog under the microscope, and, bidding me look, left me. I looked and

[1] In my observations on some points in the anatomy, physiology, and pathology of the blood in the *British and Foreign Medical Review* for 1842, I recorded the fact that in a mixture of blood and pus the red corpuscles are observed to be so soft and yielding as to admit of being drawn out into mere filaments in passing through narrow spaces between the pus cells, and yet, when free, to resume their original form.

[2] Guy's Hospital Reports for October, 1850, p. 51.

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saw, as I had seen before in my own microscopical examinations of the mesentery of the frog, displayed, I venture to say, in a far more efficient manner for accurate observation, numerous white cells on the surface, but which were merely the cells of the peritoneal secretion, and not escaped white corpuscles of the blood at all. In my own careful researches undertaken for the purpose of satisfying myself of the truth, I never did detect the slightest indication of an escape of white corpuscles from any of the mesenteric venous trunks returning from the capillary system of the frog's intestine. Of course there could be none from mesenteric capillaries or venous radicles, seeing that there are no such vessels in the frog—the only vessels in the mesentery of that animal being arteries going to and veins returning from the capillary system of the intestine, with here and there arterioles which I discovered opening directly into venous trunks, but which were mistaken by the late distinguished professor, Theodore Schwann, for capillaries with muscular walls.[3] Capillaries, he forgot, do not open into venous trunks, but only into venous radicles. The gentleman who displayed the mesentery of the frog under the microscope for my inspection, it should be mentioned, laboured, like Cohnheim himself, under the mistaken impression that there are capillary vessels and venous radicles in the frog's mesentery. From the other gentleman whom I asked if he had ever really seen white corpuscles of the blood escaping from the interior of capillaries or venous radicles by boring through their walls, I received the most confident assurance that he had. "Will you demonstrate the fact to me," I then said. "Oh, yes," he patronisingly rejoined, and invited me to his laboratory for the purpose. I accordingly presented myself there at the appointed time. He, however, did not present himself, but delegated a student to meet me, who displayed the tongue of a frog under the microscope, and bade me look. In the same professor's syllabus of lectures I have since found the following statement:—"When a tissue is injured, the capillaries begin first to widen and then to leak, the plasma and leucocytes passing out in succession, and that more intense injury produces stasis and extravasation of coloured discs." Did the professor mean that this should be accepted as an observation of his own from Nature, or merely as an enunciation of Cohnheim's doctrine improved in its terms for the benefit of his students? I long ago showed, both by verbal description and pictorial delineation, that by pressing with a blunt point over an artery or a vein in the web of a frog's foot (1850) or a bat's wing (1852), so as to cause contusion of the inner layer of the wall of the vessel, a greyish granular floccule composed of white corpuscles held together by a viscid fibrinous-looking substance is deposited, filling the calibre of the vessel partially or completely.[4] Here, notwithstanding the injury of the tissue, no emigration of white corpuscles was seen to take place through the contused walls of the vessel. As little even have I observed any special tendency of white corpuscles to escape from the mouths of small divided vessels. The white corpuscles accumulated in the plasma of an internal clot remain within the truncated end of the divided vessel, though, according to the emigration doctrine, they might easily work their way out from the gaping orifice, through the collection of red corpuscles and fibrin forming the external clot.

In conclusion, now, let it be said: 1. That as yet no accurate and consistent observation has been adduced to prove decidedly that white corpuscles of the blood emigrate from the interior of small vessels by boring through their entire walls under any circumstances, physiological or pathological. 2. That when white corpuscles are found unenclosed in a vascular wall, this is because the wall has disappeared from having become disintegrated and dissolved, as I showed thirty-five years ago. The blunder that nuclei in the walls of capillaries are white corpuscles in the act of boring their way out, no one I presume would, like the gentlemen before referred to, now venture to uphold—not even that professor who was "as sure of it as of his own existence."

Ventnor, Isle of Wight.

[3] Malpighi examined microscopically the vessels of the frog's mesentery, but made out nothing similar to what he discovered in the lungs.

[4] At the British Medical Association meeting at Belfast, a professor of physiology, in an oration, referred to this fact, but in such a way as to show that he had never "thought it fit on the original itself to look," or even to send the original record of my observation, which he attributed to another observer who first learned the fact from a study of my essay, and who only noticed the fact in a writing published long after.

CLINICAL NOTES ON A CASE OF SANGUINEOUS CYST OF THE ABDOMEN.

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In the month of May of last year a young woman, aged twenty-four years, a widow, was admitted into the Newcastle-upon-Tyne Infirmary complaining of pain in and swelling of the abdomen. The case was sent in as one of ordinary ascites. There was a large quantity of fluid in the abdomen, but it was encysted; it was entirely confined to the lower part of the left half of the abdomen. The temperature was above 100°, a fact which increased the difficulty of making a diagnosis between the disease which it afterwards turned out to be and such things as tubercular peritonitis, ovarian tumour, peritonitis, &c. There appeared in May, 1883, in THE LANCET, a paper on "Sanguineous Cysts of the Abdomen," by Dr. Bristowe, and by it much light was thrown upon a diseased condition which for long might have puzzled me.

On admission the patient's feet were swollen, her face was sallow and anæmic. She stated that she was the mother of one child, five years of age, and that since the death of her husband she had been leading the life of a prostitute. Eighteen months before coming under observation her menses ceased, and for three months prior to this she had suffered almost continually though not greatly from metrorrhagia. She had always enjoyed excellent health until the menses ceased, but it was only within the three months previous to her coming under my care that she detected the swelling of the abdomen. It had never been localised. Her attention had been drawn thereto by a feeling of constant pain confined to the lower part of the abdomen. For some time, however, before the abdomen swelled, she had suffered from frequent vomiting. Her appetite was bad. The urine was scanty and passed with difficulty. The bowels were normal. Beyond very slight prolongation of the expiratory murmur at the right apex the lungs seemed healthy. The first sound of the heart was normal, the second was accentuated. The abdomen was greatly distended; it measured at the level of the umbilicus forty inches and a quarter; fluctuation was well-marked, particularly in front and on the left side. A network of enlarged veins was seen coursing up on either side. The right flank and iliac region were tympanitic on percussion, but as the middle line of the abdomen was approached the note became duller and less tympanitic. Over the whole of the lower half of the left abdomen there was absolute dulness on percussion, and there was marked resistance to but no pain upon pressure. This dulness extended about an inch to the right of the middle line and had its upper margin two inches above the umbilicus. On placing the patient on her right side it was noticed that the left half of the abdomen remained absolutely dull on percussion and that fluctuation was well-marked. The upper part of the left flank, however, became tympanitic. No souffle was detected on auscultating this area, and on vaginal examination the os was found to be low down and gaping. The uterus was freely movable, nothing being felt either behind or in front of it. The sound passed with ease to the bend of the instrument; its direction was upwards and to the left.

Briefly, her condition on admission was as follows. A large and somewhat rounded mass was occupying the lower half of the left abdomen; it was more or less fixed, as it did not alter to any extent with change of position of the patient. It gave on tapping very distinct waves of fluctuation; physical signs which, with a history of absent menses, suggested at first ovarian disease, although the accompaniments of pain, increased temperature (on the second day after admission it was 102°), the negative results of a vaginal examination, and, the positive sign, alteration of the respiratory murmur over the right apex, rather raised the question of tubercular peritonitis. Having decided to aspirate the tumour, our junior house-surgeon, Mr. Hudson, on May 8th, inserted a small trocar and cannula into the lower part of the abdomen; 148 ounces of blood-red fluid escaped, which under the microscope was found to be composed almost entirely of

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blood cells. The coloured cells were crenated. The colourless were large and exhibited amœboid movement.

In spite of the very large quantity of fluid which was removed, there was detected two days afterwards very distinct fluctuation in the left abdomen. The right half was perfectly clear and tympanitic on percussion, the left, especially in its lower half in front, was absolutely dull. Change of position did not alter the relationship of the dulness. Her urine, however, had been passed in larger quantity; it had a specific gravity of 1025, was acid, deep orange in colour, and contained a large quantity of urates, but no albumen. There was pain in the abdomen. For some days after this the temperature kept rising. By the evening of May 17th it was 104·2°. The pain in the abdomen was now severe. The physical signs already mentioned were again becoming prominent; it was evident fluid had again accumulated. On May 20th the patient was again aspirated, and eighty-four ounces of fluid similar in character to the last were removed. This time the abdomen seemed to be completely emptied, for the lower half of the left abdomen now gave on percussion a clear note. Under the microscope the fluid was found to contain myriads of crenated red discs of various sizes, a few indefinite corpuscles like ordinary lymph cells, some of which had undergone fatty granular degeneration, while in others vacuoles, could be distinctly seen.

Previous to the second operation the patient had in addition to the rise of temperature suffered from slight difficulty in breathing. On examination the lower half of the left chest was found to be absolutely dull on percussion, and over it there was noted absence of the respiratory murmur, absence of vocal resonance and fremitus, while over the upper half of the lung the breath sounds were harsh and tubular. As time went on, and the respiratory murmur returned, crepitation and friction sounds were heard. It is difficult to account for this pleurisy of the left side. Like most cases of ordinary pleurisy, it was limited to the left side. It was in the left half of the abdomem that the tumour existed, and possibly by means of the lymph canals which traverse the diaphragm material may have passed from peritoneum to pleural cavity and set up inflammation there. It was not tubercular, as the patient made a good recovery; a later examination of the chest failed to detect anything but slightly prolonged expiration at the right apex. Strange to say, however, as the effusion disappeared from the left pleura physical signs pointed to a reaccumulation of fluid in the abdomen, but this time its existence was temporary. It never called for further aspiration.

It is unnecessary to give further details of this case. Suffice it to say that by July 30th the patient had made a good recovery. Pain had disappeared; the temperature had been normal for some time; the area of dulness in the abdomen had greatly diminished; and at her own wish she left the hospital. Nine days afterwards I was asked to see her in consultation, as pain now of a very severe character had returned accompanied by vomiting. The abdomen was flat, but there was still the area of dulness in its left half, diminished in size, resistant, and semi-fluctuant. By those who saw her with me, the worst opinion possible was entertained. Permanent relief, it was thought, could only be got by removal of the cyst by abdominal section. She was readmitted into the infirmary. Opium in small quantities having been given, I applied freely fly blisters to the abdomen. In a few days pain had entirely disappeared; no complaint of it was made even on the application of deep firm pressure. The whole of the abdomen in front, left as well as right, was tympanitic. A degree of dulness lingered for a short period in the left lumbar region. Spinal tenderness in the mid-dorsal region was complained of, but it soon yielded to blistering. On vaginal examination the lips of the os uteri were found to be everted; the posterior lip was found to be retracted by means of dense bands which passed between the cervix and posterior vaginal wall, and the uterine sound passed with some difficulty just beyond one inch. After this the abdominal dulness entirely disappeared. The patient left the infirmary quite recovered. On September 19th I saw her. She was then in excellent health. She had regained flesh and colour, pain had never returned; menstruation, which had been absent for two years, had reappeared a few days previously. Concurrently with this return to health, she had resolved to abandon her former life—a resolve which I believe she has faithfully carried out. Three months afterwards I heard from her; she was then engaged as a laundry-maid in one of the retreats in the south of England, and was in the best of health. This is still maintained. In a letter which I saw from her six weeks ago she was then in excellent health.

What, then, was the nature of the cyst? Situated in the left half of the abdomen, a renal, splenic, peritoneal, and pelvic origin was each in its turn suggested. Beyond the presence of a large amount of lithates in the urine, which was passed in small quantity, there was an entire absence in it of any abnormal constituent. The tumour was too low down in the abdomen, and also too much to the front, for the kidney to be in any way connected with it. Its presence so low down and so far forward, with the absence of a well-defined margin, led me to ignore the spleen as being its origin. The after-history of the case, morning temperature frequently higher than the evening, and the fact that an intercurrent attack of pleurisy with effusion was successfully passed through, show conclusively, I think, that the case was not one of tubercular peritonitis; nor can the cyst be considered as having been malignant. I am inclined to regard the cyst as having been in some way or other connected with the left ovary; possibly it depended upon an aggravated rupture of the ovary at the time of menstruation. What lends some little support to this supposed origin are the facts of cessation of the menses, a cessation which took place long before any tumour was felt by the patient in the abdomen, and their return after the treatment adopted, a point similarly noticed in ovarian cases after successful ovariotomy. Against this view of the origin of the cyst may be urged the character of the life led by the patient, it being a well-known fact that many prostitutes do not menstruate for years. I am inclined to think this tells both ways. The intense ovarian excitement, coitus during menstruation, and the not too kind treatment to which these women are subjected, render them liable to such an accident. One of Dr. Bristowe's cases turned out post mortem to be a cysto-sarcoma growing from the pelvis. I regard the case I have quoted, however, as a hæmatocele of ovarian origin, and I am led to record it from the difficulties which surrounded its diagnosis and the success which followed a simple line of treatment—aspiration.

Newcastle-on-Tyne.

MELANCHOLIA, IN ITS RELATIONS TO DIMINUTION OF THE OXYGEN SUPPLY.

By J. HARRINGTON DOUTY,
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AMONGST the various diseased conditions of the mind there is none which, in its special or general pathology, presents more points of interest than does melancholia. I propose to direct attention to one of these—viz., to the fact that mental depression is very frequently associated with anæmic conditions, with valvular or structural diseases of the heart, or with pulmonary lesions—in a word, with those states of the various organs or of the blood itself which result in insufficiency of the supply of oxygen by the blood to the brain. After discussing this point and referring to cases in illustration, I shall briefly consider the etiological connexion which may exist between melancholia and oxygen famine. A careful examination of a number of cases of melancholia in the Worcester Asylum has resulted in the conclusion that in a very large proportion—75 per cent.—either (1) the blood itself was impoverished—there was an anæmic state; or (2) the state of the respiratory or circulatory apparatus was such as to prevent healthy aeration. Forty-seven per cent. of the patients were anæmic. This anæmia was the result of various circumstances. In some 18 per cent. the character of the patients' daily occupation in coal mines, ironworks, needle factories, potteries, shops, &c., was responsible for the impoverishment of the blood. Where fresh air is scarce, and carbonic anhydride and organic impurities accumulate in places filled by crowds of *employés*, there are the predisposing and immediate causes of anæmia. When, too, as is often the case, after the day's work is done the employed go either to insanitary homes or to a public-house in some close alley, and spend the rest of the day in an atmosphere even worse than that which they have left, there is no chance for their blood to make up for the losses it has sustained during

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the day. On admission we find patients who come from such conditions pale and feeble, with anæmic murmurs and languid bodies. Their minds are so devoid of vigour as to render them indifferent to the pleasures and occupations of life, capable only of looking upon the dark side of things in general, and even in many instances depressed to such an extent as to be tired of life itself.

In those cases where melancholia accompanies anæmia it would seem that it is usually rather the chronic form of anæmia than the acute (if I may use the term). In the chlorotic conditions of girls, which come rapidly and are so extreme as to lead the patient to notice her condition and seek advice, resulting usually in a rapid cure, the mental state, though occasionally one of depression, is generally a slight general inactivity of the functions. Melancholics admitted from places and circumstances that produce an anæmic and unhealthy condition frequently improve as by magic; they obtain an invigorating country air, are made to take plenty of healthy exercise out of doors, and lead a regular life. These things, together with hæmatinics, iron, quinine, or arsenic, and in many cases stimulants in the form of brandy, beer, ammonia, and ether work the best results. The patient improves in appearance, gains weight, gets a good colour, and in these simple cases uncomplicated by grave bodily diseases speedily recovers in respect to his mind. So much for melancholics with simple anæmia.

I will speak now of melancholics who possess grave organic lesions, producing anæmia or some other condition causing diminution of oxygen supply, and will give extracts from the notes on ten cases.

CASE 1.—H. D——, aged thirty-five, ironworker. Melancholia, suicidal tendencies; white and pasty; renal heart and pulse; hæmaturia, albuminuria; died. Microscope revealed subacute interstitial nephritis; brain not atrophied, large, and very white.

CASE 2.—D. I——, a needle-stamper, aged fifty. On admission, as still, intensely melancholic. Agitated at times and strongly suicidal. Has had for twelve years intermittent hæmaturia, worse of late, and rendering him extremely anæmic. No heredity. Urine contains large large numbers of blood-corpuscles. No vesical calculus and no other symptoms, excepting the bleeding and melancholia. Previous medical attendants report old symptoms of left renal calculus. It has been noticed that when bleeding is worse his mind is also worse. No drugs do any good excepting, to a slight extent, ergot and iron at times. He is in a critical state, which fact, with the indefiniteness of the symptoms, contra-indicates surgical interference. He needs constant watching to prevent his self-destruction. Prognosis very bad.

CASE 3.—J. W——, aged fifty-seven, moulder. Melancholia; suicidal. Was admitted immediately after an attack of acute rheumatism; has had several subacute attacks since, and has very loud, rough, apex and basic bruits; his pulse is intermitting, short, and toneless. All kinds of treatment have been tried, but without effect. Heart is worse; he is as suicidal as ever, and is thin, feeble, and intensely anæmic.

CASE 4.—S. B——, aged fifty-two, ostler. Acute melancholia; very anæmic. Had loud whistling mitral regurgitant bruit. Left lung dull everywhere. Moist râles, of a bubbling nature, over its upper half; no air entered its base. At apex cavernous breathing, whispering pectoriloquy, and metallic râles. Died. The autopsy revealed a small localised empyema at extreme right apex communicating with the lung, from which probably came some of the pus he expectorated. The left lung was in a condition of fibroid contraction, the bronchi, in the upper lobe, were greatly dilated, their mucous membrane red and covered with pus. Pleura greatly thickened. Mitral valve puckered, hard, and almost immovable.

CASE 5.—T. P——, aged fifty-eight, a newspaper correspondent. The most actively suicidal patient in the asylum. He has had several dangerous attacks of syncope since admission. His heart is large, feeble, and irregular in its action; præcordial pain, and pain down left arm; capillaries on cheeks dilated. He is very white, feeble, and breathless, and has frequent headaches and dyspnœa. Mental condition probably depends, as do his other symptoms, on fatty degeneration of the heart. He has taken iron, belladonna, digitalis, ammonia, ether, strychnia, quinine, and other tonics, and at times has a morphia hypodermic injection, or chloral and opium draught at night. The patient has slightly improved, and can now take a little out-door exercise, and do some literary work. Prognosis, however, is as bad for his mental as for his physical condition.

CASE 6.—G. W——, aged sixty-three, a carpet weaver. Acute melancholia; suicidal; refuses food, and has needed artificial feeding; very pale and thin, and has a double mitral bruit. He gets no better, but progressively worse.

CASE 7.—A female, aged fifty-six. Has all the symptoms of fatty degeneration of the heart, and her mental condition is exactly like that in Case 5, in which there is also probably a fatty heart; she is intensely anæmic, and no medical treatment has been of any avail in relieving her symptoms; she holds, amongst others, a fixed delusion that one of the night-nurses is going to "freeze her alive"; she is strongly suicidal.

CASE 8.—W. A. D——, aged thirty-two, a shopman. Melancholia; he has a purplish skin and chronic pulmonary congestion, from which he has twice nearly died, depending on mitral stenosis; his heart's systole is short and his pulse is toneless and irregular. He is becoming gradually mindless.

CASE 9.—A. G——, a female, aged fifty, dressmaker. Has chronic melancholia and fibroid phthisis.

CASE 10.—C. K——, a female, aged sixty-two. Has chronic melancholia. She is very anæmic, thin, and feeble, and has grave mitral disease.

These are a few cases. I might multiply their number almost indefinitely; they are all interesting in their special, and most of them also in their general, pathology. I have carefully reviewed during the last few months the cases of those melancholics admitted into the Worcester Asylum since 1882, with the following result. Out of the fifty-two cases admitted conditions causing the oxygen supply to be below the healthy standard existed in no less than thirty-nine. Of these thirty-nine, ten were cases of simple anæmia from unhealthy lives in insanitary conditions, &c.; eleven others had grave diseases of the heart (valvular or fatty degeneration); five had chronic affections of the lungs, and in the rest of the thirty-nine there were various causes of impoverishment of the blood, or disturbance of its circulation, such as atheroma of the vessels, renal calculus, surgical injuries, chronic alcoholism, renal disease, &c. In the rest of the fifty-two (thirteen cases) the blood, heart, and lungs were healthy or nearly so, and of these thirteen ten have recovered or are convalescing. Of the ten simple anæmics, six have recovered; of the eleven heart cases two have proved fatal, one is improved, and the eight remaining are chronic. Of the lung cases four are chronic melancholics; one has sufficiently recovered to go home. Amongst those with the less serious causes of oxygen deficiency five are recovered or convalescing. Thus out of the fifty-two cases twenty-three are well or nearly well; in five prognosis is doubtful; and in the remaining twenty-four it is bad or hopeless, on account of the serious bodily conditions which obtain. With facts like these before one it is but natural, though one may possibly have travelled along a wrong path, to arrive at a conclusion that some definite connexion exists between the "miserable" mind and an imperfect supply of oxygen to the brain. In confronting the etiology of melancholia, wrapped as it is in uncertainty and concerning which so little investigation is recorded, even circumstantial evidence which points to a theory is valuable. There is a very natural tendency to seek for its cause amongst influences which act directly upon what we call "mind." An individual's happiness depends certainly to a considerable extent upon the kind of his surroundings; upon his wealth or poverty; success or failure; upon the temperament of those who are his daily associates; upon contentment; upon the kind of part he has to play upon the world's stage. Trouble, disappointment, worry, and anxiety, long continued, may doubtless so react upon the healthiest of minds as to cause disorganisation of its functions. A sense of weariness is induced; the individual acquires a feeling of disgust with things in general, and becomes depressed and miserable. His interest in things around him gets worn out, and his thoughts turn rather to the effects which he feels these surroundings are working upon himself. From such a state, by exaggerating his troubles and his sins, by looking at everything on its dark side, he begins to draw on his imagination, and passes into a condition of insanity, conceives delusions, or meditates or commits the act of self-destruction. So by indefinite and invisible gradations is the melancholic state matured. Its production, however, by such mental influences alone is, I believe, by no means the rule; and when depending upon such alone, it generally yields

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to appropriate treatment. In a very large number of cases we have no history of misfortune or monotonous anxiety to account for its origin; and in such we turn to physical conditions, and inquire whether there is not a melancholia which depends on these for its causation. That such should be the case would be no more extraordinary than that mental anxiety and worry should, as they certainly are capable of doing, produce a diarrhœa. Some cases, of course, depend largely upon hereditary predisposition to insanity. Of the fifty-two cases in question there is history of heredity in three only of the thirty-nine associated with bodily diseases; whereas of the thirteen admitted in "good bodily health" no less than eight were distinctly hereditary. In a large proportion of cases, however, we cannot point either to mental or hereditary influences; and in these what is responsible for the mental affection? As I have said, observation has led me to believe, and is daily strengthening the belief, that an imperfect oxygen supply may alone produce a melancholia. How variations in its supply to the cerebrum act in producing a predominance of happy or of miserable types of thought, I will not venture to discuss; but facts seem to suggest that they are intimately connected with such predominance. The events even of everyday life may bear this out. After a day or week of close confinement in an unhealthy chamber, resulting in a low and despending state of mind, a condition of disgust with things in general, how a walk or ride in pure air outside raises one's spirits. A man under such conditions often comes in feeling, as he says, "a different man." There has been an abundant supply of oxygen, and the exercise has stimulated his heart to increased exertions in driving the oxygen-loaded blood rapidly through his cerebral arteries. The raising of one's "spirits," the generation of happy thoughts as opposed to the miserable, which attend a journey or sojourn in a highly ozonised atmosphere, are surely physiological results; and so also the opposite tendencies of unhygienic conditions to bad temper, irritability, gloomy and miserable states of mind are pathological certainties. Such unhygienic conditions, I hold, we may associate with the various organic diseases I have above referred to and anæmia, as all tending towards the same mental state; and it seems more than likely that they exert their respective influences towards its production through "imperfect oxygen supply" as a common medium.

Worcester.

WHICH IS THE MORE FREQUENT SITUATION IN MALES OF THE INDURATED CHANCRE, INFECTING SORE, OR INITIAL SIGN OF SYPHILIS?

By FREDERICK W. LOWNDES, M.R.C.S.,
SURGEON TO THE LIVERPOOL LOCK HOSPITAL AND CONSULTING SURGEON, SEAMEN'S DISPENSARY.

SOME time ago my colleague, Dr. Bernard, called my attention to the circumstance that the indurated chancres seen by us in our male patients at the hospital and dispensary appeared to be most frequently situated upon the prepuce. Previously to this we had both been under the impression that the more usual seat was in the furrow near the frænum, on the corona glandis, or on the glans, situations where the syphilitic virus might be expected to adhere, especially in cases where the prepuce was long, and where a want of cleanliness was also co-existent. Careful observations in hospital, dispensary, and private practice confirmed Dr. Bernard's statement, and I suggested to him that we should make independent notes of all the cases which came before us until we had observed a number sufficient for statistical purposes. In the course of a few months we had records of 400 cases, made up as follows:—Lock Hospital 163; Seamen's Dispensary, 134; private practice, 103—total, 400. Every care was taken to include none except the true infectious sore. In many cases this was made manifest by the concurrence of secondary eruptions; in others the induration was well marked; while in all there was an incubation period more or less long and the presence of indurated inguinal glands, either in one or both groins. We were ably assisted in the hospital returns by Mr. T. W. Serjeant, the resident superintendent, who carefully recorded our diagnosis of each case in the "case-books." In every case which was of a doubtful character we deferred recording it until its nature had been fully established.

Before giving the results in detail, I would wish to notice the remarks and statistics of different authors with reference to the locality of chancres. Messrs. Berkeley Hill and Arthur Cooper, in the second edition of "Syphilis and Local Contagious Disorders," say (page 84): "The superficial hard ulcer or erosion is the most common form of initial lesion. A favourite locality for it is the inner surface of the foreskin." At page 87 Mr. Hill says: "Of 150 cases seen by himself at the Lock Hospital in 1861 there were 41 initial lesions of the furrow, 31 of the inner prepuce, 24 of the outer prepuce, 17 of the frænum, 15 at the free border of the prepuce, 12 on the glans penis, and 10 at the urethral meatus." Bumstead and Taylor, in their work "The Pathology and Treatment of Venereal Diseases," say (page 449): "The superficial form of chancre"—i.e., indurated chancre—"is most marked on the internal surface of the prepuce by which it is protected from the air and friction, and kept free from scabs, and it is in this situation that it is most frequently met with." Mr. Barton of Dublin in his lectures on the "Pathology and Treatment of Syphilis," says: "The situation of the sore affects the amount of induration very much; thus on the corona glandis it is very well marked, while if occurring on the prepuce it is frequently very indistinct." But he does not say which situation is the more frequent. Keyes says: "The raw erosion is the most common form of syphilitic chancre. It is found in both sexes on the integument, as well as upon a mucous or semi-mucous surface." The report of the Venereal Committee, 1864, states: "It [i.e., the sore marked by a specific induration] may occupy the inner surface of the prepuce, the fossa, the glans, or the external integument."

The following statistics of Clerc and Fournier are quoted by Professor Van Harlingen in his admirable article on Syphilis in "Ashhurst's International Encyclopædia of Surgery," vol. ii., p. 460:—

Clerc's figures.—Internal surface of the prepuce, 63; balano-preputial fold, 171; orifice of the prepuce, 35; frænum, 14; glans, 12; meatus urinarius, 33; cutaneous surface of penis or prepuce, 58; scrotum, 3; peno-scrotal angle, 5—total, 394.

Fournier's figures.—Glans and prepuce, 314; preputial furrow, 60; multiple, that is showing chancres of the furrow and prepuce, or of the furrow and glans, 11; meatus urinarius, 32; intra-urethral, 17; scrotum, 7; peno-scrotal angle, 4—total, 445.

Our figures.—Prepuce, inner and outer, 166; prepuce, furrow, and corona, 37; body of penis or sheath, 32; prepuce and furrow, 31; furrow, 29; meatus, 15; glans, 13; frænum, 9; corona, 7; furrow and corona, 7; prepuce and glans, 7; sheath and prepuce, 5; prepuce and frænum, 5; furrow and glans, 4; other situations mostly compound, 33—total, 400.

The larger proportion of chancres were thus found to be on the prepuce, and of these the majority were situated on the inner prepuce, comparatively few being on the outer. If in Fournier's statistics the numbers on the glans and prepuce had been given separately, and if Clerc's figures for the "balano-preputial fold" and "orifice of the prepuce" be added to those of the "internal surface of the prepuce," the proportion of chancres upon the latter would probably be as marked as in our cases. The situation will, of course, be determined by circumstances. Many of those seen on the prepuce and furrow, prepuce furrow and corona, prepuce and glans, and prepuce and frænum, were probably at first situated on the inner prepuce, extending to adjacent parts before they were seen by us. The condition, moreover, of the parts must have some influence on the site of initial lesion, an excoriated state being especially favourable for absorbing the syphilitic virus.

While, on the one hand, it would be absurd to attach too much importance to this question as to the exact site of the initial lesion of syphilis, it seems to me that, looking to the past history of this disease, it would be unwise to ignore any well-established fact, or to attempt to say positively of how much or of how little importance it is. Taken in conjunction with the period of incubation which almost invariably precedes the infecting sore, it is somewhat significant that the situation of the latter should more frequently be superficial, and so comparatively rare on the frænum, a place where we might expect the virus to lodge.

Those who have had experience in statistics will know

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how difficult it is to take and preserve accurate returns of such details as are here given. I could have wished that they had been even more complete, especially that the numbers for the inner and outer prepuce had been given separately. There are some other points on which it would be interesting, and perhaps profitable, to have accurate records. These are—(1) The relative proportions of single and multiple infecting sores; (2) the comparative frequency or rarity of the absence of induration; (3) the varying periods of incubation in days; and (4) the proportionate frequency of the presence of indurated inguinal glands. It is somewhat remarkable, seeing how greatly syphilitic diseases prevail in these kingdoms, so few English statistics have been compiled, most of them being those of foreign countries. Two possible reasons for this are the paucity in this country of lock hospitals and lock wards, and the immense labour involved in preparing such statistics. To reduce this latter as much as possible I am having printed forms prepared which will enable us to record with ease all the preceding details, as well as the exact site of the initial lesion. I shall probably be able to give these in some future issue of THE LANCET from the returns of a large number of cases. Should any readers of THE LANCET desire to have a specimen of these forms, I shall have much pleasure in forwarding it. We have also observed the site of the infecting sore in females, but the number is not sufficiently large for statistical purposes; these I shall hope also to give in a future article.

Liverpool.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SAMARITAN FREE HOSPITAL.
(DORSET HOUSE BRANCH.)

CASE OF REMOVAL OF LARGE INTRA-UTERINE FIBROID.
(Under the care of Dr. PERCY BOULTON.)

E. B——, aged thirty-five, was admitted on account of profuse loss of blood at her periods which had rendered her exceedingly anæmic, and latterly, during the whole intra-menstrual interval, she had suffered from a foul-smelling discharge. Being single and the hymen intact, she had never undergone a vaginal examination. Dr. Percy Boulton found the os dilated and the brim of the pelvis completely blocked by a fibroid tumour a little larger than the fœtal head at term. A broad anterior attachment was made out, and it was found that the presenting part was decidedly sloughy and causing the foul discharge complained of.

The patient was prepared and the tumour was removed. Owing to the large size of the growth and the smallness of the vaginal outlet, it was necessary to trisect the tumour. The wire of the écraseur was placed over it and tightened sufficiently to act as a tourniquet round the thick pedicle, while the other portions were removed with another instrument, the last third being removed by the écraseur that was first placed round the pedicle, and in this manner the severe hæmorrhage which was anticipated from so broad a base was prevented.

During the first twelve hours the vagina was packed with wool impregnated with iodoform and eucalyptus, and afterwards the parts were douched several times a day with iodine lotion.

Some slight pelvic cellular inflammation occurred afterwards, from absorption of the discharge through the stump, but the temperature never exceeded 102·4°, and the patient made an excellent recovery and left the hospital convalescent after seven weeks.

As the usual difficulties in removing large tumours were much increased by the small space for manipulation, and a broad pedicle is always an element of danger after the removal of fibroids, the case was regarded as interesting and satisfactory.

WOLVERHAMPTON AND SOUTH STAFFORDSHIRE GENERAL HOSPITAL.

CASE OF STRANGULATED INGUINAL HERNIA; DEATH FROM INTESTINAL HÆMORRHAGE; REMARKS.
(Under the care of Mr. KOUGH.)

FOR the following notes we are indebted to Mr. J. W. Batterham, B.S. Lond., house-surgeon.

George S——, aged thirty, was admitted at 1.30 P.M. on September 5th, 1884. He stated that he had been ruptured all his life, had never worn a truss, and had always been able to reduce his hernia when it came down; that when lifting a mass of iron early on the morning of admission the rupture came down in larger amount than usual, and he had been unable to reduce it. Patient was a spare, delicate-looking man, but had never suffered from any other ailment than his hernia. He was cold and pale with a small, feeble pulse.

Upon examination a scrotal hernia was found on the left side about the size of the patient's head. The tumour was not very tense and was resonant on percussion, but succussion showed it to contain a considerable amount of fluid. Gentle efforts at reduction being ineffectual, the patient was placed in a hot bath for twenty minutes, and then removed to bed with hot bottles to his feet and an icebag on the scrotum. He was left in this condition till 7 P.M. During this time he was extremely restless and complained of great thirst. He vomited a few ounces of bilious matter. At 7 P.M. he was becoming extremely collapsed, and complained of dyspnœa. The hernia was slightly smaller than on admission. At 7.30 P.M. chloroform was administered and the hernia readily reduced. The patient's pulse improved somewhat under the influence of the anæsthetic, from which he soon recovered, but he rapidly reassumed his collapsed condition, and died about 9.30 P.M.

Necropsy, sixty hours after death.—The sac in its empty condition was nine inches long and nine inches in circumference. It appeared to be the sac of an acquired inguinal hernia of the external or indirect variety. The mouth of the sac was large, admitting three fingers. The pelvic cavity was full of blood-stained serum, a little of which was also found in the sac. The last nine feet of the ileum, the cæcum, and ascending colon (in all, about one foot of large bowel) were of a dark-purplish tint, and had evidently formed the recent contents of the sac, though the exact point of strangulation could not be detected. A long meso-cæcum was present. The above-mentioned ten feet of intestine were ligatured and removed. The peritoneal surface was firm and polished. On laying the gut open about a pint and a half of blood escaped. The inner surface of the bowel was of an even darker colour than the outer, and presented throughout large slate-coloured patches of ecchymosis. Peyer's patches and the villi were very well marked, being turged with blood. No ulceration or other sign of disease was detected. The heart was anæmic, but healthy; the lungs were congested and œdematous; the liver congested; other organs were normal. The large venous trunks contained hardly any blood.

Remarks.—The above case presents several unusual features. 1. The large size of the hernia. 2. The great length of the mesocolon and mesocæcum, which allowed the first 12 in. of the large bowel to occupy the sac of a left inguinal hernia. 3. It is difficult to account for the presence in the bowel of so large a quantity of blood. The large size of the opening into the sac, and ease with which the hernia was reduced under chloroform, do not point to a very severe strangulation of the bowel by the neck of the sac. To what then was the intense congestion and subsequent hæmorrhage due? Is it possible that a twisting and stretching of the mesentery may have produced so grave an interference with the circulation? The patient presented the symptoms of internal hæmorrhage, and his death was apparently due to this cause. I am not aware that any case has been reported where death after hernia has occurred in this manner.

CASE OF RUPTURE OF THE LIVER; NECROPSY.
(Under the care of Mr. KOUGH.)

The notes of this case also have been furnished by Mr. J. W. Batterham, B.S. Lond., house-surgeon.

John B——, aged twenty-three, was admitted into the hospital at 2.40 A.M. on Sept. 5th, 1884, having been run over by an empty railway truck (weighing about four tons)

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an hour and a half previously. He was conscious, but cold, pallid, and almost pulseless. He was found to have sustained a simple fracture of the right femur, a compound fracture of the right forearm, and a simple fracture of the ribs on the right side. His respiration was thoracic and chiefly confined to the left side. Pain was complained of in the upper part of the abdomen, being felt most acutely in the epigastric region. There was no retching or nausea. Patient exhibited extreme restlessness and complained much of thirst. He died about two hours after admission.

Necropsy, eighty hours after death.—The fifth and sixth ribs on the right side were found to have been fractured just in front of their angles. The bruising of the tissues, &c., showed that the wheel of the truck must have passed over these ribs about an inch external to their cartilages. Hæmorrhage had occurred into the old adhesions by which the right lung was universally covered. The thoracic viscera were otherwise normal, and the diaphragm intact. On opening the abdomen about thirty ounces of blood were found in the posterior part of that cavity. The abdominal viscera were all intact except the liver. Extending along the posterior border of the right lobe, between the attachments of the coronary ligaments, was a rent four and a half inches long. From the centre of this a second similar lesion extended forwards across the upper surface of the right lobe. This T-shaped laceration affected the hepatic tissue to the depth of two inches.

ASHBURTON AND BUCKFASTLEIGH COTTAGE HOSPITAL.

DISLOCATION OF THE HIP-JOINT IN A BOY; REDUCTION FIVE WEEKS AFTER THE INJURY.

(Under the care of Dr. JAMES ADAMS.)

W. E——, aged twelve, was brought by his mother on July 1st walking by the help of a crutch and stick. The history was that he had been thrown from a horse on May 31st and injured his left thigh.

On examination it was at once evident that there was a dislocation of the femur at the hip-joint, and the following symptoms existed, indicating it to be a dislocation into the sciatic notch—viz., shortening of about an inch, with great toe resting on the ball of great toe of right foot, leg slightly inverted; on lying on the back the left knee was advanced, and on attempting to bring the knees down to same level the back was considerably arched; almost complete immobility of the joint, and on applying Nélaton's test, the trochanter was found to be displaced.

Next day he was admitted into the hospital; and on July 4th, Mr. Ubsdell having given chloroform, Dr. Adams attempted to reduce it by Bigelow's method of manipulation, but failed. Mr. Ubsdell also tried, with a similar result. Pulleys were put on, and used with as much force as was thought prudent for nearly half an hour, without success, although the use of pulleys contributed materially to the subsequent reduction of the dislocation by stretching the tissues and muscles, breaking down adhesions, and giving more play to the head of the bone in its new situation. Manipulation was tried again, and the plan of flexion, rotation outwards, and bringing down the limb having failed, the limb was flexed and rotated outwards. When in this position it was forcibly flexed still further (the pelvis being firmly held) and the femur used as a lever, and by this leverage movement in a direction of backwards, upwards, and outwards, the head of the bone was liberated from the sciatic notch and slipped into the socket with an audible snap on bringing the limb down.

A Liston's splint was kept applied for a fortnight. At the end of a month the patient was discharged, walking well, and only the slightest limp when he walked fast.

Remarks by Dr. ADAMS.—I observed that there was a lengthening of quite half an inch after the reduction, and this is usually attributed to deposits in the acetabulum, preventing the head of the bone returning to its normal position. May not this lengthening be more probably due to the fact that the muscles attaching the femur to the pelvis being, as in my case, weakened by disease, and then stretched by pulleys, are unable to pull the bone up to its proper place at first, but that when they have recovered from these effects the bone is once more brought to its natural length? I would also call attention to the leverage movement mentioned above, as I do not see it alluded to in the surgical works I have been able to consult.

Medical Societies.

CAMBRIDGE MEDICAL SOCIETY.

AT the meeting on August 8th, Dr. J. B. Bradbury in the chair,

Mr. DEIGHTON related a case in which Alarming Symptoms occurred during the Willing Game. In November, 1883, he was summoned in urgent haste to see an undergraduate. He found him surrounded by his friends, who said they had been playing the willing game, and that he had been blindfolded and whirled; soon afterwards he became tottering on his legs and went into a state of convulsions. When seen he was tossing about on a sofa, with face slightly flushed, the movements of the arms and legs being most irregular, almost equally exaggerated on both sides. The muscles of the face and neck were least affected, but he spoke in a jerky way, and on putting out his tongue it was protruded and withdrawn suddenly. He was quite conscious, clear and collected, and said that he tried to prevent himself tossing about, but could not help it. The pupils acted to light and were natural in size. He was ordered a bromide draught and told to go to bed. The next morning he was quite well. He said he had spent a bad night, tossing about until five A.M. before he went to sleep, but there was now only an occasional twitching in the legs. He was of a nervous and excitable disposition, but never had fits, rheumatism, or chorea. The heart sounds were normal. He was liable to excessive frequency of micturition on any excitement. The attack had all the appearance of chorea, the short duration of the seizure being the only difficulty to that view. Mr. Deighton thought that if chorea were regarded as a functional affection in which a mere exaggeration of those muscular movements which are constantly taking place in the body occurred, and that a shock by removing the controlling power of the higher centres allowed the lower centres to have full play, then this case was in the same way capable of explanation.

Mr. WHERRY related a similar case, in which the symptoms, though not so definite as in Mr. Deighton's case, were nevertheless sufficient to alarm the patient's friends. He was sent for one evening to see an undergraduate who had become suddenly ill during the willing game. It appeared that his friends had blindfolded him in the usual manner and were willing him to do some simple action, when suddenly he became weak in the knees and had to be helped to a seat. The handkerchief was removed at once, but the patient did not seem at all himself. He found him leaning against the mantelshelf, looking fixedly downwards in a dogged and morose attitude; he answered questions in monosyllables in a hesitating way, not stammering, but with a jerk and without expression. Usually, his friends said, his manners were natural and polite. The pupils were dilated, with no action to light and his memory was a blank as to the details of the game. He was sent to bed, and when seen the next morning he was better; his pupils were normal and active to light, but his manner was still odd and his speech remarkable. When advised to leave Cambridge for a few days' change, he refused rudely, but was afterwards persuaded by his friends, and returned quite well.

Dr. BRADBURY related a case of Ulceration of the Cæcum with Pyæmic Abscesses in the Liver. The patient was an engine driver, aged thirty, who was admitted to the hospital on May 28th. He was quite well until April 25th, when he was attacked with pain in the left side of the abdomen. During the first week of his illness he had two or three violent fits of shivering, and vomiting had been present from the first and continued until about a week ago, and he had also had some diarrhœa. He had lost much flesh, and was troubled with a slight cough. On admission he was much emaciated; skin hot; tongue dry and brown; pulse 84; temperature 101·8°; abdomen lax, tender on pressure, especially in the left iliac fossa; no spots; a patch of dulness over the base of the left lung behind, with deficient breathing and fremitus; liver dulness normal; splenic dulness from the seventh to the eleventh rib, extending back nearly to the angle of the scapula; the urine contained no albumen. On June 2nd he had a rigor, with pain in the abdomen and diarrhœa, and profuse sweating afterwards. The rigors and sweats were repeated for several days, and the temperature chart showed

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great diurnal variations, on one occasion dropping from 106·6° to 96·4° in less than twelve hours. The physical signs remained about the same, except that on June 18th the liver dulness extended from about the fourth rib to a quarter of an inch below the edge of the ribs, and on the 23rd to two inches below the ribs, and at one time slight jaundice was noticed. On June 25th the abdomen was swollen and very tender, and peritoneal friction was perceptible over the upper part. He remained in much the same condition until July 9th, when he was suddenly attacked with severe pain near the right nipple, the pain recurring several times with dyspnœa, and friction sound was audible. On July 10th the physical signs showed a large effusion into the right pleural cavity, with tenderness over the liver, and swelling of the legs. Death took place on July 16th. The post-mortem showed the right chest to be full of pus, of yellowish colour, and very offensive. A communication was found through an opening in the diaphragm with an abscess in the liver. The liver contained many abscesses of various sizes, the largest about the size of a lemon, which had burst through the diaphragm. In the intestine close to the junction of the vermiform appendix and cæcum was an ulcer, the size of a split pea, surrounded by congested mucous membrane; the intestinal wall was not perforated. The cause of the ulceration was not apparent and the appendix was natural. The cæcum was bound down in the right iliac fossa by adhesions of old date. The hæmorrhoidal veins and the inferior mesenteric above were filled with breaking down clot and pus. There was no evidence of any disease in the rectum or small intestines. The spleen weighed thirteen ounces and a half. Dr. Bradbury in his remarks alluded to the obscurity of the symptoms in the early history of the case and difficulty in diagnosis; the peculiarity of the pain complained of in the left side of the abdomen, and the comparatively small size of the ulcer in the bowel, the cause of the fatal pyæmia. He showed the liver and the ulcer in the cæcum.

Mr. CARVER exhibited a specimen of great Enlargement of Prostate. It was removed from a gentleman, aged sixty-seven, who only suffered from prostatic symptoms for three or four years before death. He had consulted several medical men on account of diabetes from which he suffered in addition. The patient first consulted him in 1882, when he was unable to empty his bladder, and was troubled with frequent micturition. A catheter was used three times a day and the diabetes treated by dieting. In 1883 an abscess formed in the ischio-rectal fossa, from which he suffered much pain. Early in 1884 he became much emaciated, and in May an incision was made and a large amount of fetid pus escaped, but he gradually sank. The enlargement was chiefly of the lateral lobes.

Reviews and Notices of Books.

Lectures on the Diseases of Infancy and Childhood. By CHARLES WEST, M.D. Seventh Edition. Pp. 896. London: Longmans and Co.

DR. WEST is entirely justified in the satisfaction with which he introduces the seventh edition of his Lectures on the Diseases of Infancy and Childhood. The work, in its latest form, is gracefully inscribed to Roger, Barthez, and Henoch, as the three men who in their generation have done most to increase our knowledge of the diseases of children. But in any such group which we might construct Dr. West's own name would deserve a place, perhaps not second to any other. The service which he rendered in founding the Children's Hospital in Great Ormond-street cannot be over-estimated, and the present work is still, as in its earliest form, a monument of patient, long-continued, and fruitful industry. Now that the opportunities for the study of children's diseases are so multiplied, it is well to bear in mind that Dr. West's earliest observations were made in an almost untrodden field, and that the materials for the early editions of these lectures were gathered largely from out-patient work in one of the lowest parts of London, and from post-mortem examinations made under great difficulties in the homes of the poor. The successive editions of the book mark the increasing and well-ordered experience which Dr. West obtained, with the wider opportunities which gradually unfolded themselves; and in the present volume there is nothing more striking than the readiness of the author to reconsider many of his earlier opinions, and to incorporate, when they seem to be reliable, the observations of younger workers.

We are glad that Dr. West has himself revised his own work instead of committing it to younger hands, for although, truth to say, on comparing the last edition with the first, there are many noteworthy modifications to be found in the directions for treatment, yet there is still enough in the way of thorough going statement of old antiphlogistic methods to make it instructive to students brought up in the ways of medical nihilism. Albeit none more readily than Dr. West would recognise the mental and moral gain which comes from a review of the ebb and flow of therapeutic doctrine even within our own time, and of the influence of the "zeitgeist," which in medicine, as in other realms of knowledge, insensibly modifies our most cherished opinions. Thus it happens that much of the routine management of disease in one generation falls gradually into the background, and, without any definite reason being formulated, certain plans of treatment gradually give place to others, or, indeed, in some cases to no treatment at all. Whether in the swing of the therapeutical pendulum we of this generation may see a revival of antiphlogistic methods it is difficult to foretell, but at least it is useful to have before us statements of the convictions arising out of a faithful application of such methods in past years.

It is scarcely needful to say that these lectures hold an honourable place amongst English medical books in general, and amongst books on children's diseases in particular, for their clear concise style. They are readable from beginning to end, and they possess the rare virtues amongst "special treatises" of being absolutely limited to the special diseases considered, of being thoroughly practical and free from the bondage of academical systematising. If there be a fault in style, it is perhaps the somewhat needless employment of French terms in regard to physical signs, and let us add in general the undue prominence of French statistics and of French authorities. We proceed to consider briefly the substance of the lectures, noting by the way a few points which appear to us open to criticism.

We cannot agree with Dr. West in his disparagement of the plan of taking the temperature of children in the rectum. Not only is this method more accurate, but it has the great advantage, both for doctor and child, of requiring a much shorter time than the axillary method. Three minutes are in general quite adequate for taking a rectal temperature, which will often be found higher than the temperature registered on a thermometer held in the axilla for ten minutes. Whenever the value of the various external applications of cold comes into question, the rectal temperature is obviously essential for accurate scientific observations.

From the student's point of view, some detailed account of ophthalmoscopic signs, with the necessary and important limitations as to the conclusions to be drawn therefrom, would have been more useful than the disparaging and tantalising paragraph which Dr. West quotes from M. Roger.

The lectures on tubercular meningitis are excellent, but we could have wished for a fuller discussion of what we believe to be the faulty generalisation largely owing to Rilliet and Barthez—namely, that in children tubercular meningitis and basilar meningitis are practically synonymous. It is certain that in young infants a form of basilar meningitis is not very rare in which tubercle plays no part whatever. As to the *quæstio vexata* of the recoverability of tubercular meningitis, is it not possible, in the light of occa-

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cloral post-mortem suggestions, that in the rare instances of recovery tubercular deposit may have been present, but limited to a portion of the pia mater or part of the cortex? It seems inconceivable that the extensive brain softening which, whether inflammatory or dropsical, or both, is so commonly found in autopsies on tubercular meningitis, should in any given case, when once established, be recovered from, and for our own part we have always considered this softening as the most important part in the disease. But it must be remembered that it is not absolutely invariable. It seems probable that localised groups of miliary tubercles may be tolerated for considerable periods. The so-called scrofulous tumours of the brain in some cases have obviously been formed by the coalescence of such miliary groups, and it seems possible that limited inflammation in the neighbourhood of such groups may have given rise to some at least of the signs of tubercular meningitis.

The account of infantile paralysis, although on the whole satisfactory, is defective in the description of the electrical reactions, no reference being made in the paragraph on diagnosis to the noteworthy changes observed in the response of the paralysed muscles to the constant, as distinguished from the faradaic, current. The account of the morbid anatomy of this disease is also very meagre.

The lecture on disorders of the mind in children contains valuable hints on the moral perversions of children, of which the doctor is apt to take too slight a cognisance.

In the section devoted to the treatment of empyema we fail to find any expression of the author's opinion on the uses of the antiseptic method, or of the expedient, now coming largely into vogue, of removing a small portion of rib for the purpose of efficient drainage.

The lectures on croup and diphtheria are extremely valuable as giving a faithful *résumé* of the whole of this difficult subject, and as a frank and outspoken statement of the author's gradual change of view, not only on the question of identity or non-identity of the two diseases, but as to their appropriate treatment. For our own part we are not much concerned on the subject of mere nomenclature. The first question in any given case, and one not always easy to determine, is whether membrane is present in the larynx or not. Further, it may be conceded that the membranous cases are divisible into at least two types, the sthenic and the asthenic, between which there constantly occur examples of the *tertium quid*, in which we are puzzled to say what is the type. As to the all-important question of treatment, we do not deny that many of the non-membranous cases have recovered under the use of antimonials, whilst we are equally certain that these drugs have repeatedly lessened the chance of recovery of membranous cases. It must also be conceded that the non-membranous cases recover under the employment of simpler measures, such as steaming, local hot applications, &c. Post-mortem experience, indeed, shows that fatal non-membranous laryngitis is a very rare occurrence. We therefore submit that antimonial treatment in the laryngeal affections of children is in the aggregate of cases undesirable, as being *positively* dangerous in many of the membranous cases, *possibly* dangerous in the indeterminate ones (that is, those where we are uncertain whether membrane is present or not), and unnecessary in the non-membranous cases.

Dr. West gives an excellent account of the form of diphtheria which sometimes accompanies measles, and to which he was the first in this country to draw attention. In the description of diphtheritic paralysis we fail to find any reference to the remarkable disappearance of the knee-jerk in many cases, which may continue absent for a time, even after the motor power has apparently been fairly recovered.

The lectures on whooping-cough is one of the best in the book, and those on phthisis are also very valuable, especially the illustrative cases, which Dr. West quotes from his own note-books. We have always doubted the propriety of the separation of a distinct group of cases under the title of bronchial phthisis, for which Barthez and Rilliet were largely responsible, and to which Dr. West gives only a qualified assent. That in the tuberculosis of children the bronchial glands play a relatively large part goes without saying, but the interest of this feature is mainly pathological and one of degree. Cases of bronchial phthisis in children without any pulmonary phthisis must be excessively rare, although in some cases of tuberculous bronchial glands the tubercle present in the lungs may be both latent and limited in amount.

In the lecture on the cachexiæ of early life the section devoted to congenital syphilis is very disappointing. There is no reference to the early enlargement of the spleen in this disease, and only the merest mention of liver affection, in which not only the miliary gummata of M. Gubler, but large gummatous tumours and localised as well as generalised interstitial inflammations, deserve to be noted. Amongst the late manifestations of the disease, nothing is said about the characteristic form of keratitis discovered by Mr. Hutchinson, nor about affections of the choroid, nor about the special form of deafness which often develops, nor about other affections of the nervous system which have been recorded by several observers. By an unfortunate clerical error the word "molar" has been used instead of "incisor," in describing the special malformation of the second dentition described by Mr. Hutchinson. But, omissions notwithstanding (and let us add that no author could be more anxious than Dr. West to give generous acknowledgment to his contemporaries), this book remains one of the best as it was one of the earliest treatises on the diseases of children. Let us sincerely express the hope that the author may in years to come have the pleasure of issuing fresh editions of his work, bringing forth from the fulness of his experience and the wealth of his erudition "treasures both new and old."

New Inventions.

"CRAPE OF HEALTH" UNDERCLOTHING.

THE specimens of the above underclothing, of which we have made trial, seem to be very satisfactory hygienic garments. We have before insisted, as we do this week in another column, on the advantages of wool as the next covering of the constantly perspiring skin. In these garments its natural hygroscopic properties are taken full advantage of, the peculiar curly texture of the manufacture affording a greater extent of surface for absorption and evaporation. The material is extremely elastic (which elasticity it seems to retain well after being washed) and porous, affording free access of the air to the skin. Since loosely fitting clothing is as a rule warmer than tightly fitting, it may be hinted that attention should be paid to the fit of these garments, their elasticity and "doubled up" texture rendering them very adaptable. If worn tight to the skin and stretched they would lose most of their advantages. It is possible that the very curly nature of the texture might be irritating to sensitive skins: to those who can bear it, however, the slight friction excited is, of course, advantageous. These garments are made of pure silk, silk and wool mixed, &c., as well as of pure wool. They are manufactured by Strachl-Siebenmann at Zofingen, Switzerland, and may be obtained through the firm of Howell and Co., 60, Watling-street, E.C.

SYDNEY ARTHUR, a medical student, was sentenced last week by the Recorder of Dublin to a year's imprisonment for having committed several larcenies. He pleaded guilty.

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Abstracts
OF
INTRODUCTORY ADDRESSES
DELIVERED AT THE
PROVINCIAL SCHOOLS OF MEDICINE
AT THE
Opening of the Session 1884-85.

QUEEN'S COLLEGE, BIRMINGHAM.

ADDRESS BY PROF. J. SAWYER, M.D. LOND., F.R.C.P.

AFTER a few words on the growth and prosperity of Queen's College which he said was confessedly one of the most advanced and best-equipped schools of medicine in this or any other country, Dr. Sawyer continued as follows:—

"Examination is the dominant 'note' of our current medical instruction. Two or three generations ago the leading principle of medical education was imitation. Now the student has set before him examinations he has to pass; then the apprentice had before him a master to imitate. Now our teaching is professorial, and to a class; then it was more personal, and to an individual. There is much that is good, doubtless, in our present system of medical education; but I am afraid we have scarcely preserved all that was good in the system we have set aside. I dare say we have been gaining in professional knowledge. Have we not been losing somewhat in professional wisdom? We have been growing in scientific precision. Have we not sometimes been loosening, and are we not in danger of losing, some of our best traditions?

"I have been asked to say a few words especially addressed to the medical students who are here this evening, and who are about to begin or to resume their professional studies. To them I say—fellow-students, you come to our school to get knowledge. It will not, I am sure, be the fault of our school if each of you do not get in it, in fair proportion, the knowledge it offers you. In our laboratories and in our books, in our museums and in our lecture rooms, and in our hospital wards and mortuaries, your several teachers, in their expositions and in their practice of the sciences and arts they profess, will continue to submit to your senses—to your eyes and to your ears, to your hands, to your noses, and to your mouths—an endless store of objective facts in the sciences and arts of medicine; and in each of you it will depend upon himself—upon your capacity, and upon the motives which guide your conduct—how much or how little of this objective knowledge you shall hold and make your own. I am not going to urge you to seek knowledge for its own sake. Knowledge, like money, health, justice, truth, and virtue, is not an end in itself, however startling this fact may be when you first apprehend it. Knowledge, in its final appraisement, is only an intermediary means, which many good people are in the habit of mistaking for an end. Now, why do you come to seek the knowledge, the particular knowledge, which we offer here? Because you want to become members of the great profession of medicine; and you are probably impelled to seek entrance into our profession for no single or separate reason alone, but rather as the resultant of a variety of motives, amongst which, scientific interest, honourable pursuit of worldly means, and pursuit of distinction, are probably the most powerful.

"Now I am afraid many of you are apt to imagine, as most people do when they begin preparation for a particular career in practical business or professional life, that all you want now, that all you need seek, as students, is knowledge. You have heard very often that knowledge is power, and you are prone to think that if you have knowledge all things else will be added unto you. But surely this is not so. Knowledge is not power, but only its material. Knowledge is only power when wisdom points its employment. Even now and here, when and whither you have come to seek and find knowledge, you must seek and find wisdom too if you would grow in the skill and grace which the life you have chosen requires of you. 'Knowledge comes, but wisdom lingers.' As a psychological product, wisdom is infinitely more elaborate than knowledge. It is knowledge kneaded with exquisite complexity into every phase of your consciousness. Wisdom is knowledge which patient experience has intimately blended with your emotions and with your desires, with your volitions and with your beliefs. It is knowledge polished and finished, qualified and refined, tested and checked, proved and guided by every pleasure which has thrilled you, by every pain which has cast you down, by every consideration you have felt of fitness and of prudence, of utility and of duty.

"The systematic knowledge we offer you here, in this medical school, in our instruction in the sciences and arts of medicine, is a matter-of-fact knowledge; it is a duly arranged aggregate of objective experience, which we present, through your senses, to your minds. Take care, take most watchful care, that you get a clear and certain perception of every fact which is placed before your understanding; for clearness of reproduction is impossible without previous clearness of perception. But the wisdom I ask you to seek, even now, is more than knowledge; it is far different. When you have begun to apply knowledge, in thought and action, to the best ends and true purposes of life, you have begun to be wise. When your self-love, your search after your own happiness, has been tempered by knowledge into prudence, and when your sympathy for others has been tempered by knowledge into duty, you have begun to be wise, for you have been putting down your pride, learning the love of mercy, and growing in the power to judge and act rightly. But, you may say, tell us how to do so much; how to get knowledge, to learn prudence and duty, and to be wise to do rightly. I answer, make it your business, even now, while you study to get knowledge in this college and in our hospitals, to study also the words, the acts, and the lives of some of those of our profession who, without trifling with truth, and without pliancy of principle, have achieved success, and honourable competence, and the love and confidence of their brethren, and so you shall learn how to prepare for professional life, as well as for professional diplomas."

UNIVERSITY COLLEGE, LIVERPOOL.

INTRODUCTORY ADDRESS BY PROFESSOR MACCANN.

PROFESSOR MACCANN, who delivered the inaugural address at University College, Liverpool, on the 4th inst., remarked that he counted himself happy in having been at a Scotch university, if only to have seen with his own eyes how a deep, genuine, disinterested, self-denying delight in science and literature and philosophy lay ready to be evoked from the great mass of the people, even from the sons of artisans and peasants. But he did not think it was mainly from these higher motives that these throngs of students went to the university. It was from the less noble, though still honourable, motive of making a career in life. And to this these Scotch universities could in a most substantial and definite way assist their students, because they could give them not only an education but a degree, a degree that was a passport to a career in life. He did not wish to speak of a degree as everything. A degree was not the end of education; no number of degrees could make a man intrinsically other than he was. A degree was but the stamp that made intrinsic value current. But it did make it current, and he dared say more than one of them could at this moment recall, as he could, cases in which even genius, knowledge, and enthusiasm had been pitifully condemned to a lifelong obscurity, drudgery, and degradation, only because they had not that outward sign and seal of academic standing to which the world was perhaps only too ready to give recognition. In a great and growing town like Liverpool there were many who had every motive and every claim to be students. Though they could not be students by profession, they had the instincts of students. They had the student's persistent love of culture; they had the student's unworldliness, almost everything except leisure. Leisure they had not; this was denied them as by a vindictive irony of fate, not seldom denied them most just when they were most conscious of its value. Such men in many cases themselves knew well the risk they ran—the danger that the necessary contractedness of their practical work would by-and-by pass into their lives, and set its brand upon their minds and character, until at last, as Adam Smith long ago pointed out, they run a risk of falling victims to a universal contractedness—contractedness in horizon, contractedness in sympathies, contractedness in the faculty and fibre

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of their minds. It was to such men that something of the higher culture had perhaps its greatest worth. They would tell them so themselves. The enthusiastic study of a physical science, the loving knowledge of a favourite author, a real contact with nature through some branch of biology, a living insight into some period of history, an unaffected devotion to art—these could bring results not seldom great and beneficent, just because the dregs of time spent on the study of them were all that could be wrung from the tyrannous demands of a busy life. They could bring what was needed—a wider mental horizon, broader sympathies, and intellectual visions of a world greater and richer than that bounded by the close and stifling confines of the toiling specialised individual life; and he was free to confess that he had seldom found a purer, or more strenuous, or more self-denying devotion to culture than among some of those of whom he spoke—men who were in their souls students, but in their circumstances not students by profession.

Lord Derby next addressed the students, and at the close of his remarks presented the prizes gained during the preceding winter and summer sessions.

YORKSHIRE COLLEGE: MEDICAL DEPARTMENT.

INTRODUCTORY ADDRESS BY DR. MICHAEL FOSTER.

IN the course of his address at the opening of the fifty-fourth session of the Leeds School of Medicine on the 1st inst., Dr. Michael Foster remarked that the most powerful means of advancing the medical profession is by advancing the sciences on which the profession rests. Every little push of that science means a great bound of the profession. But the theoretical sciences on which the art of medicine is based cannot, to any large extent, be advanced by the active members of the profession. The main work of progress must be done by men set aside for that special purpose. The profession are agreed upon that; and if to any outside the profession this may appear strange, they should reflect upon what the human body is, which is the foundation of the medical art. The human body is a complicated machine, compounded of all manner of machines which are in a dim way analogues of the work of man's art. There are machines with pulleys and levers, there are telegraphs, there are telephones, there are delicate barometers and thermometers and chemical works; there is a mass of molecular machinery, and the whole machinery is governed by a nervous machinery of strange complexity, in comparison with which the most complex of human mills seems a thing of actual simplicity. And this curious, complex machinery is changing from year to year, from day to day, nay, from minute to minute. From moment to moment never is it the same. And it is a machine delicately responsive to all the changes in its surroundings. In a certain sense it is more sensitive to light than any photographic plate, more sensitive to the pressure of air than any barometer. No change outside of it, from sun to shade, from level to height, but what produces some change upon it—change which may be recognised. Some of those changes are at present hidden from us; but were we able to read all those secrets, this machinery would seem to us a microcosm. We might read in it, as in a mirror, the changes in the world without: a machine so responsive, so liable to get wrong (the getting wrong being the thing we call disease), and yet with such power of recuperation that it may be built up again from what seems but its mere wreck. Dr. Foster confessed that there were two wonders constantly before him; one wonder when he viewed the great complexity of this machine, that it holds together even for a minute; and another wonder, when he viewed its wonderful power of reparation, that it should ever come to an end. This machine cannot be studied profitably or with success at odd times in leisure moments, with loins girded for other work, or when one returns wearied from other duties. It requires the application of complex instruments, delicate instruments of precision and observation, which may be an observation of importance, determining or rectifying a great truth, which may require hours of patient preparation before the time for observation comes. And how can the doctor who is at the beck and call of his patient break away from hours of preparation just at the moment when the right time for observation has come on? Clearly there must be a division of labour. The progress of physiology is always slow, and very slow in this country. It is slow for many reasons, but it is slow for one reason especially—namely, that labourers in it are few, and because there are so few places in England where a man may at the same time gain that which a physiologist, like other people, must gain, his bread and cheese, and yet pursue his study quietly without the trouble of private practice. The greater part of the progress for the past fifty years has been carried on by labour in the laboratories of Germany. We Englishmen have played only a very small part. It is not because the German is individually more acute or more industrious than the Englishman, but it is because there are in Germany so many universities having chairs of science, which will provide for a man and set him at leisure to advance his own particular branch of science, and thus enable him to give the best of his ability to the work. People may say that in Germany these universities are largely aided by the State; but he (the lecturer) belonged to the old-fashioned school of politics, which thinks that the State should not be asked to do that which can be done as well, or even better, by the individual. He believed that the interference of the State would lead to increased centralisation of our teaching, whereas what we want is increased decentralisation. He believed in small schools, where each man could come more or less distinctly under the personal influence of the teacher; and the best style of teaching is that in which a man is taught the rudiments well, under good supervision, in the years of his apprenticeship, and has a good foundation laid in such a manner that he may be fitted to travel in succeeding years, picking up the best that other schools can teach. In concluding with the desire that the Yorkshire College should be carried on, not only as a college but as a university, Dr. Foster defined the scope of a university thus:—"The mark of a university is not the granting of degrees—for I believe that this country will one day wake up to the fearful loss of time and means in competitive examinations—but it is that which distinguishes it from a seminary. In a seminary boys and girls are taught, and the whole energy of the establishment is spent in turning them out 'taught' boys and girls. In the university they do this; but they do it in such a manner as to instil into the minds of the pupils a genuine love of science and foster a disposition to make the interests of science predominant. It seems to me a matter of very small consideration whether your degrees are given here or in London, or in Manchester or elsewhere; but it is a vital point whether the men who are tutors here are, at the same time, men who are carrying science into unknown regions."

ARMY MEDICAL SCHOOL, NETLEY.

THE forty-ninth session of the School was opened on the 2nd inst. by Professor LONGMORE, C.B. Thirty-five surgeons on probation, who passed the London Examination in August last, entered on their Netley duties, thirty for the British and five for the Indian Armies. Among the visitors was Sir Galbraith Logan, K.C.B., formerly Director-General of the Medical Department of the Army, who never misses an opportunity of showing the deep interest he takes in all that concerns the well-being of his old service.

The lecturer gave the usual hearty welcome to the newcomers, and after reading, by order, an official letter from the Director-General, intimating the concurrence of the Secretary for War in the decision of the professors in the case of a surgeon on probation who failed to obtain the minimum of marks required by the regulations at the last Netley Examinations, gave, in his usual clear and vigorous language, an account of what is expected of those who aspire to serve the State in the Medical Service of the Army, and explained the new circular regulating the examination of surgeons for promotion, and of surgeons-major who seek admission to the administrative ranks of the service. We hope this admirable discourse will be published *in extenso*.

THE REMOVAL OF FEVER CASES.—At the last meeting of the guardians of the Holborn Union a letter was read from Dr. J. W. Smythe, in which information was asked as to the duties of relieving officers in the removal of cases of infectious disease, and in which it was stated that a relieving officer had refused to grant an order for the removal of a patient unless the father made the application. The relieving officer being called upon for an explanation, denied the statement *in toto*, and Dr. Hollis was requested to immediately examine and report upon the case.

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THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

THE General Medical Council met on Tuesday last, Sir Henry Acland, President, in the chair. In opening the proceedings,

The PRESIDENT said, in conformity with the instructions of the Council, I have summoned the present meeting at the first convenient day after the long vacation. The Council will remember that the second period of five years, for which they had elected the present President, ended on July 18th, but that, since it might be undesirable to meet at that particular date, in view of the Medical Bill then before Parliament, it was agreed that I should continue in office in order that I might call the Council together at the time most suitable either for the winding up of its arrangements under the Act of 1858, or for the further discharge of its responsible duties under that Act. This accordingly has been now done or the latter purpose. The Bill, on which so much labour and care has been expended, was withdrawn by the Prime Minister at the close of the session, after it had passed the House of Lords, but not before 185 amendments, in thirteen folio pages of more or less importance, some being in duplicate and triplicate, had been put on the notice paper of the House of Commons. The Council therefore meets now, without delay, both for the election of a President and for the grave purpose of considering the situation in which the medical education of Great Britain and of the Colonies is once more placed by causes in large measure unconnected with it. It is not my intention, under these circumstances, to make any elaborate address before retiring from the high office in which you have twice been pleased to place me. It would not, indeed, be strictly in order to do so, even if it were expedient. But I crave your indulgence while I say a very few words on the position in which, as the guardian of medical education in this country, the Council seems to be now placed. Government Bills, conferring fresh powers and imposing new duties on the Council, and this year re-constituting the Council, and assigning new and important functions to medical boards, have been four times passed through the House of Lords in the last twelve years, and have been four times withdrawn by the Government in the House of Commons without full discussion in that House. Into the causes of this abiding misfortune I will not enter, but I ask your leave to record that this failure has not been dependent on the action of the Medical Council. It is true that the work of the Council has been affected by an unusual, perhaps unprecedented, state of things. It has been hampered in its action, both from without and from within, by the sense that the powers and duties assigned by the Act of 1858 might shortly be modified or transferred. The Council, though anxious to act to the full extent of its powers, was aware that its recommendations and its conclusions were, pending the new legislation, of late years made at a disadvantage. It cannot fail to be asked, What then is now the duty of the Council? Is it to wait for further attempts at legislation? Or is it to continue to develop the work which lies before it, and, with the varied experiences it possesses, to act as though no legislation and no change were impending? It would ill become me to-day to attempt to answer these grave questions. The Council will give its own reply by its actions. But I venture to hazard the statement that three short clauses, to which no serious person could object, would, if passed into law, shortly relieve the teachers and students of modern medicine in this country of almost all their present educational uncertainties. The first, directing the Council not to admit to the Register, after a given date, any person who had not passed examinations, satisfactory to the Council, in medicine, surgery, and midwifery. The second, empowering the Council to appoint, in such manner as it deemed expedient, one or more assessors to every examining board, whatever be their number now or hereafter. The third, making it clear that the Council can, under Clauses 18, 19, and 20 of the Medical Act, inquire into the modes of teaching by the schools, as well as into those of examining by the licensing bodies. But I might go further, and say that at the present crisis it probably is in the power of the existing licensing bodies and schools, by a combined effort, to give practical effect to these several propositions without legislation, and to secure thereby peace to themselves, and in great measure to obtain more completely the confidence of the public at large. I trust that I have not, in these few words, trangressed the bounds which you would wish me, at the close of ten years as your President, to set to these remarks. I do not presume to forecast the future. Of the past I know that the work which I have had the honour of sharing with you at this table for twenty-six years since the establishment of the Council has been work of the deepest interest, and often of great difficulty. During the last ten years it has been such as to produce in me sentiments of profound gratitude and to give confidence that the Council, as the guardian of medical education in Great Britain, will deal with the present crisis alike in the spirit of patriotism and in the temper of scientific progress on which modern medicine so largely depends. Whatever may be the case elsewhere, there is no question that within the walls of this Council there can be now only one aim—viz., how to unite in using and regulating, for educational purposes, and in the best attainable way, the many forces which bear on the study of all problems connected with the prevention and treatment of disease, both personal and national. These are forces which are ever moulding anew the character of the true student for the common good of mankind. They ever need for their study and their guidance fresh thought and new exertion. I now leave the chair in which you have twice done me the high honour of placing me, that you may discharge the duty under the Act of electing a President.

The President's address was ordered to be entered on the minutes, and, on the motion of Dr. HUMPHRY, strangers were requested to withdraw during the consideration by the Council of the election of a President on the retirement of Dr. Acland. On their readmission they were informed that Sir H. Acland had been re-elected for another period of five years.

The Business Committee having been reappointed, the usual returns from the Army and Navy Medical Departments were received and ordered to be entered on the minutes.

Dr. A. SMITH, in calling attention to the returns, said it was very satisfactory to observe that in those of the Army Medical Department there were no rejections, and that in those of the Navy Medical Department there were only two rejections. It was evident, he said, that the candidates were better educated than formerly, it being very unlikely that the standard of examination was lowered.

Mr. TEALE called attention to the fact that candidates from the English bodies appeared to have been the most successful in obtaining vacancies. Two out of three, or at least a half, appeared to have been successful, while of the candidates from the Royal College of Surgeons, Ireland, only one out of twelve had succeeded in obtaining a vacancy, and of the ten candidates from the King and Queen's College of Physicians in Ireland only one had been successful, and of the eight candidates from the Royal University of Ireland one only had obtained a vacancy. Such a result seemed very curious, and appeared to require explanation.

Mr. MACNAMARA said it was gratifying to find that the education given by the Irish bodies had satisfied the examiners. It appeared, however, that the education given in London was still better, since the candidates had been more successful in gaining places. They had learned the cause of it in Ireland, and the result was that he was going to send to London a first-class apprentice of his who knew his business thoroughly, but the grinders or coachers in Ireland did not appear to have the "straight tips" for the examinations. He was certain that if the gentleman to whom he referred presented himself for the examination he would come out qualified but unsuccessful. He (Dr. Macnamara) would, however, provide against such a contingency, for he would send him to one of the best coaches in London who had the "straight tip" for the Army and Navy Examinations.

Mr. MARSHALL said that the number of licences held by the candidates ought to be taken into consideration in any comparative statement. It would be found from the returns that eighty-nine licences were held by forty-four candidates, so that it appeared probable that every one had a double licence. In any comparison it was desirable to ascertain which candidates had the respective licences.

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Dr. WATSON said he had no doubt it would be found that the appointments had been given to those who had obtained the largest number of marks.

Dr. STRUTHERS said it would be very interesting to have similar returns from the India Department, and proposed—"That a copy of the returns of August, 1884, furnished to the Council by the medical departments of the army and navy be transmitted by the registrar to the authorities of the Indian Medical Department, with the suggestion that similar returns furnished to the Council from that department would be useful in order to render the statement of the medical examinations for the public services complete."

Dr. HAUGHTON, in seconding the motion, said that the Indian service was the blue ribbon of medical students, and the examination was a totally distinct one, including natural history as well as medicine. All the best men in the University of Dublin went in for that examination, and he believed that in a return of men who had obtained honours in it the students of that university would be found at the head of the list. The returns as they were laid before the Council were very imperfect, affording no information as to the final result of the year's study passed by the candidates at Netley and Haslar after the examination.

The motion of Dr. STRUTHERS having been passed, Dr. HAUGHTON moved, "And that the authorities at Netley and Haslar Hospitals be requested to forward to the Council a return of the final examination passed by the medical officers of the Army, Navy, and Indian Services." During the year, he said, the men were severely tested, and the results of their additional training ought to be known.

Dr. BANKS seconded the motion, which was adopted.

The following communication from the College of Preceptors was laid before the Council:—

DEAR SIR,—I beg to submit to you, as usual, a statement of the results of the preliminary examination for medical students and others, held by this College on the 9th, 10th, and 11th of September. The total number of candidates examined was 274, of whom 188 sat at the London centre, 27 at Bristol, 20 at Birmingham, 23 at Leeds, and 16 at Liverpool. Of the total number examined, 128 (rather less than half) obtained certificates qualifying for registration as medical students, while 4 passed in mechanics as a separate subject. Of the 142 who failed to obtain qualifying certificates, 40 failed in one obligatory subject, 24 failed in 2 obligatory subjects, 24 failed in 3 obligatory subjects, 23 failed in 4 (or more) subjects; while 31, who passed in all the obligatory subjects, failed to obtain the minimum total of marks required for a place in the second division of the second class, as required by the Medical Council. It will be seen that the results of the recent examination show a marked improvement as compared with the results of former examinations, especially in regard to the smaller number of very ignorant or incapable candidates—i.e., those who failed in three or more obligatory subjects. I am, dear Sir, yours faithfully,

October 3rd, 1884. C. R. HODGSON, Secretary.

Sir HENRY PITMAN moved that the communication be entered on the minutes, and that the College of Preceptors be thanked for the important information it contained. He said it was somewhat disheartening to find that more than half the candidates for the preliminary examination were rejected. The result, however, was better than that in March, when three out of four were rejected. Whether it was the fault of the students or of the examination itself, it was not for him to say; but he thought the question was one which the Council ought to consider. It was a grave matter for consideration that three out of four of those who sought to enter the profession should be found unfit on the ground of ignorance.

Dr. STORRAR said his impression was that the fault rested with the candidates. The College of Preceptors was a body of most experienced teachers, and most competent to test the qualifications of lads coming from school. There was an extraordinary tendency in young lads to go up for examination on speculation, and the result was that they were repeatedly rejected. The effect of the rejection by the College of Preceptors would, however, no doubt, be to raise the general preparedness of the candidates, since those who sought to enter the profession would be made aware that they must be fairly well educated. At the University of London the rejections had been for years 47, 48, or 49 per cent. When he was a young man it was regarded as a disgrace to be rejected, but that was by no means the case at the present time.

Dr. HAUGHTON thought that the result was partly due to the total ignorance of the candidates and their teachers as to what was expected of them. He considered that the best examinations were those at which there was the best *rapport* between the examiners and the teachers, and in which the fewest rejections took place.

The motion was adopted.

Sir HENRY PITMAN moved—"That the several colleges and bodies mentioned in Schedule A to the Medical Act, which conduct an examination on the subjects of general education, be requested to furnish annually the General Medical Council with a return of the number of those who had passed and of those who had failed to pass each such examination, together with a statement of the subjects on which the candidates had been examined." He said that there were fifty-six different examinations, any one of which, if passed would qualify the candidate to commence his professional studies, but the only one from which returns were made to the Council was that of the College of Preceptors. Similar returns from other bodies conducting an Arts examination qualifying for admission to the profession would, he thought, afford valuable information to the Council, and might suggest in what direction improvements might be made in the way of recognising the different bodies. Considering that the subjects were alike in all the different bodies, there ought not to be any great variation in the number of rejections. The subjects which the candidates were expected to pass were specified in the regulations of the Council, but they were not in reality all passed, and last year an application was received from one body asking to be recognised, although it excluded one important subject. The subject of mechanics was constantly omitted, and the College of Preceptors stated that only four out of 274 candidates passed in that subject.

Dr. MACNAMARA, in supporting the motion, said that the percentage of rejections at the College of Surgeons, Ireland, was about twenty-five.

Dr. HAUGHTON said it was of very little use to know how many candidates passed and how many were rejected, without knowing the questions that were asked. He would suggest that copies of the examination papers should be sent with the other returns, together with a statement of the standard in which they passed. There were in Ireland three examinations that were above suspicion—those of the University of Dublin, the Royal University of Ireland, and the Intermediate School Board. Dr. Banks could tell the Council that he would have some difficulty in making a return like that suggested. There was no special examination for medical students, and it would be impossible therefore for the three bodies he had mentioned to state the numbers of the medical students passed and rejected. The students were always recommended by the University of Dublin to spend two full years in arts before going to the medical school at all. It might be desirable to ask that a special examination, including mechanics, should be instituted for medical students, and he thought that the University of Dublin would not be indisposed to accede to the request.

The PRESIDENT said that Dr. Haughton had opened up a large and important question, which could hardly be fully discussed under the terms of his motion, and he would suggest that the whole subject could be better taken into consideration when Sir Henry Pitman brought forward the motion, of which notice had been given, for the Council to resolve itself into a committee to enter fully into the consideration of the subject of preliminary examination.

This suggestion was adopted, and the motion was accordingly withdrawn.

Mr. MACNAMARA moved—(*a*) "That medical students, seeking registration as such at the several branch offices of the General Medical Council, be required to produce, in addition to those certificates at present requisite, a certificate of moral character which shall be satisfactory to the Registrar, acting under the direction of the Branch Council, to the following effect: 'I, , do hereby certify, from personal knowledge, that is of good moral character, and a fit and proper person to be admitted to the register of medical students.'" (*b*) "That it be most strongly recommended to the several medical authorities to require candidates, previous to admission to their final examinations, to produce a certificate of good moral character, to be signed by a clergyman, a magistrate, or a registered medical practitioner." He had, he said, divided the resolution into two parts, because, while the Medical Register was entirely under the control of the Council, the medical authorities could only be recommended, not compelled, to adopt the suggestions of the Council. In the sister profession of the law, students before admission were required to bring a certificate of moral character, without which they were not allowed to commence their legal studies. It was equally important to the medical profession that there should be some guarantee as to the

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character of the young men who were to be entered upon the Students' Register. Cases had come under his knowledge in which lads of infamous character had been expelled from schools, and after passing the preliminary examinations of different bodies had been entered as medical students. If his suggestion were adopted there would, he thought, be some difficulty in a student getting a certificate. As to the persons who should give such certificate of character he had advisedly excluded schoolmasters.

Dr. BANKS said he was glad to find that the College of Surgeons, Ireland, was about to follow the example of the King and Queen's College of Physicians, which required a certificate of character from its students. Such certificate, he thought, should be given, not by clergymen or by magistrates, but by two registered practitioners.

Dr. HAUGHTON thought it would be better not to define the kind of certificate required, and that it would be sufficient to state that it must be "a satisfactory certificate of character." It would be invidious to leave out the clergy, for he thought that the lowest of the clergy in the Church were on a higher platform than the lowest registered practitioners.

Dr. QUAIN suggested that the certificate should be one which should be satisfactory to the registrar.

Mr. SIMON thought it would be better to say "satisfactory to the registrar as instructed by the Branch Council." He sympathised with the object of the resolution, but he did not see what satisfactory evidence of moral character could be obtained. Every man was assumed to be of good moral character until the contrary was shown. If it could be proved that a man had committed a crime so that he could be brought under the criminal law, he could be easily dealt with, and the medical student might be called upon to sign a declaration to the effect that he had not committed any such crime. He protested against making any further addition to the dreadful certificate system, under cover of which many false statements were made.

Dr. LYON also expressed his sympathy with the object of the motion, but said he thought it would be very difficult to carry out the proposed recommendation.

Dr. PYLE seconded the amendment.

Dr. A. SMITH contended that the Council was quite prepared to vote on the question, and expressed his concurrence with the views of Mr. Simon and Dr. Lyon. He had once said that he would certify to anyone's moral character except his own.

Dr. HUMPHRY objected to throwing upon medical practitioners the responsibility of certifying as to moral character. It was hardly possible that lads of seventeen or eighteen could be excluded for want of moral character. He did not think that the proposed regulation would be of the least value in the profession.

Mr. DUNCAN, in supporting the motion, said that the very fact that such a certificate was required would be of great moral value to the students. No one could escape the responsibility of writing certificates of character; they were given in other instances, and he could see no good reason why they should not be required from persons entering the medical profession. He had often to write them himself, and his practice was to write them as honestly and as liberally as he could.

Mr. MACNAMARA declined to accept the proposal to refer the matter to a committee, which he said would only have the effect of shelving it. He accepted, however, Mr. Simon's suggestion that the certificate should be "satisfactory to the registrar of the Branch Council."

The amendment was then put and rejected, and the original motion met with the same fate. The second part of the resolution was then withdrawn.

Dr. BANKS moved "That it be a recommendation from the Medical Council to the medical authorities that they should not confer a degree or licence to practise upon any candidate until he has attained the full age of twenty-three years." He said he believed that the present regulation as to age was frequently evaded. He was strongly of opinion that in the case of most men there was not time to receive a good preliminary or professional education by the age of twenty-one. There was only one other country (Germany) in which the period of study for medical students was so short as in England; and Billroth had declared that it was shameful that a boy leaving school at sixteen should, after four years' study, be considered qualified to deal with the health and lives of the people, when he would not be allowed to deal with his own property. The minimum age in the Church of England was 23, and in the Church of Rome 24; in Austria the time required for medical study was 5 years, in Holland 6, in Belgium 7, in Denmark 5, in Norway 7, in Russia 5, in Greece 5, in Italy 6, in Portugal 5, in France 6, and in Sweden 10. It might be said that if his proposal were adopted poor lads would be prevented from entering the profession; but if parents could not give their sons a learned profession they ought to send them to trades. It was not well for the profession that there should be too great facilities for entering it.

Dr. HAUGHTON, in seconding the motion, called attention to the grave responsibilities undertaken by medical men and the delicate position in which they were often placed in regard to the domestic affairs of their patients.

Mr. SIMON said that the case of a clergyman was not analogous to that of the medical man. In the one case the main question was the competence to act as a spiritual guide, and in the other it was the earning of a livelihood. The real question in the case of the medical man was whether he was fit to undertake legal responsibilities, and whether he knew his business—a matter to be decided by his examinations. He did not think they ought to make too stringent rules as to the length of the curriculum. It would be injustice to a young man who was competent at twenty-one to extend the age to twenty-three.

Dr. LYON said that, in the event of the motion being adopted, some provisions should be made in favour of those who had been preparing for examination under the present regulations. He suggested that the regulation should not be made until after the year 1888.

Mr. DUNCAN thought that such a tremendous revolution (though he sympathised with the recommendation) ought not to be finally adopted without obtaining the deliberate opinions of the various licensing bodies, none of whom at present required a greater age than twenty-one.

Dr. STRUTHERS said he would be willing to alter the age to twenty-two, but he thought that twenty-three was rather overstepping the mark.

The debate was then adjourned to Wednesday.

WEDNESDAY, OCT. 7TH.

SIR HENRY ACLAND, PRESIDENT, IN THE CHAIR.

On the motion for the confirmation of the minutes,

Mr. MACNAMARA called attention to the title "Mr." prefixed to his name in the minutes, instead of "Professor." He had written to the Registrar on the subject, and had received a reply stating that "Sir H. Pitman (chairman of the Business Committee) thinks this would be contrary to practice, and, unless the title of 'Professor' were prefixed to all who adopt that prefix at the schools where they teach, it might give rise to unpleasant feelings." Sir H. Pitman had as much right to question his title of "Professor" as he (Mr. Macnamara) had to question the prefix to Sir H. Pitman's own name, which he had so honourably won. His college (which had a Royal charter) had appointed him as a professor, and he was therefore entitled to the designation.

Dr. HAUGHTON seconded the motion for the amendment of the minutes.

The PRESIDENT pointed out that the question was one which would apply to other members of the Council, and could not be settled without careful consideration. Hitherto such matters had been left to the chairman of the Business Committee.

Sir H. PITMAN thought it was strange that Mr. Macnamara, having sat on the Council for ten years, should now for the first time raise the question of his title. He (Sir H. Pitman) had followed precedent, and if any alteration were made it ought to be under the direction of a committee appointed to consider the whole question and settle it once for all.

After some further discussion, lasting in all nearly three quarters of an hour, it was suggested by Mr. SIMON that the matter should be left to the discretion of the President. Mr. Simon also drew attention to the fact that in the document containing the appointment of Mr. Macnamara he was designated "Rawdon Macnamara, Esq."

Mr. MACNAMARA accepted the suggestion of Mr. Simon, and withdrew his motion for the amendment of the minutes.

The PRESIDENT said he desired to make a brief statement with regard to the very serious business before the Council. It was no exaggeration to say that a very serious mass of complicated and entangled work was before them. What they had practically to decide was whether they should wait for further legislation, or whether the Council should proceed

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to do the work appointed for it by the Act of 1858, which, under various and increasing difficulties, it had been attempting to do during the last ten years. The first important point to be considered was, he thought, the duty of the Council in regard to the medical education of the whole kingdom. The Legislature of the country had for more than ten years been endeavouring to solve the question, and had again failed; but it had not taken from the Council the duties and powers assigned to it in 1858. The Council would have to consider what were the things it could not do without further powers. It might be said that the motions set down on the programme solved the questions to be considered; but he thought it would be desirable that the Council should first consider in committee what were the most important changes, if any, in respect to medical education and examination which should be made for efficiently carrying out the intention of the Medical Act: that the several changes, if any, be classed into (1) those which could be effected by the action of the Medical Council, the several medical bodies, and the recognised medical schools; and (2) those, if any, which might require for carrying them into effect an alteration of the law. He suggested that the representatives of the several licensing bodies should use all due effort to obtain the consent of their respective institutions to such resolutions as might be passed by the Council, with a view of immediately carrying out those which could be effected without an alteration of the law, and for their observations on the importance and desirability of those which could not. It might also be desirable that the committee of the whole Council should first deliberate in private, until matters were put into such a shape that they could be conveniently submitted as definite resolutions and publicly debated. Notice of motion to the effect he had mentioned would appear in the programme of business on Thursday.

Dr. HUMPHRY said he was greatly alarmed at the announcement of the President that the notices in the programme were to be displaced for a discussion which could not be productive of any good result. The thought of future legislation had been a hindrance to their work during almost the whole of the time he had been on the Council, and it was now their duty to proceed without any reference to such legislation.

The adjourned debate on Dr. Banks's motion to extend the age of commencing medical practice was resumed.

Dr. HALDANE thought that a young man of twenty-one who passed the required examination ought not to be prevented from practising the medical profession, seeing that he could perform any other legal function at that age. Many men at twenty-one were as well qualified as others were at twenty-three or twenty-five. It would not do to send them out as assistants, since they would be legally unqualified, and to prevent them from earning their own living would be a great hardship, especially in the case of men of small means.

Mr. MARSHALL was in favour of lengthening the curriculum, but saw no good reason in setting the proposed limit as to age except with that view.

Dr. STORRAR said that the public wants must be met, and there was a large class of persons who could not afford to pay for the professional services of an expensively educated man. The question of age should be left to settle itself. If the standard were raised too high, the poorer part of the public would go to chemists and druggists and to irregular practitioners.

Dr. SCOTT ORR thought that the lengthening of the curriculum was more important than the extension of the age for the commencement of practice. The former question could not much longer be shelved now that the list of subjects was so much extended. He approved of the suggestion of Dr. Struthers that the required age should be twenty-two, which he thought would be tantamount to adding another year to the curriculum.

Dr. HUMPHRY thought that the question should be left to the licensing bodies. To extend the age to twenty-three would be a hardship to clever and industrious pupils, who might be led away to other professions in which they could earn money at an earlier period.

Dr. BANKS, in replying, said his only object in bringing forward his motion was to raise the status of the profession. He was willing to adopt Dr. Struthers' suggestion to fix the age at twenty-two. An extension of the curriculum to five years, however, would answer the purpose he had in view, and if that were adopted he would throw over the regulation as to a minimum age. So far from his proposal being revolutionary, it was really only a return to former practice.

Mr. SIMON said he objected as strongly to fixing the age at twenty-two as he did to fixing it at twenty-three. He suggested that the motion should not be pressed, but that the whole question of the curriculum should be reconsidered with the other recommendations of the Council at the next session after conference with the authorities of the different bodies concerned.

The motion was then put and rejected.

Sir HENRY PITMAN moved—"That the proposal of the Royal College of Physicians of London and the Royal College of Surgeons of England to co-operate under the direction of the Council, do receive the sanction of the Council." The scheme submitted, he said, was the same as that brought forward last year, and it had been before the Council for a considerable time. The words "under the direction of the Council" had been inserted because they were in the Act of Parliament, and they were also used when the sanction of the Council was given last year to the proposals of the corporations in Scotland. He could not suppose that the Council would refuse to sanction that which it had been seeking to obtain during the last fourteen years. It might, perhaps, be urged that the question should be deferred till the proposals of the President in his notice of motion should be considered; but that notice only referred to questions as to which any doubt existed whether they could be carried into operation without further legislation. There could, he thought, be no question that the Council had the power to grant its sanction at once. It might be said that it was not to the interest of the bodies to combine, but that was rather a question for the bodies themselves than for the Council. If they chose to sacrifice any of their own interests for the good of the profession it was meritorious on their part. A previous scheme had been under consideration, but it had been withdrawn, and the sanction of the Council was now asked to the new proposal.

Mr. MARSHALL, in seconding the motion, said there was nothing in the scheme which would interfere with any Medical Bill that might be brought forward. It was limited in its action, and did not profess to cover the whole ground of medical reform—an object in which Parliament itself had failed. The scheme was a thoroughly practicable one; the two Colleges had considered it over and over again; there was a perfect harmony between them, and if the Council sanctioned the scheme the Colleges were prepared at their next sittings to nominate the Committee of Management to carry it out. It would be unquestionably an advantage to the student to have but one course of study to pursue in order to obtain a double qualification. Simplification and consolidation of the curriculum would be of great importance on the existing curricula of the Colleges. The student would no longer be troubled with too many lectures, but he would have three examinations instead of two. The first examination would be under the authority of the examiners of the two bodies. Years ago he had proposed such a preliminary examination for the College of Surgeons but without success; his proposal, however, had since been accepted and it worked well, attracting many new candidates to the College. The division of the examination was also matter of great importance, and if it were for that alone the scheme deserved the consideration of the Council. The period at which a man could finally get his licence was prolonged, and by dividing the examinations the candidate would be able to take time over each subject. If a man were at all distrustful of himself, he was thus encouraged to take things separately and quietly. It might be said that the present licence of the College of Physicians was all that a man wanted, since "physic" included surgery. Admitting that the College of Physicians had the right to examine and qualify a man in surgery, what were the actual facts? He had analysed one-tenth of the names on the Medical Register for 1884, and out of that number (1450) there were 153 licentiates of the Royal College of Physicians, only six of whom were contented with the single qualification, and, of those six, two lived in Canada (having no doubt a Canadian qualification also), two in London, one in Hampstead, and one in the provinces. Of the remaining 147, 139 were also members of the Royal College of Surgeons of England. That was very satisfactory as showing that the licentiates were anxious to secure good surgical qualifications. If the College of Surgeons were giving up any legal right, they ought to be complimented on their self-sacrifice in behalf of the public. The proposed scheme was not opposed

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to any of the existing lines or tendencies of the medical student, but in reality encouraged them, and he thought that the Council could hardly exercise its power of refusal to sanction a scheme which had been submitted by two such honourable bodies as the College of Physicians and the College of Surgeons. As to the question of fees, the familiar "three courses" presented themselves: first, to raise the fees; secondly, to lower them; and thirdly, to leave them unaltered. An increase of the fees would have raised an uproar at once, because it would be said "You are saving money by combining your forces, and yet you demand more money." If the fees had been lowered, it might be said that the Colleges were bidding for candidates in competition with other bodies. Under all circumstances, it had been thought desirable to keep the fees as they were—fifteen guineas at the College of Physicians and twenty-one guineas at the College of Surgeons, thirty-six guineas in all. It was found that the cost of conducting the first examination was very considerable; many candidates did not go through the entire examination, some dropped off early, and the candidates for the final examination gradually diminished. The cost was more than if all the candidates went through the whole examination, and hence it had not been considered desirable to reduce the fees. As to the funds which the College expected to possess, it would not do to count their chickens before they were hatched. When the College was in possession of the funds it would be right to re-open the question of fees, and see whether they could be assimilated to those of the College of Physicians. To lower the fees at present would, he thought, be open to serious criticism. He earnestly hoped that before many hours the scheme would receive the sanction of the Council.

Dr. QUAIN said he had a very strong impression that Mr. Marshall had drawn largely on his imagination for his facts. He had boasted of the character of the examinations about to be established jointly, but he should have told the Council that they were almost identical with those now carried out by the College of Physicians. The present movement on behalf of the Colleges originated in the College of Physicians. Proposals were sometimes made by one of the Colleges and at other times by the other; but in October, 1882, one of the most distinguished Fellows of the College of Physicians proposed this resolution: "That, whereas the Royal Commission on granting medical degrees has now affirmed the principle of diminishing the number of examining boards for medical licences, the Royal College of Physicians takes the opportunity of reaffirming that principle, already adopted and acted on by it." The effect of the resolution proposed by the College of Physicians would be, not to reduce the number of boards, but to increase them. The College of Physicians must be ready to examine candidates who came from the College of Surgeons in Ireland, in Edinburgh, or elsewhere, and the College of Surgeons of England must be ready to examine candidates coming from other bodies; so that there was a new board added, and it was a perfect delusion to think that there was any diminution of the number of boards. The object of the second portion of the resolution—namely, that the President should be requested to name a committee to consider what combination the College might best enter into for examination purposes, so as to secure without further delay one complete examining board, which should be satisfactory to the profession, the Medical Council, and the Government—was that there should be a board in England that should license to practise in England, and that no one should receive a licence from either of these bodies if he did not pass the examinations of both boards; but in the note to the scheme now before the Council it was stated that anybody coming from Edinburgh might go to the College of Physicians and say, "Examine me for my licence," or he might go to the College of Surgeons and say the same, so that there was no advantage or benefit whatever to be derived from the scheme. Mr. Marshall had alluded to the fact that the scheme for the Scotch union was passed without question, but that scheme was totally different from the present one, which was not truly for union or combination. The Scotch Colleges combined; the London Colleges proposed only to co-operate. In Scotland there wss a common fund, and all the fees were paid into it, but in London the examiners could be appointed by the separate Colleges and the fees would remain just as at present. Each College would also pay its own examiners. Under these circumstances he regarded the proposed joint board as a sham. If anybody came to the College of Physicians with a surgical qualification, he was not asked a question about the College of Surgeons and its course of education. What was the price to be paid for this supposed advantage? The Council had aimed at a board examining all round, and that amiable fox living in Lincoln's-inn-fields, which never had a tail, went to the College of Physicians and said, "How beautiful I am without a tail!—do drop your tail and be like me." When the Medical Act of 1858 passed, the College of Physicians particularly felt that the privileges of the College were almost swept away, and they considered how they could best adapt themselves to the new position. They resolved to do away with the extra licentiates and to institute an examination for licentiates. They found that the old word "physic," as it was used in the time of Henry VIII., meant medicine and surgery, and that they were empowered to have one single examination for physic and surgery. From the old Charter it appeared that every physician was entitled to practise medicine and surgery. Some doubt having been thrown upon that view, no one exerted himself to get the surgical qualification recognised more than Sir Henry Pitman himself. Why, then, should the College of Physicians give up the examination in surgery? The scheme, too, broke in on the great principle of the single examining board, and the object of the proposal was to help the College of Surgeons out of its difficulty, as it had at present only power to give a half qualification. The College of Physicians only accepted the scheme under the impression that it was going to establish a grand national board. Ninety-three per cent. of the licentiates of the College also got the qualification of the College of Surgeons voluntarily, but what was more strange was that 30 per cent. of them got the licence of the Apothecaries' Society. Why should men who did this be compelled to go to this and that particular College? and why should a man who was willing to give fifteen guineas to get a perfect diploma be compelled to go to the College of Surgeons and pay twenty-five guineas more? For his own part, he felt that the Council would make a very great mistake if it sanctioned such a partial and incomplete examining board. The number coming up to the College of Physicians had increased so rapidly that there were more than 200 licentiates during the past year. That was what had stirred up the College of Surgeons. It was, in fact, the old story of the battle of shops. He would move as an amendment, "That while the Council approve of the resolution of the College of Surgeons that it will not grant its diploma to any candidate who has not passed all the examinations required for a registrable medical diploma, it is not prepared to sanction an arrangement by which the Royal College of Physicians would become a partially qualifying body, and thus entail additional expense and inconvenience upon candidates for its licence."

The amendment was seconded by Dr. PYLE.

Mr. MACNAMARA approved of the Scotch scheme owing to its comprehensive character, including, as it did, all the bodies; but the present English scheme was very different, omitting one important body, the Apothecaries' Society. If that Society had been included he would have voted for the scheme.

Mr. TEALE said he was at first greatly disappointed with the scheme, but he did not think the Council could refuse to sanction it. The step was one in the right direction, and its effect would be greater than might appear at first sight. It would settle the curriculum for the students; and the qualification would be universally recognised as a high one. That it was a co-operation instead of a union was somewhat the result of the difficulty of conducting negotiations between two large bodies, each of which had its own interests, and one of which was involved in great pecuniary responsibilities. He regretted that there was to be at first no reduction of fees, but hoped that such reduction would in future take place. The additional examination proposed would involve considerable additional cost to the students; but that might be modified if the preliminary examination could be conducted by men sent into the country from the central body to co-operate with the teachers of the schools. The long attendance in London was very costly. The paper examinations might be conducted in the country; and the candidates who were rejected on the paper examinations ought not to be required to come to London for the *viva voce* examinations. The provincial schools were becoming large and important bodies, and were entitled to every consideration.

Mr. SIMON expressed his dissent from the views of Dr. Quain as to the claim of the College of Physicians to give a qualification in medicine and surgery. The statute of

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Henry VIII. no doubt stated that the members of the College of Physicians were entitled to practise surgery; but that was very different from giving licences to practise to persons not members of the Corporation. The College of Physicians had, indeed, never examined in surgery, except through Fellows of the College of Surgeons. The point had once come before the College of Surgeons, in connexion with the conjoint scheme, whether it would be justified in refusing to examine a man in surgery who had not a medical qualification. It was an open secret that the College was advised that it had that power, but on taking further advice (at his recommendation) it appeared that it had no such power, and accordingly the College obtained an empowering Act of Parliament for the purpose, so that it could now, if it entered into combination, refuse a separate examination. He believed that the College of Physicians had not obtained such an Act, and if so the difficulty appeared to him to be insuperable.

The PRESIDENT said that a second amendment had been handed in, moved by Dr. Chambers and seconded by Mr. *Simon*, to the effect that the Council was prepared to sanction the scheme "provided that full facilities were afforded to the other licensing bodies in England for co-operating with the above-named Colleges under the direction of the Council."

The debate was then adjourned to Thursday.

THURSDAY, OCTOBER 9TH.

The Council resumed the adjourned debate on Sir H. Pitman's motion sanctioning the proposed conjoint scheme of the College of Physicians and the College of Surgeons. The amendment moved by Dr. Quain was put, and rejected by thirteen votes against five. The amendment of Dr. Chambers was then discussed, and was also rejected by fourteen votes against four. Dr. Lyon moved, and Mr. Collins seconded, a third amendment, proposing to send back the scheme to the Colleges, to consider whether some arrangement could be made to include the Society of Apothecaries. This amendment was rejected by thirteen votes against four. A fourth amendment was moved by Mr. Bradford, and seconded by Dr. Chambers, sanctioning the scheme "on the understanding that the two Colleges shall not be at liberty to refuse the further co-operation of any other of the English licensing bodies if offered on terms which the Council deems proper." The amendment was rejected by fourteen votes against six, and Sir H. Pitman's motion was put and carried.

The Council then adjourned to Friday.

HOSPITAL FESTIVITIES.

UNIVERSITY COLLEGE MEDICAL DINNER.

SIR WILLIAM JENNER graced with his presence in the chair a most successful dinner held at the Freemasons' Tavern on the 4th inst., when at least 175 sat down. The chief object of the dinner, now celebrated for the second time, is to promote the social consolidation and good fellowship of the living aggregate of past and present students of the Faculty of Medicine of University College, London. In a warm-hearted and telling manner Sir William interested his large audience by stating the reasons which had led him to accept the invitation to the chair on that occasion. These may be summed up thus:—The social nature of the gathering precluded the necessity of formal speech-making; and Sir William's long connexion with the institution, of which he felt himself to be the pure outcome since he had established the foundation of his knowledge nowhere but at University College, and had never drunk of the muddy waters of the Danube. In proposing the toast of "The Health of the Chairman," Mr. Erichsen remarked in fitting language that Sir William had spoken of the good gained from University College, but not of the debt which the medical school owed him. The general cheerfulness of the evening was added to by vocal music rendered by Dr. F. T. Roberts, Mr. Price, and Dr. Beevor to the pianoforte accompaniment of Mr. H. A. Powell. A vote of thanks to Dr. Poore and Mr. C. Stonham for their services in organising the dinner was carried with acclamation, and it was announced that the same gentlemen had kindly undertaken to resume their functions at the next annual dinner.

THE LONDON HOSPITAL.

The East of London was quite *en fête* on the first of October, partly, let us hope, in expression of the feeling of the people of these regions that that institution is a veritable and kindly home to them in the dark days of sickness, but partly doubtless on account of the magic influence of the Lord Mayor, whose arrival was, though somewhat late, evidently highly popular, not only to the crowd of spectators outside, but to the gay company assembled within under a tent erected for the purpose. The proceedings were very interesting, including speeches from Mr. Buxton, Sir Andrew Clark, Mr. Jonathan Hutchinson, the Lord Mayor, and others; also the giving prizes to the successful pupils of last session and to the nurse probationers. The school promises to have a very large entry, and is altogether in a healthy and progressive state. After a hundred years of most creditable work, as Sir Andrew Clark said, they are entering on another century with a fixed determination to carry on and to carry higher the art of healing and medical teaching, and the grave moral teaching which physiology and medical experience carry with them. Mr. Hutchinson's address was a feature of the evening, and it is to be regretted that he had not more time and leisure to develop his views as to the claims of poetry on the scanty time and thought of medical students and medical men. Few of us probably are prepared to substitute the poets for the prophets, but it was interesting to note the place they take in a mind so thoroughly practical, and, we will add, reverent as Mr. Hutchinson's. His favourites among living poets are Longfellow, Browning, and especially Wordsworth. The Lord Mayor expressed his high view of the calling of medicine, and the whole proceedings were wound up with a spectacular entertainment in the grounds of the hospital which we have already noticed.

THE MIDDLESEX HOSPITAL.

The annual dinner of the past and present students of this institution took place at St. James's Hall on the evening of the 1st inst., under the presidency of Mr. Henry Morris, M.A., M.B., surgeon to the hospital. The gathering was well attended, and the occasion very successful. The toast of the evening, "Prosperity to the Middlesex Hospital and its Medical School," was proposed by the chairman, who took occasion to contrast the earlier history of the hospital with its present condition, and who paid a well-merited tribute to the devotion and fostering care of the weekly board. Mr. A. H. Ross, M.P., the chairman of the weekly board, and Mr. J. W. Hulke, F.R.S., responded to this toast. "The Health of the Lecturer of the day" was given by Dr. Spencer Cobbold, F.R.S., and acknowledged by Dr. D. W. Finlay. Mr. B. T. Lowne proposed "The Past and Present Students," which was responded to by Sir Oscar Clayton and Mr. C. L. Hudson. An admirable selection of music was given by Herr Ganz, Mr. D. Hepburn, and others, and the proceedings lasted until a late hour. In connexion with this hospital, it may be mentioned that on the occasion of the distribution of prizes which followed the introductory lecture, the chairman (Mr. A. H. Ross, M.P.) announced that Dr. Frederic Hetley of Norwood had forwarded him a cheque for £25 to be expended in a clinical prize, and had expressed his intention of providing a similar sum annually. The announcement was received with loud cheering.

SOCIETY FOR THE STUDY AND CURE OF INEBRIETY.—A meeting of this Society was held in the large room of the Medical Society on the 7st inst. The president, Dr. Norman Kerr, who occupied the chair, showed specimens of the kola-nut of South Africa (Sterculia acuminata), the professed anti-dote to drunkenness; containing a considerable proportion of caffeine, with a lesser amount of theobromine and tannin, it was a stimulant and tonic. Dr. Alfred Carpenter read a paper on the "Study and Cure of Inebriety." Inebriety, he said, was often induced by nervous shock and other physically disordered states of the nervous system. The worst effects were seen in the children of young drunkards. Penalties and imprisonments were useless. Total abstinence was essential to a cure. Mr. Oakley Hall described American legislation for the inebriate as being immeasurably ahead of legislation in England.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 11, 1884.

THE disastrous effect of the paralysis of Parliament on medical affairs is nowhere more apparent than in the Medical Council itself. That body has never been famous for transacting business in a business-like way. But for a year or two it has been affected with the feeling that it was under some public criticism and in yearly danger of dissolution. Such a feeling has had some wholesome influence on the Council and made its discussions a little more practical, and perhaps a little shorter than usual. But the failure of even Mr. GLADSTONE'S strong Government to effect legislation so long expected and demanded by such a consensus of opinion in and out of the profession has emboldened the representatives of "the shops" to regard themselves and their position as unassailable, and to waste the costly time of the Council over questions and discussions of mere academic or even personal interest. We say the costly time of the Council, for it is literally very costly. Thus—

In 1883 a meeting of the Council cost	£1061	0	0
One day's meeting costs	151	0	0
One hour's meeting ,, ...	38	0	0
One minute's ,, ,, ...	0	12	8

The Council should at the commencement of its meetings insist on having from its Executive Committee a statement of the absolute and necessary business to be done. We mean by this the statutory business which it was called into existence to discharge. Having got this statement and insisted further on the separate parts of the statutory business being placed on the programme in the order of their importance, it should proceed to dispose of such matters. This is the way in which any ordinary body acting under the powers of an Act of Parliament and at the expense of a poor profession would proceed. But it is not the way in which the Medical Council acts. Thus, out of about eighteen motions which constitute the programme, about six may be regarded as arising out of the statutory duties; of the rest, two-thirds are matters of theory and opinion, and refer to subjects that have been discussed over and over again by the Council. For example, the time of the Council, on its first day of session, was occupied mainly with two unpractical resolutions. The very first was a proposal by Mr. MACNAMARA that gentlemen seeking registration as medical students should in addition to all other certificates produce a certificate of moral character from a clergyman, magistrate, or registered medical practitioner, and should produce a similar certificate before admission to the final examination. The moral character of young men, of mere youths, is surely a thing to be assumed. Charity believeth all things of men at such periods of life; and even if charity in so doing is open to the charge of being a little credulous, it is better that it should be so than that inquisitorial investigation should be instituted, or that general certificates should be relied on which can be procured by anyone who does not flagrantly break the Ten Commandments. The common sense of the Council negatived this proposal, but not till a couple of hours and about sixty pounds had been spent over it. This academic discussion was followed by another equally unreal as to the feasibility of recommending to the medical authorities that they should not confer a degree or licence to practise on any candidate until he has attained the full age of twenty-three years instead of twenty-one, as at present. This also was negatived by the Council, but not much under a cost of fifty pounds and an hour and a half of time. The proposal was made by Dr. BANKS, who, it must be allowed, does not generally make unreasonable use of the time of the Council. The climax of unreasonableness was reached by no less sensible a man than Mr. MACNAMARA, who detained the Council for about forty minutes over a discussion on the title by which he ought to be addressed. This little incident was so ordinary and slight a matter in the eyes of the Council, that it has no record in the minutes. But it cost the profession £25 6*s.* 8*d.* The consequence of all these speculative discussions is not only waste of time and money, but the neglect or the inadequate treatment of graver questions, when the Council wakes up to the conclusion that its time and its patience are exhausted.

The real matters of importance disposed of at the time of our going to press are not many. It will surprise no one to hear of the re-election of Sir HENRY ACLAND to the chair of the Council, which was practically unanimous. This is the third period of five years for which he has been elected. There are obvious and grave objections to making a precedent of virtual permanency in this office; but, apart from this, there are few men so eligible, and who could place so much time and hearty service at the disposal of the Council, as Sir HENRY ACLAND. His re-election should encourage him to persevere in bringing about an understanding between public men in and out of the profession by which the chaos of our examining system and the competition of rival bodies can be remedied. By such a use of his influence he will befriend not only the medical profession, which is injured by the existing state of things, but Parliament, which is discredited by its impotence to improve it. With all that Sir HENRY said as to the gravity of the situation produced by the failure of legislation we cordially agree; but we must lose no time in saying that the situation would not be materially improved by such slight measures as he sketched in the three proposals which will be found in his address. Such proposals would not make the Council more efficient or more independent. They would not materially add to its power for securing fairness and an approach to equality in corresponding examinations in different divisions of the kingdom; and they would not diminish but increase the worry and cost of the process by which the poor student is now distracted in order to maintain twenty bodies instead of three.

A LETTER, written by Dr. WILKS, which appears in another column, gives expression to a reasonable hope and expectation that the Royal College of Surgeons of England will devote much of the munificent bequest of the late Sir ERASMUS WILSON to the purpose of providing facilities for the pursuit of anatomical, physiological, and pathological investigation and research, more especially in relation to surgery. The need of such facilities has, we have reason for knowing, often been pressed upon the attention of many individual members of the Council, though to few does it

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seem hitherto to have commended itself as a practical or practicable suggestion. The alleged difficulty was a financial one. This has at length been removed, inasmuch as necessary funds have been provided in a collateral and quasi-accidental way, without interfering with the ordinary revenue of the College. It is rumoured that some members of the Council intend to propose that a large part of the funds likely soon to be at the disposal of the College shall be expended in acquiring and furnishing a place and means for scientific research such as many of the universities and colleges on the Continent possess. We rejoice that the College, though late, is now likely to emerge from the torpid and semi-hibernating condition of a mere examining body, and undertake the higher, more useful, and patriotic duty of promoting and encouraging the science and art of surgery in England. It was never designed that the business of the College should begin and end in granting qualifications to practise as surgeons. This was evidently intended to be merely subsidiary. The preamble of the first Charter granted to the existing College (40th GEORGE III.) sets forth the purpose for which the College was incorporated in the following words: — "Whereas it is of great consequence to the Commonweal of this Kingdom, that the Art and Science of Surgery should be duly promoted; and whereas it appears to us that the Establishment of a College of Surgeons will be expedient for the due promotion and encouragement of the Study and Practice of the said Art and Science," &c. This purpose is repeated in the recital of the Charter of the 3rd of GEORGE IV., and more particularly in the preamble of this Charter, in which the College is empowered to hold lands or rents to the yearly value of £2000—"And whereas it appears to Us to be expedient, in order more effectually to promote and encourage the study and practice of the said art and science of surgery ..... We of our especial grace and mere motion, at the humble petition of the said Royal College, have willed ..... that the said Royal College of Surgeons in London shall and may take, purchase, possess, hold, and enjoy any lands ..... not exceeding ..... the yearly value of two thousand pounds." It will be remembered that last March it was recommended that the College should obtain power to hold lands or rents to the yearly value of £10,000.

It is remarkable that, notwithstanding the obligations imposed by the various Charters of the College, the Council should have hitherto suppressed the higher function of promoting and encouraging the study and practice of the art and science of surgery, and should have been content to travel for eighty-four years along the old lines of its predecessors, "the Masters, Governors, and Commonalty of the Art and Science of *Surgeons*." Had the Council fully appreciated the true significance of the intention of the founders of the College, it would long ago have taken under its ægis the protection, promotion, and encouragement of surgical art and science. As it is, it has been satisfied with merely affixing its *imprimatur* on young surgeons, who have been compelled to acquire all their learning and training elsewhere. Absence of facilities for thorough and complete training in surgical and pathological science has, no less to the profit than astonishment of foreigners, compelled hundreds of our countrymen, carrying with them thousands of pounds, to seek in continental schools the help which the College of Surgeons might at any time from its foundation have supplied as effectually at home. Henceforth the Council will have no valid excuse for its *laissez-faire* policy in this matter.

THE disgusting and dangerous condition of the Thames has been proved by such a mass of scientific evidence, and has, moreover, been rendered so evident to the popular nose during the recent hot weather, that no one now doubts that some remedy will shortly be attempted. The Royal Commission appointed to inquire into the matter is still sitting, and is engaged in the consideration of remedial measures; but it has already published a report in which very strong opinions in regard to the existence of the nuisance are stated; and Mr. THORNHILL HARRISON, in his recently published report, goes even further, as will be seen from the following quotations:—"It is probably no exaggeration to say that at the present time [August] there is a month's sewage from the metropolis oscillating backwards and forwards between Greenhithe and Teddington. ..... The water during high spring tides is polluted even up to Richmond, and it leaves a foul deposit on the banks of the river and on the towing-path. This nuisance is complained of by the Richmond people. The Thames in its present condition can only be compared to a huge sewage tank, which for now many months has not been cleaned out. It is notorious that under such circumstances the sludge, wherever it settles, becomes putrescent and most offensive. ..... The Metropolitan Board of Works deny altogether that there is any deposit of sludge in the Thames from their sewage. I feel confident that this contention is no longer tenable; for there must be a considerable deposition of mud wherever the water is moderately quiescent."

At last it appears the Metropolitan Board of Works has changed its front, and has come forward with a new scheme for dealing with the sewage of the whole of London, including that of the Lower Thames Valley. Sir JOSEPH BAZALGETTE, it is said, now proposes that the sewage of South London shall be carried under the Thames to the northern bank of the river, to join the northern sewage, the united stream being then carried down to Sea Reach to be discharged near the Essex shore during the ebb tide, and so carried to sea. As for the sewage of the Lower Thames Valley, that is to be carried through a new main sewer, through Kingston to Crossness, where it would join the sewage of South London. Considering that the nuisance is the work of the Board, and that the money of the ratepayers has been spent recklessly in the fruitless endeavour to prove that no nuisance exists, the public will regret that some other authority cannot be entrusted with the reform. But reform is so urgent that we care little who effects it, and if this scheme is shown to be the best which is offered, we trust it will be adopted without delay. Let it be remembered that we are living in extreme risk. The cholera is in Europe. It was here not many years ago, and may come again next year. A river which has been converted by human stupidity into a huge open sewer is a home to which it would naturally fly, and from which no one can tell how soon death might radiate.

The greatest objection to Sir JOSEPH BAZALGETTE's scheme is that it would take years to accomplish. There are

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other objections of course. It is painful to think of the waste of phosphates involved. We ransack the world for phosphates. The supply is large, but not inexhaustible; and yet we seem to be ever adopting new contrivances for throwing them into the sea. This is a sin, and England is, as LIEBIG long ago declared, the greatest sinner. Native phosphates represent the food supply of future generations, and seem intended by nature to replace the unavoidable losses incident to any system of agriculture. For this reason we should be inclined to give the preference to any system of sewage disposal which avoided the total waste of manurial elements, even if it were at starting somewhat more costly and less agreeable. It will cost an enormous sum of money to throw all the London sewage into the sea, and we are by no means certain that the interest of the money would not pay for a purification process, which would recover some of the ultimate elements of food and yet leave the river practically unpolluted. Of course, we do not assert that a purification process is practically possible. The cost of any such process may, for aught we know, be out of all proportion to the benefit, but the metropolis could afford to pay a good price even for an experiment, and some such system might surely be tried, as an experiment, during the years that must pass before the sewage can be sent into the sea. For the next few years, at any rate, the Metropolitan Board of Works suggests no remedy except the almost frantic use of disinfectants, a remedy which stultifies their own reiterated assertions, and is at best a miserably imperfect one.

OUR readers will have noticed that the treatment of genu valgum by osteotomy was one of the subjects specially chosen for discussion at the recent meeting of the International Medical Congress at Copenhagen. Fortunately, Dr. MACEWEN was chosen to introduce the subject, and we were able to give his paper in full in our columns a fortnight ago. He has from the first been most honourably associated with this department of surgical practice, and the record he was able to give of his results was truly remarkable. We must refer our readers to the paper itself for all the details of the picture, and must merely repeat here some of the leading facts. Dr. MACEWEN has performed osteotomy for genu valgum 820 times, and in 810 instances has performed the supra-condyloid section of the femur which bears his name. Death has followed the operation in five cases, but in no one instance was it directly traceable to the operation. Suppuration occurred in eight instances; but during the last three years in all the cases the wound has healed without the formation of pus. In all cases the operation has effected a correction of deformity and improvement in the strength and utility of the limb; while relapse, even to a slight extent, was only observed in one case. The records of other varieties of osteotomy for genu valgum are also very good, but we cannot doubt that Dr. MACEWEN'S supra-condyloid operation is destined to supersede them all on account of its safety and success, and also because it appears to be founded on more correct pathological data than its rivals.

It is surprising to notice with what rapidity osteotomy has been adopted into general surgical practice. Dr. MACEWEN speaks of having performed it 1800 times, and there are other surgeons who can record their cases by hundreds. This fact is one of the strongest proofs of the great advance of operative surgery, and especially of the treatment of recent wounds. That one surgeon can record a series of 1800 compound fractures—for that is the effect of the operation—without a single instance of pyæmia or septicæmia, or of any fatal wound complication, is a fact that nothing but the more generally known results of scientific wound treatment would make credible. The operation was at first viewed with suspicion by many surgeons, and those who practised it largely were thought to employ it with unnecessary frequency, being tempted to accomplish quickly by operation what might be attained by other and milder measures at an expenditure of more time. This was no new experience, but only an expression of the opinions of the two great surgical "parties" that always exist. We see no reason why osteotomy should be abused in this manner more than many another surgical procedure, and perhaps there is quite as great a danger of withholding from a patient the advantage he might derive from the operation were the surgeon better versed in its details or more confident of its value. Dr. MACEWEN insists that the operation should never be performed until after the stage of ramollissement has passed off, and in this he will of course be supported by every careful surgeon. The earliest age at which he has operated for genu valgum has been seven years, and he has extended the advantages of the operation to patients as old as forty-seven.

From the very large number of cases recorded by some surgeons, and their remarkable success, it is not allowable to infer that the operation is devoid of difficulty or of danger, and already instances have been published of mishaps, owing to neglect of proper precautions. If the chisel be insecurely held, or driven in a wrong direction, or the section of the parts be made at a wrong level, it is not surprising if the results differ seriously from those obtained when all these precautions are duly observed. The reason why Dr. MACEWEN and others can show an almost unbroken success in their long list of cases is that each case has been the object of special care; familiarity with the details of the operation has not been allowed to beget neglect of any necessary precaution. Those who would attain like success must adopt the same means, must regard osteotomy as an operation demanding special care in its management, and not as a simple "chipping of a bone" which can be accomplished in any fashion.

The large number of cases recorded by Dr. MACEWEN, Dr. OGSTON, and other surgeons, has now settled the position of this operation so far as statistics can do it. The safety of the procedure has been abundantly demonstrated, and it is only necessary to insist upon the importance of carefully observing all the precautions indicated by experienced operators.

SOONER or later, we are persuaded, sanitarians will discover the unwisdom of ventilating sewers, and as the phrase runs, "letting fresh air into drains" by openings on the street level. No one with a sense of smell can fail to have noticed the highly offensive emanations from street ventilators and "inlet" (!) gratings, frames and pans, under certain, or rather uncertain, states of the atmosphere. We fully recognise the difference between a mere effluvium and poisonous gas, but it must be admitted that the two are not infre-

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quently associated, and the former may be accepted as a warning of the latter, although the air may be poisonous without being also offensive. All things considered, for danger and decency's sake, low level ventilation *must* be avoided. Every single purpose to be gained by it is gained by the adoption of pipes or shafts opening at high levels, and without risk. Meanwhile it is necessary to point out that these pipes or shafts must not be so placed or constructed as to act the part of supply-pipes, actually "laying on" sewer gas into bedrooms and other apartments, by being so placed as to open near windows or chimneys. Some of the most expert and painstaking architects, engineers, and professed sanitary builders are committing this folly for the sake of a little economy. They think "it will do very well," and be "quite safe" to carry up a ventilating-pipe to the roof of a house, and finish it a foot or so above or on the side of a dormer or other window. Obviously whenever the wind happens to blow in the direction of the window, or to "blow down"—as so often happens—the gas escaping from the pipe must be carried into the window. Then, again, they will not, if it be possible to avoid doing so, use cowls. They like to finish the pipe with a little umbrella, or to bend the sides in a little on themselves, and say this "does better." If there be a chimney-stack in the neighbourhood the builder thinks he does a clever thing by attaching his pipe to the brickwork and carrying it a few feet higher. Probably he has heard that it is necessary to keep it away from the chimney, so he bends it out a little at an angle, and thus ensures the occurrence of the very *contretemps* he ought to avoid—namely, the "sucking down" of the sewer gas into the chimney and its discharge into the rooms below. It is forgotten that every up-draught is accompanied by a down-draught, which either encircles it as a cylinder or in some way passes it in the chimney-shaft. This is a matter of exceeding moment. Shafts and pipes connected with sewers must be carried both *above* and *away from*, all openings—whether windows or chimneys *or* ventilators or trap-doors—communicating with houses. There is no sort of difficulty in securing this measure of safety. It only requires a firm stand on the part of the owner or "authority" against the plausible arguments of the "professional men" and "experts" engaged. Simply insist that there shall be no opening of any sort in the ground level, whether with a "charcoal pan" or however constructed. Carry all ventilators to a level above the top of the house, and quite out of the way of windows and chimneys. If this be done there need be no fear of sewer-gas. If it be not done, however excellent the "system" adopted may be, there must be fear—ay, and peril.

ON the 25th ult., a charge of negligently creating a nuisance preferred against the Mayor, Aldermen, and Burgesses of Jarrow, by Dr. W. Whamond, was after a four hours' hearing dismissed. Before announcing their decision the magistrates inspected the alleged nuisance, which consisted of a deposit of over 2000 tons of night soil in a large hole within a short distance of occupied houses.

THE Viceroy of Ireland, in some recent remarks, has shown that he appreciates the value of sanitary measures for the prevention of disease. Let Lord Spencer prove his sincerity by taking the condition of the Liffey seriously in hand. It is a disgrace to the Irish capital.

Annotations.

"Ne quid nimis."

THE LATE JOHN NETTEN RADCLIFFE.

THERE is a strong feeling among the friends of Mr. Radcliffe that something should be done to express their sense of his worth, and of the merit of his work. The more this work is considered in its public bearings the more clearly does it appear reasonable to hope that the public will not be unrepresented in the movement. A man who tracks the course of cholera and intercepts the poison at its very fountain is one of the prime benefactors of his race, and

"More than armies to the public weal."

Such was Radcliffe, though working always quietly, even with quiet humour, among the poisons that bring disaster to communities. Sir Andrew Clark has most kindly put his house at the disposal of Radcliffe's friends, and all who have the wish will probably soon have the chance of joining in a tribute to the memory of one of the best members of our profession, who was always ready to help and advise his brethren.

OUR MEDICAL CHARITIES AND THE WORKING CLASSES.

No man has done more to excite the interest of the working classes in medical charities than Mr. Sampson Gamgee of Birmingham. To him, probably, more than to any other person it is due that the working classes of Birmingham have subscribed in twelve years about twice as much to hospitals as the working men of Liverpool or Manchester. Mr. Gamgee has been discoursing on this subject in his capacity as President of the Birmingham and Edgbaston Debating Society. His address appears in the Birmingham papers of Thursday week. It is full of interest for the information it gives of the growth of working men's contributions to hospitals, from absolutely nothing forty years ago to £9664, or one-ninth of the whole expenditure, in 1883; for the generous and sympathetic sentiments expressed towards the working classes; and, not least, for the suggestion, only hinted at, that as working men are contributing so largely to hospitals—almost entirely supporting some—the question of paying the medical staff should be considered. Mr. Gamgee would be the last man to vulgarise medical service or commercialise medical institutions. He would be the last man to convert our hospitals into shops, or bring them into competition with the long-tried and faithful general practitioner, who is available to the honest poor night and day and all the year round. But he tenderly describes the case of a man prematurely turned out of a hospital imperfectly recovered from fracture, only to straiten still more the *res angusta domi*, and of others. He shows how "many of the so-called minor injuries treated in the out-patient department would be rapidly cured if the patients could be admitted into the hospital; and if for want of funds this cannot be done, great and inevitable risks are incurred." This sentence is quite as true as, and is far more serious than, the reiterated but little investigated statements about the abuse of the out-patient department. It is pitiful to think of the lasting and wearing misery of what in the poor are called slight complaints—varicose veins, an ulcer of the leg, a fistula, a skin eruption, a neglected cold,—but which in the rich would send their victim by express train to the consulting-room of the most eminent specialist in London. The poor cannot even get into a hospital with such ailments because the beds are full, or because the authorities of the hospital are bent on increasing the investments. These points are all well brought out by Mr. Gamgee, whose address is one to be studied by all who are anxious to see

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the working classes helping the hospitals, and helped by the hospitals without injury to these classes or injustice to the profession.

DR. JAEGER'S SANITARY CLOTHING.

WE have already had occasion to refer to the sanitary woollen clothing system introduced by Dr. Jaeger. This reform in clothing, as has been often demonstrated at the Health Exhibition during the past season, aims at covering the body both by night and day to the degree of comfort, but not of oppressiveness, with woollen textures, and, except where leather is necessarily worn, with these only. Where leather is employed a porous variety is selected. Not only under-garments, but every other article of daily dress, bedding, and night-wear save boots, is made of wool. The coat is double-breasted, the vest, when worn (which is not always the case), forming an inner flap of the same piece; overcoats are said to be rendered unnecessary by the warmth of the other clothes. No linen is worn; the collar is of unstarched cashmere. Bed-sheets also are composed of the latter material. Felt forms the "uppers," felt and porous leather, the soles of the boots. Wall-hangings are not omitted, being evidently regarded as clothes in an impersonal and Carlylean sense. For their manufacture leather is preferred, on the ground that it is of looser texture than ordinary paper, and is, moreover, an animal product. "Animal to the animal" may, in fact, be said to be the motto of this new experiment in hygiene. It should be mentioned that these various substances are either not coloured, or are stained with fast dyes. The mere fact of animal or vegetable origin, of course, is insufficient to decide the question as to the comparative wholesomeness of clothes, but there are good physical reasons why materials allied to flannel in their structure should form the fittest covering for the skin. Their non-conducting quality is a guarantee that the body temperature shall be in great measure conserved; while, on the other hand, the shape and arrangement of their constituent hairs provide for the escape of moisture by capillary attraction, and their adaptation to both of these ends is greater than that of any vegetable fabric. The skin is constantly excreting water and carbonic acid, with fat particles and different decomposition products of the latter, such as lactic, butyric, and formic acids, to which the sour odour of sweat is due. Much of the carbonic acid is dissolved in the excreted water, and escapes with it. Obviously the kind of covering which acts as the best conductor of surface moisture with its various fluid impurities, while at the same time it hinders the escape of heat, is that which commends itself as at once the cleanliest and the healthiest. Woollen clothing is therefore suitable to warm and cold seasons alike, and to passive and active conditions. We find accordingly that it holds a predominant rank among the dress materials of temperate climates, the inhabitants of which are subject to the most frequent changes of temperature, and exhibit in their lives the fullest and most varied activity. Its arrangement on the body and its relation to the customs of dress are, however, still far from perfect. It gains nothing in wholesomeness, probably not even in comfort, from being overlaid, as it too often is, by an impervious mackintosh or sealskin jacket; nay, it loses much due credit thereby, and perhaps even more when its rightful place next the body itself is usurped by a comparatively inefficient linen shirt. It is for under-garments that woollen goods are most required, and their use in this form is much rarer than it should be. For a great many people these considerations have an especial and vital interest. Certain skins perspire much more freely than others. It is well known that persons of consumptive or rheumatic tendency, even though free from actual disease, have this peculiarity. The same is true of women in middle age, and of all whose circulatory system is for the time weakened from any cause. In these circumstances a coating of under-flannel, acting as we have shown that it does, may turn the scale between health and acute illness. The stockings of the Jaeger system are noteworthy. They are of course woollen, and have separate divisions for each of the toes. Such a contrivance is well adapted for maintaining the warmth of the lower extremities. We confess to some scepticism as to whether the combination of felt and porous leather in the Jaeger boot is equally trustworthy in all weathers. The preference for leather over wall paper also is of doubtful necessity or advantage. It must harbour dust, effluvia, and germs of disease, if present, in a way that paper does not, unless it be glazed, and if glazed its porous character is gone, and with that any superiority which it may possess. It is open to question if leather is, after all, naturally more porous than paper. These points, no doubt, admit of modification, and they cannot be said to impair in any marked degree the general practical value of a system as sound in theory as its methods are exact.

KINDNESS TO ANIMALS.

WE commend to the notice of all, but more especially to the residents and frequenters of our other seaside resorts, the very interesting and humane proceedings which took place at Scarborough a few days since, under the auspices of the Royal Society for the Prevention of Cruelty to Animals. Last year several gentlemen offered a few prizes to the owners of the horses and donkeys which at the end of the season showed that they had been treated kindly and well cared for, and the experiment has been repeated this year, the prize meeting being held in the presence of several hundred spectators. In the unavoidable absence of the Archbishop of York, Mrs. Thompson distributed the prizes on the sands, where the ponies and donkeys were paraded, and Archdeacon Blunt and Lord Londesborough made some practical remarks on kindness to animals. It is not right that such a thoughtful and excellent example should pass by without attracting the attention and publicity which it undoubtedly deserves. We fear that animals generally meet with too little kindness and consideration. People are apt, heedlessly no doubt, to think that by stopping short at ill-treatment they have been kind. Such negative kindness is far from being sufficient or satisfactory. Man owes more to the dumb creatures placed under his control. Every encouragement, therefore, should be given to any experiment having for its aim the inculcation of a truer and more active kindness to and interest in those animals which are more immediately associated with us in our daily work and leisure moments. It would be well if special prizes for kindness were given at the various agricultural, cattle, horse, and kindred shows held throughout the kingdom.

HOSPITAL SHIPS.

AT the recent meeting of the Social Science Congress in Birmingham, Dr. Braidwood drew the attention of the Health Section to the value of hospital ships. He described the various methods by which they might be constructed, and he very rightly observed that if a hospital ship is to be efficient, it is far better, and in the end cheaper, to build it outright, than to attempt to convert an existing vessel. We have some doubt whether anything except the ward that is erected on the upper deck forms a really good hospital, the difficulty as to ventilation being a very serious one as regards all lower deck wards; and though it may be said that ventilation is much more easily obtained in a floating hospital than in one on shore, yet experience has shown

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that on calm days it is often very difficult to keep the lower wards sweet and fresh. There is at present a demand for hospital ships, and it should be met. But where a land hospital will answer the purpose equally well, there are distinct advantages connected with the latter institution. The administration is more difficult afloat than on shore, and where, as now often happens, the floating hospital is used for infectious diseases, it has often been found all but impossible to maintain such isolation between the different diseases as to avoid all danger of spread; whereas, in a properly arranged land hospital, this difficulty is easily overcome. The Port Authority of London, when they recently found it necessary to provide new hospital accommodation in lieu of their hospital ship *Rhin*, considered all these points, and their experience led them to decide in favour of a hospital on the banks of the river. That hospital ships can be made efficient we do not doubt, and when they are efficient they have some very distinctive advantages, but if their efficiency is to be equal to that of modern land hospitals, the expense of their construction must necessarily be very heavy. The *Castalia* is, from the financial point of view, not an encouraging precedent.

MILK EPIDEMIC AT DERBY.

MR. ILIFFE, the borough medical officer of health, reports an interesting epidemic of enteric fever at Derby, in which the source of infection was milk, and which, it is to be hoped, has already had its influence curtailed, if not quite checked, owing to the system of compulsory notification which exists in the town. On September 27th and 28th some eight to ten cases of enteric fever were reported to Mr. Iliffe, and another was heard of as having commenced on the 24th. All received their milk from a dairy in Shaftesbury-crescent, and this circumstance coupled with facts elicited as to the progress of the outbreak, strongly indicated milk as the vehicle of disease. The Shaftesbury-crescent milk was received from a dairy-farm at Mickleover in the Shardlow rural district, the milk being derived both from that farm itself and from a second farm at Sinfin. The dairy-farmer and his son were both engaged in delivering the milk to their customers, some 200 in number; and the fact that the father distributed the Sinfin milk only, whereas the son distributed all the Mickleover milk, as well as some of the Sinfin milk, coupled with the circumstance that the disease was limited to the son's customers, at once enabled Mr. Iliffe to differentiate between the supplies derived from the two farms. In short, the Mickleover milk alone came under suspicion. The Mickleover farm was then subjected to a careful sanitary investigation. In the first place it was found that the occupants had only been in possession a short time, and that during the fourth week in August, soon after their arrival, a child, aged two years and a half, sickened with enteric fever. Ten days afterwards the child's mother fell ill, and then two other children were attacked. The water-supply was derived from a well which was situated on the brink of a ditch which received the drainage from the farm-house and also from three houses above, the ditch terminating in a cesspool receiving the contents of privies in addition to pigstye drainage. The well therefore had been exposed to the risk of soakage of a large amount of filth, and since the occurrence of the first case of fever in the farmhouse, if not previously, it had also been liable to receive soakage from enteric fever excreta. The supply of milk had already been stopped on Mr. Iliffe's arrival, and the Shardlow medical officer of health was at once communicated with, in order that action might be taken to remedy the grave conditions connected with the dairy farm. Over forty patients had been attacked at the date when the report was made, the enteric fever wards at the Derby Infirmary were full, and for at least ten days more new cases might arise. Fortunately, the outbreak was heard of in its early stages, otherwise the result might have been far more serious. On the general question of milk infection it is impossible not to regard frequent occurrences, such as the one we have adverted to, as constituting a grave scandal. Sanitary authorities and their officers cannot in the present day be ignorant of the danger to the health and lives of large numbers of people which arise from the existence of insanitary circumstances such as obtained at this Mickleover farm. The Legislature has made these authorities responsible for the removal of such conditions, and it has given them ample powers to carry the removal into effect. A cursory examination revealed the obvious danger when once the mischief, which sanitary authorities are appointed to prevent, had been brought about; and a proper examination of the locality at an earlier date ought absolutely to have prevented such an occurrence. If sanitary authorities will not make that regular and systematic inspection of their districts which has been imposed upon them, irrespectively of their officers, as one of their principal duties, they should at least keep all dairy farms under constant and vigilant inspection, so that conditions of neglect such as are revealed in Mr. Iliffe's report should not carry disease and death to numbers of innocent people.

NEW CLINICAL METHOD FOR ESTIMATING UREA.

ON Monday afternoon, at the London Hospital, Dr. Ralfe exhibited a very simple and ingenious apparatus, devised by Mr. E. Squibb of New York, for the purpose of facilitating the operation for determining the amount of urea in urines at the bedside of the patient. It consists of two wide-necked medicine bottles, joined together by a piece of indiarubber tubing. In one of these bottles (A) is placed 4 c.c. of the twenty-four hours' urine, which, at the right time, by a simple contrivance, is mixed with 40 c.c. of a solution of chlorinated soda, prepared according to the directions of the United States Pharmacopœia. Decomposition of urea at once ensues, and nitrogen gas passes off freely from A to the second bottle, B, which is filled with water. A portion of this water is forced out by the gas and overflows, by means of a special tube fixed into the cork of B, into a graduated receiving glass. The amount of water so displaced and discharged into the receiving glass is the measure of the amount of nitrogen disengaged, each cubic centimetre of displaced water being equal to 1 c.c. of nitrogen, which displaced it; and 1 c.c. of nitrogen represents ·0027 gramme of urea. Thus, supposing 36 c.c. of water is displaced as the result of the decomposition of 4 c.c. of urine, then the amount of urea is $36 \times ·0027 = ·0972$ gramme of urea in 4 c.c. of urine. Now, if we divide this ·0972 gramme by 4, we get ·0243 gramme as the amount of urea in 1 c.c. of urine. Multiply this last by 100, we have the percentage amount; or multiply it by the total amount of urine collected in twenty-four hours, and we have the diurnal excretion of urea. It is not claimed for this method that it gives absolutely correct results, but that, compared with other methods, such as the hypobromite (in which pure solutions of urea yield a deficiency of nitrogen of quite 7 per cent.), it stands high as regards accuracy. The cost, moreover, is slight, and this in itself is a distinct advantage; a couple of medicine bottles, two indiarubber corks, and a few inches of indiarubber piping can be procured for a few pence, and an ordinary student can put them together. Lastly, the apparatus is so portable that it can be carried in a student's coat-pocket. The only difficulty is with regard to the chlorinated solution, which must be prepared according to the United States Pharmacopœia, and which differs

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from that of the British solution in the important fact that it contains an excess of sodium carbonate. This difficulty, however, has been provided for, and Mr. Martindale of New Cavendish-street has made arrangements for the supply of the United States solution, and also the apparatus itself, accompanied with full directions as to its use. The introduction of a simple and fairly accurate method for the estimation of urea is certainly a great boon, and will no doubt extend the range of our observations regarding the fluctuations of this substance occurring in the body. Such observations are, however, especially called for in many of those constitutional disorders which are often preceded or accompanied at their onset by increased elimination of urea and phosphoric acid.

THE DRAINAGE OF CAMBRIDGE.

THE Improvement Commissioners of Cambridge are determined to die hard, and to keep up the appearance of resistance, however faint, to the very last. Their latest excuse for the masterly inactivity of past years is that now for the first time have they been brought face to face with the Local Government Board. According to their contention, the drainage scheme would have been carried out had it not been for the University authorities, who objected to, or at least could not agree with the town on, the money part of the question. It seems to us, however, that the primary duty of the Improvement Commissioners should have been to propose a rate which seemed to them equitable to both interests, and then apply for an Act of Parliament to give the rate effect. If either the University or the town thought itself aggrieved by the rate as assessed by the Commissioners, it could easily have resorted to arbitration—that is, if both parties were really in earnest as regards the sanitary condition of the town. The Improvement Commissioners now plead as a reason for their complacency that they were not brought face to face with the Local Government Board. It is true that the Board's inspectors had reported unfavourably of the drainage of Cambridge, and that notice had been given that a scheme for its improvement must be adopted, but in the eyes of the Commissioners the tone was not sufficiently imperative. Of course it is easy to read between the lines of this excuse. The Improvement Commissioners, as indeed are the sanitary authorities of large towns generally, are persons of position and influence in the town, and most of them doubtless owners of property. It is scarcely to be expected that men in this position should make themselves unpopular with the bulk of their fellow-townsmen, who, caring little for sanitary matters, are exceedingly jealous of any increase of the local burdens, even if the authorities are not unwilling to burden their own property with a heavy tax, unless the matter is peremptorily and forcibly put before them. They may admit that something ought to be done, but until the spur of necessity is applied they are indisposed to incur the odium that attaches to those who augment the rates of a district, and are naturally unwilling to increase the burden on their own property unless they see a profit in it. The case of Cambridge is like that of many places in England, especially in rural districts. Unhealthy little villages and hamlets exist in which typhoid fever and diphtheria from time to time play havoc. The rural sanitary authority consists generally of the chief landlord and small proprietors, out of whose pockets the cost of any improvements has to come. The medical officer of health for the district makes his report; it is received and discussed, and then conveniently shelved. If the medical officer is wise in his generation he will say nothing more; but if he is possessed of a desire to perform his duty, he will find his practice suffer from his unpopularity, and will lose his appointment when occasion offers. Fortunately for Cambridge, the Improvement Commissioners are at last brought "face to face" with the Local Government Board; and, still more fortunately, public opinion is strongly backing the step it has at length taken. When the undergraduates complain that they are driven from the river by its foulness, and paterfamilias writes to the newspapers of the dangers his sons are exposed to, the townsmen and University authorities will speedily find out that they have to choose between either a small additional rate or a considerable decline in the value of their property.

TRANSITORY APHASIA.

SINCE the time of Broca, aphasia dependent on serious lesions of the brain has been well recognised, but the aphasia which may be met with in the course of certain affections, and which disappears in a relatively short space of time, has been less studied. It needs no great stretch of the imagination to invent hypotheses to account for such cases of transitory aphasia, and almost any theory must, from the nature of the case, possess a certain degree of plausibility. The destruction of the functions of language, no matter to what extent, may be brought about by many other morbid conditions than mere gross anatomical alteration. The nutrition of the organs which constitute the physical basis of language, or let us say speech, may be damaged to any extent and in any degree by changes in the supply of blood, which may be of many sorts. Other means by which the nutrition of these centres may be interfered with will readily suggest themselves. Loss of speech of brief duration has been recorded in connexion with cases of general paralysis, epilepsy, hysteria, and migraine; and examples of its occurrence have been met with in cases of gout and rheumatism. The acute specific fevers, and more particularly typhoid fever, have been credited with the property of causing the same disturbance. M. Dunoyer has given, in the *Gazette Médicale de Paris*, the particulars of a case of transitory aphasia which supervened on the ingestion of five centigrammes of santonin. The patient was a girl, aged twenty, the victim of advanced pulmonary phthisis. Three hours after the self-administration of the santonin the patient was found sitting up in bed and unable to pronounce any other word than "mais." A physical examination of the nervous system was then made, on the supposition that a tubercular lesion of the brain had begun to manifest symptoms, but the investigation revealed nothing. The next day the invalid spoke, and informed the doctor that soon after taking the worm powder all objects had a yellow colour. The symptoms related to the nervous system which santonin appears to be able to produce are yellow and violet vision, hallucinations, mydriasis, perversion of taste and smell, deafness, opisthotonos, convulsions, and a tendency to walk backwards. The case above referred to is a curious example of idiosyncrasy, for the dose absorbed was almost insignificant.

"A MAGISTRATE ON HYDROPHOBIA."

UNDER this heading a contemporary seems to disparage some remarks made by Mr. Bushby, at Worship-street, on the impolicy of at once killing a dog supposed to be "mad." The magistrate was quite right. The dog ought not to be killed. If dogs which bite persons were kept alive it would often be found that they were not hydrophobic, and all anxiety would cease; whereas persons who are bitten by dogs, probably only savage from some passing illness, are worried to death by the fear of hydrophobia because the animals have been hastily killed. No possible harm can result from keeping, properly restrained, a suspected dog alive, and in many cases ease of mind would be secured. It is a strangely silly and wholly groundless notion that anything is gained by destroying the dog.

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MALPRAXIS AND LISTERISM.

THE following remarkable case is reported from Germany, bearing on the question of what constitutes culpable homicide attributable to malpraxis. In April of the present year a serving man was wounded in the chest with a knife, and was treated by a practitioner without antiseptic precautions. The man died from septic poisoning, and the practitioner was arraigned on the above charge, which was upheld by the magisterial court on the ground that a medical man should be so far abreast with modern science as to avail himself of the recognised rules of treatment, and that in the case in question the practitioner should have been aware that the procedure adopted by him might lead to the death of his patient. The Reichsgericht being appealed to, confirmed this decision. The editor of the *Berliner Klinische Wochenschrift* (No. 40), in commenting on this case, the details of which are very briefly reported, points out that methods of treatment vary, and to stigmatise as malpraxis the pursuance of measures sanctioned by generations because improvements have been introduced is surely wrong. "In England," he goes on to say, "there is a large party who make no use of Lister's so-called antiseptic method, which was in question in the above case, and what would the court say if it saw the method of the open treatment of wounds which has been carried out for years at Zurich, without any suggestion of malpraxis being raised? We are staunch supporters of the Listerian method, or, to speak more correctly, of the scrupulous cleanliness and care connected with it; but to sentence a medical man for culpable homicide because he has not employed 'antiseptic measures,' supposing that he took ordinary care in disinfection and cleanliness, does not appear to us to be just." We trust that all the particulars of this case will be made public. It is hardly conceivable that such a judgment could have been given on the sole ground stated. If this indeed be the case, then we can only hope that the decision will be reversed on further appeal, which it is proposed to make. Unless there had been obvious and wilful neglect of the rules of surgery, amongst which cleanliness stands foremost, no English court would, we venture to think, pass such a judgment on a practitioner. Indeed, if the non-adoption of Listerism came to be regarded as a ground for legal intervention, the surgical part of the community would be seriously harassed.

APPARENT DEATH.

CASES of cholera patients who, having reached the algide stage, have been given over as dead while perfectly capable of recovery, have not been unfrequent in the last visitation in Italy. The following is a well-authenticated instance. Towards the close of last week Dr. Canepa, a physician in Genoa, was attacked with cholera, and before remedial measures could take effect passed rapidly into the algide stage, and, to all outward seeming, ceased to live. His death was duly announced by the practitioner in attendance, and his family had performed the last offices, pending those of the undertaker, whose arrival they were awaiting in a room adjoining that in which the body of Dr. Canepa, decently covered with a white sheet, was lying. Suddenly the door between the two chambers was seen to open, and the ghastly figure of Dr. Canepa, arrayed in burial vesture, presented itself to the thunderstruck family. In a feeble, scarcely audible voice he complained of having been left so long without attendance (six hours, in fact, having elapsed since he was given up and laid out as dead). He was immediately replaced in bed and every restorative practised on him till a physician could be obtained to perform Pacini's operation of hypodermoclysis. But in vain. The assistance which might have been effective some hours previously arrived too late, and a valuable life was lost to a wide circle, public as well as private, through the premature assumption that death was real while it was only apparent. A list of such cases, divided into two categories—first, those who have been ultimately recognised as living and rescued in time, and, second, those who have indeed been recognised as such but too late for measures of recovery—is, we understand, in preparation by an Italian physician.

BONY TUMOUR OF BRAIN.

THE formation of true bony growths in the substance of the brain is believed to be of rare occurrence. It is possible that the apparent rarity is due to the infrequency of post-mortem examinations of the cranial cavities of senile individuals. M. Witkowski has placed on record some of the particulars of an example of osseous tumour of the brain. The morbid growth was of the size of a walnut and occurred in the left hemisphere at its occipital part; it was quite independent of the pia mater or ependyma, being surrounded on all sides by brain matter. Its shape was like that of two pyramids set together at their bases; its surface was studded with a number of spicules, points, and folds, the last of which had a certain resemblance to the convolutions of the brain. The tumour was encased in a fibrous capsule, and presented many excavations filled with brownish or yellowish soft material, which was discovered on microscopical examination to be of the same structure as the marrow of bone. The fibrous capsule or periosteum of the tumour was composed of a dense connective tissue, calcified in parts. After the tumour had been decalcified by treatment with chromic and nitric acids, a hyaline ground substance was brought into existence, and lamellæ with bone corpuscles and Haversian canals were to be seen. The tumour was connected with the nervous substance by means of a delicate connective tissue strewed with amyloid corpuscles. There were no other osseous formations in any part of the central nervous system. The brain on the same side as the tumour was certainly more consistent than the right hemisphere, and the microscope exhibited an increase in the amount of connective tissue and stellate cells. The cerebral arteries were extensively thickened, and many small foci of the brain were in a state of softening. Some degree of internal and external hydrocephalus was found, and the ependyma was thickened. The brain was that of a man, aged seventy-nine years, who had never shown any symptoms of brain mischief during life. No accident could be assigned as the cause of the formation, which does not appear to have been an ordinary psammoma.

CORONERS' POWERS.

AT an inquest recently held at Penge the coroner, Mr. Carttar, came into collision with the medical man concerned in the case. It appears that Mr. Sicard was called to attend a young child suffering from the effects of extensive superficial burns. The treatment he adopted consisted of applying white paint to the injured skin and administering one grain of Dover's powder. The patient died in less than an hour after taking the powder. At the inquest a question was raised as to the propriety of the medical treatment, and particularly as regarded the use of opium. Now, Mr. Sicard was not summoned in statutory form to appear before the coroner, but received oral directions from the officer of that functionary that his attendance was required. In deference to the coroner he went, though at great personal inconvenience, but he does not seem to have met with the courtesy one would have thought his due. If reported correctly, the coroner is said to have "ordered his officer to fetch the doctor." The verdict of the jury entirely exonerated Mr. Sicard from all blame, and rightly so. His treatment of the child—whatever individual opinion may be concerning it—was in accordance with the teachings of reco

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guised standard works. The fact of the child dying from shock within such a short period is in itself a justification of the course taken by Mr. Sicard, for under the circumstances a proper dose of opium was not only a desideratum, but we might almost say a necessity. It is not our purpose nor desire to advise a medical man to stand upon his strict legal rights, but clearly, if occasion requires, it is well for him to remember that even a coroner is not vested with unlimited and irresponsible power, and that he is entitled to a summons, prescribed by law. We hold that if in the course of an inquiry the coroner finds it necessary to have the evidence of a doctor, he should either adjourn the hearing or *invite*, not *demand* the attendance of the doctor on the present occasion. Unfortunately a medical man cannot claim more than £1 1s. for giving evidence in the same case, no matter how many times he has to present himself. Moreover, we have authority for saying that the Home Secretary has no funds out of which the claim for remuneration for extra services can be satisfied. Unless the case is taken up by the Treasury a medical man is under the obligation, by virtue of the coroner's warrant, to make a post-mortem examination, give evidence, and if necessary conduct an analysis of the contents of the stomach, all for the fee of two guineas.

SUBLINGUAL ULCERS OF WHOOPING-COUGH.

ANOTHER interpretation of the ulceration on the frænum linguæ met with in many cases of whooping-cough has been put forward by M. Delthil. He does not believe that the ulceration in question is due to the friction of the tongue against the teeth, because it appears several days before the onset of violent attacks of coughing. The ulceration, moreover, does not always begin on the sides of the lingual bridle, but may sometimes be seen only in the vestibule of the floor of the mouth and of the lower lip, where it leaves indelible scars. According to M. Delthil, the sublingual lesion is of contagious and parasitic origin, and due to the contact of a healthy infant with an infant affected with whooping-cough. The parasite is the microbe of whooping-cough, the same as may be found in the sputa of cases of pertussis. The sublingual lesion may be seen fourteen days after the accidental inoculation, when it is associated with the appearance of fever and vomiting; the fever disappears when the wound has cicatrised. The fever of whooping-cough is thus believed to be due to an intoxication by microbes. The sputa are believed to be dependent on ulceration of the air-passages similar in character to that found under the tongue; the cicatrices which may be discovered at autopsies are the remains of the ulceration, and the swelling of the bronchial glands is determined by the ulcerative lesion of the bronchial mucous membrane. As a consequence of these considerations, the disease can only be said to have ceased when the lesion in the mouth has healed, which fact is the announcement of the disappearance of the infectious element.

EXPERIMENTAL ACETONÆMIA.

THE presence of acetone in the blood has been considered by some authors to be the proximate cause of the symptoms collectively known as diabetic coma. Other observers have looked on the undoubted presence of acetone in the breath and urine as the result of decomposition of another chemical body of more complex composition. The importance of investigating the matter is decidedly great, looking to the frequency and danger of diabetic coma. M. de Gennes has recently published a work in which he collates the results of the experimental production of acetonæmia. Experiments were made on the guinea-pig and rabbit by the injection of varying quantities of acetone into the subcutaneous tissues. The intensity and mode of evolution of the symptoms bore a direct relation to the amount of acetone hypodermically introduced. The main phenomena observed after such subcutaneous injections were restlessness, drunkenness, muscular weakness, coma, and an alteration in respiration like that which may be met with in cases of diabetic coma; in addition, the temperature of the body was lowered and the expiratory breath strongly impregnated with the odour of acetone. It is necessary to keep clearly in mind the real significance of the results of these experiments. A series of phenomena appeared after the subcutaneous injection of acetone, which series had an undoubted resemblance to the symptoms observable in the coma of some cases of diabetes. That is all the information the researches give. We are well aware that many causes may produce the same group of symptoms, and so there is a gap yet to be filled up. Whether diabetic coma is due to acetonæmia still remains an open question.

HOSPITAL SUNDAY FUND.

MR. LANE'S second letter to *The Times* does not materially repair the damage done to his argument by Mr. Burdett's first letter. It simply leaves us with the impression that the great hospitals have suffered themselves to become a little too careless, and to rely too much on the goodness of their cause and the efforts of the Council of the Hospital Sunday Fund. Mr. Lane does not seem to think much of a collection of £33,000. It is very true that it does not fully represent the wealth of London churches, or do very great credit to metropolitan religion. But before disparaging it too much Mr. Lane would do well to ask himself one or two questions. One question might be this: How can such a sum be raised in any other way, or for any other purpose? If he thinks it such a slight achievement to raise £33,000, he would do well to try to raise an equal sum by some other machinery, and appeal to some other motives. We venture to think that the result would be to make him think a little more highly of the Hospital Sunday Fund. Another question he might put to the treasurers of our medical charities. He might ask them if they would like Hospital Sunday to be abolished, or if they regard it as inimical to their interests. In saying this we do not mean to assert that Hospital Sunday has done all it might do. It might exercise far more influence over hospitals in securing economy and efficiency of management, and over rich men in inviting large gifts into the treasury. It might also do much more than it has done in bringing the ministers of religion into personal contact with our hospitals and their inmates. We would suggest that the Hospital Sunday Fund should take steps to largely increase the amount it raises.

FUNDUS OCULI IN INSANE INDIVIDUALS.

As the result of careful observation Dr. Wiglesworth and Mr. Bickerton have come to the following conclusions on the conditions of the fundus oculi in insane individuals (*Brain*, Parts XXV. and XXVI.) That in insanity proper (including all forms of mental disease other than general paralysis) changes in the fundus oculi are found only in a small minority of cases; but that when allowance is made for changes depending upon associated constitutional conditions, errors of refraction, &c., the number of cases in which a connexion between the mental state and the accompanying change in the fundus oculi can be so much as suspected is very small. That, though atrophy of the optic nerve may succeed to a slight chronic interstitial neuritis, it is also not unfrequently primary at the optic disc; the atrophy may be complete, the patient becoming blind. That in a considerable proportion of the cases in which atrophy of the optic discs is met with spinal symptoms pointing in the direction of posterior or lateral sclerosis are prominent; but that this connexion is by no means invariable.

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CHOLERA RESEARCH IN GERMANY.

ONE result of the Cholera Conference held at Berlin just before the vacation has, as we have already announced, been the institution of a course of instruction to medical officers of health and army medical officers at the Imperial Board of Health, with the object of making them familiar with the methods pursued by Dr. Koch in his cholera research. Dr. Koch conducts the classes, which are each limited to twelve members, the course lasting ten days. The first subjects dealt with are the preparation, staining, and examination of cover-glass (dried) specimens, especially of dejecta. Then come the preparation and sterilisation of the nutrient gelatine, and the production of pure cultures of the bacteria found in normal stools and in those of cases of diarrhœa, dysentery, &c. The material employed is of the simplest, the idea being to impart such an amount of knowledge as can be readily turned to account in practice.

MUSCULAR INFARCTS.

UNDER ordinary circumstances the muscular apparatus of the body receives but little attention at the hands of the performer of a post-mortem examination. M. Giraudeau has recently written a memoir on the subject of infarcts in the muscles. Three cases of advanced cardiac disease, associated with widespread atheromatous changes in the vessels, afforded the material on which the essay was written. The pectoralis major, the vastus externus, and the sartorius muscles presented infarcts of exactly the same appearance as those which are frequently seen in the spleen and kidneys. But whilst infarction of the kidneys or spleen may be brought about by a simple obliteration of one of the arteries, a number of conditions is necessary to produce an infarct in a muscle. Loss of elasticity of the vessels, either from sclerosis or atheroma, cardiac weakness, and badly oxygenated blood lead to embolism and thrombosis of a small artery, and the anastomotic circulation is insufficient under such circumstances to prevent the formation of an infarct.

BUBONIC PLAGUE.

THE existence of bubonic plague in Bagdad has been reported by the Russian papers. The rumour is, however, contradicted, in so far as the town of Bagdad is concerned, and though it is admitted that the disease has prevailed in the vilayet of the same name, yet it is declared on the authority of Drs. Lubitch and Padrilaki, that the whole district is now entirely free, and that all quarantine measures have been removed.

WE have received from the firm of E. H. Schroeder, of 137, Möckernstrasse, Berlin, copies of engravings of Rembrandt's two celebrated pictures, "Vesalius at his Dissections" and "Talpius giving an Anatomical Lesson." The engravings are of the same size as the paintings, and are admirably executed; but they are sold at a price which places them within the means of all. We believe that many of our readers will wish to possess such faithful copies of these historical pictures.

DR. ROBINSON, the Medical Officer of Health for East Kent, has been instructed by the rural sanitary authority to make a full inquiry into the circumstances of the cases of poisoning by shrimps which have recently occurred at East and West Northdown, in the Isle of Thanet.

PROF. ZEISSL of Vienna, who, with Sigmund, enjoyed the highest reputation as a syphilographer, died on the 23rd ult., after a long illness.

PROF. H. KRONECKER of Berlin has accepted a nomination to the chair of Physiology at Berne University, in succession to Professor Grützner, who goes to Tübingen. Professor Hermann of Zurich has been transferred to the same chair at Königsberg, in succession to Professor von Wittich.

AT Aberdeen the death has recently occurred of Mr. Charles Mann Crombie from injuries received through being thrown from his horse on the 1st inst. The deceased was a M.B., C.M. Aberd., and held several appointments in the city in which he lived. Mr. Crombie was forty-three years of age, and leaves a widow and large family.

A TELEGRAM has been received from Montreal announcing the death, suddenly, of heart disease, of Mr. C. Lowther Kemp, the Secretary to the Royal Hospital for Diseases of the Chest. Mr. Kemp had been for some time in failing health and had obtained a short leave of absence.

THE next primary and final examinations for the Fellowship of the Royal College of Surgeons of England are announced to commence on Nov. 21st and 27th respectively.

ON Monday next the opening of the Medical and Pharmaceutical Exhibition at Humphreys Hall, Albert-gate, will take place, at one o'clock.

THE chairs of Physiology and Pathology at the Calcutta Medical College will for the future be distinct. Dr. D. D. Cunningham has resigned his appointment to the latter office.

SOUTH AFRICAN MEDICAL ASSOCIATION.

THE first annual meeting of the South African Medical Association was held on July 18th. The report, which was read by the Secretary, stated that eighty-one members have joined the Association, of whom twenty-eight reside in Cape Town and suburbs, the remainder being dispersed throughout the colony and the Orange Free State, while Basutoland and Bechuanaland contributed one member each. Six papers were read and discussed—Dr. Ebden on Cholera; Dr. Beck on the Small-pox Outbreak at Worcester; Dr. Cartwright Reed on the Kimberley Eruptive Fever; Dr. Walker on Medical Examiners *versus* Coroners; Dr. Robertson on Corrosive Sublimate as an Antiseptic; Dr. Miss Waterston on Diseases and Remedies as seen in Native Practice. The Parliamentary Committee's Report stated that Parliament had taken no action in the direction of any medical reform. The old Medical Ordinance of 1830 has not been altered or abrogated, and the Lunacy Act is very imperfect still, in spite of the many appeals by the Medical Board during the last three years to the Government, urging alterations in and additions to the law.

After the reading of the treasurer's report, which was a very satisfactory one, and the election of office bearers for the ensuing year, the President, Dr. Ebden, delivered an address, in which he reviewed the advantages offered by the Association and alluded to several local improvements, attained, projected, or needed for the removal of disease and the preservation of health. Reviewing the history of the several small-pox epidemics which had ravaged Cape Town at different times, Dr. Ebden said that fewer persons died in that of 1882 than in any of the former ones, and that none of the vaccinated white or coloured people suffered greatly from the effects of the disease. He concluded by expressing the hope that the members of the medical profession resident in the vicinity would set their faces against the system of drainage contemplated for Cape Town, by which it was proposed to empty all the excreta and refuse into Table Bay.

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THE SANITARY CONGRESS, DUBLIN.

IN the section of this Congress devoted to sanitary science and preventive medicine the following papers were read on the 1st inst.:—

Dr. Grimshaw, Registrar-General, read a paper on the Statistic Measure of the Health of Communities. After thanking the Council of the Sanitary Institute of Great Britain for the honour they had done him in selecting him to preside over this section, the author stated that attempts have been made from time to time to estimate what should be the death-rate of a healthy community, but in his opinion all such efforts have been failures, and we are driven to depend upon comparisons of death-rates in various countries with one another, or to comparisons of different portions of the same community with the whole or with one another, as the only test of the healthiness or unhealthiness of such communities. Thus the average annual death-rate of the population of England and Wales for ten years, 1871–80, was 21·4; while in London it was 22·5. In Scotland it was 21·6 for the same period. In Ireland for the same decade it was 18·3, and varied from 27·5 in Dublin to 14·1 in the rural districts of Connaught. Now, do these varying rates truly represent the relative healthiness of the different communities to which they refer? Dr. Grimshaw stated unhesitatingly that they do not; that in some of these districts the people are less unhealthy, in other cases more unhealthy, than the rates represent them to be. It has long been known that a very general relation existed between the density of a population and its death-rate—in other words, where people are packed closely together we expect to find a high death-rate. This at first sight appears to be a mere truism, but he was glad to say that the old sanitary or unsanitary maxim, "that a dense population has a high death-rate," is becoming less true every day, though statistics show that there is still a correspondence between high death-rates and density of population. It is a matter of the utmost importance when applying death-rates as a test of health that the relative numbers of the population belonging to each social class should be known. The variations in the death-rate between the classes and the subclasses are remarkable. For example, in the "professional class" the death-rate is but 19·8 per 1000, while in the "general service class" it is 36·8, or nearly double. Among domestic servants it is but 9·1, while among labourers it is 34·4, although both are drawn from the same stratum of society. Figures show that the death-rate steadily decreases as age increases, until the age period of from ten to fifteen years is reached, when the rate reaches the maximum both in Ireland and England, being 3·7 in Ireland and 3·3 in England.

Dr. Edgar Flinn read a paper on the Administration of the Public Health Act in Ireland with regard to the Duties of Officers of Health. He said the working of the Public Health Act in Ireland has, in a great majority of districts, well-nigh become a dead letter. One of the main causes of the slow progress of sanitary reform in Ireland is that there are no local boards or combinations of districts. The boards of guardians, the sanitary authorities for the rural districts, are not as a general rule opposed to sanitary reform, yet they are never anxious to move in any measure of sanitary work that will cause outlay. In lieu of having six or more medical officers of health in each district, with a superintendent medical officer of health, there should be one and only one medical officer of health, who should be a man free from the cares of practice, and whose pecuniary interests would not be perpetually at war with a due and fearless discharge of his duties.

Mr. Edward Spencer, M.A., T.C.D., read a paper on the Homes of the Working Classes in Dublin, in which after noticing the difficulties of dealing with the subject by general as distinguished from local legislation, he pointed out that Dublin is, of all cities which have carried out improvements for the housing of the poor, most peculiarly situated.

Surgeon-Major Wycliffe Jones read a paper on the Insanitary State of Small Irish Towns.

At the meeting of the Section on the 2nd inst. Dr. M'Cabe read a paper on the Water-supply and Drainage of Small Towns in Ireland; Mr. R. O. B. Furlong spoke of the Objects and Work of the Ladies' Sanitary Association; Mr. J. Byrne, M.R.I.A., of the Public Health of Kingstown; and Surgeon-General A. C. C. de Renzy, C.B., discoursed on the Sanitary Conditions under which Cholera prevails in Northern India.

The discussions in Section 2 of the Congress, which met on the 2nd inst. in the new buildings of Trinity College, were chiefly of a technical character, and related to structural plans and methods.

Mr. C. Cotton, C.E., the Engineering Inspector to the Local Government Board, delivered an address on the Public Health (Ireland) Act of 1878, so far as it related to engineering.

Professor H. Robinson, C.E., read a paper entitled "Sewage Disposal." He said the general conclusions which he deduced from his observations were as follows:—(1) That chemical precipitation is not so necessary now as it was considered to be a few years ago in cases where land for irrigation is not procurable; (2) that the efforts to profitably remove the manurial elements from sewage by chemicals not having been successful, the system should be adopted *per se* only where filtration area cannot be obtained; (3) that the success which has attended the construction of filtration areas where the land is clayey, and the successful results which have been obtained from a combined straining of sewage and of consequent filtration through small areas of artificial filters point to the adoption of one or other of these systems in many cases where chemical treatment would previously have been advised; (4) that the injurious effects of passing untreated sewage into a river depend upon not merely the relative volumes of the sewage and the river, but chiefly upon the power of the river to oxidise the sewage, which is in proportion to the extent of oxidisation of the river itself.

Mr. W. Eassie, C.E., read a paper on "The Collection and Disposal of House Refuse."

Dr. Charles A. Cameron, on the 3rd inst., in Section 3, read a paper on Micro-organisms and Alkaloids which render Food Poisonous. For the purposes of his address the author arranged diseased and otherwise unsound food into five classes:—(1) Vegetable food infected by fungi and other parasites, chiefly microscopic; (2) animal food containing entozoa or internal parasites; (3) animal food containing micro-organisms endowed with virulent properties; (4) animal and vegetable foods containing alkaloids generated during putrefaction; (5) the flesh of animals affected by specific diseases, the various *materies morbi* of which have not been isolated. Each of these divisions was discussed in detail, and the whole paper bore marks of careful research. Having already published some papers on the subject of the fitness of the flesh of animals affected with contagious pleuro-pneumonia, rinderpest, foot-and-mouth disease, and other maladies resulting from blood-poisoning, Dr. Cameron did not in his paper consider it. He, however, strongly advocated the systematic and skilful examination of food prepared or being exposed for sale.

On the 3rd inst. the business of the Congress was concluded by a lecture from Dr. Carpenter, the Chairman of the Council. He urged that stringent legislative measures should be passed to prevent the overcrowding of houses in the poorer parts of cities, and further recommended that in place of sewage being thrown into the sea and wasted it should be used for manuring. If the present system of sewage in London was continued a state of things would gradually be produced which would make the future sanitary history of the Thames somewhat similar to that which belongs to the Pontine marshes or the deltas of the great rivers of India. The 100,000,000 gallons of water fouled by the filth of London ought to be returned to the land whence the water came, and ought to be again filtered through the chalk hills, the Woking and other sand beds, or the barren acres of Surrey, Hants, Berks, and Oxfordshire, by which tens of thousands of cattle might be nourished, and millions of gallons of milk provided for the teeming population of the great metropolis of the empire.

SCHOLARSHIPS. — At the Middlesex Hospital Medical School, the science scholarship of the value of £50 has been awarded to Mr. J. Gordon; the entrance scholarship of £25, tenable for two years, to Mr. E. A. Falkner; the entrance scholarship of £20, tenable for two years, to Mr. H. B. Shepherd; and the exhibition of £20 to Mr. Alfred Clark.—At St. Mary's Hospital Medical School, Mr. R. T. Graveley and Mr. F. Lewis divided the scholarship in natural science of £105 open to students of Epsom College who are sons of medical men.

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INTERNATIONAL MEDICAL CONGRESS.

PHYSIOLOGICAL SECTION.

Cheyne-Stokes' Breathing.

PROFESSOR MOSSO (Turin) has constructed an apparatus for registering respiratory movements in the healthy subject. This consists of a respirator applied over the mouth and nose connected with a delicate gasometer, and which can be worn by many persons during sleep without producing much inconvenience. An examination of the tracings which can be obtained showed a rhythmic variation of the same character as those seen in Cheyne-Stokes' respiration. These consisted of rhythmic variations, both in time and in quantity of air respired. Professor Mosso maintained that this condition, about which so much had been written, was a normal one, and could not be considered a pathological phenomenon at all.

Professor HAYCRAFT remarked that the experiment was not conducted under normal conditions, and that the resistance produced by the gasometer exhausting the nerve-centres of the respiratory muscles would, as in other cases of such depression, produce rhythmic variations of activity. A pathological condition may be a quantitative deviation from the normal; and if rhythmic variations should eventually be proved in normal breathing, the exaggeration of this seen, say, in a case of apoplexy might well be considered pathological.

Professor CHEVEAU suggested an improvement which might be made in the instrument of Professor Mosso, which would simplify it and diminish the resistance.

On the Action of a Secretion obtained from the Medicinal Leech on the Coagulation of the Blood.

Professor HAYCRAFT found that the leech secretes from its sucker and gullet a juice which prevents the coagulation of the blood, which therefore remains fluid within its body, and is difficult to stop when exuding from the wound after the animal is withdrawn. This may be extracted from the anterior part of the creature with water after dehydration in alcohol. The juice destroys the blood-coagulating ferment without killing the corpuscles. On invertebrate blood where the clotting is due to the welding together of the corpuscles it has no action. When injected into the veins of dogs or rabbits, the animals are thrown into a condition resembling hæmorrhagic diathesis; the blood withdrawn from the animal remaining fluid, and the smallest wound bleeding continuously on this account. It was suggested that in the case of transfusion of blood any chance of clotting could be prevented by injecting small quantities of the substance into the body of the person from whom the blood was afterwards to be taken.

THE INTERNATIONAL COLLECTIVE INVESTIGATION OF DISEASE.

A STATEMENT has been submitted by Dr. Isambard Owen, general secretary, in which the main object of the International Committee formed at the Copenhagen Medical Congress for the Collective Investigation of Disease is defined as follows. To widen the basis of medical science, to gather and store the mass of information that at present goes to waste, to verify or correct existing opinions, to discover laws where now only irregularity is perceived, to amplify our knowledge of rare affections, and to ascertain such points as the geographical distribution of diseases and their modifications in different districts. It will be its endeavour to place clearly before the whole profession the limits and defects of existing knowledge, as well as to stimulate observation and to give it a definite direction. The following is the proposed method. A subject having been selected, a person or persons of acknowledged authority will be asked to write a memorandum, in the form of a short essay, upon it. The memorandum will succinctly give the present state of our knowledge. It will also point out the directions in which further research may best be made; and, with this view, will suggest a few simple and definite questions upon the subject selected. The questions will relate to matters of fact, to be elicited by observation of cases, rather than to matters of opinion. The contemplated organisation will, it is hoped, in time enable the Committee to ask and collect answers to these questions from the profession at large wherever scientific medicine is studied or practised. It will be a further duty to examine, arrange, tabulate, and deduce results from the mass of observations thus collected, due credit being given to each contributor for the information he has furnished; and reports on the results of the several investigations will be laid before the International Congress at its next meeting at Washington.

OVER-PRESSURE IN SCHOOLS.

THAT the views which we have thought it our duty to enforce in connexion with the subject of over-pressure in elementary schools are accepted by those who, next to medical men, are best entitled to express an opinion on the point—viz., the school teachers—may be gathered from the following resolutions adopted at a meeting of the Executive Council of the National Union of Elementary Teachers on Saturday, the 4th instant.

Resolved:—"That this Executive Council, consisting of men practically engaged for years in the work of elementary education, and representing 13,000 elementary teachers in all parts of the country, endorses the general conclusions arrived at in Dr. Crichton Browne's report with respect to over-pressure in schools, and thanks him for the masterly way in which he has presented the facts of the case as known to teachers, and as established by communications received from teachers, managers, and parents of pupils in all classes of elementary schools in all parts of England and Wales. That this Executive Council has read with the greatest surprise the memorandum of Mr. Fitch on Dr. Crichton Browne's report, and distinctly affirms: 1. That teachers in Mr. Fitch's district and throughout the country declare that they find detention after school hours absolutely necessary to meet the requirements of the inspectors and secure a sufficient number of passes. 2. That examinations, instead of being tests of school work, have become, to a great extent, its one aim and guiding principle. 3. That the power to withhold children from examinations is not, and cannot be, effective to remove the over-pressure so long as the inspector is the sole judge, on the day of examination, of the reasonableness on which children are withheld."

In the face of testimony of this kind, what becomes of the charge of exaggeration brought against Dr. Crichton Browne by interested or ill-informed critics?

THE PROGRESS OF CHOLERA.

WITH the advent of cooler weather the number of fresh cholera cases in Italy is showing a decided diminution; the abatement being especially marked in Naples, Genoa, and Spezia, where the force of the epidemic had principally shown itself. There are still fluctuations; thus the latest news from the province of Cuneo relates to a notable increase in the number of attacks; and notwithstanding the general abatement which has taken place, the epidemic is still causing about 120 deaths a day in the localities concerning which statistics are officially published. The accounts from Venice are contradictory, but even if any cases of true cholera have occurred there, they have been but isolated ones. Rome still remains free from the epidemic.

In France, a few cases still occur daily at Toulon and Marseilles, and a new outbreak is reported from Oran; but elsewhere the epidemic still maintains signs of subsidence. In Spain, the provinces of Alicante, Lerida, and Tarragona continue to be the only ones whence cholera news comes; and in view of the late season, it may now be confidently hoped that the Peninsula will escape any such prevalence as has occurred in France and in Italy.

QUARANTINE AND INFECTED PORTS.

All arrivals in Algeria from Portugal are subjected to a quarantine of five days; the quarantine on arrivals from France has been reduced from five to three days.

The port and shore of the whole "Circondario" of Genoa

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have been officially declared infected with cholera, and foul bills of health are issued. Vessels from Genoa are, on arrival at all non-infected Italian ports, subjected to ten days' quarantine if no sickness exists on board, and to twenty-one days if otherwise.

At Christiania the visitation of vessels from Great Britain, Holland, Belgium, and German North Sea ports has been abolished.

At Malta quarantine has been raised on arrivals from Sicily, from Turkish ports east of the Adriatic, and from ports in the Black Sea. Arrivals from Algeria are refused admittance.

The province of Oran and the port of Barcelona have been declared to be infected with cholera morbus.

In Greece all arrivals from Dulcigno and Antivari are subjected to five days' quarantine of observation.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 4th inst., 5939 births and 3379 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which had declined in the six preceding weeks from 25·6 to 19·1 per 1000, rose again last week to 20·1. During the thirteen weeks of last quarter the death-rate in these towns averaged 22·8 per 1000, against 20·6 and 19·9 in the corresponding periods of 1882 and 1883. The lowest rates in these towns were 14·1 in Portsmouth, 16·6 in Brighton, 17·2 in London, and 17·3 in Plymouth. The rates ranged upwards in the other towns to 29·3 in Newcastle-upon-Tyne, 29·4 in Preston, 30·1 in Sunderland, and 31·4 in Halifax. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had declined in the six preceding weeks from 1314 to 611, further fell last week to 548; these included 281 from diarrhœal diseases, 68 from "fever" (principally enteric), 59 from scarlet fever, 54 from whooping-cough, 37 from measles, 37 from diphtheria, and 12 from small-pox. These diseases caused the lowest death-rates in Portsmouth, Plymouth, and Brighton, and the highest in Oldham, Blackburn, and Preston. The highest rates of mortality from diarrhœa were recorded in Blackburn, Bolton, and Preston; from measles in Preston and Bolton; from scarlet fever in Salford and Cardiff; and from "fever" in Salford, Birkenhead, and Blackburn. The 37 deaths from diphtheria in the twenty-eight towns included 21 in London, 4 in Liverpool, and 3 in Nottingham. Small-pox caused 10 deaths in London, 1 in Birkenhead, and 1 in Sunderland. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 471 and 536 in the two preceding weeks, was 533 on Saturday last; the new cases admitted were 106, against 65 and 129 in the two previous weeks. The Highgate Small-pox Hospital contained 22 patients on Saturday last, 7 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 159 and 162 in the two preceding weeks, further rose to 184 last week, but were 67 below the average. The causes of 76, or 2·2 per cent., of the 3379 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Norwich, Wolverhampton, and in four smaller towns. The largest proportions of uncertified deaths were recorded in Huddersfield, Salford, and Oldham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which in the two preceding weeks had been 20·8 and 23·0 per 1000, declined to 21·1 last week, and exceeded by 0·9 per 1000 the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 13·4 and 16·0 in Perth and Edinburgh, to 23·9 in Dundee and 25·0 in Paisley. The 508 deaths in the Scotch towns included 56 which were referred to diarrhœal diseases, 20 to diphtheria, 17 to whooping-cough, 16 to scarlet fever, 14 to measles, 14 to "fever," and not one to small-pox; in all, 137 deaths resulted from these principal zymotic diseases, against 130 and 131 in the two previous weeks. These 137 deaths were equal to an annual rate of 5·7 per 1000, which was 2·4 above the average rate from the same diseases in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 51 and 52 in the two preceding weeks, further rose to 56, and included 20 in Glasgow and 12 in Dundee. The 20 deaths from diphtheria exceeded by 6 the number in the preceding week; 6 occurred in Glasgow, 6 in Dundee, and 3 in Edinburgh. The 17 fatal cases of whooping-cough showed a decline from recent weekly numbers, and included 5 in Edinburgh. Of the 16 deaths from scarlet fever, 9 occurred in Glasgow, where 11 of the 14 fatal cases of measles were also recorded. The deaths referred to "fever" showed a decline of 6 from the number in the previous week, and included 7 in Glasgow and 5 in Edinburgh. The 52 deaths referred to acute diseases of the respiratory organs in the eight Scotch towns were 13 less than the number in the preceding week, and were below those returned in the corresponding week of last year. The causes of 85, or nearly 17 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 26·6 and 30·2 per 1000 in the two preceding weeks, declined to 26·3 in the week ending the 4th inst. During the thirteen weeks of the quarter ending the 27th ult., the death-rate in the city averaged 25·4 per 1000, the rate during the same period being 20·9 in London and 17·0 in Edinburgh. The 177 deaths in Dublin last week showed a decline of 26 from the number in the previous week, and included 49 which were referred to the principal zymotic diseases, against 32 and 36 in the two preceding weeks; of these, 15 resulted from diarrhœal diseases, 8 from "fever," 7 from scarlet fever, 2 from diphtheria, 1 from whooping-cough, and not one from small-pox. These 49 deaths were equal to an annual rate of 4·9 per 1000, the rate from the same diseases being 2·2 in London and 4·4 in Edinburgh. The fatal cases of diarrhœa showed a further decline from those returned in recent weeks. The deaths referred to "fever," which had been 1 and 3 in the two previous weeks, further rose to 8 last week, and exceeded the number recorded in any week since April last. The 7 fatal cases of scarlet fever were 4 less than in the preceding week, and the deaths from diphtheria and whooping-cough also showed a decline from recent weekly numbers. Eight inquest cases and 3 deaths from violence were registered during the week, and 54 deaths occurred in public institutions. The deaths of infants and of elderly persons showed a decline from those returned in the previous week. The causes of 34, or 19·2 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

Surgeon-General J. Irvine, of the Army Medical Department, having returned to Egypt and resumed duty as Principal Medical Officer of the Army of Occupation in that country, Deputy Surgeon-General Fox, who has been holding that position, has returned to Alexandria from Cairo, and taken over the post of Principal Medical Officer of the Alexandria Garrison.

ARMY MEDICAL DEPARTMENT.—Brigade Surgeon Wm. Henry Muschamp to be Deputy Surgeon-General, vice Thomas John Murphy, M.D., granted retired pay.

INDIA OFFICE.—The Queen has approved of the retirement from the Service of the under-mentioned officers of Her Majesty's Indian Military Forces:—Deputy Surgeons-General John Edward Tuson, M.D., and James Alexander Caldwell Hutchinson, M.D., of the Bengal Army; Surgeon-Major Rivers Mantell, of the Bengal Army.

BREVET.—The under-mentioned officers have been granted a step of honorary rank on retirement:—Deputy Surgeon-General John James Clarke, M.D., of the Bengal Army, to be Surgeon-General; Brigade Surgeons William Watson, M.D., and Theobald Mathew, of the Bengal Army, to be Deputy Surgeons-General; Surgeon-Major Ferdinand Odevaine, of the Bengal Army, to be Brigade Surgeon.

ADMIRALTY.—The following appointment has been made:—Fleet Surgeon William Graham, to the *Penelope*.

ARTILLERY VOLUNTEERS.—1st Gloucestershire: John

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Hancocke Wathen, and David Samuel Davies, M.B., to be Acting Surgeons.

RIFLE VOLUNTEERS.—1st Dumbartonshire: John Maccallum Cameron, Gent., M.B., to be Acting Surgeon.—1st Pembrokeshire: Surgeon Edward Picton Phillips is granted the honorary rank of Surgeon-Major.

Correspondence.

"Audi alteram partem."

THE BEQUEST OF SIR ERASMUS WILSON.

To the Editor of THE LANCET.

SIR,—I observe that a proposition has been made by Sir Spencer Wells to devote a large portion of the magnificent bequest of Sir Erasmus Wilson to the formation of a Physiological and Pathological Institute. I sincerely hope that his proposition will be carried into effect. I cannot conceive of a more desirable object for the College to undertake than the foundation of an institution of this kind, one which would for ever perpetuate the College fame, and bring credit on all those who now have a voice in its councils. I believe also the proposal would receive the sanction and support of the whole profession. I have every reason to think so from the fact that, when three years ago the Association for the Advancement of Medicine by Research was founded, all the leading and most distinguished men in the profession came forward to maintain in the strongest terms the absolute necessity of providing some means for the furtherance of our science and art by more precise methods. The earnestness of these gentlemen was shown by the readiness with which they opened their purses to aid in the object which they had at heart. With all their liberality, however, the private subscriptions of medical men could afford but scanty means for the development of so large and important an object. Our Colleges have no funds to undertake it, and Government will not assist. It is only therefore by the liberality of private individuals that any hope can be entertained of rearing an institution devoted to pure science. The opportunity has now arrived when this can be done; an opportunity which may not occur again for another age, and one which now taken advantage of will surround the president with glory. A learned body has it in its power to found an institution to be devoted to pure science, untrammelled by any conditions to mar its usefulness. I feel sure too that such a foundation would have been quite in accord with the feelings of the bequeather.

That interest in biological work has not departed from us is proved by the popularity of Professor Michael Foster's laboratory; but we want something still greater, something more national. At the present time a large number of workers are obliged to seek their means of investigation abroad, and, what is more lamentable, a considerable number of young men of scientific tastes, to be met with in all our medical schools, are forced to relinquish their good intentions for lack of opportunity. I do therefore trust Sir Spencer Wells's proposal will become a reality; there is a crying necessity for an institution where physiological, pathological, and therapeutical research can be carried out, and the College has now in its hands the power to rear such a one in our midst. This will indirectly bring with it large practical advantages, and the College therefore will also have the satisfaction of knowing that it is acting as a public benefactor.—I am, Sir, your obedient servant,

Grosvenor-street, W., Oct. 1884. SAMUEL WILKS.

STOPPING TEETH AT GENERAL HOSPITALS.

To the Editor of THE LANCET.

SIR,—Will you permit me to bring before the profession by means of your journal a subject which to my mind is of the most vital importance to the public—viz., that general hospitals should make provisions for the stopping of teeth? How many instances do all of us see where good teeth are sacrificed merely for the want of proper attention at the commencement of the decay, to say nothing of the innumerable instances where teeth are extracted daily from patients who attend the various hospitals simply because the operator is aware of the fact that such patients have not the means to have their teeth stopped, and thus he extracts them rather than allow the sufferers to be in continual pain. Now what does this mean? That healthy young persons of poor circumstances are forced to sacrifice their teeth, and thus when they reach advanced age their health is broken down by chronic indigestion and the very many other maladies allied thereto, to say nothing of the loss of nature's gift, a good set of teeth, which is of no small matter to one's beauty, especially to marriageable young women. As general hospitals take up every other branch for the relief or cure of diseases which flesh is heir to, why not this most important branch? I feel confident that if the treatment to which I refer were once to be established, we should not have the slightest trouble in carrying out the good work, without experiencing any difficulty or incurring expense, so to say, to already overtaxed institutions. I am certain there would always be double or treble the number of students who would be delighted to fill the office of dental dresser for fixed periods, as in the other departments of hospitals; indeed many of such dressers, who intend following dentistry, would be receiving instruction at the same time at the dental hospitals; but even those who do not intend doing so would take a delight in the work merely for the sake of the experience in acquiring the art of stopping teeth. I devoted some time, when a student, to acquiring the knowledge of extracting teeth under the supervision of the appointed dental surgeon of the hospital to which I belong; and, although I do not follow dentistry, even in its simplest forms, I feel the immense advantages I have gained in being able to diagnose, I may say, at a glance the pathology and necessary treatment which ought to be adopted in different maladies of the mouth—a knowledge which I feel sure I should not have possessed had I not had some experience in such matters.

By way of conclusion, I may mention that only recently one of my domestics asked leave to go to a hospital for the purpose of having two teeth extracted, as she could not afford to have them stopped, and the dental hospitals (Leicester-square and Great Portland-street) were so far distant. "Besides, everyone cannot go there!" On looking at the teeth I found that they were the two anterior lower molars, and as I considered them not too far decayed to be stopped, I sent her to a dentist. The result is that she has thus saved two useful teeth, which will, in all probability, last for years.—I am, Sir, yours truly,

Baron's Court, S.W. R. FITZROY BENHAM.

LUNACY LAW AGITATION AND SUICIDE; THEORY *v.* COMMON SENSE.

To the Editor of THE LANCET.

SIR,—I have to express my thanks for your insertion of my letter in your last issue, and for having acceded to my request that you would favour me with your judgment upon the facts related. I trouble you again with reluctance, but the matter seems to me important enough to justify further discussion. Your verdict is that "the fault was obviously that of the friends," and you remark that "it is nothing to the point that the husband was eighty." I cannot have made clear what I wished chiefly to emphasise—viz., that the patient had no friends. The age of the husband is very much to the point, because, by reason of his age, he was unable to cope with his wife in her excitement. But, leaving this case for a moment, what has hitherto been the course usually pursued by a medical man whose patient, being attacked by insanity, requires treatment such as in his judgment cannot be pursued at home? He recommends treatment in an asylum. Asked to advise what asylum, he advises. He explains the requirements of the law; he sees the necessary forms gone through; and if, as so frequently happens, the case is of a nature to make personal action on the part of the patient's friends unwise, he recommends application being made to the asylum superintendent to select some one from his staff to accompany the patient from home. What could be more in accordance with common sense? with common humanity? What could be less open to the charges of "fussy interference" and "discreditable touting"? As to the law of the matter, the Lunacy Acts say nothing. They tell us that such and such conditions having been fulfilled, the superintendent may "receive"; they are silent as to whether he may or may not "send for" the person to be admitted

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The theory just now appears to be that he may not, this theory being founded on remarks made by the judge in the case of Weldon *v.* Semple. Hence (to return to the case which prompted my first letter) because the theory happens to be what it is, nobody felt at liberty to act. Common sense went to the wall; theory triumphed; but the patient died.

I am, Sir, yours faithfully,
H. J. MANNING.

Laverstock, near Salisbury, October 7th, 1884.

*** Our correspondent does not seem to see our point. It is not for a medical practitioner to meddle in the carrying out of his recommendation. He gives advice; with that his function ends. It is neither right nor wise to attempt to carry his precepts into practice. He should decline to do more than counsel; it is no affair of his whether the patient has friends or not. Medical men should limit their interference to the simple task of advising. They do not act wisely if they go further.—ED. L.

"OVER-PRESSURE IN SCHOOLS."

To the Editor of THE LANCET.

SIR,—Dr. Fergus has been medical officer to Marlborough College for more than a quarter of a century, and has a right to speak with the authority of a long experience of the diseases incident to school life; but some facts of his own previously published seem to stand in the way of the accuracy of his view that boys at Marlborough enjoy better health and develop in vigour more during term time than in the holidays. For example, Dr. Fergus reports the death of a boy from so-called spontaneous septicæmia, whose illness began in December—i.e., the last month in the third term of the year. The head master of Marlborough reports in *The Times* another death following an ambiguous illness beginning on July 14th—i.e., again the last month in the longest term of the year. I can find no record of similar deaths at the beginning of term, when, according to Dr. Fergus, schoolboys are more out of health than at the end. Other deaths have occurred at Marlborough, the exact dates of which I have no record at hand; but Dr. Fergus could probably supply the dates of these more readily than I could. There appears also to have been a death-rate at Marlborough equal to from two to three per cent. of the cases of scarlet fever, which is, as far as my observation goes, in excess of the death-rate among patients in private practice of the same age and class as the boys at Marlborough. These facts appear to me to be inconsistent with Dr. Fergus's view that health is better preserved and life more secure at school than at home under parental care.

If more evidence is necessary to prove the exhausting influence of school life, it would be obtained by a study of the group of head masters of our public schools. When they met at Wellington College in conference I saw them photographed in group in front of the College, their faces

"Sicklied o'er with the pale cast of thought."

Of some sixty masters I could only pick out three who looked ordinarily healthy, and only one with a face in the least rubicund, and this genial countenance might have been seen in a good likeness of him in the Royal Academy of this year. Anyone interested in this group might obtain a copy of Bishop, Bookseller, Wellington College. It is very expressive.

I am, Sir, yours truly,
J. G. BARFORD.

Wokingham, Oct. 6th, 1884.

CATHETER FEVER (?)

To the Editor of THE LANCET.

SIR,—Much interest was recently excited in this subject by the address of Sir Andrew Clark and subsequent discussions at several of the Medical Societies. A case recently came under my notice which impressed me much, the details of which, so far as known to me, are as follow:—On September 21st I was requested to visit a patient, whom I found to be a man about fifty years of age, who had previously served in the army. There was a history of long-standing stricture, for which the patient had been treated in the Royal Infirmary of Edinburgh and the Glasgow Western Infirmary. Without much difficulty I passed an elastic catheter, which, as there was coarctation of the urethra, the patient retained in the bladder for about eight hours. On my subsequent visit on the 24th the patient complained of a good deal of pain in the region of the bladder, and on this account, and as there were no urgent symptoms to justify it, no instrument was passed, but bromide of potassium and tincture of buchu were ordered internally. The patient was again seen on the 27th, and his condition was much as before. Morphia suppositories were ordered, with milk *ad libitum*, and a metallic instrument was passed, and at once withdrawn. The last drops of urine were slimy and tenacious, indicating vesical inflammation. On the 29th, two days subsequently, the condition of the patient seemed alarming; the pulse was weak and irregular, and the tongue was dry, as in typhoid fever, while since my last visit vomiting and retching had hardly ceased. I should have mentioned that on the 27th vomiting was also complained of, and that small doses of hydrocyanic acid and solution of bismuth were therefore given, but had no effect. On this occasion two teaspoonfuls of brandy were ordered with the milk as formerly, and the use of a warm sitz-bath was enjoined. The urine was scanty and high coloured. On my visit the next day I found that the patient had died about 10 A.M. Is this a case of catheter fever? or, is it a case of nephro-vesical fever independently of catheterism? I call to mind in this relationship the death of a medical friend well known in this city, and I confess that unless these cases be of a like nature to those described by Sir Andrew Clark and others, the pathology is to me perplexing.

I am, Sir, yours faithfully,
D. CAMPBELL BLACK.

Glasgow, Oct. 6th, 1884.

PRESTON MEDICO-ETHICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—We beg to forward you a copy of the enclosed resolution, passed at a general meeting of the above Society, held on September 24th, 1884.

We are, Sir, yours respectfully,
JOHN HOLDEN, } Hon. Secs.
J. J. BYRNE, }

Oct. 4th, 1884.

"Resolved that the Preston Medico-Ethical Society (and also requesting kindred Societies to) petition the General Council of Medical Education and Registration to obtain a clause in the next Medical Act Amendment Bill (or as a separate Bill) to the following effect:—'That whereas large numbers of Her Majesty's subjects are to their great injury misled and deceived by the advertisements offering medical and surgical advice by unqualified persons; be it therefore enacted that all such persons not having duly obtained a diploma, degree, or licence from any of the qualifying bodies named in Schedule A of the Medical Act, 1858, be deemed liable and subject to the penalty or penalties claimable under the Fortieth Section or Clause of the said Medical Act, 1858.'"

"BICYCLE RIDING AND PERINEAL PRESSURE: THEIR EFFECT ON THE YOUNG."

To the Editor of THE LANCET.

SIR,—After reading Dr. Herschell's letter in your last issue, I was not a little surprised to find that gentleman's name in the list of candidates for admission to the Cyclist Touring Club, published in this month's *Cyclist Touring Club Gazette*. Since Dr. Herschell "quite agrees with everything Dr. Strahan has said," and is convinced "that bicycle and tricycle riding will produce stricture of the urethra," it can hardly be that he is willing to run the risk of exemplifying in his own person these dire results of this "most healthful form of exercise." Possibly, however, Dr. Herschell has found some method of obviating the pathological results of cycling, and, if so, will doubtless take an early opportunity of bringing it before the notice of his fellow-cyclists.

I am, Sir, yours truly,
J. W. BATTERHAM, B.S. Lond.
(Member of C. T. C.)

General Hospital, Wolverhampton, Oct. 2nd, 1884.

*** Other letters on the above subject are unavoidably held over till next week.—ED. L.

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HOSPITAL ABUSE AT BIRMINGHAM.

To the Editor of THE LANCET.

SIR,—Can you afford me space for a word or two on this subject? We hear a great deal about the prevalence of the abuse of hospitals in London, but I humbly think if observers would let the profession know how much it abounds in the Midland metropolis it would help forward the movement for reform. I have not great means of observation, but in my practice I have frequently seen cases which go a long way to prove that the yearly subscription to hospitals is not a charity but an investment, for which return is expected. The authorities of the hospitals scatter broadcast through our churches, &c., at stated periods, blank schedules crying loudly for monetary subscriptions, and an intimation that the donor of a certain sum will have so many notes given him in return. These "notes" are distributed indiscriminately, and at the hospital no questions are asked. The bearer gets advice and medicine gratis "till the note expires." Now, to my certain knowledge, many people well able to pay the moderate fees of the private general practitioner go regularly to the hospital in this way. I go into houses daily, well furnished, several grown-up members of the household in constant work, where they tell me I am called in an emergency, "as they are hospital patients," or their "note" is expired, and they have failed to find another "note."

I saw a patient recently to all appearance quite comfortable as regards means. She suffered from liver disorder and dyspepsia. She had a box of lactopeptine and a mixture obtained from the "dispensary." Surely some reformers of the right sort are forthcoming to stop the traffic.

I am, Sir, yours faithfully,

Sept. 1884. FIAT JUSTITIA.

LIVERPOOL.

(*From our own Correspondent.*)

OPENING OF THE WINTER SESSION OF UNIVERSITY COLLEGE.

THE opening of the winter session of the Liverpool University College took place on Saturday, under most favourable auspices. Additional interest attached to the proceedings in consequence of its being the fiftieth anniversary of the School of Medicine, which was organised in 1834. Lord Derby presided, and presented the prizes to the successful candidates with his usual courteous ability. The address of Professor McCann was a most admirable production, delivered with graceful eloquence, and was listened to with deep attention, the only interruptions being the frequent bursts of well-merited applause. Professor Rendell, the Principal, in his report, gave a most encouraging account of the progress of the College. In the evening the annual dinner took place at the Adelphi Hotel, under the presidency of Professor Rendell. Eighty-four gentlemen attended, and among the guests were the Mayor (Mr. Thomas Holder), the Chairman of the Dock Board, and several members of the Royal Infirmary Committee. The professors, medical staff, and students were well represented.

INFECTIOUS DISEASES HOSPITAL.

Although the difficulty as to a temporary hospital for infectious diseases has been happily overcome, another difficulty has sprung up in its stead. Owing to the persistent action of two members of the City Council it has become compulsory for the latter to provide at once a permanent infectious diseases hospital. As usual, there is the difficulty of selecting a site which shall please everybody and displease nobody. A site had been recommended to the City Council by the Health Committee. It is situated in Wavertree-park, a little beyond the eastern boundary of the city, and has many recommendations, chiefly those of proximity and easy access. But it has the objectionable propinquity to the works of the London and North-Western Railway, the incessant noise of which both by night and day cannot but be prejudicial to the recovery of fever patients. At a meeting of members of the profession on Tuesday night in the Medical Institution the following resolution was passed: "It is the opinion of this meeting of the medical profession of Liverpool and its neighbourhood that, whatever reasons may be advanced for or against the neighbourhood of Edge-lane Hall as a site for a fever hospital, its close proximity to the extensive system of rails of the London and North-Western Railway must be considered an insuperable objection to its adoption."

THE DEAD-HOUSE, PRINCE'S DOCK.

The Liverpool side of the river Mersey occupies some miles in length, and of this the Prince's Dock is the centre. Many years ago a "dead-house" was erected by the Dock Board to receive the numerous bodies which from time to time are washed up by the tide or found floating in the river and docks. Such was the original intention, but practically it is the dead-house for the whole city, receiving bodies from the Leeds and Liverpool Canal, and from all parts within the borough boundary. In it many post-mortem examinations are made, and a faithful record of all these would add considerably to the literature of medical jurisprudence, especially as relating to infanticide and death from drowning. In spite of efforts made both by the present and late medical officers of health, it still unfortunately happens that the dead-house is a very imperfect and most unsuitable structure, in which surgeons have to perform their important duties amidst surroundings inconvenient, unfavourable, and thoroughly uncomfortable. It is high time that in such a city as Liverpool at least one proper mortuary and post-mortem room should be erected in a convenient situation.

THE DANGERS OF PARAFFIN LAMPS.

On Monday night four persons lost their lives through the upsetting of a paraffin oil lamp, which set fire to the staircase and kitchen furniture of the house, the smoke from which suffocated the inmates of the upper rooms. The bodies were subsequently recovered in a very charred state, and removed to the Prince's Dock dead-house. On Tuesday a woman and her son were taken to the Northern Hospital suffering from burns through the upsetting of a paraffin lamp. The son's injuries were fortunately but slight, and his mother is progressing favourably.

THE DISSECTING ROOMS.

Dr. Barron, the Demonstrator of Anatomy, has already secured ten subjects on which upwards of sixty students are engaged dissecting. It is hoped that the class will already be largely increased by new entries. The other classes have all commenced, and are well attended.

THE MEDICAL INSTITUTION.

The President of the Medical Institution (Dr. Robert Gee) will inaugurate its opening on Thursday night by an address on the history of the institution since 1864. Anatomical and other exhibits, and micro-photographs shown by the oxy-hydrogen lantern, will contribute to the interest of the occasion.

Liverpool, Oct. 8th.

NEWCASTLE-ON-TYNE.

(*From our own Correspondent.*)

NEWCASTLE COLLEGE OF MEDICINE: THE NEW SESSION.

THE winter session of the Newcastle College of Medicine in connexion with the University of Durham was opened on the 1st inst., and the proceedings were very interesting. The Dean of Durham made some happy remarks during the distribution of the prizes. In the absence of Dr. Heath, the president of the College, Dr. C. Gibson opened the meeting, and stated that during the past year 192 candidates had presented themselves for examination, and of these 107 had satisfied the examiners. During the year 200 students had been enrolled in the books of the College of Medicine, and at the autumnal examinations just concluded 49 candidates presented themselves. Dr. Gibson next pointed out the pressing need which existed for adequate premises for the College, and it is satisfactory to note on this point that our municipal authorities have lately conceded this necessity, and there is now a good prospect of the Medical College and the College of Physical Science having a home under one roof and in a building worthy of the city, and of the visit of the Prince of Wales, which event it is

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proposed to commemorate under the name of the "Royal Albert Edward United College."

THE SANITARY CONDITION OF ALNWICK.

Dr. Spear, the inspector appointed by the Local Government Board, has made a complete inspection of those portions of the town where insanitary conditions were stated to prevail, and the local papers state that a thorough condemnation of the sanitary condition of the portion inspected by him was the text of his remarks at the Local Board, and this although some ancient abuses in the ducal town were stoutly defended. Dr. Spear's report to the Local Government Board is likely to lead to very much needed reforms.

THE COMING WINTER AND THE WORKING CLASSES.

The approach of winter is looked forward to with some apprehension, owing to the want of employment in the North. At Sunderland there is already very great distress, where 30,000 persons are said to be out of employment. Durham also is suffering, and at the east-end of our city there is much distress. This is the locality depending so much on shipbuilding and its allied trades. Our mayor (Mr. Newton, Surgeon), fully alive to the exigencies of the working classes, has decided to call a town's meeting, and some very handsome subscriptions have been sent in, notably one of £100 from Mr. Joseph Cowen, our senior M.P.

THE NEW EYE INFIRMARY.

The Duke of Northumberland has consented to lay the foundation stone of this new hospital on Monday next, the 13th.

PENNY DINNERS IN NEWCASTLE.

The penny dinner project first mentioned in the North by the Rev. Moore Ede, the rector of Gateshead, has attracted much attention all over the district, and in various places steps are being taken to establish the system. A commencement was made on a large scale in Newcastle last week by Mr. Anderson of this city, who has opened rooms with accommodation for 1000 persons. The prices for adults range from one penny to fivepence. For the penny a basin of good soup and a large piece of bread are supplied, while for fivepence a repast of three courses is given of good, wholesome, and satisfying food. The Mayor of Gateshead pointed out that the prospect of profit depended very much on the number of those who partook of the dinners, but that 1000 dinners could be supplied at a surprisingly small sum, and still leave a margin.

WALLSEND DEATH-RATE.

A medical writer in one of our daily newspapers draws attention to the very high death-rate prevalent at Wallsend, 39 per 1000 at present, which he fears is likely to increase. He points out very forcibly that although the population has trebled, the "old drainage system," if it can be dignified by terming it a system, still prevails, and that the mortality now is higher at Wallsend than that reached at Sunderland when THE LANCET sent down a commission to inquire into and report upon the sanitary condition of that borough. The writer calls for a Government inspection, and in view of some of the facts already brought under your notice in the preceding portion of this letter as to the condition of the working classes on the Tyne, his demand would appear to be reasonable and opportune.

Newcastle on-Tyne, Oct. 7th.

GLASGOW.

(From our own Correspondent.)

OUTBREAK OF ENTERIC FEVER.

IT is satisfactory to be able to report that the outbreak of enteric fever which occurred in the three large hospitals in this city seems to have been checked, its course, and its subsidence when its cause had been discovered and removed, being such as to support the view taken of its causation in Dr. Russell's report.

SMALL-POX.

One case of supposed small-pox was admitted to the small-pox hospital during the past fortnight, but was dismissed in a few days, having turned out to be a case of skin disease.

THE SMOKE NUISANCE.

The smoke nuisance was under discussion lately by the Town Council. Anyone who is familiar with Glasgow will be aware that to say that its atmosphere is murky and loaded with smoke to a degree highly prejudicial to health is to state the matter very mildly. The Council seem to think that the question is not one to be lightly meddled with. One magistrate, who has to try "smoke cases" not unfrequently, "made bold to say that hardly any one of the plans proposed for consuming smoke was of much use. As a smoke-producer he would not be dictated to by the Health Committee, or by any scientific man, as to what he was to do in this matter. He would conduct his business and consume his smoke as best he could, and the duty laid upon the Town Council was to keep him from making smoke the best way they could." Another councillor held that "the city lived by smoke, and why should they kill the goose that laid the golden eggs?" When sentiments like these are entertained by our local rulers and law administrators, there can be little wonder that our Smoke Act is practically a dead letter in Glasgow.

The names of the Earl of Stair and the Earl of Rosebery have been mentioned in connexion with the vacant office of Chancellor of the Glasgow University.

I understand that no fewer that 150 candidates are presenting themselves for the third professional examination for medical degrees at Glasgow University.

The Western Medical School in Glasgow is not in a very flourishing condition. Three of its lecturers have resigned their posts—those on materia medica, chemistry, and medical jurisprudence.

ITALY.

(From our own Correspondent.)

HAVE Italian pathologists, in considering the factors of cholera, taken due note of the habitual defect of chloride of sodium, or common salt, in the daily food of its victims? That essential constituent of healthy blood appears in excessive quantities in the choleraic dejecta; and its withdrawal from the system, by diminishing the fluidity of the circulation, contributes to the consequent stasis and ultimate collapse. It is reasonable to assume that cholera patients who have not been denied the normal proportion of chloride of sodium in their diet, and have therefore the due amount of it in their blood, should, when the hydrorrhagia sets in, be better able to afford the saline loss and to maintain a longer fight with the disease than those in whose daily meals it has been habitually deficient. But this latter condition—defect of chloride of sodium in the daily food, and therefore in the system—is precisely that in which the lower population of Italy is generally found. Common salt is a Government monopoly throughout the Italian Peninsula. As such it is sold, like tobacco, at a price which millions of the poorer classes cannot afford. They therefore accustom themselves to do without it or only occasionally to indulge in it, to the serious injury of their vitality or resisting power to disease. It is a curious coincidence that the countries in which cholera is endemic, like India, or in which it easily effects a footing, like Arabia, are precisely those where the food of the people—rice mainly—is generally taken without the due proportion of common salt. The connexion between this "error in diet" and the liability to succumb to cholera is well worth the consideration of the hygienists of Italy; while Italians themselves, instead of rising in mutiny against the communal physicians as if these were trying to poison them, might more profitably agitate for the repeal of the salt tax, which places an essential constituent of healthy food beyond their reach.

In confirmation of the absolute necessity of maintaining the due proportion of chloride of sodium in the system as the condition of recovery from cholera, the success of hypodermoclysis in treatment may again be referred to. One of the most conspicuous cases of its efficacy in Naples has been that of the son of the well-known musician and composer, the *maestro* Petrella, on whom when in the stage of apparent death, and when about to be consigned

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to the undertaker, the operation was practised, according to the method of Cantani, with complete success. True, the operation has in many cases disappointed expectations, but on inquiry it has been found that in these it was performed unskilfully or at an inopportune time—that is to say, when the process of intestinal transudation was still going on, and when the solution of carbonate of soda and chloride of sodium was draining away almost as fast as it was injected. As to other methods of combating the disease, the profession seems settling down to the opinion of Stefanoni, as conveyed in the following words:—"The only cure, rational and preservative, of cholera is to check the diarrhœa on its first appearance. In a country invaded by the epidemic, no abnormal intestinal movement ought ever to be neglected. From its first declaring itself, the patient should be put to bed, since absolute repose, combined with astringent treatment, is the only available means of checking the serous flux of the intestines. Fifteen drops of laudanum in a few teaspoonfuls of peppermint-water are the one efficacious medicament I have seen used in the primary diarrhœa; and this, it cannot be too often repeated, if attended to at once, on its first appearance, is certainly curable, while rigorously keeping the recumbent posture in bed, regulating the diet, and drinking at frequent intervals and in small sips acidulated beverages like lemonade, or, if there be febrile heat, sucking from time to time little pieces of ice. To the arrest of the premonitory diarrhœa, which by common consent, if treated in time, is perfectly tractable, are reduced all the pretended cures of cholera—cures vaunted by so many as specifically due to the most various remedies. Once the patient has neglected the treatment of this primary stage, medicine can do little more than confess her impotence, since, by the consensus of all practical physicians, there is nothing to do but await the setting in of an extremely uncertain reaction."

Genoa has not escaped the epidemic, after all, though its incidence has been much less violent than at Naples. This has been mainly due to the more robust, better fed population of the Ligurian seaport, to the complete absence of panic, and to the prompter treatment of the premonitory diarrhœa. The Committee of the Red Cross, headed by the Syndic Signor Podestà, and reinforced by the most prominent among the citizens, including many ladies of high position, has done yeoman's service in limiting and attenuating the force of the malady. One effective stroke of hygienic strategy by which the invader was kept at bay was the stoppage of all water-supply to the town from the Scrivia torrent, after this was found to have been infected by the cases that had occurred at Busella. Deplorable to relate, after all the experience so dearly won at Spezia, the Scrivia water furnished by the Nicolay Company had been allowed to be contaminated by the washing of the linen of the cholera patients of that neighbouring township! And the Nicolay Company, rather than suffer pecuniary loss, had withheld the knowledge it possessed as to this contamination! But purer water has now been introduced; the sick-list and death-rate are manifestly on the decline, and numerous families who were preparing to join in a general stampede are remaining quietly in their homes.

Rome, to the great credit of the provisional syndic, Duke Leopold Torlonia, maintains her wonderfully clean bill of health, and with it the calm of the entire population. Her water-supply, long known to be the finest for purity and abundance in Christendom, has again been subjected by Professor Mauro to chemical analysis, and again with invariably satisfactory results. The Acqua Marcia, the Acqua Vergine, the Acqua Felice, and the Acqua Paola have all been proved to be perfectly limpid; to contain no organic matter of animal or other origin; to leave, when evaporated, a residue of not more than 50 grammes to the 100 litres of water; and to yield from this residue not more than thirty grammes of *carbonate terreux*, or than four grammes of magnesia. The best of the four are the Acqua Vergine and the Acqua Marcia. "We know," says Professor Mauro, "that the composition of the water has an influence on the development and the multiplication of some harmless microscopic organisms, but we are in absolute ignorance of what favours or counteracts the hurtful organisms, because we do not know their biology; we are ignorant, in fact, whether the water transmits them intact or feeds and develope them."

The literary "hit" of the hour is Professor Angelo Mosso's article in the *Nuova Antologia* on the "Precautions against Cholera and Quarantine"—a brilliant exposure of the futility of those mediæval safeguards on which Italy—not much to her credit and greatly to her cost—has, for the last time, let us hope, placed such implicit reliance.

Rome, Sept. 29th.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 2nd:—

Angior, Thos. Matthews, Oriel-road, Bootle, Liverpool.
Brighouse, Herbert William, Fortess-road.
Sykes, Thomas Hindle, Hoghton-street, Southport.
Thompson, Edward Egerton, The Square, Tenbury.
Woodforde, W. Sidney Ridout, Oakbank, Spencer's Wood, Reading.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Harry Gravely, University College Hospital; Archibald Thomas, Middlesex Hospital.

Passed and received a certificate on Sept. 25th:—

Santi, Philip Robert William, Doughty-street.

ROYAL UNIVERSITY OF IRELAND. — The following have obtained the degree of M.B. and the diploma in Obstetrics:—

BACHELOR OF MEDICINE.—W. Frederick Bailey, Patrick Blackall, Arthur Blackwood, Fredk. James Burns, George Clarke, John N. Corbett, Patrick Cotter, Warren Crooke, James Ferguson, Joseph Guisani, Charles Graves, Edward Greene, Chas. Hayden, Peter Horkan, Samuel Hunter, Hugh Lewers, Marcus Loudon, James McAvoy, Nicholas McDonnell, Joseph McKay, Morgan McSwiney, Edward Magennis, James Magner, Donald Martin, John Moore, Hugh Morrison, Cornelius O'Doherty, Michael O'Halloran, Patrick O'Hara, Joseph Prendergast, Fred. Sinclair, Alfred Smith, Patrick Soraghan, E. Starling, George Tate, Wm. Wadsworth, Geo. Waters, George Wynne.

The following passed in the upper pass division, and those marked with an asterisk will be admitted to a further examination for Honours:—

*Wm. Bartley, Robert Carter, M. Connery, Charles Cooke, *J. T. Daly, Charles Elliott, Thomas Frisell, *Thos. Grainger, *Benjamin Hosford, *John Kearney, *Philip McCarthy, *Robert Macnamara, *James Morwood, *Denis Sheehan, *William White.

DIPLOMA IN OBSTETRICS.—P. Blackall, A. Blackwood, John Bullen, P. Cotter, C. R. Elliott, J. C. Ferguson, J. Guisani, T. Grainger, S. Hamilton, B. Hosford, John Kearney, H. Lewers, J. McAvoy, P. McCarthy, N. McDonnell, J. F. Magner, J. Morwood, Cornelius O'Doherty, M. O'Halloran, D. Sheahan, A. J. Smith, E. Alfred Starling, William White.

IMPORTANT concessions as to reduction of time on duty have been made to the employés on the Brighton Railway.

FEMALE NURSES FOR THE ROYAL NAVY.—The Admiralty have passed important regulations for the female nursing staff, which is to some extent to supersede the present staff of male nurses at the Royal Naval Hospitals.

VACCINATION GRANTS.—Dr. Guy (Norwich) and Mr. J. H. Hughes (Ombersley district of the Droitwich Union) have received the Government grant for successful vaccination in their districts.

AT the last meeting of the City Commissioners of Sewers, the proposition to increase the salary of the medical officer of health, Dr. Sedgwick Saunders, from £900 to £1100, was carried by a majority of forty five against sixteen.

THE beautiful Hall of the Knights, Copenhagen, where the king recently entertained the Medical Congress, was unfortunately totally destroyed by fire on the 3rd inst. The entire palace has been almost consumed by the conflagration.

THE HOWARD ASSOCIATION.—This Association has, in response to a request made by the president of a Congress on Prisons, Pauperism, &c., to be held at St. Louis, Missouri, U.S.A., on the 13th inst., forwarded an address in which are discussed some of the principal questions in which the English Association and the American Congress are special interested.

A WATER FAMINE.—East Lutton, a village on the Yorkshire Wolds, near Driffield, is stated to be entirely destitute of a supply of water, and the villagers have to fetch it from another place more than a mile away. At Timber the inhabitants are reported to be almost entirely dependent upon the village pond, which is fouled by animals.

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SUICIDE OF A SURGEON.—An inquest was held last week by Mr. Collier on the body of John Lamond Hemming, M.R.C.S., L.R.C.P., who up to his death practised in Finsbury. Evidence having been given as to the discovery of the body, and Dr. Evans having deposed to the cause of death—i.e., poisoning by prussic acid—the jury returned a verdict "that deceased committed suicide while labouring under temporary insanity."

SANITARY ASSURANCE ASSOCIATION.—The Council of this Association has resolved to present to the free public libraries of the country copies of Mr. Mark H. Judge's "Sanitary Arrangements of Dwelling Houses; Notes in Connexion with the Sanitary Exhibits of the International Exhibition," recently published by the Sanitary Assurance Association, of which Mr. Judge is the surveyor.

HEALTH EXHIBITION, DUBLIN, HOSPITAL FETE.—On Saturday last, the fête in aid of the Dublin hospitals was held; it was a decided success, the attendance being very large, and the amount received must have been considerable. During the evening there was an ambulance demonstration, and a distribution of bronze crosses by Sir R. Rawlinson awarded to members of the Dublin police.

BOARD OF CONTROL OF IRISH LUNATIC ASYLUMS. This board has been reconstituted, and the following now comprise its members:—Major-General Sankey, John Nugent, George Hatchell, William R. Le Fanu, and Samuel Usher Roberts. These will act as commissioners for general control and correspondence, and for the superintending and directing the erection, establishment, and regulation of asylums for the lunatic poor in Ireland.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.—At a meeting of the committee of management of this institution on the 4th inst., it was stated that 1063 in-patients and 148 out-patients had been admitted during the three months which ended the 30th ult., being a large increase on the number admitted during the corresponding quarter of 1883. The receipts from all sources show a general increase as compared with the corresponding period of 1883.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the twenty-ninth session of this Society was held on the 3rd inst., when an address was delivered by the President, and the following were chosen office bearers:—President: Mr. John Marshall. Vice-Presidents: Dr. R. Carrington and Mr. C. H. Hartt. Council: Mr. A. L. Bowen, Mr. J. Brindley-James, Mr. G H. Cable, Mr. F. Carson Fisher, Dr. A. Forsyth, Mr. J. Hammersley, and Mr. F. Moon. Treasurer: Dr. Prior Purvis. Secretary: Mr. H. W. Roberts. Librarian: Dr. J. B. Saundry.

TEMPERANCE LECTURES.—The Committee of the Women's Union of the Church of England Temperance Society have arranged for the delivery of four lectures during November—viz., by Dr. E. Symes Thompson, on the 8th and 15th, on Temperate Teaching on Temperance, and the Causes and Preventive Treatment of Inebriety; and by Dr. Oliver Leeson on the 22nd and 29th, on Alcohol in Health, and on the Formation of Temperate Habits in Early Life. The lectures commence at 3 30 P.M., the first two being delivered at 83, Lancaster-gate, and the remainder at the Vestry Hall, Kensington High-street.

NEW BRANCH OF THE BRITISH DENTAL ASSOCIATION.—A meeting of dental practitioners took place in Birmingham, on Sept. 20th, at which it was resolved to form a Society, to be called the "Central Counties Branch of the British Dental Association." Dr. Waite of Liverpool presided. The laws of the Midland Branch with a few alterations having been adopted, the following officers were elected:—President: Mr. Charles Sims. Vice-President: Mr. F. J. Thorman. Hon. Secs.: Mr. H. Breward Neale and Mr. Frank Huxley. Treasurer: Mr. J. Humphreys. Council: Messrs. F. R. Batchelor, R. King, F. W. Richards, E. Harding, H. Blandy, and S. Birt.

LOWER THAMES VALLEY DRAINAGE.—The Works and Parliamentary Committee of the Lower Thames Valley Main Sewerage Board have submitted to that authority a lengthy report in which, after criticising the action of the Select Committee of the House of Commons in rejecting the scheme of Messrs. Mansergh and Mellis for the drainage of the district, they state that the creation of the board which was to solve the drainage difficulty has been attended with failure. This report was received by the board at the last ordinary meeting, and the plan of Sir Joseph Bazalgette, by which the whole of the sewage from the district of the joint board could be carried to the Crossness outfall, without going through the district of the Metropolitan Board of Works, was referred to the committee for their consideration and report, their report having been presented with full knowledge that such a scheme existed.

HULL GENERAL INFIRMARY.—This building is about to be enlarged by the addition of two wings and the erection of an out-patients' department; and the first stones of these new buildings were laid by His Royal Highness the Duke of Edinburgh and Her Royal and Imperial Highness the Duchess of Edinburgh on the 1st inst. The architects are Messrs. H. Saxon Snell and Son of London, and the builders of the portion now being executed are Messrs. Jackson and Son of Hull. The cost of the whole work will, when completed, amount to £25,000. Drawings of the proposed works of the infirmary building were illustrated in our issue of May 31st last.

PRESENTATIONS.—On October 1st a beautifully illuminated address and handsome carriage clock were presented to Mr. Charu Chandra Bose, on his leaving the Edinburgh City Poorhouse, Craiglockhart, by the officials of the institution. The address expressed the respect and esteem in which he was held, and wished him every success in his future career.—Dr. Woodhouse, on his retirement from the post of one of the honorary medical officers of the General Infirmary at Hertford, after forty-one years' service, was on the 2nd inst. presented with a testimonial which took the form of a handsome silver salver and a purse containing one hundred guineas.

PRIZES AT UNIVERSITY COLLEGE, LIVERPOOL.—The following is a list of the medals, prizes, and scholarships distributed by Lord Derby at University College, Liverpool, on the 4th inst.:—Lyon Jones Scholarships: Mr. R. Sumner, Mr. A. A. Kanthack, Mr. A. J. Burrowes, Mr. T. J. Sweeney. Derby Exhibition: Mr. G. S. Wild. Medicine: Mr. A. W. Collins and Mr. H. L. Pearson (equal), silver medal. Surgery: Mr. J. G. G. Corkhill, silver medal. Pathology: Mr. T. G. Laslett, silver medal. Obstetrics: Mr. E. Buxton, silver medal. Advanced Anatomy and Physiology: Mr. A. A. Kanthack, Torr gold medal; Mr. J. H. Abram, bronze medal. Elementary Anatomy and Physiology and Chemistry: Mr. W. E. Livsey, Bligh gold medal; Mr. G. W. Chaster, bronze medal. Histological Prizes: Mr. A. A. Kanthack, Mr. R. J. M. Buchanan. Medical Jurisprudence and Toxicology: Silver medal, Mr. F. H. Barendt. Materia Medica: Silver medal, Mr. A. A. Kanthack. Botany: Silver medal, Mr. W. E. Livsey. Practical Chemistry: Silver medal, Mr. W. E. Livsey. Students' Debating Society Prizes: 1st prize for essay, Mr. J. H. Lightbody; 2nd, Mr. J. Cunningham; 3rd, Mr. F. H. Barendt. Reports of Medical Cases: Mr. H. L. Pearson. Prize for Specimens: Mr. A. A. Kanthack. Reports of Surgical Cases: Mr. E. Buxton. Debating Prizes: Mr. Collins.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BOSWELL, JOHN IRVINE, L.R.C.P.L., M.R.C.S., has been appointed Medical Officer for the First District of the Faversham Union, vice Atthill, resigned.

ELIOT, ERNEST FREDERIC, L.R.C.P. & L.M.Ed., L.S.A.Lond., has been appointed House-Physician to the Queen's Hospital, Birmingham.

FOOT, ERNEST G., M.R.C.S., L.S.A.Lond., has been appointed Resident Clinical Assistant to the City of London Hospital for Diseases of the Chest, Victoria-park.

GORDON, JOHN JOSEPH, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Infirmary and Workhouse, Hackney Union, vice Garman, resigned.

HARMER, SIDNEY FREDERIC, B.A., has been appointed Demonstrator of Comparative Anatomy in the University of Cambridge.

JELLY, FRED. ADOLPHUS, M.B., C.M.Ed., has been appointed Assistant Medical Officer to the Wynford House Asylum, Exeter, vice Moypan, resigned.

LEWIS, W. BEVAN, L.R.C.P.Lond. &c., has been appointed Medical Superintendent of the West Riding Asylum, Wakefield, vice Dr. Herbert Major, resigned.

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MCWILLIAM, ALEX., M.B., C.M.Aber., has been appointed Senior Assistant Medical Officer to the Somerset and Bath Asylum, vice Beatty, resigned.

NEWMAN, DAVID, M.D., C.M.Glas., F.F.P.S.Glasg., has been appointed Surgeon to the Dispensary for Diseases of the Throat, Glasgow, vice Dr. Eben. Watson, resigned.

OPENSHAW, T. HORROCKS, M.B., L.R.C.P.Lond., has been appointed Resident Accoucheur to the London Hospital.

PARROTT, THOMAS GODFREY, M.R.C.S., L.R.C.P.Lond., has been appointed Resident Medical Officer and Secretary to the Bournemouth Cottage Hospital.

PEDLEY, RICHARD D., M.R.C.S., L.D.S., has been appointed Dental Surgeon to the Metropolitan Dispensary, Fore-street, Cripplegate.

PINK, THOMAS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Weldon District of the Oundle Union, vice Stokes, resigned.

PORTER, CHARLES F., M.R.C.S., has been appointed Health Officer for the Port of Port Philip, and Superintendent of the Sanitary Station at Point Nepean, vice Burmer, resigned.

RIDLEY, GEORGE WALTER, M.B.Dur., M.R.C.S., has been appointed Senior House-Surgeon to the Ingham Infirmary, South Shields, vice S. Lowes, M.B., L.R.C.S., resigned.

SMALL, THOMAS, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Tenth District of the Hexham Union, vice Connon.

TOMKINS, HARDING H., M.R.C.S. (late Assistant House-Surgeon to the Children's Infirmary, Liverpool), has been appointed Assistant Medical Officer to the Gloucester County Asylum.

WALLER, CHARLES B., M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the Westminster Hospital, vice A. Scanlan, resigned.

WELD, JAMES CHARLES, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Health Officer for the Shire of Ararat, Victoria.

Births, Marriages, and Deaths.

BIRTHS.

JONES.—On the 5th inst., at 6, Westbourne-street, W., the wife of T. W. Carmalt Jones, F.R.C.S.Ed., of a son, who survived his birth only a short time.

PICKUP.—On the 30th ult., at Bishop-street, Coventry, the wife of W. J. Pickup, M.B.Lond., of a son.

POPE.—On the 1st inst., at Broomsgrove Villa, Goldhawk-road, Shepherd's-bush, W., the wife of H. Campbell Pope, M.D.Lond., F.R.C.S., of a son.

WEBB.—On the 1st inst., at Kingsbridge, South Devon, the wife of W. H. Webb, M.R.C.S., of a daughter.

WESTLAND.—On the 1st inst., at Belsize-park, N.W., the wife of Albert Westland, M.D., of a daughter.

MARRIAGES.

BROSTER—POOLE.—On the 24th ult., at St. Mary's Church, Longfleet, Arthur Erdwick Broster, M.R.C.S., only son of the late Richard William Broster, M.R.C.S., of Beaminster, to Fanny Augusta, second daughter of Christopher Hill Poole.

EDWARDS—DOUTY.—On the 29th ult., at Netherhampton, by the Rev. Canon Olivier, Rector, assisted by the Rev. M. J. Drinkwater, Rector of St. George's, Antigua, W.I. (brother-in-law of the bridegroom), Charles Reginald Edwards, M.R.C.S.Eng., L.R.C.P., youngest son of W. H. Edwards, Esq., F.R.C.S.Eng., of St. John's, Antigua, W.I., to Lucy Ella, eldest daughter of the late Joel Douty, Esq., of Netherhampton House, near Salisbury.

SHAPLEY—STOCKWOOD.—On the 17th ult., at Newcastle Church, Bridgend, S. Wales, by the Rev. J. P. Hughes, M.A., Vicar of Llantrissant, assisted by the Rev. G. Thomas, B.A., Vicar of Newcastle, Frank Shapley, M.R.C.S., L.S.A.Lond., of Bryngarw, Sidcup, Kent, to Edith Stockwood, daughter of T. Stockwood, Esq., Solicitor, of Caederwen, Bridgend.

STORER—CLARKE.—On the 2nd inst., at Christ Church, Tunbridge Wells, Charles Storer, M.D., of Lowdham Grange, Notts, to Elizabeth, second daughter of the late Lieut. Clarke, R.M.L.I., of Epperstone, Notts.

THOMPSON—BARTER.—On the 2nd inst., at Gowran, co. Kilkenny, by the Rev. J. Stewart Hickey, Rector of Goresbridge, William Thompson, Esq., Surgeon, R.N., of Sandeville, co. Kerry, to Mary Agnes, youngest daughter of the late Dr. Barter, of St. Ann's-hill, co. Cork.

WADE—TODD.—On the 30th ult., at St. Mary's, Finchley, Charles Wade, M.R.C.S., L.S.A.Lond., of Hatfield Broad Oak, Essex, son of Edward Wade, Surgeon, of Cross, Somerset, to Sarah, only daughter of the late Benjamin Todd, Esq., of Finchley.

DEATHS.

BREWER.—On the 29th ult., Thomas Brewer, M.R.C.S., L.S.A.Lond., of New North-road, Huddersfield, aged 44.

DUNCAN.—On the 7th inst., at Great Marlborough-street, W., Peter Charles Duncan, M.D., after long continued suffering.

JOWETT.—On the 3rd inst., at Cedars-road, Beckenham, Joseph Jowett, Surgeon-Major (retired) H.M. Indian Army, second son of the late Rev. Joseph Jowett, M.A., Rector of Silk Willoughby, Lincolnshire, aged 69.

LIVINGSTONE.—On Aug. 9th, at Fitzroy, Melbourne, Andrew Cairncross Livingstone, M.D., L.R.C.S.Ed., late of Edinburgh, aged 72.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 9.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 9th, 1884.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb	Wet Bulb	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 9.30 A.M.
Oct.	3	30·07	W.	54	50	94	62	50	..	Cloudy
,,	4	30·48	N.	49	45	92	60	42	..	Hazy
,,	5	30·75	N.W.	49	46	66	58	45	..	Cloudy
,,	6	30·59	N.E.	55	52	72	61	48	..	Overcast
,,	7	30·22	N.E.	55	52	91	62	51	·01	Cloudy
,,	8	29·86	N.	51	49	84	60	49	·02	Overcast
,,	9	29·54	S.	49	45	84	58	40	·11	Bright

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

LONDON CABS.

"THE Man About Town," writing in the *County Gentleman*, notices on complaint about the "growler," and says that it "has been anticipated, and the fusty, jingling vehicles described by THE LANCET are being rapidly supplanted by really comfortable carriages." He adds, "Some of the new four-wheelers recently put on the ranks are as neat as need be." Our contemporary will earn the gratitude of a long-suffering public if he will state the precise localities of the ranks on which these much-to-be-desired but rather invisible four-wheelers are to be found. We welcome the announcement that "Forder's have invented a new hackney-coach called a landaulette. This can be driven open or shut." When is it to appear? There could be no better time than "chill" October. The occupation of a cabmaster is just now popular and aristocratic, and possibly profitable. But why do certain noble proprietors of cabs confine their enterprise to the hansom? In all fairness to the "growler," let us hasten to admit that with very slight alterations as to its interior it would be a *perfect* conveyance—for luggage!

T. K.—At St. Thomas's Hospital probationers under the auspices of the Nightingale Fund are allowed £16, besides board, lodging, &c., during their year of training.

R. D. is referred to a general notice at the head of this column.

ENGLISH *v.* FOREIGN OBJECTIVES.

To the Editor of THE LANCET.

SIR,—In your issue of Sept. 27th, in answering a correspondent who signed himself "Microscope," the writer, I suspect, hardly expressed all he intended. He must have meant to say that foreign objectives are superior to English *at the price*. I have elsewhere recorded my admiration of the high-power "immersions" of Zeiss, made on Professor Abbé's formulæ, and which rival the productions of our Powell and Lealand; but foreign low-powers are of inferior quality. Yet on these depends the greater part of practical work. Even in the matter of price the balance is not always against us. During some years I have had occasion to critically examine many glasses by Wray of Highgate (not so generally known as they should be), and I can guarantee their being nearly, or quite, equal to those of our first makers, at less than half the price. A stage-micrometer affords a simple test of excellence of correction. Its ruled lines should appear sharply defined all over the field, and run distinct and without bending to the edge. Still, the beginner must remember that the working image is the joint product of the objective and ocular; and if the latter is defective, as is too often is, spherical aberration will result with the best objective. My experience leads me to prefer Beck's eye-pieces to all others, especially their Kellners.—I am, Sir, yours obediently,

Bristol School of Chemistry, Oct. 4th, 1884. F. W. GRIFFIN, Ph.D.

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HAM YARD SOUP KITCHEN AND HOSPICE.

THE committee of the above institution have issued an appeal for funds which deserves a prompt and generous response. Since the institution was founded, in 1846, it has provided over five million meals of soup and bread for the poor of London, and since 1873 it has distributed 558 tons of coals. The relief during 1883 was 153,671 meals, and 1597 nights' lodgings in the Hospice, the Christmas Dinner regaling 5000 persons. It is stated that during epidemics such as cholera, or widespread distress the committee could, if provided with funds, relieve eighteen or twenty thousand persons a week, and distribute disinfectants, &c., to poor families. We are glad to notice that penny dinners to poor school children will be provided during the winter.

Wintonia.—The case is not uncommon; but we cannot depart from our rule.

EARTH AS A DRESSING FOR SPRAINS.

To the Editor of THE LANCET.

SIR,—Being quite familiar with the use and value of clay in treating sprains, and having a very apposite case, I ask the favour of your columns for the following remarks.

Until medical conservatism has seen quackery bring a promising remedy into disrepute (recall electricity, massage, &c.), scientific investigation is often withheld. Ten years ago a distinguished surgeon of Philadelphia, Dr. Addinell Hewson, established the fact of the widespread applicability of clay dressings in medicine and surgery, due, as he believes, to the local anti-inflammatory action of the earth. Wherever hyperæmia or inflammatory action exists, even if more or less deeply seated, clay applications, dry or moist, are thereby indicated. This is the principle involved, and had I the time and space I should be glad to discuss some of the theories suggested to explain its *modus operandi*. While admitting in the case of sprains that the pressure attendant on the clay dressing is to be considered, the criticisms of Drs. Dinin and Robertson on Dr. Shearer's use of the rubber bandage show hasty reading, for the latter distinctly says he applies it "lightly enough to keep the dressing from shifting." In my own practice I simply use a muslin bandage for retentive purposes. The essence of the treatment consists in the complete contact of such a layer of earth in its dry state with the diseased part, so as to thoroughly exclude the air from such parts. The profession have been so slow in following Dr. Hewson's lead in this agency that outsiders who have watched his success are now pushing the remedy with profit to themselves, and a National Pharmacy Association, with extensive warerooms, "combine a number of geological strata ... into a compound of remarkable antiseptic, absorbent, astringent, contractile and healing properties."

My case was that of a young lady who had a terrible fall from a ladder, wrenching her ankle and tarsal articulation severely. The family physician, a prominent homœopath, was summoned. He said nothing could be done till the swelling subsided; and on his next seeing the case, after a few weeks' absence from the city, said it was then too late to do anything. With commendable confidence the lady resigned herself to a life of limping, occasional falls in the street, rest in bed, and in the house painful locomotion and semi-invalidism. After the lapse of about *eight years* the family determined to see a surgeon, requesting his attendance privately. An examination revealed considerable weakness and tenderness of the lateral ligaments, some of the fibres of which had been ruptured; pain was experienced on pressing the articular surfaces together; there was not much swelling or redness, except after exercise. An ankle-brace was ordered to be used in washing, and the foot was dressed with clay, which was adapted to it as a plaster-splint would be. Of course, I ensured perfect rest for the joint. To the satisfaction of the patient and myself anodyne and antiphlogistic effects were obtained. With the aid of the brace, in the course of a month or six weeks she could walk well, being restored to a useful out-door life.

The details of this case are necessarily meagrely given; for I must close with saying that I am neither a "geophagist" nor a "geomaniac," but simply an appreciative son of mother earth.

I am, Sir, yours respectfully,

Baltimore, Sept. 3rd, 1884. EDWARD M. SCHAEFFER, M.D.

A CORRESPONDENT asks: Can the growth of hair upon different parts of the human body be stopped, destroying the hair roots without injuring the skin permanently, otherwise than as to its appearance? If so, how can it be done?

Dr. Victor Geiger.—The holders of degrees or diplomas of recognised foreign universities and colleges have, we believe, no difficulty in obtaining permission to practise in Australia from the Medical Board of the State in which the privilege of practising is desired.

"IS DEAFNESS A BARRIER TO PRACTICE?"

To the Editor of THE LANCET.

SIR,—Allow me to inform "Constant Reader," in answer to his letter in your issue of Aug. 16th, that there is in this city a physician who carries on a large practice although so seriously deaf as to be unable to follow ordinary conversation. The name of this gentleman can be furnished, if necessary. I have also heard of other cases where deafness seemed no bar to *resuming* an established practice. It would, however, doubtless prevent a young man from establishing *ab initio* such a practice. I am, Sir, yours respectfully,

Boston, U.S.A., Sept. 23rd, 1884. E. W. CUSHING, M.D.

THE ALLEGED DEATH FROM THE STEM OF A TOBACCO PIPE.

THE statement made by a lay contemporary that a man had recently died in St. Thomas's Hospital from injury to the brain consequent on the stem of a long pipe which he was smoking perforating the skull through the palate, was entirely disproved by the post-mortem examination. At the adjourned inquest, on Oct. 6th, Dr. Hadden gave evidence to the effect that the man's death was due to natural causes. The left middle cerebral artery was obstructed by a clot, probably detached from an atheromatous aorta, and the left cerebral hemisphere was extensively softened. From various cuts and bruises on the front of the body and face it was evident that the man had fallen forwards. The stem of the pipe had partially detached the soft from the hard palate, but had not penetrated the base of the skull.

Mr. Kerly.—The matter has already been noticed in our columns, but will probably have further attention.

DANGERS OF WEARING HAIR-PINS.

To the Editor of THE LANCET.

SIR,—The following cases appear worthy of record. Mary S——, aged forty-five years, married, robust, and a nullipara, was first seen on July 23rd. She informed me that on July 19th, at 6 A.M., after sitting up in bed for a few minutes, she turned her feet out of bed and slid on to the floor. As she did so she felt something sharp run into her privates, and she called out to her husband. A spot of blood appeared on the night-dress, and she felt two sharp points with her fingers outside; at the same time she missed a pin from her hair. Repeated attempts were made by straining and with fingers to extract it. On examination the points of the pin could not be felt outside nor per vaginam. A silver catheter, passed to three inches, detected a metallic substance on the floor of the bladder, which could be traced between the fingers in the vagina and catheter to the inner end of the urethra. I was unable to make any attempt at removal until the 27th, when fortunately the points of the hair-pin could again be felt at each side of, and about half an inch from, the meatus. After several attempts I seized one arm of the pin with the ordinary tongue forceps, and by pushing the pin back towards the bladder disengaged the point from the mucous membrane of the urethra and brought it down through the meatus, forcing the other point through the wall of the urethra into the vagina. The rest was easily extracted by turning the head of the pin outwards. No inconvenience was felt afterwards.

A somewhat similar, but ludicrous, case is the following, briefly given:—A female, aged fifty years, was visited at 11 P.M., complaining of "agony" in moving and great tenderness of right flank, for a week or more. When the patient stripped, a hair-pin was discovered, with one shank buried in the skin an inch deep.

In neither case do I think imposition or deception at all probable.

I am, Sir, yours truly,

Romsey, Sept., 1884. SPENCER B. SIMPSON.

Chromium.—The condition referred to is familiar enough to every toxicologist. Bichromate of potassium is a powerful irritant poison. Workmen engaged in the manufacture of this article suffer from a bitter, nauseous taste in the mouth, irritation of the mucous membrane of the nose, incessant sneezing, increased secretion of tears, and even severe inflammation of the eyes. Chronic sores often form on the hands, feet, and shoulders. It may in time lead to destruction of the septum of the nose.

POISONOUS EFFECTS OF THE SPANISH BROOM.

To the Editor of THE LANCET.

SIR,—Last week Mrs. S——, aged sixty, a thin woman, got from the nursery garden some tops and seeds of the Spanish broom. She put about half a pint of the cuttings into a pint of water, boiled it down, and drank most of it. In ten minutes a violent perspiration overcame her, the sweat running down her face. She lost her sight, and had the appearance of being drunk. She began to vomit, and the sickness continued for twenty-four hours. In three days she quite recovered. Thinking that the herb might be a strong one, I sent a specimen to Professor Attfield, and he kindly wrote the following:—"The tops and seed vessels you forwarded are those of the Spanish broom (*Spartium junceum*), not the common broom (*Cytisus scoparius*). In small doses it is diuretic, in large doses emetic and purgative."—Yours truly,

Watford, Herts, Oct. 6th, 1884. ALFRED T. BRETT.

Mr. Francis Lance.—A readable book entitled "Medical Fashions in the Nineteenth Century, including a Sketch of Bacteriomania and the Battle of the Bacilli (London: H. K. Lewis, 1884), by Dr. Edward Tibbits, would give the information required.

Dr. C. Y. Biss.—One of the September numbers of the *Lyon Médical*.

"ANILINE DYES."

To the Editor of THE LANCET.

SIR,—*A propos* of the article and letter on this subject which have appeared in your columns, might I direct attention to the fact that some specimens (if not all) of that colouring medium, liq. rosæ dulc., are undoubtedly made with aniline dye. I have a sample at present in my possession. If aniline is really hurtful, it ought not to be used in making such preparations as liq. rosæ dulc.—Yours faithfully,

Oct. 6th, 1884. INTEGRITAS.

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ROYAL MEDICAL BENEVOLENT COLLEGE.

THE case of Charles Ambrose Hughes, aged ten years, as a candidate for admission to the above College, has been brought under our notice. He is son of the late S. C. Hughes, M.D., F.R.C.S.I., who held several important appointments in Liverpool, and who was unfortunately killed through a gig accident while visiting his patients. Dr. Hughes was also a life governor of the College, and has left a wife and six children very inadequately provided for.

Young Surgeon.—The production of evidence of the possession of a degree or diploma from any recognised university or college will be accepted by the Medical Board of the colony as a sufficient ground for granting the holder permission to practise. Registration in England is not necessary.

WILLIAM ALLEN AND GUY'S.

To the Editor of THE LANCET.

SIR,—You kindly inserted a note of mine some months ago, specially addressed to Guy's men, asking for information about Allen. That note put me in communication with men of the highest repute in the medical profession, who willingly gave me all the help they could. To you and to them I beg to return my best thanks.

Please add to your kindness by allowing me space for a few words of explanation, for the sake of those interested in Allen. My little book is about to be issued; but the only notice of it I have seen is so misleading that it may well escape the notice of Guy's men. The publishers, Messrs. Hodder and Stoughton, have done what they list with the title, and it is referred to in an influential daily paper as, "The Spitalfields Genius. The Story of William Allen, the Quaker Philanthropist. By J. Tayle, B.A." On the title-page itself there is no reference to Allen being a Quaker philanthropist; for my aim was to write a short and readable sketch, of a Quaker certainly, but in a perfectly unsectarian spirit; of one who was so clever that for twenty-five years he was a most popular lecturer at Guy's, as the letters of Mr. Edward Cock, late consulting-surgeon there, and the only survivor of Allen's classes, sufficiently testify; and of one who was so completely the true gentleman that he was the confidential friend of Her Majesty's father, the late Duke of Kent, the trustee of his estates, and his executor, as well as administrator of his will. He was also the trusted friend of Alexander I., and "Courier to the Duke of Wellington." Well, here be truths which no Guy's man need be ashamed of.

For myself, I object to being turned into a caudal appendage, or a tale that is told, as the Psalmist means it, or even a twice-told tale, whatever may be the spelling, as my name is the Norman-French for a beech tree, and though the bark of the beech was used for writing a story upon, I am not the Story, but the Teller of the Story of Allen, and therefore wish the Tayle to be crossed, as I subscribe myself

Yours indebtedly,

Walthamstow, Oct. 7th, 1884. J. FAYLE.

"A NEW TRACHEOTOMY TUBE."

To the Editor of THE LANCET.

SIR,—I am glad to find that gum elastic has been used for tracheotomy tubes, and that they have given satisfaction. I was perfectly ignorant of the fact when I wrote before on the subject.

Having seen Messrs. C. Wright and Co.'s tubes, I am able to mention some differences in the patterns. My pattern has a shorter vertical portion, a rectangular curve, a somewhat thinner material, a proportionately larger calibre, and a smaller shield, giving a considerable gain in weight. One of my tubes weighs only 24 grs., and has a calibre of a ½-inch diameter.

Messrs. C. Wright and Co. have kindly undertaken to make some tubes after my pattern, and should anyone think them worth a trial they can now be had of them. I am, Sir, yours truly,

Euston-road, Oct. 6th, 1884. A. REA EDWARDS.

"THE FUNCTION OF THE SPLEEN."

To the Editor of THE LANCET.

SIR,—I have just been reading, in your issue of May 17th, a leading article on the above subject, and found therein no reference to the assistance which it possibly gives to the portal circulation. It appears to me to resemble in its use the elastic webbed ball in an ordinary ether spray apparatus, receiving a pulsating current of arterial blood from the heart, distending under the cardiac pressure, and by its elasticity forcing onwards a non-pulsating current of blood into the vena portæ.

Perhaps my note may elicit correspondence on the subject from some of your readers. I am, Sir, yours faithfully,

J. H. NANKIVELL, M.R.C.S.,

Butterworth, S. Africa, Aug. 30th, 1884. District Surgeon, Transkei.

QUININE AND HONEY.

To the Editor of THE LANCET.

SIR,—Honey is the best vehicle I have yet met with for the administration of quinine to children and others to whom the flavour of this drug is very nauseous. If the alkaloid be placed in the centre of a small spoonful of honey, I venture to surmise that the bitter at repugnance to the flavour will be entirely overcome. I have tried glycerine, milk, and other vaunted specifics; but, as our American friends say, they are "not a patch" on honey. I am, Sir, yours truly,

Brighton, Sept. 29th, 1884. DULCE ET UTILE.

YELLOW FEVER.

C. R. (Southampton).—In the *North American Review* for the current quarter the origin of yellow fever is traced to miasmata which are not the natural exhalations of the soil or water, and which cannot arise from soil and water fouled by ordinary sewage. "The filth that breeds it is the filth of the negro race, and furthermore it is the peculiar filth of the 'middle passage.'" The discharges of the sick negro; the dysenteric and other filth of slave-ships fermenting or putrefying in the harbour mud, and tainting the alluvial foundations of houses along the shore and the water conduits—such are the causes of yellow fever. The merit of this induction is given by the reviewer to the French physician, Dr. Audouard, who himself followed up an observation of Dr. James Copland, made in 1817.

Mr. Mayo Robson's paper will appear shortly.

CASE OF POISONING BY CARBOLIC ACID; USE OF THE STOMACH-PUMP; RECOVERY.

To the Editor of THE LANCET.

SIR,—Perhaps the following notes may be deemed of sufficient interest to find a place in your columns.

On the 18th ult., about 10 P.M., J. E——, aged seventy-one, accidentally swallowed a quantity of carbolic acid. In a few minutes he became comatose, and deglutition could not be performed, no doubt in consequence of the paralysed condition of the constrictors of the pharynx and œsophagus. Respiration was extremely laboured, and to all appearances he was dying. Finding he could not swallow, I lost no time in using the stomach-pump, which, in his case was attended with considerable risk, as the tube might unduly press upon the larynx, and so produce asphyxia before the operation could be successfully completed. However, as it was the patient's only chance for life, I carefully proceeded with the operation, keeping the tongue well forward and the head thrown as far back as possible, for obvious reasons. The most important part of the operation being so far successful, I proceeded to inject warm water into the stomach, in order to quickly dilute the acid, and so render it more harmless. On withdrawing the injected water it was found to be strongly impregnated with the acid. I repeated the operation three times, and then injected about a pint of thin gruel with an egg well mixed, to which I added an ounce of brandy, as the heart's action was failing. I withdrew the tube, got the patient quickly placed in bed, and applied warmth to the thorax and extremities. I remained with the patient two hours, to watch the symptoms and keep the throat and mouth clear of the mucus as it accumulated; this was done by means of an extemporised sponge probang. On leaving I gave the nurse instructions to keep him warm and to remove the mucus from the mouth. On visiting the patient in the morning I learned that he had had a very restless night, and that he was unable to swallow until 7 A.M., when he took a little milk. He had no recollection of what had transpired the night before. At the time of the accident the patient was suffering from asthmatic bronchitis, which was now much aggravated; this was, however, soon relieved by a cough linctus, to which was added chlorate of potash. The mouth and throat were dressed with a mixture of chlorate of potash and glycerine. The patient has had a sharp attack of diarrhœa during the last three or four days, which was relieved by the usual chalk mixture. He is sitting up to-day for the first time, this being the thirteenth since the accident, and no doubt in a few days he will be able to leave the house.—I am, Sir, yours faithfully,

Bristol, Oct. 1st, 1884. G. W. GROTE, L.R.C.P., &c.

H. B. S. (Bradford).—The generosity of Dr. Tommasi-Crudeli's vindication of Pacini's claim to the discovery of the "cholerigenous microbe" was appreciated at the Copenhagen Congress only by those of the audience who knew the animosity with which Pacini had attacked Dr. Tommasi-Crudeli himself. The last years of poor Pacini's life were embittered, if not shortened, by the fierce controversies in which he was engaged with his professional colleagues, particularly those of the Tuscan school.

Mr. MacCrombie.—We cannot extend our exchange list.

PHTHISIS.

To the Editor of THE LANCET.

SIR,—Could any of the numerous readers of THE LANCET kindly inform me what is the composition of Congreve's elixir, used in the treatment of consumption? I am, Sir, yours truly,

Oct. 7th, 1884. H. G.

OWING to the length of the report of the proceedings of the Medical Council, we are compelled to hold over several communications already in type.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Risdon Bennett, London; Dr. Herman, London; Mr. F. W. Lowndes, Liverpool; Mr. J. H. Douty, Worcester; Mr. A. Kerly, London; Dr. T. Oliver, Newcastle-on-Tyne; Dr. Manning, Salisbury; Mr. Buckston Browne, London; Professor Wharton Jones, Ventnor; Mr. Chauncy Puzey, Liverpool; Dr. Norman Kerr, London; Mr. Wheeler, Dublin; Mr. Combie, Coleraine; Mr. Thompson, Hague; Mr. T. Bagley; Mr. Molony, Tredegar; Mr. Waters, Clifsonville; Dr. Campbell Black, Glasgow; Mr. Allbutt, Leeds; Dr. Campbell Hyslop, Church

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Stretton; Dr. D. M. Douglas, London; Messrs. Grant and Son, Edinburgh; Dr. Isambard Owen; Mr. Rea Edwards; Dr. Sinclair White; Mr. Pooley, London; Dr. Saundby; Dr. Maunsell, Bath; Dr. Gleim, Bath; Mr. Iveson, Hull; Mr. Grant, Birmingham; Mr. Gatcliff, Kingston-on-Thames; Messrs. Boosey and Co., London; Mr. Armstrong, Manchester; Messrs. Austin and Son, Clifton; Messrs. Coxeter and Son, London; Mr. Brook, Talke; Mr. Bogue, London; Dr. Percy Boulton, London; Dr. Hughes Bennett, London; Dr. J. C Lucas, London; Mr. Phillips, Cleveland, U.S.A.; Dr. Lewis Stimson, New York; Mr. Tilley, Brixton; Mr. Lance, Wroxall; Mr. Batterham, Wolverhampton; Mr. Kemp, Craiglockhart; Mr. Toogood; Mr. T. L. Gentles, Derby; Dr. Griffin, Bristol; Mr. G. E. Walker, Liverpool; Dr. A. D. Macdonald, Liverpool; Messrs. Hilliard and Sons, Glasgow; Dr. Eberle, Thirsk; Mr. Fenwick, Leeds; Messrs. Wood and Co., New York; Mr. Saville, London; Dr. Hawkes, London; Mr. Reed, Harburg; Messrs. McGee and Co., Belfast; Mr. Gardner, Bournemouth; Mr. Yeates, New Haven; Mr. Birchall, Liverpool; Rev. S. Attleal, Buttermere; Dr. Herschell, London; Dr. J. H. Thompson, Rome; Mr. J. Startin, London; Surgeon Major Knox, Bareilly; Mr. Oakley, London; Dr. Cushing, Boston, U.S.A.; Mr. J. Oliver, London; Mr. Bull, Stony Stratford; Mr. Gess, London; Dr. Wake, London; Mr. H. T. Kesteven, London; Messrs. Turnbull and Wood, Newcastle-on-Tyne; Mr. F. E. Cane, Leeds; Mr. James Wilson, Glasgow; Mr. Fayle, Brighton; Mr. Baten, Cupar; Dr. Clement Dukes, Rugby; Mr. F. E. Hexley, Birmingham; Mr. Brett, Watford; Dr. Sweeting, Pelham; Mr. J. M. Dennis; Mr. Townsend, Exeter; Mr. Turner, Colchester; Mr. Jarman, Rhayader; Mr. Shaw, Newton-le-Willows; Messrs. Boulton and Paul, Norwich; Mr. Caird, Glasgow; Messrs. Oliver and Boyd, Edinburgh; Mr. Griffith, Chester; Mr. Curtice, Exmouth; Mr. Barry, Hartlepool; Mr. Wood, Southgate; Mrs. Carless, Liverpool; Messrs. A. & C. Black, Edinburgh; Messrs. Wright and Co., London; Mr. Macdonald; W. H.; E. G.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Hope, Stoke-upon-Trent; Dr. MacMunn, Shacklewell; Mr. Dowse, Huddersfield; Dr. Pritchard, Grantham; Mrs. Napper, Bournemouth; Mr. Russell, Birmingham; Mr. Hopkins, Bath; Mr. Gentle, Derby; Mr. Lalor; Mr. Buchanan, London; Mr. Shapley, Sidcup; Mr. Robbin, Rippindale; Dr. Best, Birmingham; Dr. Rutherford, Dumfries; Mr. Roberts; Mr. Mackay, Edinburgh; Mr. Cook, Cheltenham; Mr. White, Bayswater; Dr. Water, Graaf, Cape of Good Hope; Messrs. Downs and Co., London; Mr. Mitton, Eastbourne; Mr. G Gordon; Mr. Hardwick, Rotherham; Mr. Salter; Mr. Whipp, Burton; Mr. Heaton; Mr. Johnson, London; Mr. Bowlby, Kilburn; Mrs. Bedingfeld, London; Mrs. Griffiths, Southport; Mr. Cantley Riplin; Mr. MacCrombie; Miss Meyer, Holloway; Mr. Hamilton, Carrick-on-Shannon; Dr. Ballantyne, Over Darwen; Messrs. Whitehead and Co., Manchester; Mr. Bullin, Duncan; Dr. Prosser, Birmingham; M. W.; F. W.; Physician, Cardiff; Medicus, Bridlington Quay; Medical, Kendal; M.; P. P.; M.D., London; M.R.C.S., Islington; J. P.; X. Y. Z.; F.S.A., Wye; F.; Medicus, Minchinhampton; G. W. S., Weishpool; Pelham; Lady Superintendent, Cambridge; T. M. D.; Midland; H. R.; Beta; Medicus, Birmingham; W. J., London; Senior; J. R.; M.D., Rotherham; M.R.C.S., London; H. G., Blackheath; Brave, Whitechapel; A. G. O. E., Liverpool; R. S., Shepherd's-bush; Scalpel, Shepherd's-bush; R. D., Bewdley; F.R.C.S.; M.R.C.S., Wincanton; Medicus; F.R.C.S., Chewstoke; Fideliter, Clifton; Delta, Bloxwich; Neurosis, Bembridge; T.; N. W., Brailsford; Medicus, Denbigh; M.B., Manchester; Medicus, Southport; Medicus.

Irish Times, Jarrow Guardian, Shields Daily Gazette, Sunderland Daily Echo, Sunderland Herald, Hamilton Evening Times, Kimberley Daily Independent, Kimberley Diamond Fields Advertiser, Lakes' Chronicle, Western Mail, Dietetic Reformer, City Press, Bolton Daily Chronicle, &c., have been received.

Medical Diary for the ensuing Week.

Monday, October 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, October 14.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, October 15.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, October 16.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

HARVEIAN SOCIETY.—8.30 P.M. Mr. H. E. Juler: Interstitial Keratitis (with cases).—Mr. Noble Smith: The Mechanical Principles of Surgical Apparatus.

Friday, October 17.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, October 18.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom, and at their Advertising Agents.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

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A Lecture
ON
DISEASES OF CHILDREN.

Delivered at the Hospital for Sick Children, Great Ormond-street,

BY ROBERT J. LEE, M.D., F.R.C.P. LOND.

INFANTILE AND FAMILY SYPHILIS.

GENTLEMEN,—It is right that I should ask you for some indulgence if I incur the risk of being tedious in the consideration of the subject of Infantile Syphilis. You may be inclined to take the view that there is very little practical use in studying this subject as I propose to do, and that it is enough if we learn to recognise the symptoms when we see them, and can treat a case satisfactorily. Now, so far as the diagnosis of symptoms is concerned, there is usually no great difficulty in recognising them; while the treatment of infantile syphilis may almost be said to be expressed in one word, "mercury." It is not the question of treatment that I propose to consider, nor that of diagnosis; for it would be difficult to give you any information on these points which is not to be obtained from most works on general medicine. You will naturally, then, inquire what object there can be in studying this disease if we exclude all considerations of diagnosis and treatment. Admitting that there may possibly be much to interest those who have the time and disposition to pursue obscure and difficult questions when an extensive field for observation is at their command, still you may feel that such questions are not important enough to occupy the time and attention of the busy practitioner. Let me dispel such an idea from your minds by assuring you that the most extensive field, indeed almost the only one which circumstances permit, for the solution of the most important and difficult questions connected with syphilis, is that which is presented to those engaged in family practice. It is most difficult for the hospital physician or surgeon to do more than diagnose and treat the cases which come under his notice, unless he makes some special provision to overcome obstacles in the way of advancing knowledge, and which in the case of syphilis are, for reasons you can easily conceive, very considerable.

Supposing that we take a dozen instances of infants suffering from the disease brought here as out-patients, what do we learn by comparing them one with another, and noting all the differences between them with the utmost attention to details? If we take cases by hundreds instead of by dozens, all that we learn is to recognise the fact that syphilis in the infant is multiform in symptoms; but why signs and symptoms should differ as they do must still remain a mystery. No increase in the number of cases will furnish the data to answer that question. Nor again will they help us to explain why two or more children in a family may show no signs of infection, while others are born with distinct evidences of it. Such questions as these we ought surely to be able to answer if we set ourselves to the task in a reasonable and scientific spirit, and pursue it with energy, patience, and perseverance. It is sad to look back to the grievous errors which have been promulgated by men of the highest ability, some instances of which I shall have occasion to refer to. We can, however, defer for the present any further remarks of this nature, and turn our attention to the clinical study of the subject.

At the close of the last lecture, a case of infantile syphilis in a child six months old was brought to your notice, of which we were able to obtain a part of the history. In the interval between then and now I have obtained the other part—the most important in many respects—the history given by the father. The mother, you remember, gave a very distinct account of her married life. She told us that she was the second wife, and that her health had been good at all times. At present she is feeling weak from anxiety, and care of the infant; but she has had no symptoms which after proper inquiry could be attributed to syphilitic infection. We then had the account of her children. The first was born dead at term; the second was born dead at the eighth month; the third was born dead at the seventh month; the fourth was born dead at the seventh month; the fifth and sixth were twins, born dead at the seventh month; the seventh is now two years old, and has ailed nothing since birth. The eighth is the infant we have just seen to-day for the second time. The symptoms of syphilis are well marked; the hands and feet are peeling; the parts around the mouth, nose, and ears are slightly ulcerated; the nates are sore; the skin is pale and waxy; and the child has snuffled since it was a fortnight old. It is not at all ill-nourished, and the most marked symptoms are the general cachectic appearance and the waxiness of the skin. You noticed also a considerable amount of swelling and redness around the right elbow-joint; and the right leg was swollen, rather red and shining, a condition which you would pronounce to be erysipelas. There is an abscess in process of formation in the right arm, and I think already there is deep-seated pus. As a rule it is better not to incise in such a case, as there is little or no pain, and the inflammatory action will soon be arrested when the constitutional effects of proper treatment are obtained. I have ordered the mother to give the following medicine: One grain of mercury and chalk every night; one grain of iodide of potassium, twenty minims of syrup of iodide of iron, water to one drachm; to be taken three times a day. The prognosis of the case is very favourable, and some day I shall bring the child under your notice again, and give you an account of the results of treatment. We will now take the history given by the father. He is fifty-one years of age. When between twenty-one and twenty-two he was infected, and was under treatment for two years; so that about thirty years have elapsed since that time. He was twice salivated during the two years immediately following infection, and when he married his first wife eight years had passed. He was then in good health, and has enjoyed good health since, with the exception that he is subject to attacks of asthma. By his first marriage he had four children. The first was born prematurely and dead; the second has grown up and is now a strong and healthy youth, seventeen years of age, who has never shown any symptoms of hereditary syphilis; the third was born prematurely and dead; and the same accident happened to the fourth. The first wife enjoyed good health and died from an acute illness in no way related to syphilis. After remaining a widower for three years he married a second time, nearly twenty years after being first infected. This history is given by a man of rather superior education and intelligence, and from the first there has been a sensible desire on his part to avail himself of the best professional advice within his means. It was his own wish that he should be fully subjected to the influence of mercury, with a result not infrequently observed in similar cases.

I need hardly point out to you what are the questions of chief interest in a case like this. As far as the infant itself is concerned there is nothing to be remarked. Its condition is a common one; and the treatment is simple enough. It is not by any means the most common form of infantile syphilis, but its symptoms were such as at once to make the diagnosis and prognosis certain. It differs in this respect from the most common form of syphilis in the infant: that the child is well nourished and well developed, and the most striking symptoms are the pallor and waxiness of the skin. There is no wasting and no extensive cutaneous ulceration. The cracks round the lips are not deep. The chief troubles are the swellings of the arm and leg. Taking all the symptoms together, you would if you saw them in an adult expect to hear that a considerable interval of time had passed since infection, and that they belonged to what is usually known as the tertiary class of symptoms. As regards the mother, there is nothing whatever to be said. It is of no use discussing the question whether she has been infected or not. There is one thing certain. It is that she may some day show signs of infection, and if she does they will be symptoms of what we call a tertiary character. Note 6 in Fournier's work is a case of this kind. No. 33 in my list is also a case. These are facts which we cannot explain at present, but we shall probably find out the solution by inquiring in each such case into the history of the father. This at least appears to me to be a line of investigation worth attention. It will be convenient, I think, if I make some remarks upon the list of cases I have drawn up in a tabular form of instances of family syphilis, as I shall have occasion to refer to them from time to time. The symbols S_1 and S_2 express as far as could be ascertained the nature or mode of infection to which the mother had

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been subjected. When she suffered from symptoms of primary infection, and had contracted syphilis directly from her husband, I use the symbol S_1 to distinguish such occurrence from that where the mother was infected through the fœtus, and which is symbolised by S_2. Therefore in looking down the column containing the symbols S_1 and S_2 you can determine at once the form of infection in any particular case or number of cases. In column A the period of time is given which has intervened between the date of the infection of the father and the time of marriage. The object of this is to show to what extent it is probable that time exerts an influence in determining the evolution of specific symptoms in the mother or children, or in both. In column B a question of time is also answered, different from that in column A, and not so important in many respects, but still very necessary to the history of the family. This column gives the period which has elapsed since marriage, and enables us to some extent to compare the conditions observed when the case first came under notice with those reported by the mother or father at earlier periods of their history. I have then arranged in three separate columns the condensed history of father, mother, and offspring. Most of these histories have been taken at considerable length, and most of the details, whether positive or negative, of any importance have been noted. This table might be improved, but only at the risk of increasing its size inconveniently.

Now, in taking notes of the case which we have been considering, you perceive that there are some details especially deserving of attention. The most important fact in regard to the father is not, in my opinion, the long period that elapsed between the time when he was infected and his first and second marriages, nor the fact that he was treated so actively as to have been twice salivated, but it is that he has been the subject of asthma for many years. If this had been omitted the case would have been incomplete, and for the reason that the constitutional tendencies of the individual appear to determine to a great extent the character of the symptoms which generally follow infection, and this, too, quite as much as, if not more than, the simple influence of time. Do not suppose that I have any theory upon this point. I simply state the results of what probably many have observed and are well acquainted with. The importance of noting this fact we shall have occasion to refer to again.

The cases to which most attention should be directed in our present state of knowledge are not such cases as this, nor are they such cases as those mentioned by Fournier, where both mother and infant escaped; nor are they such cases as the 237 of primary infection in the mother mentioned by the same author. The cases of greatest interest now are those where the mother has been infected through the fœtus, and has shown symptoms of such infection; and in taking notes of these cases we must be particularly careful to have a complete history of the father. To refer again to Case 33 in my list. The fact is stated that the father was under treatment at King's College Hospital at the time that the child was brought to us here; and my friend, Mr. Royes Bell, assisted me by his notes of the father's history. I should have no difficulty in proving to you that you will find some such evidence of active symptoms in the father when the mother, through conception, becomes infected. What the relations may prove to be we will at present defer to consider. My object now is merely to explain the necessity of these details if we are to work out the questions of interest and importance connected with this subject.

We will take another case of family syphilis, of which we obtained a partial history last week, and of which I now give you the complete history. Two children were brought by the mother, the elder between four and five years of age, the younger only three months old. The infant presents the common symptoms of infantile syphilis. I mean by the common symptoms those observed in the majority of cases, and which are diagnosed without doubt or difficulty. The skin around the mouth and nose is slightly fissured and ulcerated; the child has snuffled since soon after birth, and the nates are sore, with small superficial ulcers and general redness, tending to a tinge of brown, in the parts around the ulcers. The elder child is between four and five years old; she is delicate and suffering from bronchitis; but, so far as any history of specific symptoms are concerned, we are informed that they have been quite absent. The mother gives the following account of herself. She has always been delicate, and has a tendency to bronchitis. Soon after marriage she had local symptoms of infection, with sore-throat, general weakness, &c. She gradually recovered, and latterly has had good health when not suffering from bronchitis. Of her children, the first was born dead; the second the same; the third was born alive, and died at the age of eight months; the fourth lived to the age of nine months, and suffered like the infant we have just seen; the fifth is alive, but has also suffered; the sixth is the elder of the two children brought here; the last is the infant. In the course of the week I saw the father and obtained from him his history. He is thirty-five years of age, and has been married ten years. Four months before marriage he was infected, and was under treatment, with the result that at the time he married the local symptoms had ceased, and there were no "secondaries." Very soon—that is, a few weeks after marriage—local symptoms returned, and his wife was infected, with the result we have seen. He submitted himself to treatment, and soon recovered, and has been well since. You will probably say at once that this was a case of S_1. It is entered in my list as No. 35. Compare it with No. 36 and with some few other cases. It has appeared to me doubtful whether in married women local sores are always cases of primary infection. At least, they differ generally from the common form which the disease assumes in hospitals specially intended for this malady. In the cases I refer to there is no distinct history of a primary sore. Conception takes place, and soon after—that is, within a few weeks or months—the skin, the throat, and other tissues are affected in a similar way, as far as can be judged, to that which is characteristic of the ordinary symptoms termed "secondary," when following on a primary sore. It seems if we may take the list of the cases I have tabulated, that the most common occurrence in married women is a history of freedom from all symptoms; the next most common is one of what are generally known as tertiary symptoms; and the least common are the cases of active secondaries. I have already said that a case of primary infection is very rare as the direct result of marriage, for the reason given that men do not contract marriage when suffering from local sores. I think you will see that I am arguing in favour of the view that in the condition of the father we must seek for an explanation of the varying symptoms which are presented by the mother and the children.

ON THE PATHOLOGICAL IMPORTANCE OF FLEXIONS OF THE UTERUS.

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IN communications to THE LANCET[1] on the question as to the "importance of flexions and displacements of the uterus," Dr. Grailly Hewitt has done me the honour of criticising papers of mine on the subject; and I therefore trust I may be allowed space to try to set forth more clearly those parts of my argument in which it appears I have failed to make my meaning plain, and to point out where I cannot help still thinking that Dr. Hewitt's theories are not in accord with clinical fact.

I would ask attention, first, to the difference in title between Dr. Hewitt's papers and my present communication. He writes on "flexions and displacements." I presume that no one will deny that conditions, such as inversion and prolapse, which come under the term "displacements," are morbid changes, and cause symptoms. With regard to bending of the organ, and to its slight inclinations forwards or backwards, there is not the same agreement. I wish here to limit myself to the subject of bending. I think it beyond doubt that when the uterus is not only bent, but fixed in that shape by adhesions, or when a uterus with senile thinning of its wall becomes bent, fluid may accumulate in the uterine cavity. The question at issue is whether *mere bending* of a uterus which is functionally active and free to move prevents the natural painless performance of its functions, or in any other way disturbs health.

Dr. Hewitt says: "It will hardly be necessary to urge that cases do occur in which severe flexions of the uterus

[1] June 7th, 14th, and 21st of the current year.

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give rise to great suffering, to great pain, and to various inconveniences. Those who deny that this is the case are not in my opinion open in a reasonable way to conviction, and arguments are lost upon them."[2] If this quotation be taken in its most literal sense, and as applying to cases in which neither of the two complications mentioned above are present, I must with regret admit that I am one of those upon whom Dr. Hewitt considers that argument is lost, and can only console myself by recollecting that the same censure applies to a large and increasing number of competent observers. But if I may take Dr. Hewitt's meaning to be this, that there are cases in which flexions of the uterus are *associated* with great sufferings &c. which are relieved by treatment which has for one of its results the removal of the flexion, then I quite agree with him; and the only difference of opinion is as to whether or not the benefit is dependent upon the uterus having been made straight.

In the remarks which follow I shall so often have to speak of the opinions of Dr. Hewitt, that it might seem as if the motive and subject of this paper were purely a personal one; but notwithstanding this disadvantage, frequent reference to Dr. Hewitt is not only unavoidable, but desirable; for he has so thoroughly and clearly elaborated the mechanical system of uterine pathology that, quite independently of his high position in the profession, his writings form its main support, and are the reasons of its wide acceptance; and if it can be shown that even in his writings the theory is insufficiently proved, it must fall to the ground. If Dr. Hewitt can be refuted, there is little else written on that side of the question that need be considered; if, however, a sceptic as to the mechanical system of gynæcology should admit that a flexion of the uterus may be a morbid change, it does not follow that he must accept the mechanical system of gynæcology. There is a great difference between admitting (1) that flexion of the uterus may cause symptoms in a few rare and exceptional cases, and (2) going with Dr. Hewitt in considering flexion of the uterus as the great cause of nearly all the troubles to which women are peculiarly subject. If the former of these two views be established, the latter does not follow from it.

There are four main lines along which the subject has been investigated, and which Dr. Hewitt considers in his papers, though not with equal fulness. These are—(1) statistical evidence; (2) post-mortem evidence; (3) the interpretation of signs and symptoms; and (4) the effect of treatment. To each of these I would ask attention.

1. *Statistical Evidence.*—The only statistics collected for the purpose of dealing with this question, and the only ones with which Dr. Hewitt deals, are my own and those of Vedeler. I place my own first, because they were slightly the first in order of time; but the two papers were published nearly simultaneously. Vedeler, in his first paper, makes no reference to mine, so that it is probable he had not seen it, and his observations are so numerous that he must have, at least, begun to make them before my paper was published; so that Vedeler's observations and mine were quite independently made; and they confirm one another. There are other statistics to which I have referred in my papers published in the Obstetrical Transactions,[3] which, in so far as they touch the points in question, give results similar to those obtained by Vedeler and by myself. These statistics agree in showing this broad fact—viz, that flexion of the uterus is extremely common in healthy women. This is the result attained by the only investigators who have sought to find out how often flexion occurs in the healthy. Those writers who adopt to its full extent the mechanical theory of the diseases of women take for granted, without special investigation, that the uterus in health is straight, or almost straight, and that any considerable bending is a morbid distortion. Vedeler's researches and mine concur in showing that this view, which is a fundamental principle of the mechanical pathology of the diseases of women, is erroneous; and these researches have not been rebutted by observations of the same kind. This fact is clearly established (so far as the evidence of two persons can settle anything) by the only persons who have sought to find out how often flexion of the uterus occurs in healthy women.

Dr. Hewitt, although he has no observations to oppose these, and there are none which show any different result, points out sources of error which he thinks invalidate the conclusions, and these I proceed to examine. First, he wishes a precise definition of "health" and of "complaints," and argues that the symptoms which flexions cause have not received attention or adequate recognition by previous writers; that they are often reflex; that very likely they were absent in Vedeler's patients because these belonged to the lower class; that the flexion may have only just developed, and have not had time to produce distress. These objections, it appears to me, have some weight, but not enough to prove Dr. Hewitt's theorem. If all that Vedeler's figures and mine showed was that symptoms were a little less frequent with flexions than Dr. Hewitt believed, or if Dr. Hewitt only asserted that flexion was occasionally and rarely a cause of mischief, then these sources of possible error might account for the difference in result. But when observation on the one side shows that flexion of the uterus is present in the majority of women, and almost exactly as often in those who are in perfect health as in those who suffer from uterine symptoms, while on the other side Dr. Hewitt asserts that flexion of the uterus is "the most common and most troublesome of the maladies to which the uterus is subject," and by far the most common cause of every disturbance of uterine function, it appears to me that the divergence is wider than can be accounted for by any such explanations. Dysmenorrhœa and menorrhagia, for instance, which, according to Dr. Hewitt, are almost inevitable results of long-continued flexions, are not occult, reflex symptoms, likely to be overlooked by anyone not an experienced specialist, and they are met with in the lower as well as in the upper classes. If flexion produces mischief of this kind with the frequency that Dr. Hewitt believes, it is impossible that out of several hundred cases of flexion the numbers with and without symptoms should have been almost exactly even. My own investigation was limited to the one symptom of dysmenorrhœa, of which, according to Dr. Hewitt, uterine flexion is not merely an occasional cause, but the great cause; and as to the presence and severity of this symptom special inquiry was made. Dr. Hewitt suggests that some of the patients may have been suffering from chronic ovaritis; but assuming this to be so, such cases would be distributed equally among the bent and the straight uteri, and so would not affect the result (unless it be maintained that flexion prevents ovaritis). Dr. Hewitt brings some other objections, the bearing of which I do not perceive. He speaks of the hardness or softness of the uterus. This he says introduces fallacies in examination, and he specifies the use of the sound. This instrument was not employed in any of the cases used for my investigation, from the fear of carrying diseased secretions from the vulva into the uterus; so no fallacy can have arisen in that way. He also speaks of the "double examination." I presume that this means that when the uterus was soft anteflexion was artificially produced. I do not think this was so, for the bimanual examination was always preceded by the vaginal. Some uteri may have been soft and others hard, but I do not see how this can affect the figures. Then Dr. Hewitt says that in some the flexion would be increased, in others diminished, during menstruation. I do not see how this can affect the result either, unless it be asserted that during menstruation straight uteri become bent, and bent ones straight. If this be the meaning intended, I would answer that there is no evidence that any such changes occur; and it may be remarked by the way that it is a statement which must bewilder those who think it their duty in the treatment of dysmenorrhœa to to try to cure flexions; for where is the need of straightening a canal which spontaneously gets straight during the time at which a bend would be hurtful? And how is a bend to be treated which is never present at the time eligible for treatment? It therefore appears to me that Dr. Hewitt's objections do not invalidate these statistics, and that this broad fact stands out clearly and decidedly—viz, that more or less flexion of the uterus is present in the majority of healthy women.

The next point upon which the statistics afford information is the relative frequency of flexion of the uterus in dysmenorrhœal and non-dysmenorrhœal patients. Dr. Hewitt makes some most cogent and valuable criticisms, and throws additional light on the question by his rearrangement of the figures. The statistics under consideration are contained in Vedeler's second paper. Dr. Hewitt, in the earlier part of his remarks on this paper, is not so happy as in his later ones, for he treats the figures in such a manner as to deprive them of all bearing on the question of flexions. It is this question which Vedeler discusses, and to which I here con-

[2] THE LANCET, June 21st, 1884, p. 1110. [3] Vol. xxii. and xxiv.

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fine myself. Dr. Hewitt mixes up versions and flexions together. Whatever effects version of the uterus may produce, if we want to understand those of flexion we must keep cases in which the uterus is bent distinct from those in which it is straight.

Although it may be wearisome to the reader, I must proceed to substantiate this statement. Vedeler[1] divides anteflexions into three classes:—(1) the first degree, in which the ante-curvature forms an angle greater than a right angle; (2) the second degree, in which the flexion is about at a right angle; and (3) the third degree, in which the uterus is so much bent that the body and neck are nearly parallel. Dr. Hewitt quotes him to the effect that there were 59 virgins who had no dysmenorrhœa, and in 24 of whom the uterus was in a state of marked flexion or displacement. Vedeler's statement is that of the 59 virgins the first degree of anteflexion was present in 30, the second degree in 9, the third degree in 6, and retroflexion of the first degree in 2—that is, flexion of some degree in 47 and pronounced flexion in 15. Dr. Hewitt gets his figure of 24 by taking this 15 and adding to them the 2 cases of slight retroflexion, 4 cases of anteversion, and 3 of retroversion. He similarly confuses, as I think, Vedeler's statistics of the unmarried, for he quotes him as having found in 101 unmarried women 51 instances of "marked flexion or displacement." Vedeler, out of this 101 unmarried women menstruating without pain, found some flexion in 65 and pronounced flexion in 28. Dr. Hewitt takes 28, adds to them 14 anteversions and 9 retroversions, and so gets the figure 51. He next quotes Vedeler as having found in 92 married women 13 cases of marked flexion or displacement. In this instance, for some reason which he does not explain, he has not included the versions. Vedeler, out of the 92, found more or less flexion in 47 and marked flexion in 13. Taking the three classes together, says Dr. Hewitt, the cases of marked flexion or displacement amounted to 22 per cent. (non-dysmenorrhœal). The percentage, in Dr. Hewitt's mode of tabulation, I make to be 34·9. The 22 per cent. is the proportion of flexion of the second and third degrees, according to Vedeler, the total percentage of flexions of every degree being 56. Dr. Vedeler's next table consists of 100 cases of severe dysmenorrhœa, and Dr. Hewitt deals with this in the same way. He says, "Of 13 virgins, 8 had marked flexion or version." Vedeler's statement is, that of the 13, 5 had anteflexion of the first degree, 1 retroflexion of the first degree, 3 anteflexion of the second degree, 2 anteflexion of the third degree, and 2 retroversion—that is, 11 had more or less flexion and 5 marked flexion. Dr. Hewitt makes 8 by putting together the 5 marked anteflexions, the slight retroflexion, and the 2 retroversions. "Of 44 unmarried women," says Dr. Hewitt, "19 presented the same condition." Vedeler gives 47 unmarried women, 44 of whom were nulliparæ. The distinction between unmarried women and nulliparæ is important, because Dr. Hewitt, as will presently be seen, does not always bear it in mind, and consequently incorrectly uses the figures. Of the 44 nulliparæ, the 19 displacements computed by Dr. Hewitt are made up of 6 anteflexions of the second degree, 5 of the third degree, 2 retroflexions of the first degree, 2 anteversions, and 4 retroversions. There appear in Vedeler's table, beside these 22 anteflexions of the first degree—that is, 35 flexions of all kinds—11 marked flexions. The 100 dysmenorrhœal cases are completed by 43 women who had had children or were married (not 43 married women, as Dr. Hewitt gives it, but 40). In these 43 Dr. Hewitt finds 22 "similarly affected." These 22 are composed of 4 anteflexions of the second degree, 7 anteflexions of the third degree, 2 retroflexions of the first degree, 4 anteversions, and 5 retroversions. Besides these, Vedeler states there were 16 anteflexions of the first degree. In all there were 29 cases of some flexion, 11 of marked flexion. Thus, says Dr. Hewitt, 49 out of the 100 had marked flexion or version. The figures, properly arranged so as to show the effect of flexion, are as follows: "out of the 100 there were 75 cases of flexion, of which 48 (44 anteflexions and 4 retroflexions) were slight, and 27 marked. This minute and tedious examination of the figures may seem of small importance; but if conclusions are to be drawn from these figures, it is necessary that they should be correctly given.

I now leave these details and pass to the more important summary of the figures. Vedeler's results are:—That out of 100 cases of severe dysmenorrhœa, in 71 there was more or less flexion and in 27 marked flexion; of 252 cases in which there was no dysmenorrhœa, in 56 per cent. there was more or less flexion and in 22 per cent. marked flexion. This, to quote Vedeler's own language, "appears to speak in favour of the great influence of flexion, and to strengthen the prevalent teaching that anteflexion is especially connected with dysmenorrhœa or one of its causes." But he goes on to say that we cannot accept these figures without allowing for the effect of pregnancy and parturition, the changes due to which often remove anteflexion. Of the 100 patients suffering from dysmenorrhœa, only 18 had had children; while of the 252 non-dysmenorrhœal cases, 95 had had children, or 37·7 per cent. Vedeler says, and Dr. Hewitt agrees with him, that nulliparous patients suffering from dysmenorrhœa must be compared with nulliparæ not so suffering. Dr. Hewitt accordingly makes such a comparison in what he believes to be an accurate summary of the tables in Vedeler's second paper. He says that in 160 nulliparæ, non-dysmenorrhœal, there were 47 decided flexions, and including all flexions, 103, or 64 per cent. Here, however, he is slightly in error, because, as I remarked before, he has not noticed the distinction between the unmarried and the nulliparous. Vedeler's table includes 59 virgins and 101 unmarried women; and it is the statistics of these that Dr. Hewitt has quoted. But of these unmarried, 13 had had children; while among the 92 married there were 10 who had not had children. When the necessary correction is made, by eliminating the 13 who had been mothers from the list of the unmarried, and adding the ten childless wives to those that remain, we get these figures: 157 nulliparæ with 108 flexions of all kinds, or 68·7 per cent.; and 44 flexions of marked degree, or 28 per cent.

There is yet another correction which has to be made before the figures can be properly used as a test of the effect of bending of the uterus. In drawing the distinction between slight flexions and decided flexions, Dr. Hewitt puts in the latter class anteflexions of Vedeler's second and third degrees, and retroflexions of any degree. I am aware that Dr. Hewitt does not consider a slight degree of anteflexion as inconsistent with health. But the question now under consideration is the effect of bending of the uterus; and from this point of view we should put as much separate slight from decided retroflexions, as we should slight from decided anteflexions. In Dr. Hewitt's 47 decided flexions there are four retroflexions of the first degree, which being deducted leaves 43 only. None of these four had been mothers; while among the 10 childless wives there were 2 with retroflexion of the first degree. This makes 6 to be deducted from the 44 above spoken of, leaving 38, or 24·2 per cent.

Dr. Hewitt objects to Vedeler's comparison, because this puts the dysmenorrhœa cases side by side with the table of healthy nulliparæ—that is, patients who said they were well, but who were not specially questioned as to menstrual pain, in his first paper, instead of with the table of nulliparæ known not to suffer from dysmenorrhœa contained in the second paper. This, I think, a very fair objection, and a very important criticism. In my judgment he here points out an error in Vedeler's mode of reasoning, although he does not show a flaw sufficient to make the figures tell in favour of his own position. I would even go so far as to say that Vedeler's figures, as arranged by Dr. Hewitt, form stronger presumptive evidence in favour of the production of dysmenorrhœa by flexion of the uterus than anything that has yet been brought forward. The figures, arranged in the manner in which Dr. Hewitt has pointed out that they ought to be arranged, and computed according to his view, stand thus:—

	Decided flexions.	All cases of flexions.
	Per cent.	Per cent.
157 Nulliparæ (non-dysmenorrhœal) ..	44, or 28	108, or 68·7
82 Nulliparæ (dysmenorrhœal)	20, or 35	63, or 76·8

But to make the figures show the effect of bending of the uterus, we must remove from the total of decided flexions the slight retroflexions as well as the slight anteflexions, and then the figures stand thus:—

	Decided flexions.	All cases of flexions.
	Per cent.	Per cent.
157 Nulliparæ (non-dysmenorrhœal) ..	38, or 24·2	108, or 68·7
82 Nulliparæ (dysmenorrhœal)	25, or 30·5	63, or 76·8

My own figures relate to the same class of patients as Vedeler's, but are smaller in number. I think the best use

[1] Archiv. für Gynäkologie, Band xxi., S. 228.

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I can make of them here is to add them to Vedeler's and give the result of the two sets of figures combined. They are as follows:—

	Decided flexions.	All cases of flexions.
	Per cent.	Per cent.
238 Nulliparæ (non-dysmenorrhœal) ..	76, or 32 ..	154, or 65·8
115 Nulliparæ (dysmenorrhœal)	41, or 35·6	84, or 73

The figures thus show a slightly greater frequency of flexions of the uterus among patients the subject of dysmenorrhœa. If this be admitted as an established fact, it still does not show that the flexion stands to the dysmenorrhœa in the relation of cause to effect. It may be that both flexion and dysmenorrhœa are the results of causal conditions common to both. For instance, statistics collected by Whitehead[5] and others by West,[6] show that women in whom menstruation does not commence until later than usual—that is, those in whom the development of the uterus is imperfect—are more prone to derangements of health connected with its functions than other women; and a paper by Dr. John Williams was read before the Obstetrical Society of London in 1882 in which it was maintained that in cases of primary dysmenorrhœa (the kind chiefly met with in nulliparæ) the uterus is imperfectly developed. Now, according to Dr. Hewitt (from whom I do not here differ) the uterus in early life is more anteflexed than subsequently, and this anteflexion disappears as the organ enters upon functional activity. Assuming these views to be correct, we have here an explanation of the preponderance of flexion among the dysmenorrhœal—viz., that among such patients an undue proportion of imperfectly developed uteri is present. But to pursue this subject would be to discuss that of dysmenorrhœa, and I wish here to keep to that of flexion. If the inference which I presume Dr. Hewitt would draw from these figures be correct—viz., that the preponderance of flexions among the dysmenorrhœal indicates that the flexion is the cause of the dysmenorrhœa,—I would point out, first, that it does not follow that the dysmenorrhœa is produced by blocking the canal; next, that the proportion of flexions met with in the non-dysmenorrhœal is very large, and the excess of that condition in the dysmenorrhœal very slight. If it be assumed even that in every case of flexion with dysmenorrhœa the flexion was the cause of the dysmenorrhœa, it still results that 47·3 per cent. of decided flexions, and 47·4 per cent. of all flexions, are quite innocent of any connexion with menstrual pain. Taking the more reasonable estimate, that the number of cases in which the flexion stood in a causal relation to the dysmenorrhœa is represented by the excess of flexed uteri among the dysmenorrhœal cases, we find this consists of 7·2 per cent. of all flexions, 9·6 per cent. of marked flexions. If these figures indicate that flexion is a cause of dysmenorrhœa, they also indicate that it is one of the least frequent, and, therefore, least important causes. It will be noticed also that the slight disproportion is larger when flexions of all grades are taken into account than when marked flexions only are regarded, which goes to show that dysmenorrhœa associated with flexion does not increase in frequency proportionately to the sharpness of the bend, as it should do were it mechanically caused by the bending.

Such a large percentage of flexions among the dysmenorrhœal, and such a trifling difference in this respect between them and the dysmenorrhœal, seem to me altogether inconsistent with the view that Dr. Hewitt takes of the importance of the flexed condition—viz., that it is "the most common and most troublesome of the maladies to which the uterus is liable," and the cause of dysmenorrhœa in the majority of cases.

(To be concluded.)

[5] On Abortion and Sterility, p. 48.
[6] On Diseases of Women. Fourth edition, p. 27.

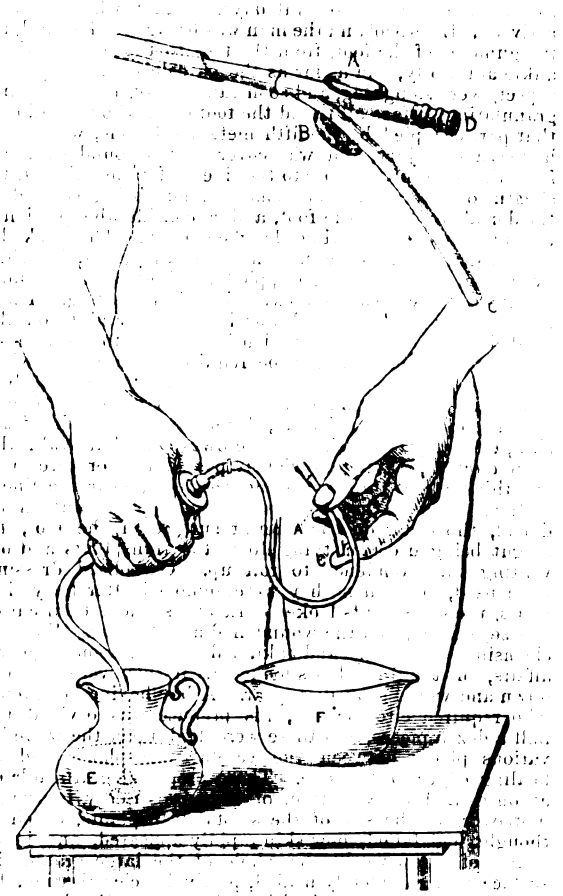
GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At the first meeting of this Society, held in the Faculty Hall on the 3rd inst., the following gentlemen were elected office-bearers for the present session:—President: Dr. G. H. B. Macleod. Vice-Presidents: Drs. Hugh Thomson and David Taylor (Paisley). Council: Drs. D. Maclean, J. C. Woodburn, William Whitelaw (Kirkintilloch), W. A. Wilson (Greenock), R. Cowan, J. A. Lothian, William Patrick, and M. Thomas. Secretaries: Drs. W. L. Reid and J. W. Anderson. Treasurer: Dr. Hugh Thomson.

A SIMPLE METHOD OF WASHING OUT THE BLADDER.

BY G. BUCKSTON BROWNE, M.R.C.S. ENG.

IN the treatment of various diseases of the urinary organs it is often necessary to teach a patient to wash out the bladder. As a rule he is elderly and not very skilful, and consequently the apparatus put into his hands should be of a simple kind. In all the instruments hitherto designed there are taps to turn, and the injecting nozzle has to be constantly connected with the catheter and disconnected; hence they all lack the element of extreme simplicity; moreover, none of these movements can be made without shifting the catheter more or less, and this is very undesirable in a tender and perhaps inflamed bladder.

In February of this year Dr. Wm. Job Collins published in THE LANCET a description of a two-way tap, furnished with two stopcocks, and intended to be fixed to an ordinary Higginson's enema syringe. This excellent contrivance at once suggested to my mind the following arrangement, in which all stopcocks are done away with, and by which washing out the bladder is made as uncomplicated as possible. The accompanying figure will for the most part



explain itself. A B C D is simply a bifurcated brass tube without valve or stopcock. The end, D, is fixed to a Higginson's syringe. At A and B are discs to support (in addition) the left thumb and second finger, the left forefinger being free to alternately close and leave open the orifice of the efferent tube at C. The jug, E, contains any bladder wash prescribed by the surgeon, and the enema apparatus is filled with it in the usual way, so that all air is expelled. The catheter is then passed, and when urine ceases to flow the nozzle is introduced into the end of the catheter. The left forefinger is firmly applied to the orifice at C, and two ounces of injection are gently introduced into the bladder

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by squeezing the ball in the right hand. The left forefinger is then raised and the fluid issues from the bladder, while the right hand relaxes its pressure and allows the bulb to draw up a fresh supply of fluid. This process can be repeated as often as is desired, without trouble to the patient or disturbance of the catheter. In practice, I have found this simple apparatus prove of great service to patients suffering from atony of the bladder or prostatic disease, when washing out the bladder has been indicated. The brass nozzle is made by Messrs. Weiss and Son.

Wimpole-street, W.

A NOTE ON PREPUCE GRAFTING.

By CHAUNCY PUZEY,
SURGEON, NORTHERN HOSPITAL, LIVERPOOL.

THE article by Mr. Clement Lucas, which appeared under the head of "Prepuce Grafting," in THE LANCET of Oct. 4th, reminds me of a case bearing upon this subject which was under my care about a year and a half ago in the Northern Hospital, Liverpool.

A sailor, about thirty-five years of age, sustained a severe crush of the soft parts of his left foot, owing to a spar falling upon it and rolling about on it during a heavy gale at sea. The injury was aggravated by want of attention and exposure to cold and wet for several days, so that when the ship arrived at Liverpool and the man was brought to hospital, the integuments of the foot, from the toes to the flexure of the ankle anteriorly, and as far as the os calcis on the plantar aspect, were sloughing, and soon came away, leaving a large granulating surface all round the foot (with the exception of that part occupied by the fifth metatarsal bone, which part had escaped injury, and was covered with sound skin) and from the bases of the toes to the lines before-mentioned, the sheaths of several of the extensor tendons being exposed on the dorsal surface of the foot, and a considerable portion of the plantar fascia having sloughed away. This looked a case which would take months in healing, and in which even then a tender foot, crippled by tight cicatrices, must result—a typical case for extensive skin grafting. Therefore, as soon as the wound was in a clean and favourable condition, I obtained the patient's sanction to the removal of as much skin as might be required from a part where there was plenty—namely, his scrotum. This having been cleansed by the continuous application of carbolised fomentations for a couple of days, I removed two folds of this skin, each about the size of a crown-piece, but oval rather than circular, having previously passed two or three long and thick catgut threads through the folds, near the line of section. One of these pieces was then spread out on the dorsal, the other on the plantar surface of the foot, the catgut being used for tying down the transplants and preventing their tendency to roll up. Carbolised dressings were used, but when they were removed after forty-eight hours, the transplants looked dark and sodden, their cuticle was separating, and the wound had a bad odour. Frequent cleansing, and gauze and oakum dressings, soon improved affairs, but the transplants looked as if they were softening down and would soon disappear. A boy having been found who required circumcision, his prepuce was divided into half a dozen pieces, and these were laid upon the wound in various places between the scrotal transplants and the healing edges of the sore. These preputial grafts adhered at once, and the condition of the sore rapidly improved; moreover, in the site of the scrotal transplants, which we thought had failed, new skin rapidly appeared, and in the course of a few weeks the whole of the large granulating surface was completely healed, partly by cicatrisation, but to a great extent covered with healthy skin. Weeks instead of [illegible] for the restoration of a perfectly [illegible] and foot.

[illegible] much better material than [illegible] is difficult to imagine [illegible] of a healthy infant—this [illegible] and thus readily adapted to any [illegible] these days of [illegible] [illegible] general hospitals in [illegible] [illegible] patients, discomfit [illegible] supply, though the [illegible] objections on [illegible] purely sentimental; still this objection has no doubt hitherto stood in the way of utilising a material which, in these days of conservative surgery, is too valuable to be wasted.

Liverpool.

CASE OF SPORADIC TYPHUS, WITH HIGH TEMPERATURE, COMPLICATED WITH ULCERATIVE ENDOCARDITIS; POST-MORTEM EXAMINATION.

By AUGUSTUS H. COOK, L.R.C.P, M.R.C.S.,
MEDICAL OFFICER TO THE HAMPSTEAD INFIRMARY.

FANNY W——, aged twenty-three, married, was admitted to the infirmary in the evening of April 26th of the present year, with the following history, ascertained from her husband. The illness commenced on Tuesday, April 22nd, four days before admission. She was perfectly well in the morning, and did her washing as usual; but before dinner she felt so weak that she had to lie down, and complained of feeling very ill. She vomited and retched from the time of the seizure till the end of the week, and complained of severe headache. Her skin was burning hot, and her feet very cold, "like ice." She refused all solid food. She was cheerful and perfectly sensible. During the whole time the pain in the head was very severe ("awful"). She bore the journey to the infirmary well, expressing a wish to get there. When she was an infant all her family had typhus, at Wootten-under-Edge, Gloucestershire, her case being the worst; she had typhoid fever when older, and rheumatic fever severely at the age of twelve, but she did not know of any heart disease being left in consequence; she was one of twelve children, and healthy. The patient was confined four months ago, natural labour; but has never been so strong since. Her father and mother are still living, aged forty-three and fifty respectively; both are strong and healthy. Two brothers died young ("of vaccination"); two brothers are still living, both healthy; three sisters, all healthy; her baby, aged four months, is healthy; no other illnesses known. She was in the habit of leaving the unwashed napkins under the bed in which she and her husband slept, for days together, and the smell was very bad at times, especially just before her illness, when the soiled napkins had lain beneath the bed for three or four days—so much so that her husband complained about it. On admission she stated that she had been ill for nearly a week, and that the doctor thought she was a bad cold. She did not appear very ill, but the temperature was 103·8° F.—27th: At about 6 A.M. the patient became unconscious, and when first seen by Dr. Paddle and myself at 11 A.M. she was in the same state. On stimulation she opened her eyes, but showed no other sign of consciousness. Temperature 103·6°; pulse 120; pupils unequal, the left dilated. No signs of any rash, with the exception of a few light-brown stains about the flanks and abdomen. The tongue was a little tenacious and frothy mucus streaked with blood, but careful examination failed to detect any sign of pneumonia. A soft blowing murmur replaced the first sound at the apex. The urine was drawn off by catheter.—28th: Temperature fallen to 102·8°; pulse 120. Patient very delirious, but able to converse with her husband a little. Room, which had been confined throughout, opened by [illegible]. Beef-tea, milk, eggs, &c., taken freely. Incontinence of urine.—29th: Morning temperature, 104°; pulse [illegible]. Prostration extreme; patient still delirious. Temperature at 6 P.M., 106°; 108° at 9 P.M. The patient died at 11.

Autopsy, forty hours after death (at which I was assisted by Dr. Paddle).—The body was fairly well nourished; no eruption, but marked lividity along the back; rigor mortis still present. A dark clot was found on the surface of the brain, over the posterior half of the left hemisphere, about four inches long by one and a half inches wide; it was quite superficial; the vein under the clot was empty. All the superficial veins were gorged with blood, and the membranes were congested but free from opacity, flakes of lymph, or other signs of inflammation; there was little or no effusion into the subarachnoid space or ventricles. The [illegible] section, was found to be greatly congested. There were [illegible] hæmorrhages into the following parts, namely, [illegible] anterior and outer part of the right frontal lobe, about the size of a pea (the centre of this clot was [illegible] colour); (2) in the posterior part of the [illegible]

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outside the optic thalamus, of rather larger size than the above; (3) in the left hemisphere on the outer side of the posterior cornu, beneath the seat of the superficial hæmorrhage, which probably came from this source. In the cerebellum a considerable hæmorrhage was found in the right lobe, where its substance was broken down; and a slight clot in the opposite lobe. In the pons and medulla the veins were gorged, but there were no hæmorrhages. The pericardium contained three or four ounces of slightly turbid serum, containing flakes of lymph. On the parietal surface there were numerous well-marked petechiæ, about the size of a pin's head; there were none on the visceral surface. The heart contained dark-coloured fluid blood on both sides, also soft, light-coloured clots extending into the pulmonary artery and the aorta. The mitral valve was thickened and beaded, and the posterior flap presented a fresh ulcer, thickened and raised, about the size of a pea; and about an inch from this a second smaller ulcer at the free margin of the valve. Loose vegetations were on the surface of both ulcers, which came away easily on washing. All the remaining valves were healthy. There was no hypertrophy or dilatation, but the heart substance was soft and friable. The lungs were greatly congested throughout, especially the bases and posterior part, presenting the appearance of the first stage of pneumonia. Over the apices and anterior free borders there were numerous small round petechiæ. The bronchial tubes were congested and full of dark frothy mucus. There were no cavities. The right lung weighed 24 oz., and the left 20 oz. The abdomen was retracted. On opening it the peritoneum was found healthy, and its cavity free from fluid or flakes of lymph. The liver weighed 46 oz.; it was pale, but superficial veins and capillaries were mapped out over certain areas from congestion, giving it a mottled appearance; there were no hæmorrhages into it, but it was very friable. The spleen was much increased in length, weighed 14½ oz., was black, and of semi-fluid consistence. The right kidney weighed 7 oz., pyramids deeply congested, cortex normal, the whole soft and friable; the left weighed 7½ oz., pyramids congested; three or four dark nodules were seen on its surface, which on section proved to be recent wedge-shaped infarcts, dark at the circumference, yellowish in the centre; also very friable. The uterus was of normal size and consistence, the lining membrane was congested and softened. The intestines, except the lower part of the colon and rectum, were found congested. There were three or four large dark-coloured extravasations beneath the peritoneal coat, one in the jejunum, two in the ileum, and one or more in the ascending and transverse colon; there were also one or two small infarcts on the surface of the colon. The mucous membrane was carefully examined throughout, and no signs of enlargement or ulceration of Peyer's patches, or solitary glands, could be found.

Remarks.—This case is of interest from the difficulty of the diagnosis during life, owing to the absence of the characteristic rash and the rapidly fatal result on the eighth day. The diagnosis was based upon the early prostration, delirium, and coma; and upon the course of the temperature, with the absence of diarrhœa, tympanites, signs of pneumonia, or other sufficient cause to account for the fever; and it was verified by the post-mortem examination, which presented all the appearances generally found in a case of typhus.

Denning-road, Hampstead, N.W.

ON THE TREATMENT OF A CASE OF

ACUTE CATARRHAL INFLAMMATION OF THE MIDDLE EAR BY REMOVAL OF ACCUMULATED SECRETIONS FROM THE TYMPANUM THROUGH THE EUSTACHIAN TUBE.

BY SAMUEL SEXTON, M.D.,

AURAL SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY.

THE possibility of relieving the tension and consequent pain and discomfort due to the accumulation of secretions in the middle ear by means of suction applied to the outlet of the Eustachian tube in the pharynx has often occurred to other otologists as it has to myself, but the operation, I believe, has been hitherto regarded as impracticable. The opportunity having been recently offered me to successfully demonstrate its practicability, and, it may be added, its simplicity, the case is reported with the hope that others may be induced to test a plan of treatment which promises more speedy relief, in certain cases at least, than is attainable by other methods. A single case, certainly, does not ordinarily afford sufficient experience from which conclusive deductions may be obtained in recommending a new departure in practice, but in the instance to be cited below the observations were confirmed by the patient himself, a person in every way capable of judging of the symptoms and sensations experienced. The case was that of my friend Prof. J. D. Bryant. He had become much run down by overwork, and, contracting a severe head cold, was taken with consecutive otitis media catarrhalis acuta on Jan. 29th, 1884. The two ears were affected in the beginning, and there was much tinnitus and autophonia, both of which symptoms increased on the 30th to such a degree that his lecture on that day was delivered with great discomfort. There was vertigo with nausea, occasional unsteadiness of gait, and very considerable impairment of hearing. The phenomenon of staggering was notable, the patient experiencing concussion of the brain and confusion of ideas from the sound of his own voice, as he himself stated, "the sound of my own voice was so confusing that coördination and locomotion were difficult." On the 31st inst. the trouble began to concentrate, as it seemed in the right ear, which was now the seat of so much pain that he came to consult me about it.

Appearance of the Ears.—The left membrana tympani was slightly hyperæmic about the short process of the malleus, but was otherwise free from inflammation. The right membrane had the general appearance of being intensely inflamed, but on close inspection the inflammation was found to be confined to the membrana flaccida for the most part; indeed, the posterior part of this structure was greatly distended, and was bulging out as though it would burst. The contiguous dermic layer lining the superior posterior wall of the canal was, for the distance of some lines, elevated and very red. The intumescence also extended somewhat downwards along the posterior margin of the membrana tympani, being sharply limited anteriorly at the malleus handle. The swollen membrana flaccida overhung the comparatively unaffected inferior segment of the membrana tympani, thus giving the appearance of much more general distension than actually existed. This case, it will thus be seen, belonged to a rather uncommon form of middle ear inflammation, since the region of the organ affected was the upper chamber of the tympanum, which lies back of the membrana flaccida and immediately beneath the tegmen tympani. The overhanging intumescence above alluded to, and entirely concealing the rest of the membrane in certain cases, is most puzzling to the observer when the true nature of the disease is not recognised, and it is in such cases that disappointment is liable to be experienced in consequence of the escape of air only when the membrana tympani is punctured, the pent-up secretions being confined to the upper chamber. On being asked by the discerning surgeon who was seeking relief if the confined secretions might not be drawn out through the Eustachian tube, it occurred to me that the operation could be successfully performed by means of the flexible Eustachian catheter[1] which I introduced some years ago. This catheter, it may be well to state here, is made of flexible rubber, but is sufficiently unyielding to retain its shape while in use. It has a soft, velvety finish, and its introduction in the adult creates so little discomfort that one which is one-fourth of an inch in diameter can generally be employed. This is readily introduced into the mouth of the Eustachian tube, and permits a large current of air to pass. I proceeded to introduce a catheter of the above-mentioned size through the inferior nasal passage, and after connecting it with a large metallic ear syringe by means of a stout piece of soft rubber tubing ten inches in length, suction was effectually established by using the syringe as in aspiration. It was worked by one hand whilst the other hand kept the catheter in place. By means of an otoscopic tube the suction in the affected ear could be plainly heard by myself with each pumping stroke of the piston, the action being yet more plainly manifest to the patient, who after one or two successful exhaustive efforts had been made exclaimed, "That does the work; the pain has gone." Suction was

[1] Wide Trans. Am. Otological Society, 1881. The catheters are made by Mr. Ford, of Caswell, Hazard, and Co.

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then maintained until half a dozen strokes of the piston were made. Relief from the disagreeable tension and other symptoms was not only immediate, but it was also permanent, although the deafness, autophonia, &c. did not entirely disappear for some days. No local injury was inflicted by the catheter on the mucous membrane of the pharynx; and on examination of the membrana flaccida, it was found that its convexity was much reduced and the congestion diminished. In the previous attacks of acute inflammation of the middle ear, to which Professor Bryant has been subject, the disease has frequently gone on to the suppurative stage, and the membranes have spontaneously ruptured or were punctured. In the present instance suppurative action was probably prevented by the timely withdrawal of the secretions from the tympanum. The only medication in the case consisted of the administration, subsequent to the operation, of sulphate of calcium, in doses of one-twentieth of a grain, every three or four hours, and small doses of the fluid extract of belladonna and aconite. Even these mild measures were somewhat neglected, and the patient gave himself no rest during the attack; on the contrary, he not only attended to his practice and college work, but also made a journey out of town. At the date of the present writing, he states that he has felt entirely well for more than a fortnight.

New York.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

MIDDLESEX HOSPITAL.

POISONING BY CARBOLIC ACID; SEVERE BRONCHITIS; RECOVERY; COMMENTS.

(Under the care of Dr. SIDNEY COUPLAND.)

FOR the notes and comments in this case we are indebted to Mr. L. M. Guilding, M.R.C.S., late resident physician's assistant.

A well-nourished, healthy little boy, aged three years and a half, was admitted into Cambridge ward on Aug. 16th, having taken half an hour previously a small quantity of a solution of crude carbolic acid used for disinfectant purposes. His breath smelt strongly of the acid, and there were some excoriations about the lips. He was in a state of extreme collapse, with cold clammy extremities; shallow laboured respiration, and all but pulseless. In the out-patient room four drachms of ipecacuanha wine and a small enema of beef-tea and brandy had been administered, and after being put to bed hot-water bottles were placed to the feet and in the axillæ. As the emetic took no effect, a hypodermic injection of apomorphia, one-tenth of a grain, was tried. In a few minutes the child made an attempt to vomit, his mouth and nostrils became clogged with yellowish mucus, his face grew livid and cyanosed, and he was all but asphyxiated. His throat was swabbed out, and the natural colour in some degree returned. The general depression, however, was much worse, and the child seemed hovering between life and death. Pulse thready, fluttering, and scarcely perceptible; respiration 99, very laboured; loud mucous râles audible over the whole of the chest, and his motions passed under him in the bed. Ten minims of ether were injected subcutaneously into the arm. A second enema, containing two ounces of beef-tea and half an ounce of brandy, was administered per rectum, to be repeated every four hours, and a linseed jacket poultice was ordered. Under this treatment he rallied, and at 10 P.M. was sleeping quietly, to all appearance free from any danger beyond a severe attack of bronchitis. Respiration 66; pulse 120; temperature 102·6°. His urine was passed under him in the bed, so that it was impossible to examine it for evidence of the poison. Vomiting at intervals through the night, but vomited matter did not contain blood.

Aug. 17th.—Respiration had diminished in frequency to 36, but the physical signs of bronchitis remained unaltered. He passed a comfortable day, but towards the evening was seized with severe dyspnœa and became very cyanosed. Respiration 100; pulse 120. He was ordered an expectorant mixture with ten minims of spirit of sulphuric ether and five minims of antimony wine every four hours. Curtains round cot; steam kettle; linseed poultices to be continued. Ordered two drachms of brandy in enema every four hours, and half a drachm by the mouth every hour. 12.30 A.M. Respiration more tranquil, and cyanosis greatly diminished; but the child was so restless that it was found impossible to keep him covered up. Temperature 102·4°.—18th: The child passed an extremely restless night, but was evidently much better. Respiration 72; pulse 120; temperature 101·4°. Bronchitis still severe, but unaccompanied by expectoration.

From this date the child made steady progress towards convalescence. The medicine and stimulants were gradually withdrawn, and on Aug. 25th he was allowed ordinary diet. His recovery was marked by extreme restlessness and a vacuous, almost idiotic expression. He could not be induced to speak until two days before his discharge on Sept. 1st.

Comments.—The following points with regard to the case are of interest:—1. Where a rapid and efficient emetic is required ipecacuanha wine is practically worthless on account of the time it requires to act, and possibly owing to the fact that unless the bottle containing it is well shaken, little but sherry is administered—a practical point often forgotten at the moment. Apomorphia is efficacious, but depressant to a dangerous degree. As an emetic nothing surpasses the household remedy of mustard-and-water. The sulphates of copper or zinc are equally good. 2. In cases of carbolic poisoning in children the main effort should be to arrest the dangerous state of shock and collapse which is invariably present, and to apprehend a severe attack of bronchitis and give it prompt treatment. This is a distinct fact which has been well exemplified in several cases admitted of late into the hospital. For apart from its immediate local effect, carbolic acid appears to be very liable to excite broncho-pulmonary irritation; and fatal cases of pneumonia due to carbolic poisoning are sometimes witnessed. Again, in the present case the long-continued condition of mental depression which supervened was remarkable, and must be attributed either to the initial "shock" or to the direct action of the poison on the brain.

LIVERPOOL ROYAL INFIRMARY.

VILLOUS TUMOUR OF BLADDER; REMOVAL BY [illegible] CYSTOTOMY; DEATH; REMARKS.

(Under the care of Mr. REGINALD HARRISON.)

F. J. M——, aged forty-two, married, engaged in business, was admitted on Sept. 8th, 1884. In December, 1880, without any apparent cause, he commenced to pass blood in his urine. In December, 1882, he first came under Mr. Harrison's observation. Three months previous to this a catheter had been passed for him, which was followed by a considerable increase in the amount of blood and vesical irritation. For this condition, rest and various styptics were tried with some improvement. Matico seemed to answer best; turpentine increased the vesical irritation. In January, 1883, a piece of growth was passed by the urethra and proved to be villous; on subsequent occasions similar fragments were expelled along with the urine. The infusion of matico was of service to him, and at times he had a cessation of hæmorrhage for periods of six and eight weeks. In the summer of 1883, in consequence of the persistence and amount of hæmorrhage, Mr. Harrison urged the desirability of direct surgical interference, but the patient, who had by reason of his business considerable knowledge of drugs, preferred waiting. In July, 1884, the amount of blood passed was excessive, and he became extremely blanched and exhausted. In September his condition had become still more extreme, and he requested that an attempt should be made to get at the growth. It was clear that unless the bleeding was stopped he could not survive but a few days.

On Sept. 10th he was placed under ether and Mr. Harrison opened the bladder by the median perineal incision. To give more space for manipulation the spot and part of the prostate were incised vertically by a probe-pointed knife, an addition to the ordinary method of entering the bladder from the membranous urethra which has proved valuable. The growth was readily felt and a large portion of it

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removed by forceps and a scoop. The bladder was much distended with blood-clots, and these had to be cleared away before the tumour could be defined. The patient's condition rendered it necessary that the manipulation should not be prolonged. The amount of blood which escaped from the incision and tumour was very small, and no vessel required a ligature. One of Browne's dilatable tampons was introduced and the patient removed to bed. He seemed to be rallying nicely, urine escaping both by the tube and the side of it. Death occurred somewhat suddenly, apparently from syncope, twelve hours after the operation.

An examination of the bladder after death showed the pedicle and remains of a villous tumour, occupying the position of the orifice of the left ureter, the orifice of the right ureter was patent and dilated, as if blood had been forced into it; the bladder was hypertropied, not sacculated, but rather more capacious than natural. The prostate was normal and the incisions into it were as described. The pedicle of the growth in the relaxed condition of the parts occupied the mucous membrane of the bladder round about the orifice of the left ureter to an extent that a shilling would cover; when constricted with a ligature the space occupied was reduced to one-fourth of this; by means of a ligature the entire connexions of the growth (which in its original state was about the size of an ordinary hen's egg) could be included. Had it been possible to apply it, the ligature would probably have been the most effectual method of dealing with the growth. There were no signs of secondary deposit in any of the parts subjected to examination in the neighbouring glands.

Remarks.—Mr. Harrison observed that all cases bearing upon the operative treatment of tumours connected with the bladder or prostate should be reported regardless of results, in order that the value of the treatment may be duly estimated and the indications for operation more precisely determined. He could hardly imagine a more favourable case for operation than the one just described had such measures been resorted to earlier. The tumour was of at least four years' growth, was a true villous, and had no features which clinically could be regarded as typical of malignancy. The patient died, not from any ulcerative action, or cachexia, or from the spread of the growth, but from the continuance of a hæmorrhage it was found impossible to restrain by medicines. In this instance additional room for entering the bladder from the membranous urethra was afforded by incising in the median line directly upwards and downwards the roof and floor of the prostate. The necessity for attempting to remove, either entirely or partially, tumours occupying the interior of the bladder or the prostate will be determined by the nature of the symptoms they produce; here it was undertaken with the object of arresting a hæmorrhage under which the patient was rapidly sinking without any other chance of escape. Mr. Harrison referred, in illustration of the sudden and excessive bleeding that tumours of this nature are liable to, even when they may appear comparatively quiescent. In a case he had recently published,[1] where death from this cause took place in nine hours, in this instance slight hæmaturia had existed for some months previously, but no operation had been performed.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Nerve Symptoms in Rheumatic Affections.—Preputial Calculi.—Urticaria Pigmentosa.—Perforation of Vermiform Appendix.

THE first meeting of the session was held on October 10th, Sir Andrew Clark, President, in the chair. The attendance was numerous, and considerable discussion was elicited by the papers read by Dr. Hadden and Dr. Finlay. In the course of the evening the President congratulated Dr. C. Theodore Williams on his reappearance amongst them.

Dr. W. H. HADDEN read a paper on Certain Nerve Symptoms in Rheumatic Affections. The first case was one of glossy skin following on an acute joint affection. The patient, a woman aged thirty-five, was under the care of Dr. Bristowe at St. Thomas's Hospital. A year before admission she was attacked with articular rheumatism which lasted for six months. She was jaundiced for six weeks after the attack. A month before admission she had rheumatic pains in the knees, back, and hands. On examination no swelling or tenderness of joints was found, but she complained of rheumatic pains in various parts. All the fingers of the right hand were extended, the fore and middle fingers were wasted and sensation a little impaired. She could only flex them very slightly, but could bend the ring and little fingers more readily. She could not separate the fingers of the right hand so well as those of the left. All the fingers of the right hand were wasted, smooth, and shiny, and the nails were long and filbert-shaped. There was atrophy of the muscles of the forearm and of the thenar and hypothenar eminences. She rapidly recovered under the use of the continuous current. The second case was that of a young woman, aged twenty-six, who had had swelling and tenderness of various joints, but chiefly of the right fingers, for a week before admission. She complained chiefly of two small round superficial sores, one on the extensor surface of the second joint of the right little finger, and the other on the extensor surface of the left middle finger, near the base of the nail. They appeared about the time the joints became affected, were very tender and itched a good deal. During the last six months the catamenia had become irregular, and this fact seems to support Dr. Ord's idea that there is a relation between menstrual disorders and joint affections. The third case was that of a man aged fifty-seven, who was the subject of chronic rheumatoid arthritis of some months' standing. His face was curiously expressionless, and the whole body was held stiffly, with a marked forward inclination. The skin of both hands was smooth and shiny. The ends of the finger joints were much thickened, and there was extensive dislocation of joints. Both of the hands were flexed at the metacarpo-phalangeal joints, but the fingers were hyper-extended. There was slight affection of some of the larger joints. There was very extensive anæsthesia of both upper extremities. The prick of a pin was not felt over the front and back of the left leg and the dorsum of the left foot, but elsewhere in the lower limb there was no impairment of sensation. The interossei and extensors of both forearms were atrophied. They responded to the interrupted current, but less actively than normally. The left extensor communis digitorum gave the "reaction of degeneration." The skin and tendon reflexes were exaggerated everywhere, and there was double ankle clonus. The gait of the patient was spastic; an extension of the inflammation from the joints to the nerves might partially account for the various nerve disorders, but the author believed that it was more likely that there was an independent rheumatic neuritis. The nerve disorders were neither concerned with the causation of the gouty affection nor dependent on it. In the first two cases the trophic disorders occurring during the subsidence of the gouty affection seemed to be a relapse affecting the nerves. The author referred to a case of anæsthesia in the course of the ulnar nerve, which he had observed in a patient convalescent from acute rheumatism. The muscular atrophy, affecting chiefly the extensors, seemed to be trophic. In shoulder-joint disease the wasting of the deltoid, and in hip-disease the wasting of the glutei, supported the law that the extensors suffered more than the flexors. It was urged by some that this depends on some selective action of the spinal cord, but the cases of lead palsy and alcoholic paralysis, in which the disease is due to the peripheral nerves, renders it possible that in joint affections a similar cause holds good. The occasional occurrence of rigidity and ankle clonus, perhaps, depends on affection of the spinal cord, although the author believes that such conditions are sometimes due to lesion of the peripheral nerves. The duration and intensity of the joint affection has nothing to do with the cause of these trophic disorders. The cases given neither support nor disprove the theory of articular rheumatism.—Sir ANDREW CLARK believed that in chronic rheumatism, osteo-arthritis and chronic gout disorders of sensation and motion were very frequent; he had never seen the glossy skin in chronic rheumatism, but frequently in osteo-arthritis and chronic gout.—Dr. T. BARLOW briefly related four cases which bore on the subject. The first case was one of acute rheumatism in a man aged forty; a severe attack of rheumatic fever was followed by hyperpyrexia, after which he was found to be affected with anæsthesia in the tract of the ulnar

[1] Liverpool Med. Chir. Journal, July, 1884.

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nerve, with some wasting of the interosseous muscles of the same side; these nervous conditions soon passed away. The second case was similar to the first, but the amount of wasting was more considerable, so that it looked like progressive muscular atrophy. The third case occurred in a very stout lady, who had an attack of rheumatism; here also the ulnar nerve suffered, and there was wasting of the interosseous muscles. The fourth instance was that of a boy aged fifteen, who was afebrile when first seen; there were signs of mitral obstruction and a history of previous rheumatism; here the nervous symptoms could only be explained by a lesion of the brachial plexus high up in the axilla, since anæsthesia and atrophy were so extensive and irregular in distribution. The degenerative reaction was obtained for a few days only, and the case finished by recovery. A rheumatic inflammation of the sheaths of the nerves was the probable explanation of the above cases, though in the first instance an injury might have played a part, since the man was so violent as to require the strait-jacket.—Dr. LONGHURST inquired whether any evidence of syphilis was present; this was answered in the negative.—Dr. STEPHEN MACKENZIE said that many instances of arthritic inflammation were ascribed to rheumatism, but he could not disregard the possibility of the joint affection and the nervous lesion being due to disease of the spinal cord. He had seen a very remarkable case, which began as one of acute febrile disease, and was diagnosed as acute rheumatism; but when Dr. Mackenzie first saw the case the character of the inflammation of the joints was not like that of acute rheumatism. Incontinence of urine and sacral bedsores appeared, and slight reaction of degeneration was detected in some muscles. The girl made a complete recovery, and there could be no doubt that the symptoms were due to an acute affection of the spinal cord. Chronic and degenerative changes were credited with the power of producing arthritic disease. A definite local lesion of the spinal cord was possibly present in these acute cases without involving the theory that rheumatism was dependent on disorder of the spinal cord.—Mr. HOPKINS narrated a case of absolute paraplegia, during the course of which both knee-joints and ankle-joints were inflamed; there was rapid wasting of the muscles. The patient recovered considerable power, but the joints remained stiff, and the muscles gave no reaction to the faradaic current.—Dr. MILLER ORD referred to a paper read before the Society some years ago in which he had pointed out the agency of the nervous system in the production of arthritic changes. Nodosities of the fingers brought about by uterine affections were possibly due to a reflex nervous influence. Many of the so-called rheumatic affections of joints might be explained by reflex trophic changes produced by the intermediate action of the spinal cord, or again, primary affection of the nervous centres might be the cause of trophic changes in the joints. Charcot had published cases of arthritis of slight, not painful, character, which were followed by atrophy of muscles excessive as compared with the joint lesions. In chronic rheumatoid arthritis the trophic changes might be referred to the intermediate action of the spinal cord. He thought there were many cases which observers were too apt to class as chronic rheumatoid arthritis, which probably owned a neural origin. It was important to recognise that inflammation of joints was common to many conditions.—Dr. HADDEN, in reply, said that it was clear that some observers had met with anæsthesia in cases of rheumatism. He had seen trophic lesions in gout, such as unilateral sweating and glossy skin. No accidental pressure existed in any of the cases he had seen, and so he regarded Dr. Barlow's first case of anæsthesia as of rheumatic origin.

Mr. JOHN CROFT read a brief paper on Preputial Calculi in the Inhabitants of the Fiji Islands. He pointed out that the proportion of males which suffered from phimosis was very great. The calculi were numerous, and composed chiefly of phosphatic matter.

Dr. RADCLIFFE CROCKER showed the drawing of a case of Urticaria Pigmentosa which occurred in a girl aged four and a half months, who came as an out-patient to University College Hospital on September 22nd, 1883, with a history of the affection having commenced when she was three weeks old, coming out first as tubercles singly or in groups. Each tubercle was the size of a small pea, of a yellowish-brown colour with a pink areola; on some of them a small bulla formed, the contents of which became absorbed in a few days, leaving a permanent tubercle of yellowish-red colour; some of them grew larger, and the older ones paler, forming lesions varying in size from a hempseed to a bean, and in colour from a brownish-red to a pale-fawn, but mostly yellowish; they were not pruritic at first, but later on itched at the period of evolution. They covered every part of the body, including the palms and the soles, but were thickest upon the trunk and neck; a few shrunk a little, but most remained unaltered, except that fresh vesicles formed on some of them; there were never any ordinary wheals, nor was factitious urticaria present. The child died of whooping-cough and bronchitis in May last, but signs of improvement in the skin had commenced about a month before death. In reviewing this and the other nineteen published cases, Dr. Crocker summarised the facts known about the condition, and remarked that while cases like Dr. Tilbury Fox's worst and his own were very unlike urticaria, the intermediate cases brought it into closer relationship with that disease; moreover, nearly every one of the special features of urticaria pigmentosa were seen in exceptional cases of ordinary urticaria. The remarkable point was that in this disease all these rare symptoms combined in one individual to form a definite clinical variety.

Dr. D. W. FINLAY communicated a paper on a case of Perforation of the Vermiform Appendix, with Peritoneal Abscesses, followed by death from Pyæmia after a long interval. The patient, a baker, was admitted into the Middlesex Hospital on Jan. 4th, 1884. He complained of severe pain over the whole abdomen, which was moderately distended, tender, and tympanitic. The areas of liver and splenic dulness were normal. The heart and breath sounds were normal. The tongue was dry and coated, with a brown strip down the centre; the cheeks flushed; the lips dry and cracked. The pulse was 96, compressible; the temperature was 99·6°; the respiration 24, and entirely thoracic. The urine was turbid with lithates, and very acid, sp. gr. 1034, free from albumen and sugar. The patient had a similar attack three years previously. Otherwise his health had been good. His present illness came on a week before admission with griping pains across the lower part of the abdomen, followed by vomiting, headache, and diarrhœa. He was treated with opium, and put upon a diet of milk and beef-tea, and three days after admission appeared much better; the general tenderness of abdomen had disappeared, but there was a spot midway between the costal margin and iliac crest on the left side, where tenderness remained, and the percussion note was dull. On Jan. 9th his bowels were opened for the first time after admission, the motions being loose and light in colour, with a few small scybalæ. During the night he had been seized by pain in both parotid regions, and this was followed by swelling and tenderness, with inability to open the mouth. Both swellings suppurated, and were incised; his temperature slowly rose, and he became delirious, and sank somewhat suddenly on Jan. 16th. He had had no rigors. At the post-mortem examination three large and as many small abscess sacs were found within the peritoneum, the oldest-looking being around the vermiform appendix, which was perforated about half way from its attachment. The appendix was plugged by a small mass of fæcal matter on the cæcal side of the perforation. The peritoneal surface generally showed old fibrous bands and greasy-looking flakes uniting the coils of intestine together, with some recent injection, but almost no recent lymph. The other organs were fairly normal, except that the lungs were œdematous, and the left pleura contained a quantity of clear serous fluid. The case seemed interesting from the prolonged latency of the disease, the perforation of the appendix having probably taken place on the occasion of the previous attack, adhesions being then formed which prevented for the time a fatal result. It was certain, at all events, that the abscess sacs were of very considerable age, and it was a striking fact that the man should have been able to go about his daily work apparently in good health with such a condition of his abdominal cavity.—Dr. MAHOMED had for some time directed his attention to the subject of the recurrence of perityphlitic attacks. In the majority of such cases we had to deal with a concretion in the appendix vermiformis. He had thought of performing some operation for removal of the concretion, and had practised the procedure on the dead body. The case of a man was referred to who had suffered from frequent attacks of perityphlitis, in whom the operation had been carried out with complete success. The operation was like that employed for ligature of the external iliac artery; by this means the vermiform appendix could be seized by the finger and felt through the parietal peritoneum; a neat

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incision on to the calculus contained in the appendix would serve to liberate the concretion. He admitted that cases which perforate into the pelvic cavity were more difficult to deal with. The value of being able to diagnose whether the perforation had taken place into the peritoneal cavity or was more limited was next dwelt upon in its relations to the operation referred to. A physical sign had been pointed out by Professor Austin Flint. This sign was loss of the hepatic dulness in cases of perforation into the peritoneal cavity, and Dr. Mahomed could testify to its correctness. In reply to Sir Andrew Clark, he said that the calculus was mainly a phosphatic concretion.—Dr. THEODORE WILLIAMS referred to the case of a young man who was the subject of phthisis, during the progress of which he one day felt a sharp pain in the right iliac fossa, which was due to a localised peritonitis, as the further history showed. Later on the patient died of pneumothorax, and then the localised abscess was found to have been dependent upon ulceration of the vermiform appendix, which had not led to extensive mischief. The abscess was enclosed completely within a small area, and he thought that surgical interference might have been less satisfactory. He would not be anxious to proceed to the operation proposed by Dr. Mahomed until it was probable that the mischief would be more severe if left to nature.—Mr. HOWARD MARSH thought the suggestion made by Dr. Mahomed was valuable. Nothing could be smaller than the beginning of cases of perityphlitis, which not rarely went on to a fatal termination. He thought the operation would become an acknowledged one. The relation of the appendix to the peritoneum might vary; in his experience it was sometimes behind and outside the peritoneum, but in the majority it was probably within the peritoneum, and had a mesentery of its own. Where the operation could be done without opening the peritoneal cavity, every surgeon ought to perform it. But the difficulty no doubt was how to diagnose the relations of the appendix. Brief mention was made of a case in which perityphlitis, the result of perforation of the appendix, was diagnosed, but in which the patient was too ill to be operated upon. Perforation of the small intestine a few inches above the ileo-cæcal valve was discovered at the autopsy.—Mr. BRYANT was of opinion that in cases of cæcitis the suggested operation, or something akin to it, should be performed more frequently than it was. No doubt, such cases commenced in the connective tissue around the cæcum or vermiform appendix, and early surgical treatment directed to let out the pus, would prevent the suppuration extending far upwards and downwards, thus taking away the worst aspect of the affection. If the surgeon made an incision into the connective tissue of the part, he felt sure that it was the right method. He had tested the possibility of the procedure on the cadaver, and in three cases in the living subject. But he agreed that the question of diagnosis was the trouble. In this relation, he pointed out that associated with this inflammation pain travelling along the anterior crural nerves was not infrequent, and simulated hip disease, for these was also flexion and rotation outwards of the thigh. Again, forced extension produced pain in the cæcal region in such cases.—Mr. CHRISTOPHER HEATH considered that an important sign by which it could be determined whether perforation had taken place within or without the peritoneum was the presence of surgical emphysema; gentle palpation sometimes detected a sensation of crackling in the iliac fossa, and then the perforation was outside the peritoneal cavity.—Mr. R. W. PARKER related the case of a boy who went to the Hospital for Sick Children because he could not pass urine. It appeared that he had received a blow in the loin. Great pain was followed by vomiting, which ended in death. It would seem that a local peritonitis had been induced by a concretion in the appendix having perforated, and that the vomiting had led to the development of general peritonitis, from which the patient rapidly succumbed. This case illustrated how dangerous and unsuspected such concretions were.—Dr. MAHOMED wished it to be understood that he would not operate during the acute stage of the malady, but only when the mischief was quiescent.—Dr. LONGHURST made some remarks on the frequency with which perityphlitis recurred. In one patient there had been five attacks in the course of two years. A means of prevention of the recurrence would be of great service.—Dr. FINLAY, in reply, said that in cases of intestinal perforation obliteration of the hepatic dulness was well known at Middlesex Hospital, and perforation from enteric fever was almost always attended with this sign.

The following living specimens were shown:—Congenital Tumour of the Shoulder, by Mr. Barker; a case of Endarteritis Obliterans, by Mr. Pearce Gould; a case of Bullous Iodide Eruption, by Dr. Radcliffe Crocker; and a case of Pseudo-hypertrophic Paralysis with Contracture of the Thigh, by Dr. T. Barlow.

OPHTHALMOLOGICAL SOCIETY.

Central Choroiditis with Good Vision.—Pseudoglioma and Purulent Meningitis.—Effects of Bisulphide of Carbon and Chloride of Sulphur.—Recent Detachment of Retina.—Night Blindness.—Action of Hydrochlorate of Cocaine.

THE first meeting of the session 1884–85 was held on October 9th, Mr. Jonathan Hutchinson, F.R.S., president, in the chair. Sir William Bowman, Bart., was unanimously elected an honorary member. A committee consisting of Messrs. Nettleship, Green, and Adams Frost was appointed to inquire into the prevalence and nature of impaired sight and nervous affections resulting from the exposure to the fumes of bisulphide of carbon and chloride of sulphur as met with in the manufacture of certain kinds of india-rubber.

Dr. BRAILEY read a letter which had been received from Mr. R. G. Hamilton, stating the steps which the Local Government Board for Ireland had taken in response to the resolution passed by the Society on July 12th in reference to the prevention of blindness. A circular letter had been sent by the Secretary of the Local Government Board for Ireland to the medical officer of each dispensary district, to the midwives of each district, and to the clerk of each union.

Mr. NETTLESHIP showed a drawing of a very remarkable case of Central Choroiditis, with almost perfect acuteness of vision. The choroid over the whole of the yellow-spot region was superficially atrophied, and to a great extent covered by large densely black patches of pigment. The retinal vessels were normal, and the optic disc healthy. There were a few detached patches of pigment beyond the yellow-spot region. Vision was $\frac{20}{30}$ fairly, and 1 Jaeger. No scotoma could be made out, but the visual field was defective at the periphery. The appearances were those of superficial choroiditis, with great proliferation of the pigment epithelium, and infiltration of some of the pigment into the retina. Such changes, involving the fossa centralis, would seem to be incompatible with such good vision as the eye preserved. Two alternative explanations were suggested: either that a slightly eccentric fixation had been acquired, or that the choroiditis had in reality occurred in the deepest larger layers of the choroid. But the fact that the pigment masses lay in front of the large choroidal vessels militated against the latter view.—Mr. WARREN TAY asked to what cause the choroiditis was probably due.—Mr. NETTLESHIP regarded hæmorrhage as the most likely explanation; there was no history of syphilis. In answer to Mr. Hutchinson, he affirmed that the field of vision was a little contracted.—Mr. HUTCHINSON commented on the remarkable extent and severity of the disease involving the fossa centralis, with the preservation of excellent vision.—Dr. ANGEL MONEY referred to a similar case which had been under the care of Mr. Tweedy at University College Hospital.

Mr. NETTLESHIP read a paper on Pseudoglioma followed by death from Meningitis, and said that in a previous paper attention had been drawn to the frequency with which attacks of destructive ophthalmitis, simulating glioma, coincided with some general illness, often presenting pyæmic symptoms. The patient, a girl aged two years and a half, died of cerebro-spinal meningitis, secondary to purulent otitis. The disease of the eye, which was purulent iridocyclitis, with suppuration of the vitreous, was most probably pyæmic, as was also the meningitis. The case threw some light on the rare cases in which meningitis occurs after excision of an acutely inflamed eyeball; both occurrences might be set down as local pyæmia, or spreading phlebitis. If, however, pseudogliomas in children were really the result of a pyæmic process, it was necessary to assume that children recovered from pyæmia with considerable frequency. The previous history of the patient in this case was negative. She was taken ill on March 2nd, shivered, vomited, and had some diarrhœa. The eye was noticed to be inflamed on

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March 3rd, and she was brought to the hospital on March 5th, when purulent inflammation of the left cornea was noted, and a mass of semi-transparent lymph, blocking the pupil and lying in flocculi in the anterior chamber, was detected. On the following day the temperature ranged between 102·2° and 103·6°, and there was a small firm swelling over the head of the right fibula. On the following day both knees were slightly swollen and tender; the lymph was disappearing from the pupil and the anterior chamber of the left eye; there was marked papillitis of the right eye. The left eye subsequently shrank rapidly, and the patient died of exhaustion six weeks after admission. The necropsy revealed no important lesions, except in the brain and spinal cord. The cura cerebri, optic tracts, and chiasma, the pons, and fore part of the cerebellum, were covered with thick yellowish-white lymph; the roof of the middle ear on the right side was yellowish and softened, the membrana tympani was softened and partially detached, and the middle ear and mastoid cells contained much thick pus. The whole posterior half of the cord, from the upper dorsal region downwards, was covered with yellowish lymph. In reply to the President, Mr. Nettleship said that no phlebitis could be demonstrated.—Dr. ANDERSON referred to the frequent association of cerebral abscess with ear disease without any discoverable tract between the two affections.

Mr. NETTLESHIP also read a paper on Amblyopia and Nervous Depression resulting from the Vapour of Bisulphide of Carbon and Chloride of Sulphur. In the manufacture of certain kinds of indiarubber the material is "cured" (vulcanised) by being passed through a bath consisting of bisulphide of carbon (thirty-two parts) and chloride of sulphur (one part); a strong vapour arises during the process, and the work is believed by the men to be unhealthy. Mr. Nettleship said that he had recently met with a case of amblyopia in a young man, aged twenty, who had been engaged in the "curing house" for about nine or ten months. After about three or four months of the work his health began to fail; he felt great weakness in all his limbs, and a liability to nausea; for some weeks before admission he had severe headache, and about three weeks before admission his sight became, apparently suddenly, so bad that he could not see people on the pavement; vision grew worse, and when admitted vision was $\frac{6}{60}$ with each eye, and 12 Jaeger. He stated that he saw worst in bright daylight; the fields of vision were not curtailed. After admission, improvement commenced, and on the nineteenth day vision was $\frac{2}{3}\frac{4}{0}$ on the right, and $\frac{1}{3}\frac{6}{0}$ on the left; the optic discs were pale, and there was a filmy haze over them; the neighbouring retina showed the "watered silk" appearance. He returned to work in the indiarubber works, but not in the curing-house, on leaving the hospital on Aug. 25th. On October 6th sight was a good deal improved (vision was $\frac{2}{3}\frac{4}{0}$ and 6 Jaeger); there was a large and ill-defined scotoma for red, a little to the outer side of the centre of each field; the scotomata were quite symmetrical. The optic discs were paler and clearer. He was well and strong, and more cheerful. Dr. Ernest Fuchs, Professor of Ophthalmology in the University of Liège, who had happened to see the above case, had communicated to Mr. Nettleship the notes of a similar case. The patient was a young girl, aged twenty-three; she was pale, thin, and weak; the muscles of the thenar eminence and the interossei muscles were atrophied; sight was very imperfect; right vision was $\frac{3}{6}\frac{5}{0}$, left $\frac{4}{6}\frac{5}{0}$; there was slight neuritis of each eye; the optic discs were pale and hazy, but not swollen. The patient stated that since she began working with the bisulphide of carbon bath she had suffered from weakness of the limbs, coldness, formication, headache, giddiness, and loss of appetite. She was admitted into the hospital, and slowly improved under treatment with strychnine administered hypodermically. About eight weeks after admission it was noted that there was a small well-defined central scotoma for red in each eye. Sixteen weeks after admission sight had much improved, vision $\frac{4}{15}$. About seven months after admission the scotoma had disappeared, and right vision was $\frac{5}{7}\frac{5}{7}$, left $\frac{5}{6}$. Eight months and a half after admission the optic discs were paler than normal, but sharply defined; the atrophy of the interossei and thumb muscles had disappeared; vision had improved; right vision $\frac{5}{6}$, left $\frac{4}{6}$. Mr. Nettleship, commenting on the cases, referred to a similar case which had been recorded by Dr. Alexander Bruce; in this case the man lost his sight rapidly after an unusually prolonged exposure to the fumes, but there had been previously for some months great nervous and muscular weakness; there were no ophthalmoscopic changes, and the patient entirely recovered in about four months. Dr. Bruce had also recorded two other cases of poisoning by bisulphide of carbon, in which the same weakness and depression were noticed, but not amblyopia. The cases were of great interest in Mr. Nettleship's opinion, as illustrating in a new way the peculiar liability of the optic nerves, as compared with other nerves of special sense, to be damaged by influences which depress the whole nervous system.—Mr. HUTCHINSON asked whether any inquiries had been made of the manufacturers to ascertain whether the injurious nature of the process of "curing" with bisulphide of carbon and chloride of sulphur was well known.—Mr. NETTLESHIP believed that but few men were engaged in that particular process, and could not give a decided answer to the question.

Dr. W. A. BRAILEY read a paper on the Treatment of Recent Detachment of the Retina founded on three cases. The first patient was a man, aged forty-three. The eye was previously normal judging from the history and from the condition of its fellow. A complete detachment of the retina had apparently occurred fourteen days earlier, during a severe fit of coughing. Gradually perception of light returned, till, on admission, he could count fingers at a foot. When he presented himself six days later for treatment by scleral puncture, vision was $\frac{6}{7\frac{5}{0}}$, and the field very much larger than before. Indeed, no detachment was now to be made out, but there were large opacities in the vitreous, especially near the seat of detachment. This improvement was maintained when last seen, three months later. The second case was a boy, aged twelve. The retina was detached at its upper and outer part, probably after a blow from a stone three months earlier. The lower and inner part of the field was wanting, the defect passing the horizontal line above and the vertical meridian below. It just embraced the fixation point. The retina so far reapplied itself after treatment by scleral puncture, rest, atropine, and jaborandi, that, except for some little peripheral limitation, corresponding to the seat of the previous detachment, the only absolutely blind part was a band or track extending directly inwards to the fixation point, which it involved. This band corresponded to the lower edge of the detachment as first seen ophthalmoscopically; but that edge of the retina lay, when the patient was last seen, in a flat fold. Two weeks later, the improvement was still maintained. The third case was a man, aged forty. The defect first appeared six months before admission, when he was suffering from a violent cough. It gradually increased till September 25th, when he was sent to Guy's Hospital by Dr. Reynolds, of High Wycombe. Then the inner half of the field was wanting, the defect extending beyond the fixation point and vertical meridian above, but not quite so far below. He was able only to count fingers at eight feet. After scleral puncture, atropine, jaborandi, and eight days in bed, the field was conspicuously enlarged, the fixation point being now free. Vision was $\frac{6}{6\frac{5}{0}}$; nor could any detachment be made out any longer; but there were numerous floating opacities in the vitreous, especially near the seat of the detachment. Dr. Brailey remarked that since in at least two out of the three cases the eye had been presumably normal, the detachment would appear to have occurred in association with a healthy vitreous. He found it impossible to understand how either a blow or any violent pressure on the globe could cause a detachment under such circumstances without rupture of the retina, of which he had not been able to find indications in these cases. The rupture would, he thought, be more reasonably attributed to the recoil of the tunics than to the original pressure. The value of the treatment was demonstrated in the third case, where the affection was progressing up to the time of operation. Though valuing puncture, rest, and atropine, he was not convinced as to jaborandi. He thought, in face of these two cases, that a simple puncture, if large enough, was quite as effective as any more complicated process; and, indeed, that it excelled the latter in rendering anæsthesia unnecessary. A bent iridectomy knife, five millimetres wide, seemed to him to be the most effective instrument.—Mr. NETTLESHIP spoke of the case of a man, the subject of myopia, in whom a retinal detachment had occurred very rapidly. In this case tapping was performed, and the patient made to lie on his back. Great improvement followed, and the operation was repeated with still further improvement, but two months later he came back as bad as ever, and the other eye had become similarly dis-

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eased. He had tapped in many cases, but this was the only one in which even temporary improvement was obtained.—Dr. BRAILEY, in reply, pointed out that Mr. Nettleship's case was myopic, whereas his own were not, the sound eye being normal in every respect.

Mr. W. ADAMS FROST read notes of two cases of Night-blindness. The first was that of a painter, aged thirty-four, who had had six attacks of night-blindness, each coming on whilst he was painting white houses in the spring, the weather, except on two occasions, being very bright. Each attack lasted about a fortnight, and disappeared under treatment by rest, tonics, and the use of eserine. Vision during the attacks was $\frac{3}{24}$, and the visual field was normal. The patient was somewhat anæmic, but there was no history of any illness. He was in receipt of good wages, and had not been underfed. He had never had any symptoms of lead-poisoning, nor had he ever been out of England. The second was that of a lamplighter, aged nineteen, who for six weeks had been engaged in painting the lamp-posts on country roads in excessively bright weather. After three weeks' painting he suffered severely from pain and lacrymation. Three weeks later he suddenly found that he could not see one evening, and this inability to see in a dull light continued until his visit to the hospital two weeks later. His vision then, in ordinary daylight, was normal ($\frac{1}{20}$ and 1 Jaeger), the visual field was normal. He presented no signs, and had had no symptoms of lead-poisoning. He was treated with tonics and instillation of eserine, and recovered in about five weeks. A month later he had a relapse, from which he recovered in about a fortnight. Since the previous attack he had been following his ordinary occupation of lamp-lighting.—Mr. WALTER H. JESSOP had observed patches on the conjunctivæ in cases he had seen. The patches looked like small bubbles of air, and were easily scraped off. On these dry patches numerous bacilli of uniform size were found. These observations had been noted by Mr. Snell and others. Two of the children were underfed, one nearly starved, and the third case was that of an adult male suffering from albuminuria. Artificial cultivations from two cases showed the same characters, and the growth was perceived to be a very slow one. The dry patches disappeared at the same time as the night-blindness.

Mr. ARTHUR BENSON (Dublin) read some observations on the Action of Hydrochlorate of Cocaine on the Eye. He had experimented with a 2 per cent. and a 4 per cent. solution on himself and about twenty-five other individuals. He found that anæsthesia of the cornea and conjunctiva was produced by a drop instilled into the conjunctival sac; that this anæthesia came on almost immediately after its application, and lasted only about five or six minutes, when it gradually but rapidly faded away. He considered that, as far as his experience went, the drug was of no appreciable assistance in operations, the anæsthesia being too imperfect. In most cases it produced slight paresis of accommodation, with partial dilatation of the pupil for about half an hour, followed by contraction of the pupil and spasm of accommodation, which again gave way to the normal condition in about one and a half or two hours. He had extracted cataract, done iridectomy and some minor operations with its aid, but found no appreciable benefit except in the most trivial cases. The anæsthesia was very transitory, and it was therefore necessary in order to obtain the best results to use the drug very shortly before operating.—Mr. MARCUS GUNN had employed hydrochlorate of cocaine in these cases, and had come to the same conclusions as Mr. Benson.—Mr. NETTLESHIP had tried it in two cases; it had produced marked anæsthesia without any inconvenience, and he suggested that, if the drops were frequently instilled so as to maintain the effect, the drug might be practically useful.

DR. BRAILEY showed living specimens of (1) Detachment of the Retina of the Left Eye, decidedly improved after scleral puncture, and (2) Optic Neuritis with increased Tension (relieved by eserine) associated with numbness of the face and recent severe pains in the head, some loss of power in the left side and slight albuminuria; the vision had deteriorated.

As card specimens Mr. NETTLESHIP showed a drawing of new formation of Pigment on the front of the Iris, and Mr. MARCUS GUNN a peculiarly shaped Eyeball, the inner part of the fundus being bulged so as to produce hypermetropia to the extent of 3 D, while the outer part of the fundus corresponded to myopia of 4 D.

ABERNETHIAN SOCIETY.

A MEETING of this Society was held at St. Bartholomew's Hospital on Oct. 9th, when an introductory address was delivered by Dr. J. WICKHAM LEGG. He began by pointing out that in all education there were two kinds of knowledge to be imparted: first, the mere storing of facts; secondly, the digestion and assimilation of facts—the first a mere exercise of the memory, the second the exercise of the higher faculties of the mind. For the first there were the lectures, demonstrations, class examinations, medals, and academical rewards; while for the second there was at St. Bartholomew's the Abernethian Society, in which the student who had learned his facts was taught to ponder over and reflect upon the ideas that he had gained; the Abernethian Society being, in fact, an intellectual gymnasium in which the mind was trained and exercised, just as it was in the disputations and exercises of the mediæval universities. In conclusion, Dr. Legg pointed out the decay of real university training that had followed of necessity in the wake of the examination system—the superficial smattering encouraged by what he called dissipation of mind, not progress in knowledge; and the introduction of which into England was one of the many evils for which the University of London would have to be responsible.

Reviews and Notices of Books.

Injuries and Diseases of the Jaws. The Jacksonian Prize Essay of the Royal College of Surgeons of England, 1867. By CHRISTOPHER HEATH, F.R.C.S., Holme Professor of Clinical Surgery in University College, London, and Surgeon to University College Hospital; Consulting Surgeon to the Dental Hospital. Third Edition. London: J. and A. Churchill. 1884.

WE regret that we have been unable to notice at an earlier date the appearance of the third edition of Mr. Heath's well-known work on the Jaws. The fact that the essay in its original form gained the Jacksonian prize testifies to its high order of merit, and the zeal and ability with which Mr. Heath has subsequently prosecuted his studies in this department of surgery have made this third edition a valuable exposition of our knowledge of diseases and injuries of the jaws. The gross characters and the physiological peculiarities of tumours of the jaws have always made them a subject of special interest to surgeons, and the enlarged information on these growths which Mr. Heath is able to give in this edition deepens the reader's interest. The main alterations in this edition are those which have been made necessary by the advance of pathological research. Thus Mr. Heath has adopted the view of the multilocular cysts of the lower jaw propounded by Mr. Eve, who regards them as arising by epithelial growths starting in the gum, and not as of dental origin. The microscopical characters of the tumours removed by Mr. Heath in recent years are added to the clinical histories of the cases; and a valuable chapter on diseases of the temporo-maxillary articulation has been appended, which makes the work far more complete than heretofore. The work has long held its place as the standard authority on the surgery of the jaws, and this third edition will not only strengthen its position but must add to the reputation the author has already won in this department of practice.

Manual of the Dissection of the Human Body. By LUTHER HOLDEN, late President of the Royal College of Surgeons of England, Consulting Surgeon to St. Bartholomew's and the Foundling Hospitals. Fifth Edition. Edited by JOHN LANGTON, Surgeon to, and Lecturer on Anatomy at, St. Bartholomew's Hospital; Member of the Board of Examiners, Royal College of Surgeons of England, &c. London: J. and A. Churchill. 1884.

MR. HOLDEN'S works have always been favourite text-books with English medical students, and this is largely due to the fact that they are more easily read and understood than

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any similar works in the English, or indeed in any foreign, language. Mr. Holden writes simply and clearly because he has a definite and precise idea of what he intends to write, and the student understands Mr. Holden fully because every statement is definitely and clearly put. There is not an involved sentence, or one capable of being misunderstood, in any of his writings. The popularity of his Human Osteology has somewhat overshadowed his Manual of Dissections, but the same easy style runs through both. For a companion to the higher student in the daily work of the dissecting-room we should still advise Professor Ellis's well-known treatise as superior in minuteness and accuracy of detail, but to the average pupil for whom such details are unnecessary and frequently too burdensome, the present volume cannot be too highly recommended, and the surgical hints which are interspersed lighten the task of the student and make the work itself more interesting. The new edition has been entirely revised by Mr. Langton, is enlarged by about 200 pages, and contains thirty new woodcuts. It is only due to Mr. Langton to add that while the anatomical descriptions are much more detailed and many important omissions have been supplied, the work has lost nothing in readableness or style. The publishers are to be congratulated on the appearance of the book: in binding, clearness of type, and well-defined illustrations it leaves little or no room for improvement. We only question whether it is not too elaborately finished for the student to keep by his side in the dissecting-room.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

THURSDAY, OCT. 9TH.

SIR HENRY ACLAND, PRESIDENT, IN THE CHAIR.

THE adjourned debate on Sir Henry Pitman's motion for sanctioning the combined scheme of the Royal College of Physicians of London and the Royal College of Surgeons of England was resumed.

Mr. COLLINS said he could not vote for the motion, as he considered the scheme to be opposed to the convictions he had entertained for years past with reference to medical reform. His opinion was that a tripartite board was what was really needed in the three divisions of the kingdom, a combination of the corporations to be joined or not, as might be thought best by the universities. He believed that the universities had determined that it was better for them not to co-operate in such a scheme, and in that opinion he entirely concurred. It was an open secret that the Society of Apothecaries in England and Apothecaries' Hall in Ireland were the real difficulty in the way of a corporate union in those countries. Happily the Scotch corporations had arranged a corporate union and combination satisfactory to themselves and to the Council, and he did not despair of such a union between the English and Irish corporations. The time would come when all the corporations would have to look the question steadily in the face. The Society of Apothecaries of London was a body that could not be ignored in any measure of medical reform, for more than half the medical practitioners in England were amongst its licentiates. As to the Apothecaries' Hall of Ireland, he thought some misapprehension existed with reference to its status and rights. He knew that it was connected with a drug establishment, and if he was asked after an experience of forty years whether that was a wise arrangement ninety years ago, he should say that he believed it was, and that it continued to be so. It was no new thing that the College of Physicians in Ireland had put its corporate foot down upon Apothecaries' Hall, but its action had been unheeded by the Irish Legislature itself when sitting in Dublin, and by the Imperial Legislature down to the present time. It was time that there should be some wise and harmonious combination beneficial to the bodies themselves, to Ireland, and to the United Kingdom. With regard to the proposed scheme, he considered that it was in many respects an excellent one. As to the primary examination, he had more than once expressed his opinion that it was insufficient and incomplete as far as general practitioners were concerned. He was sorry to find that the fees were not to be lowered and brought into harmony with those of the Scotch corporations. In order to do away with unpleasant rivalries, he thought it would be desirable that there should be as nearly as possible a uniform standard of fees in the three kingdoms. He could not vote for Sir Henry Pitman's motion because he thought it would hinder a larger and better system of medical reform in England and Ireland.

DR. DUNCAN said he dissented from the conclusion drawn by Mr. Simon that the Council ought not to sanction the scheme until it was ascertained that the College of Physicians had power to refuse its single qualification. No such remark was made when a similar proposition was made by the Scotch bodies and sanctioned by the Council. The matter was one for the College of Physicians alone to settle, and no doubt when the sanction of the Council had been given that College would consider the subject in all its bearings.

Dr. STORRAR said the Council was not justified in refusing its sanction to the claim simply because it did not include the Society of Apothecaries. The Act empowered them to sanction the union of "any two or more colleges or bodies;" and as two bodies had proposed to combine, he saw no reason for refusing the sanction of the Council simply because they had not included a third. The question raised by Mr. Simon was not a question for the Council, but for the College of Physicians, to settle. As to the desirability of the universities taking part in the examination, no body had been more ready to go out of its way for that purpose than the University of London. But there was really no prospect of medical legislation, and if they could not get all they wanted, why not accept all that they could get? He thought it would be folly to wait for further legislation, which reminded him of Goldsmith's line:—

"Remote, unfriended, melancholy, slow."

Sir HENRY PITMAN said that the amendment condemned as wrong for the College of Physicians that which it regarded as right for the College of Surgeons in reference to the power of withholding qualifications. That was not equal justice, giving to one body what was denied to another. He thought that Dr. Quain could hardly know the meaning of the words "a partially qualifying body." The College of Physicians proposed to co-operate with the College of Surgeons, and its licentiates would have to obtain the diploma of that body. Dr. Quain laid great stress upon the fact that the licence of the Royal College of Physicians was a double qualification, but the idea that when it was granted the same document put into the hands of a candidate who had passed a better examination became only a partial qualification was one that he could not comprehend. The singular contention appeared to be that it was a full qualification before it was granted, but when granted under altered and better conditions it became a partial qualification. Let the Council take care not to pronounce that which was untrue, which it would be doing in passing the amendment. As to the amount of the fees, that was a matter for the bodies themselves to decide. If either of them chose to charge fifty guineas for its licence it would not require the assent of the Council. The argument as to inconvenience appeared to him to be a childish one. Was it really a serious inconvenience for a candidate to go to the College of Surgeons to be examined in surgery instead of being examined in Pall-mall?

Dr. HAUGHTON said it did not appear that the College of Physicians had been under any particular pressure in making the proposed arrangement. It appeared to have the entire approval of the majority of the Fellows, and, under those circumstances, he, as a stranger, was bound to consider that they had discounted all the points of opposition that had been raised, and that he ought not to refuse his sanction to the proposal. All that the College of Physicians proposed to do was to ask a particular group of competent examiners to conduct the surgical part of their examination, and he did not see how such a request could be refused.

Dr. HERON WATSON said that the question was one appertaining to the two Colleges, and the proposal appeared to be strictly within the lines of the Act of 1858,

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Clause 19 giving a right to two or more bodies to combine. The Council, he thought, had no right to withhold its approval of such a combination, unless it believed that there was something behind the scheme which would be injurious. The representatives of the two Colleges sat at the Council, and had stated that the scheme had the approval of both those bodies, and, under all the circumstances, he thought that the arrangement was one which should be sanctioned.

Dr. STRUTHERS thought that the objections to the present scheme equally applied to the old English conjoint scheme, under which, no less than under the former, the College of Physicians divested itself of some of its powers. It was true that some persons were still clinging to the old English scheme, but it was in reality impossible and impracticable. In Scotland they not only disapproved of it, but they would not have it. The present scheme was workable and viable, which the other was not. As to legislation, no such Bill as that which was presented last year was possible. It was all very well to talk of obstruction in the House of Commons, but it was the intelligence of the House of Commons that would stop any such Bill. Government itself was satisfied that no such measure could pass. He did not believe any Bill could ever pass the House of Commons that did not contain the proposal made by Sir Lyon Playfair, or that superseded existing qualifications as instruments of registration. He thought it was essential that each body should retain the right to admit those who had already received the qualifications of other bodies. The great thing was that single qualifications should be stopped. The division of the examinations under the proposed scheme was an admirable arrangement. Hitherto, when a student was rejected in one subject he was rejected in all, but that would no longer be the case.

Mr. MACNAMARA said he did not know of a more genuine curriculum than that presented in the proposed scheme. The scheme was not, as had been alleged, "a sham," and as to the talk about "the battle of the shops," that might be left to the anonymous medical journalism of London. What was proposed was a bird in the hand, which would be much better than doubtful birds in a distant bush.

Dr. HUMPHRY maintained that under the proposed scheme there would be three examinations less than before and one examining board less.

Dr. LYONS objected to the scheme for its coldness and caution. It was, he said, tentative and halting, and wanted the characteristics of a courageous and trusting proposal. It would have been more promising if it had been more generous and had included bodies that were now left out in the cold. Those bodies would agitate until they were admitted, and the Legislature if necessary would come to their aid. The object of Parliament was to create a large body of well-educated men—educated up to a moderate standard—with a view of providing for the great wants of the State. At present there were 8000 or 9000 herbalists in the country, and there were no means of dealing with them. Government was hopeless in the matter, and it sought the aid of the medical bodies. Under such circumstances he should like to see the leading bodies in England and Ireland coming forward and offering their help, and endeavouring to find some common ground on which all could unite with a view of producing a qualification that would be suitable to all classes of the community, meeting the wants of the large body of men who were now treated by those outside the ranks of the profession. It was not wise to overlook the means they had of thus assisting the State in its endeavours. Each corporate body should be willing to give up something in the general endeavour to meet the requirements of the State in that direction. He hoped, therefore, that the proposed scheme would be sent back to the College of Physicians and the College of Surgeons with a view of seeing in what way they could better accommodate themselves to the great and crying wants of the State. What advantage did the State derive from the union of two bodies like the College of Surgeons and the College of Physicians? How could such a joint body render more assistance to the State than the two bodies could separately? It might be said that their example would be followed by others, and perhaps in Ireland. That might be so, but the example set to Ireland was not a good one. Nothing satisfactory could be accomplished until they found some *modus vivendi*, in the nature of a joint qualification, in which the apothecaries would be allowed to share under such reasonable safeguards as might be recommended.

Dr. QUAIN said that a curious point might arise on the proposed scheme. A person might come with a qualification in medicine from Scotland and go to the College of Physicians asking to be admitted. They would say, "You must go to the College of Surgeons and pass your examination there." He then produced his qualification in surgery from Scotland and they would refuse to examine him. The question was whether if a man had a double qualification he would be admitted by the English College of Physicians and the English College of Surgeons without further examination.

Mr. MARSHALL said he thought it was very unlikely that a man who had held a double qualification in Scotland would come to the English bodies, but such questions were mere matters of detail, and could be settled by the committee of management under the direction of the two Colleges.

Dr. QUAIN said that the two Colleges were not only in union with one another, but with all the medical and surgical qualifying bodies in the country whose licentiates they would have to admit. As to the approval of the scheme by the College of Physicians, he might be allowed to say that that body now knew a great deal more about the subject than when it was first hurriedly brought before them, when they were carried away by the golden colours in which the formation of a great "national board" was proposed. He believed that if the subject were now brought before the College they would reject the proposal as unanimously as they had before accepted it. He maintained that he was correct in stating that under the scheme the College of Physicians would be a partially qualifying body, because it went outside its own walls to get a qualification.

The amendment was then put, and rejected by thirteen votes against five.

Dr. CHAMBERS moved, "That the proposal of the Royal College of Physicians of London and of the Royal College of Surgeons of England to co-operate under the direction of the Council receive the sanction of the Council, provided that full facilities be afforded to the other licensing bodies in England to co-operate with the above-named Colleges under the direction of the Council." He said that when he first saw the scheme he hailed it with greater pleasure than anything else that had occurred since he had been on the Council, because he thought that it was a progressive step towards his El Dorado, the union of all the licensing bodies of England into one. But he was alarmed to hear the statement of Dr. Struthers that such a thing was impossible. He could not accept that view, and he hoped that some assurance would be given that the proposed scheme was not to be a final one, but that facilities would be offered for the union of the other licensing bodies to form a joint examination board for the whole of England, thus setting a good example to Scotland and Ireland. He would be quite willing to sanction the measure in order that it might be carried out to its legitimate conclusion.

Sir HENRY PITMAN said he could not, on the part of the College of Physicians, assent to Dr. Chambers's amendment, which was a proposal to compel the affiliation of one or more other bodies without any knowledge as to the conditions under which it was to take place. The Act of Parliament gave power to the Council to sanction the co-operation of any two or more bodies, but it did not give it the power to force all the bodies into affiliation.

Mr. MARSHALL said he could not accept the amendment on the part of the College of Surgeons, and he should feel it his duty to vote against it.

Dr. HERON WATSON thought that the amendment was entirely uncalled for. A definite scheme was laid before the Council, which it was asked to sanction, and it had nothing to do at present with other bodies.

Mr. SIMON said he confessed to being one of those referred to by Dr. Storrar as hankering after the old scheme, the loss of which he regarded as a misfortune to the prospects of the medical profession in the country. He had never heard it suggested by any Englishman that the scheme had been thrown aside because it was unworkable, and until the present scheme was brought forward he had not heard that any of the authorities who had entered into the old scheme had withdrawn from it on that ground. When the scheme of the Colleges of Physicians and Surgeons was first brought forward the old scheme was still in force. The diminished scheme now submitted had some good points about it. The curriculum and the educational examination appeared to be a great improvement, and there was a great deal in them for

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which the profession might be thankful. He objected to the scheme not because of its positive provisions, but because of its extreme insufficiency. Only two of the bodies were represented, and he regarded it as a great misfortune that the universities were not co-operating. The corporations would, he thought, be greatly strengthened in their work by the assistance of the universities, especially in the management of the examinations. The spirit of the universities was in his opinion twenty years younger than that of the corporations, and their absence from the scheme seriously endangered the management of the examinations. But a much more serious matter was the absence of one medical corporation; that he considered a great blot upon the scheme. The Apothecaries' Society was omitted, and was, he believed, in a condition of protest, and under those circumstances it was difficult for the Council to say that it could unreservedly approve of the scheme. It should not be forgotten that the Society of Apothecaries was called into existence on account of a neglect of duty on the part of the College of Physicians, which distinctly refused to charge itself with the education and examination of the general medical practitioner. The Society of Apothecaries undertook that duty, and for many years it was the body which contributed in a most important way to improve the status and education of the general practitioner. The College of Physicians was peculiarly bound to be tender to the Society of Apothecaries, and to refrain from any endeavour to thrust it aside. He heartily rejoiced in the approximation of the two Colleges; but he agreed with Dr. Chambers that the Society of Apothecaries ought not to be unhandsomely treated, and that facilities should be offered to them to join the combination on reasonable terms. It had been said that the combination was intended to put an end to inconvenient competition; but would that result be brought about if the Society of Apothecaries was forced to stand alone as an examining body in London, retaining as it would its legal rights to have its licentiates placed on the Medical Register? The result would in reality be an inconvenient competition. He believed that for some purposes the combination would in reality be strengthened by the inclusion of the Society of Apothecaries. There were departments of practice in which its experience might be of use even to the College of Physicians and the College of Surgeons. He suggested that the proposed scheme might be sanctioned on the understanding that the two Colleges shall not be at liberty to refuse the further co-operation of any other of the licensing bodies if offered on terms which the Council thought proper.

Mr. BRADFORD said he was thankful to Mr. Simon for the honourable mention he had made of the Society of Apothecaries, and he hoped that in any conjoint scheme that might be sanctioned by the Council due opportunity would be afforded for the co-operation of that Society, which he believed it was generally admitted had acted liberally and beneficially towards the profession at large, and which he had no doubt would continue to exercise the same salutary influence.

Dr. DUNCAN said there was nothing in the scheme itself that was hostile to the inclusion of the Society of Apothecaries, and he believed that every member of the Council would be glad to see some mode of bringing about that result. It was not, however, to be supposed that that feeling of justice was universally entertained in the profession, for extensive support was given to a Bill which omitted entirely the Societies of Apothecaries in London and Dublin. He opposed the amendment, and supported the original motion. He hoped never to see the union of all the licensing bodies in any of the kingdoms, for he thought that would be the worst possible conclusion that could be arrived at. The evils of the one-portal system were greater than any advantages which it possessed.

Dr. STRUTHERS said that some of them had not a very pleasant recollection of the Apothecaries' Society, to whose influence it was due that medical practitioners in England were in some respects behind those in Scotland, none of whom kept shops. It was considered in Scotland that the practice of charging by drugs was a degrading system, combining, as it did, a trade and a profession. Of course, it was desirable to unite all the corporations if possible, but there were no doubt difficulties in the way.

Mr. MARSHALL stated, in answer to a question by Mr. Macnamara, that a person holding the diploma of the Society of Apothecaries would, under the proposed scheme, be in the same position as persons admitted by the College of Surgeons for examination.

Dr. CHAMBERS, in reply, said that he could not accept the suggestion made by Mr. Simon.

The amendment was then put, and rejected by fourteen votes against four.

Dr. LYON proposed another amendment: "That the scheme of the two Colleges be referred back to them with a view to taking into consideration a scheme including the Apothecaries' Society of London." He said an impression seemed to prevail that the Legislature was not likely again soon to step in to interfere with the work of the Council, but he did not himself share in that opinion. The subject was one offering great attractions to the Legislature, and he did not think that the next session would be very far advanced before a note would be sounded announcing the advent of a new Medical Bill. It was certainly "within measurable distance."

Dr. HAUGHTON said that the two Colleges had no doubt looked at the matter on all sides, and he considered it was a waste of time to discuss the matter further. He thought that a triple scheme would be best, but still an enormous advantage would be gained by the public and the profession by the union of the two great medical bodies of England. He therefore gave the scheme his hearty support, hoping that hereafter some wise proposals would be made and accepted for the admission of the Society of Apothecaries.

The amendment was put, and rejected by sixteen votes against four.

Mr. BRADFORD moved another amendment: "That after the last word of the original motion the following be added—'on the understanding that the two Colleges shall not be at liberty to refuse the further co-operation of any other of the English licensing bodies if offered on terms which this Council deems proper.'"

Sir HENRY PITMAN, in opposing the amendment, said he objected to any conditions being attached to the sanction of the Council to the proposed scheme. There was apparently an attempt on the part of certain members to crush or prevent any laudable desire or effort by the two great corporations of the kingdom to carry out what the Council had been for years encouraging them to attempt. For many years the Council had been recommending that certain steps should be taken, but their recommendations had been disregarded, and now certain members of the Council were very sensitive when two Colleges simply asked the sanction of the Council to put into practice what had long since been approved in principle.

Dr. QUAIN protested against any imputations being cast upon the members of the Council. (Cries of "Vote, vote.")

The PRESIDENT then, in the midst of some confusion—several members rising to speak—put the amendment, which was rejected by fourteen votes against six.

The original motion was then put and carried.

The Council then adjourned.

FRIDAY, OCT. 10TH.

SIR HENRY ACLAND, PRESIDENT, IN THE CHAIR.

The first business was the consideration of the Report by the Pharmacopœia Committee.

Sir HENRY PITMAN moved that the Report be received, and entered on the minutes and adopted.

Dr. QUAIN seconded the motion.

The Pharmacopœia Committee beg leave to report that they have held a meeting since the last session of the General Medical Council in March, and that the subcommittee also met on May 13th, 1884. At the meeting of the Pharmacopœia Committee, held on June 20th, 1884, a summary of suggestions, received in reply to the memorandum sent by their direction to the several medical and other bodies and individuals, as stated in the last report of the committee, presented to the General Medical Council on March 27th, 1874 (see Minutes, vol. xxi., p. 14), was fully considered, with the assistance of the editors, Professors Redwood, Bentley, and Attfield. Directions were then given to the editors to expedite as much as possible the preparation of the Pharmacopœia. The chairman reported to the committee, at their meeting held on July (Oct. 8th), that the Registrar had informed him that the previous edition of the Pharmacopœia was exhausted.

Professor Redwood, who was present, informed the committee that considerable progress had been made with the new edition, especially with regard to new substances and their preparations, the introduction of which the committee had sanctioned, but in reference to which much work yet remained to be done. He, however, reported to the committee, on behalf of himself and his colleagues, that the utmost attention should be used in the preparation of the work.

The committee report that, in connection with this matter, Mr. Macnamara had tendered his resignation as a member of the committee.

RICHARD QUAIN, M.D., Chairman.

Oct. 8th, 1884.

Mr. MACNAMARA, in explanation of the letter which he had sent tendering his resignation as a member of the com-

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mittee, said that when the committee met in June last it sat from two till six. He, as well as Dr. A. Smith and Mr. Collins, then left, and he was under the impression that they would meet again the next day to consider certain matters which he wished to bring before them, including the question of chemical notation. But when he arrived the next day he was told that during his absence the previous evening the committee had finished all the remaining business in ten minutes. He considered that he had not been treated with the courtesy due to the Professor of Materia Medica in the Royal College of Surgeons in Ireland, and he therefore sent in his resignation.

Dr. QUAIN said that at the last meeting of the Council he stated that it would be most desirable for the Pharmacopœia Committee to meet in June, and in answer to a question by Dr. Storrar he expressed his opinion that the cost would be about £70 or £80. He forgot at the moment that there were more representatives on the Pharmacopœia Committee than on the Executive Committee, and, when he found that the expenses exceeded the sum he had mentioned by about £40, he considered that they could not continue their sittings from day to day without the sanction of the Council. At six o'clock there was sufficient matter left on the programme to occupy about ten minutes. Mr. Macnamara said he would not sit a moment beyond six o'clock, and after discussing the question for about five minutes he went away. A quorum was still left, and they finished the work that had to be done. Mr. Macnamara had told them that he had something to say in reference to nitrate of copper, and out of respect to him they met again next day, though in somewhat an informal way.

Dr. A. SMITH said he took the same view as Mr. Macnamara, and although he received no notice he attended the next day, and he considered that he was entitled to be paid for it.

Mr. COLLINS said that there had evidently been a misunderstanding, but he wished to state that the Irish members of the committee were treated with the greatest courtesy by the chairman, Dr. Quain. When he was informed that there were no funds to pay for a second day's meeting, because the expenditure had already been exceeded, he at once considered that that was a sufficient reason for not having another day's payment sitting. Not expecting that the meeting would last after six o'clock he had made an appointment, and he asked Dr. Quain's permission to retire, adding that he would be quite satisfied with any arrangement that the other members of the committee might make, and that he would come again the next day, and hear what Mr. Macnamara had to say.

Sir Henry Pitman's motion was then carried.

The PRESIDENT trusted that after the explanation that had been given the Council would continue to have the assistance of Mr. Macnamara on the committee. From his own personal knowledge he could state that the Chairman of the Pharmacopœia Committee, who had served the Council with great energy for many years, did his utmost on the occasion referred to to smooth over the difficulty.

Mr. MACNAMARA then withdrew his resignation, and the last paragraph of the report was ordered to be struck out.

Dr. HUMPHRY moved: "That in the opinion of this Council no person should be granted a degree, diploma, or licence to practise, registrable under the Medical Act, unless he has proved his competency in medicine, surgery, and midwifery by passing examinations in those subjects at one or more of the licensing bodies." He said he brought forward this resolution because at the present time he was of opinion the Council should go forward with more energy than they had hitherto shown, and take more definite steps to carry out to the best of their ability the powers conferred upon them by the Medical Act. It had long been one of the recommendations of the Council to the various bodies that no persons should be admitted to the Register who had not passed examinations in medicine, surgery, and midwifery, and that very point had been most prominently brought forward by the Legislature in every Bill for many years past. It therefore appeared to him that that was a matter which the Council should now take up, and upon which they should to the utmost of their power insist. He thought the best mode of doing that would be to send the recommendations again in a definite form to the several licensing bodies, because there were at present on the Register, and others were still getting upon it, persons who had not passed examinations in those three subjects. It was perfectly within the abilities of the Council and the bodies themselves to carry out recommendations without any further legislation, for the Act of 1858 gave the Council the power to appeal to the Privy Council against any licensing body which did not carry out their recommendations. His proposal simply was that the recommendation should be again sent to the bodies, who should be left for the present to carry it out.

Dr. HAUGHTON seconded the motion. He heartily concurred in it so far as it went, but he did not think it went far enough. He was so much afraid that the recommendation would not be carried out that he thought the Council must go further and cut the cancer out by legislation. A man who was most imperfectly qualified to practise but who had passed an examination in one branch of the profession could compel the registrar to put his name down on the Register on production of his licence, and then he could practise every branch of the profession. He had known cases where students in a hospital, finding surgery more attractive than medicine, never entered the fever wards, and therefore would be incompetent to treat a fever patient. For fifteen years he had been in all the parliamentary agitations relating to medical matters, and no member of the Council knew more about "lobbying" in the House of Commons than he did, and he was continually being asked the question by members of Parliament, "Why do you not guarantee that if a man is placed on the Register he is competent to go to any case which is a question of life and death?" Unless that was made compulsory by legislation, he thought some of the licensing bodies would not carry out the recommendation. Though the Council had had the power to compel the bodies to carry out the recommendation, they had never had the moral courage to exercise it. He therefore thought that, however frightened they might be at threatened legislation, something more should be done than merely to pass Dr. Humphry's motion.

Dr. BANKS cordially approved of the motion, for he had long entertained an opinion that a competent knowledge of midwifery ought to be compulsory. So strongly did he feel on the matter, that when he was one of those who had to formulate a programme for the examinations in the Royal University of Ireland, he carried a motion in the face of much opposition to the effect that candidates for the degree in medicine should produce evidence of six months' practice in midwifery. There was no subject upon which so much ignorance prevailed among students.

Dr. STORRAR said he heartily supported the motion, but there was a difficulty connected with it in reference to the position of the Society of Apothecaries of London and the Apothecaries' Hall of Ireland. They had no power by their charters to examine in surgery, and if a man went to the Society of Apothecaries and asked to be examined for a licence as an apothecary he did not see how he could be refused. If he obtained the licence he could demand to be registered. There were only two ways of getting over this difficulty: either the Apothecaries' Society must dwindle down into a condition of absolute effeteness with no candidates presenting themselves for examination, or it must be united with the College of Physicians and the College of Surgeons.

Dr. STRUTHERS said in Scotland astonishment had been expressed that the recommendation had not been enforced. That anyone should be registered who had not been examined in all the three branches was intolerable. The motion was far too mild, and he would propose that the Council should intimate to the licensing bodies that if the recommendation were not carried out an appeal would be made to the Privy Council.

Mr. SIMON said the appeal to the Privy Council could only be made when the Council thought proper examinations were not held for the qualification required by the Act, but the Legislature at the time of the passing of the Act recognised half qualifications as sufficient, and as long as the examination was enough for half qualification, it was not a case for the Council to appeal to the Privy Council. He strongly agreed with the spirit of Dr. Humphry's motion, but there were some difficulties in the way. The Apothecaries' Society would have to appoint a surgical examiner, and he (Mr. Simon) had looked at their Act, and did not see any reason there why they should not do so. It was true that the Council had no power to say that a man should not be registered as an apothecary, but they might say that they did not think it right that a man should be registered without having been examined in surgery, and then it became a question with the Society of Apothecaries whether they could appoint a surgical examiner. If a question were

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raised in a court of law between the College of Surgeons and the Society of Apothecaries as to the right of the latter to do this, it certainly would be a very strong reply to contend that medicine included surgery, and that as the Society of Apothecaries examined in medicine it was entitled to examine in the humbler branch of the healing art. An equally strong reply would be that its examination would be incomplete as giving a professional qualification unless surgery was included.

Mr. TEALE thought that if the Council would make it impossible for any man to get on the Register unless he had been fully examined in all three subjects, a very important and useful step would be taken. In Scotland the question had already been settled by the union of the three corporations and the previous action of the universities. It was secured in a great measure in England by the union of the College of Physicians and the College of Surgeons which the Council had sanctioned yesterday, and the only point of difficulty in England related to the Apothecaries' Society; but it was for that Society to find a way out of the difficulty. They might appoint surgical examiners, or they might arrange to keep their licence in suspense over those who passed their examination until they acquired a surgical qualification elsewhere.

Dr. A. SMITH thought that the only way in which the object of the Council could be attained would be to ask the Government to pass a Bill of one clause to the effect of their recommendation.

The Council consented to Dr. Humphry's making the following addition to his resolution: "That this resolution be communicated to the several licensing bodies, with an expression of the hope of the Council that each licensing body will use its best endeavours to give effect to it."

Mr. COLLINS said that for a great many years the Apothecaries' Hall of Ireland had made it obligatory upon their candidates to present certificates of having attended at least twenty cases in midwifery. With respect to surgery, the opinion of the late Baron Piggott was that one of the clauses of the Apothecaries' Hall gave a good deal of latitude with regard to the examinations, and when the Council's recommendations arrived the Apothecaries' Hall acted upon that opinion as far as they thought reasonable or possible. On the board of examiners there were now one gentleman who was a Fellow of the Royal College of Surgeons of Ireland, and another who was for a long time a demonstrator in one of the schools of anatomy. These gentlemen had been authorised to examine the candidates to a very great extent in surgery in accordance with the recommendation of the Medical Council. In Ireland a man could not get a position on the Poor-law Board unless he produced certificates of qualification in medicine and surgery, and that was a sufficient safeguard for the general public. There were also upwards of a thousand dispensaries in Ireland, and no practitioner could obtain the appointment to one of them without producing the double licence in medicine and surgery. The whole question showed the importance of forming a tripartite board. At the Apothecaries' Hall there were not the appliances nor the means to examine a man in the higher branches of surgery. According to the recommendation of the Council, at present each licensing body would be turned into a medical university, a thing which was never intended by their various Acts of Parliament.

Dr. LYONS thought it was neither desirable nor practicable to compel every man entering the profession to qualify himself in every conceivable branch of medical education. The Council was now departing from the ancient traditions of the profession, which recognised the cultivation of certain departments by particular individuals, and was running counter to the modern feeling in favour of division of labour. Out of the 22,000 practitioners in the kingdom, there might be 4000 or 5000 who never had any intention of practising midwifery, and he did not think it wise to compel such men to stop in their career and learn a branch of their profession which was distasteful to them, especially when after acquiring the qualification they would never make any use of it. If it was the intention of a candidate to practise midwifery, he should be compelled to obtain a qualification in it, and it might be made penal for any man to attempt to practise midwifery who did not possess a licence in it. That would answer all the requirements of safety on the part of the public, and at the same time relieve those who did not intend to practise it from the labour of obtaining a qualification in it. There were other subjects besides midwifery on which the public mind had been seriously occupied, such as ophthalmic surgery for those who entered the army, and an adequate knowledge of lunacy. He thought that the Council was travelling too fast, and if they intended to legislate in the direction of midwifery they would have to legislate also on the subject of lunacy, and enforce on all who entered the profession a competent knowledge of that subject. He would therefore move as an amendment: "That this Council is prepared to consider a recommendation to Government that the possession of a licence to practise midwifery be rigidly enforced by statute on those persons who enter on the practice of midwifery, and that it be made penal to practise midwifery without such licence, duly obtained after special education and examination."

Mr. COLLINS said he would second the amendment in order to beget a discussion on it.

Mr. MACNAMARA impressed upon the Council the necessity of caution with regard to the exercise of their power of going to the Privy Council.

Dr. MATTHEWS DUNCAN supported the motion. He did not think it desirable to refer back to what was done in 1869, because that would imply a degree of continuity in the history of the Council which the Council did not possess. He approved of the recommendation being renewed at the present time because the Council now had a feeling of responsibility which it did not have in 1869 or 1880.

Dr. BANKS said he could sympathise with Dr. Lyons' remarks as to the necessity of medical men possessing a competent knowledge of lunacy, for in some cases it might be a question of life or death, and a practitioner might have to decide whether the accused person was of sound or unsound mind.

The motion was then put and negatived.

Dr. HUMPHRY briefly replied, and the original motion was then put and carried, only one hand being held up against it.

The following communication was read from the Royal College of Surgeons of England:—

Royal College of Surgeons of England,
Lincoln's-inn-fields, W.C., Aug. 8th, 1884.

SIR,—In pursuance of the requirements of Section 28th of the Medical Act of 1858, I am directed to acquaint you, for the information of the General Medical Council, that the attention of the Council of the College having been directed to the unprofessional advertisements and publications issued by Mr. George Washington Evans, a member of the College, now resident at 41, Cambridge-street, Hyde-park-square, and the Council having duly considered the case, as coming within Clause 2, Section XVII. of the Bye-laws of the College, the following resolution was adopted by them on the 10th ult., and confirmed on the 5th inst.:—

"That in the opinion of the Council the advertisements and publications issued by Mr. George Washington Evans are, in the terms of Clause 2, Section XVII. of the Bye-laws, 'prejudicial to the interests' and 'derogatory to the honour of the College,' and 'disgraceful to the profession of surgery,' and that, in consequence of the issue thereof by him, he be removed from being a member of the College."

I am, Sir, your obedient servant,
W. J. C. Miller, Esq. EDWARD TRIMMER, Secretary.

On the motion of Mr. MARSHALL, seconded by Dr. HUMPHRY, it was agreed, "That the Registrar be directed to remove from the Medical Register the qualification of Member of the Royal College of Surgeons of England, 1865, formerly held by Mr. George Washington Evans."

The REGISTRAR then read the following communication from the Royal College of Surgeons of Edinburgh:—

Royal College of Surgeons of Edinburgh, May 19th, 1884.

DEAR SIR,—I enclose a certified excerpt from the minutes of meeting of this College held on the 16th inst., and in accordance therewith the name of Mr. Thomas Robert Horton has been erased from the list of Licentiates of the College. Yours truly,
W. J. C. Miller, Esq., Registrar of General Medical Council. JAMES ROBERTSON.

"The Royal College of Surgeons, Edinburgh, May 16th, 1884.

"Excerpt from Minutes of Meeting of the Royal College of Surgeons of Edinburgh, held on May 16th, 1884.

"There were then submitted to the meeting the whole documents and correspondence relating to the case of Mr. Thomas Robert Horton, adjourned from the meeting of Dec. 15th, 1883, and the officer having called the name of Thomas Robert Horton at the outer door, and reported that he was not present, the President moved that the College, having resumed consideration of the case of the said Thomas Robert Horton, specified on the billet, together with the certified extract of the verdict of the jury, and sentence, under the hand of H. B. Tayler, Clerk of Arraigns of the Supreme Court of South Australia, and citation of Mr. Horton of May 16th, 1883, along with the letters to Mr. Robertson from Mr. Horton's agent, Mr. Henry C. H. Ayliffe, Solicitor, 85, King William-street, Adelaide, and from himself dated February 15th and March 26th last, and the statements and whole documents transmitted, or referred to in these letters, and it established that the said Thomas Robert Horton was convicted of conspiracy to defraud, and that no sufficient reasons have been adduced by him why the College should not in consequence recall his diploma of Licentiate, dated April 17th, 1879; therefore the College hereby recall the said Diploma, and declare the same to be void, and direct that certified excerpts from this minute, containing this resolution, be transmitted by Mr. Robertson to Mr. Horton,

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to the Registrar of the General Medical Council, and to the Secretary of the South Australian Branch of the British Medical Association, which was seconded by Dr. Patrick Heron Watson, and unanimously agreed to. "Certified by James Robertson, Clerk." "JOSEPH BELL, Secretary."

On the motion of Dr. HERON WATSON, seconded by Dr. HALDANE, it was agreed, "That the Registrar be directed to remove from the Medical Register the qualification of Licentiate of the Royal College of Surgeons of Edinburgh, 1879, formerly held by Mr. Thomas Robert Horton."

The following communication from the Branch Council was then read, and ordered to be entered on the minutes:—

Branch Medical Council (Ireland),
35, Dawson-street, Dublin, Oct. 3rd, 1884.

DEAR SIR,—In compliance with a resolution passed by the Branch Medical Council for Ireland on the 26th ult., I herewith enclose, for the information of the General Medical Council at their next meeting, copies of the Minutes of this Branch Council for Oct. 15th, 1883, and Sept. 26th, 1884, in which are contained the original resolutions of the Branch Council for Ireland relative to enforcing due attendance on hospital practice by students, and the replies thereto of the Irish medical authorities. Yours faithfully,

R. W. HEARD, Registrar.

W. J. C. Miller, Esq., Registrar of the General Medical Council.

The Council then adjourned.

SATURDAY, OCT. 11TH.

SIR H. ACLAND, PRESIDENT, IN THE CHAIR.

Sir HENRY PITMAN moved, "That the Registrar be directed to send annually a circular to each of the bodies contained in Sections I., II., III. of the list of examining bodies whose examinations for intending medical students fulfil the conditions of the Medical Council as regards preliminary education, for information on the following points, with respect to their examinations recognised by the Council:—(*a*) Highest percentage of marks attained by any candidate; (*b*) lowest percentage of marks obtained by any candidate who passed; (*c*) total number of candidates who passed, and of those who did not pass, at the examination referred to; (*d*) copies of the examination papers set." The list of bodies, he said, was a long one, but he scarcely thought that any of them should be excepted. In regard to professional examination, the Council asked for returns from all alike, and received each year a statement of the number of candidates that passed, the number rejected, and the total number examined at each examination. He now asked for similar returns from the bodies whose examinations in general education were recognised by the Council. The reason for the request would be apparent from the report made to the Council by the College of Preceptors which conducted an examination at which a large number of medical students presented themselves. From that return it appeared that at the examination for the half year ending in March last the number of rejections was three out of four, showing that there was considerable strictness (he did not say too much) in that examination. Whether other bodies were equally strict they could not of course judge, their testamur being accepted without any evidence as to whether it was founded upon sufficient knowledge or not. The candidates rejected at the College of Preceptors might find some other body less strict, and present themselves at their examinations. It was therefore the duty of the Council to exercise some supervision over the preliminary examination as conducted by other bodies. At any rate, the returns which he asked the Council to sanction would afford them a good deal of useful information and place them in a position to deal with the subject at some future time.

Dr. HAUGHTON, in seconding the resolution, said it was of very little consequence to know how many candidates passed or were rejected at any particular examination, which was what mathematicians called "a function of many variables." The thing to be ascertained was the preparedness and intelligence of the candidates and teachers.

Dr. A. SMITH supported the motion. The information sought would be very valuable, and it would be still more so if they had a return of the subjects in which candidates continually failed. The highest percentage of marks was of very little importance.

Sir H. PITMAN thought that the addition suggested by Dr. A. Smith would give unnecessary trouble and complicate the returns.

Dr. HAUGHTON thought that the additional returns suggested would often be illusory, especially at the universities like his own, where examinations were held for purposes outside the objects of the Council, with a view of ascertaining whether the candidates had a sufficient knowledge of Greek and Latin, elementary English and mathematics, to continue a four years' course in Arts.

Mr. MACNAMARA said it would be inconvenient if it appeared that a university examination did not contain all the subjects required by the Council.

Dr. HAUGHTON said that his university examination contained all the subjects, and more. Mechanics, however, was not one of the subjects at the entrance examination, but was taken a year afterwards.

Mr. MACNAMARA sympathised with the desire of Dr. A. Smith to know the subjects in which candidates failed or were weak. Such information could be easily given in the returns of the College of Surgeons of Ireland, a record of such subjects being always kept.

After some further discussion on the precise wording of the resolution, and the desirability of the results of the examinations being uniformly stated, the motion was put and agreed to.

On the motion of Mr. PETTIGREW, seconded by Dr. HERON WATSON, it was resolved, "That the several examining bodies be requested to give the results of their examinations in question (written or oral) by means of percentages.

Dr. STORRAR moved, "That the words 'Executive Committee,' in line 8, clause 6, of chapter 13 of the Standing Orders, be inserted instead of the words 'Branch Council,' to which such applications may be made.'" He explained that the resolution referred to applications made for the registration of persons who had held appointments as surgeon or assistant-surgeon in the army, navy, or East India Service, or had acted as surgeon in the public service or in the service of any charitable institution on or before Oct. 1st, 1828. Such applications, he said, were now made to the Executive Committee, the Executive Committee referred them to the Branch Council, and the Branch Council referred them back to the Executive Committee. His proposal was that they should be dealt with at once by the Branch Councils, instead of by the present circuitous method, in order to save both time and expense.

Dr. STRUTHERS seconded the motion, which, after a brief discussion, was agreed to.

Dr. HUMPHRY moved, "That with a view of giving greater efficiency and continuity to the visitation of examinations, four persons in England, two in Scotland, and two in Ireland be appointed to visit examinations of the licensing bodies during the year." He said he had had experience both as a visitor appointed by the Council and also as an examiner at Cambridge and at the College of Surgeons, London, and had been one of those concerned in modifying the examinations at both those places, and he was of opinion that the power which the Council possessed of visiting examinations was one of the most effective and beneficial powers which it possessed. The result obtained by it was not only to be seen in connexion with the resolutions passed by the Council when the reports of the visitors were considered, but in the influence of the visitors upon the examiners with whom they had conferred, in the communications of the visitors with one another, and, last but not least, in the communications which the visitors had made to their own bodies on their return. By these various means a quiet but most important influence had been going on affecting almost all the examinations in the United Kingdom, but the licensing bodies had no doubt often been quite unconscious of the manner in which the influence had been exerted. Such quiet influence was the very best that the Council could bring to bear upon the licensing bodies, though it produced very little credit to the Council. His desire now was that it should be of a more efficient kind, and that it should be regular and systematic. Of course the bodies were informed that it was going to take place, and that afforded them the opportunity of preparing for it. It also led to a certain amount of nervousness and disturbance in the particular bodies as well as in the candidates. As an examiner he found that very slight things disturbed the candidates. He did not recommend that the reports of visitors should be so long as they had formerly been. If the visitations went on continuously the reports would be shorter, and it would become the regular work of the Council to receive information with respect to them. If his suggestion were carried out the visitors would know not only what was the exceptional manner of the examinations, but also what was regularly going on. It would not be necessary to incur any very great expense in carrying out the proposed plan, but that

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would depend upon the arrangements made by the Executive Committee.

Dr. QUAIN seconded the motion, and said he thought that the question of expense ought not to be considered by the Council. They ought not to be accumulating money that should be appropriated to present purposes.

Dr. STRUTHERS supported the motion, and expressed an opinion that the visitors should, as far as possible, be experts in the subjects on which the candidates were examined, otherwise their reports would be of little value. A report from himself, for example, on an examination in midwifery or botany would be of little or no value to the Council, but if the subject was anatomy he should know whether it was a difficult examination or not. He thought that members of the Council had a right to be present at examinations, and it would be a good thing if they would occasionally "drop in" in a quiet way to see how they were being conducted. The Branch Councils also had the power of visitation if they chose to exercise it. Visitors, he thought, should be appointed to every examination. It was impossible that the same set of visitors could visit all.

Dr. PETTIGREW also thought that visitations, to be effectual, should be conducted by experts. This was not the case on the last occasion, and the report of the visitors, admirable as it was, had in consequence given rise to some criticism. If the visitations were more frequent and regular the examiners and the examined would be accustomed to them, and there would be no such inconvenience as sometimes arose from their occurrence.

Dr. HAUGHTON thought that the visitations should be confined to the final examinations.

Dr. QUAIN considered that the number of visitors should be left open, but that there should be a sufficient number appointed to visit the examinations during the year, the special arrangements being left with the Executive Committee.

Mr. SIMON thought it would be better to resolve, "That the Council resume its visitation of examinations, and instruct the Executive Committee to conduct the visitations continuously from year to year."

Sir H. PITMAN said that there was already a standing order to the effect that the visitations should be continued systematically.

Dr. BANKS supported the motion, and said that the visitations had been of inestimable value, and had had the effect of raising the character of the examinations. If the Council was fortunate enough to secure such men as were appointed on the last occasion, a great benefit would accrue to the profession.

Dr. HERON WATSON also bore testimony to the good effect produced by the visitations. The Council had hitherto made too little use of a most valuable instrument placed in its hands by Parliament. It would be a great advantage to have the examinations conducted continuously, so that the visitors might have the opportunity of correcting first impressions when necessary. During the last visitation at Edinburgh the visitors could only spend a few hours there, and therefore had no opportunity of knowing the general character of the examination as conducted from day to day during a period of three weeks.

The PRESIDENT desired to emphasise the remark of Dr. Struthers as to the power possessed by individual members of the Council to visit examinations, whether specially deputed or not. Since he had been President he had seriously asked himself whether they ought not to use that power—not in a critical, unfriendly way, but for the purpose of informing themselves of what was going on. He had himself gone to one of the chief examining bodies and asked permission to attend, and he had been received in the most kind and courteous manner, and every information was afforded him, all the more readily perhaps because the visit was not an official one. If they desired they could in that way inform themselves as to any examination going on in the country. They also had the power of deputing other persons than themselves to perform that duty officially.

Dr. HAUGHTON said he had afforded every facility to the visitors at Trinity College, Dublin, but he had been instructed not to part with the custody of the papers, and not to allow any interference with the examination.

Mr. TEALE said that the partial character of the visitation at Edinburgh was owing to the difficulty of fitting in the various visitations, and to the large number of examiners among whom the examinations were distributed. The whole visitation was made under peculiar circumstances, the visitors having been asked to do what had never before been attempted, to visit all the examinations, which necessarily involved an immense amount of work. He did not suppose that such an attempt would be made again. The value of the report was that it contained a comparative statement of the methods employed. The visitations were commenced with the idea that some of the bodies were considerably below the mark in their examinations, and also with the idea of spurring them on and of finding out defects. They had now got much beyond that stage and entering on a new development. The visitors should be selected, not to take, as before, a general view, but to act as experts in the various subjects of examination. They should, he thought, as a rule, be younger men, busily engaged in teaching, and knowing the work of all the schools, so that they could keep the Council in touch with modern education in its various aspects, and enable it with advantage to revise its general curriculum.

Dr. STRUTHERS suggested that the number of examiners should not be less than four for the primary and not less than six for the final examination.

Dr. LYONS, in supporting the principle of the motion, said that the Council had been a little tardy in discharging the obligation imposed upon it; and it would be guilty of a dereliction of duty if it did not, even at so late a period, initiate a satisfactory system of visitations.

The motion was then put and agreed to.

A communication was received from certain dentists at Nottingham with reference to an alleged improper assumption of the name of "Eskell" by a practitioner in that town, an assistant of Messrs. Clifford of London, who, it was suggested, had been guilty of professional misconduct, and were liable to have their names erased from the Medical Register. The Council resolved that it saw no reason for taking any action in the matter.

A communication was received from the Preston Medico-Ethical Society requesting the Council to obtain a parliamentary enactment rendering penal all advertisements offering medical and surgical advice by unqualified persons. The communication was ordered to be entered on the minutes.

A communication was received from the Irish Branch Council expressing its opinion that the General Medical Council "ought at its forthcoming meeting to lay down the general principles upon which an amendment of the Medical Act of 1858 should be constructed."

The Council then adjourned.

MONDAY, OCT. 13TH.

SIR HENRY ACLAND, PRESIDENT, IN THE CHAIR.

Mr. SIMON moved: "That the Council will, at its next ordinary session, reconsider the 'Recommendations' which it at present has in force ('Recommendations,' Chapters III., IV., V.) on the subject of the age for licence for practice, and of professional education and examination; and that, with a view to such reconsideration, the Council now request the three Branch Councils respectively to enter upon a review of the present 'Recommendations,' each Branch Council conferring, so far as it may find desirable, with the several licensing authorities of its division; and that the Branch Councils be requested to communicate to the President, not later than the last day of January next, any suggestions which they respectively may have to make for amendment of the present 'Recommendations.'" He said he proposed the resolution almost as a matter of routine, and not with any prejudice in a revolutionary, or even a mutational sense. A good many years had passed since the last revision of the Recommendations, and it seemed to him essential that the Council should look over them again with such new lights as had been obtained in the interval. There were several points in connexion with the Recommendations about which his opinions were unsettled, and he would be reluctant to form a new opinion without consultation with others, and especially without taking the advice of the local authorities in the different divisions of the kingdom. His proposal was that next session the Council should go into the matter of professional examination systematically. He believed there was a pretty general consensus of opinion against raising the age, but there was a much less decided opinion on the subject of whether or not the curriculum should be extended. As preparatory to the discussion on the matter, it would be well that the Branch Councils should confer with the licensing

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authorities, and therefore he did not consider that his motion went beyond the necessities of the case.

Dr. BANKS seconded the motion, and said that it covered in a far better way the ground of the resolution which he himself had previously brought forward. His own motion was fragmentary and partial, Mr. Simon's was comprehensive and complete. It was chiefly with a view to the extension of the curriculum that he introduced the subject of the age for licence to practise, and he thought it quite right that the opinions of the Branch Councils and the authorities should be obtained with regard to the matter.

Mr. MARSHALL was in favour of the motion, because it did not bind the Council to any particular line.

Dr. STRUTHERS supported the motion. He would very much like to see the Branch Councils have something to do. A great deal had recently been said about divisional boards, but the Branch Councils would be divisional boards if they only had something to do, and clause 6 of the Act of 1858 enabled the Council to delegate to the Branch Councils everything except representations to the Privy Council. Medical education varied in the three divisions of the kingdom, and there was no reason why all medical men should be passed through the same mould. The only part of the resolution about which he had any doubt was the date by which the suggestions must be sent to the President. He considered that February or March would be quite early enough.

Dr. LYONS drew attention to the last words of Clause 6 of the Act of 1858, which said, "The President shall be a member of all the Branch Councils." He thought that the exercise of the power there given would be attended with very important results. It would give new life and great interest to the meetings of the Branch Councils if the President attended them. Ireland was not favoured with the shadow of great persons, and he hoped that in future the President would not be such an absentee from the meetings of the Irish Branch Council as he had been in the past.

Dr. HALDANE, while concurring in the motion, suggested that it would have more effect if the request were made direct to the licensing bodies instead of leaving it to the Branch Councils.

Mr. TEALE considered the motion was an extremely important one, as it would institute between the three Branch Councils and the General Council a much more intimate consultation than had previously existed. The present was a very important epoch in reference to the revision of the curriculum and the Recommendations. Assuming that the time for medical education was years ago just enough for the subjects that had to be taught, it was clear that for the present extended curriculum longer time was required, and if the subjects were added to materially without extending the time harm must be done somewhere.

Dr. PETTIGREW also supported the motion, considering that the time had come when it was absolutely necessary to reconsider the age for licence to practise. He wished especially to press upon the Council the necessity of allowing the Branch Councils to do a proper share of the work. Everything that could be done by the Branch Councils should be done by them. In each division of the kingdom there were peculiarities of education, and the Branch Councils were specially fitted for dealing with them.

Sir HENRY PITMAN did not desire to offer any opposition to the motion, but it appeared to him to be somewhat imperfect. He would have preferred to see the entire Recommendations, embracing the preliminary as well as the professional examinations, included. The resolution proposed "that the Branch Councils be requested to communicate with the President." No doubt common sense would say that the President would deal with them in any way he though t proper, but it would be better to add words giving power to the Executive Committee to deal with them, and it possible to consolidate them. If similar suggestions, varying perhaps in form, were received from two or more Branch Councils, the Executive Committee might frame them so that they might be brought before the Council in a form in which they could be readily dealt with.

Mr. SIMON said he was very much gratified at the kind manner in which his suggestion had been received. His feelings were entirely in sympathy with what had been said by Dr. Struthers and Dr. Pettigrew as to the desirability of giving greater occupation and a larger sphere of activity to the Branch Councils, and to look upon them, in fact, as divisional boards. A little timidity might be felt lest, if the Scottish Branch Council had too much power, it would excommunicate some of those who lived further south, but within reasonable limits it was desirable to develop the Branch Councils in relation to the General Council and to the licensing authorities. He approved of Dr. Haldane's suggestion, and perhaps words might be added to the resolution to the effect that a copy of the resolution be forwarded to each of the licensing bodies with a request that they would communicate with the Branch Council. Dr. Struthers' suggestion that the date should be February instead of January paid too high a compliment to the Executive Committee at the expense of the Branch Councils.

The PRESIDENT said he had very little doubt that if the motion were carried it would prove to be one of the most important acts that had ever taken place since the formation of the Council. It would carry out the spirit of one of the most important recommendations of the Royal Commission which was introduced into the last Bill—namely, that a portion of the work of the Council should be done by the Branch Councils. Though this might appear to outsiders to be a retrograde step, it really was not so. When the Council first met, what was necessary was that the divers bodies representing different opinions and interests should unite together, but experience had shown that the difficulties of the Council were enormously increased, and that what was often called a waste of time was one of the necessities of the position. What was absolutely wanted for the work of the Council was some arrangement of procedure by which the views of the different bodies and the different nationalities might be brought forward in a state of preparation so that the endless details which arose when matters were brought before them in a crude condition might be avoided. He felt that the whole question of medical education in the near future turned upon some such change in procedure as was now proposed. Before sitting down he wished to thank his Irish friends for the manner in which they had invited him to cross the Channel, but upon that subject he had a revelation to make. Shortly after he became President, being in Scotland, he was invited to attend and preside at a Branch Council's meeting there, and he did so with great satisfaction to himself. He had never refused a similar invitation to Ireland. He had on three or four occasions gone to Ireland with the express hope that he might receive it, but he had not been invited, and he was afraid that if he had himself proposed to attend the Branch Council, it might have an injurious effect, and might not be acceptable. If he could do any good by attending any special meeting of a Branch Council he would consider it his duty to go, and nothing would prevent him accepting the invitation except a feeling that he was not representing the Council for that particular purpose, or that he was not worthy of the confidence of the Council, and in that case he should resign his functions.

The resolution was put to the Council and carried, as was also a motion to the effect that a copy of the resolution should be forwarded to each of the licensing authorities.

Sir HENRY PITMAN moved: "That the Council resolve itself into a committee of the whole Council to enter fully into the consideration of the subject of preliminary education." He said he had felt bound to put this motion upon the agenda in consequence of a report which was presented to the last session of the Council, which said: "Should the Bill now before Parliament become law during the present session the consideration of this subject (preliminary examination) will devolve upon another body; should it not do so it will be the duty of the Medical Council to lose no time in entering fully upon it." He understood from that that it was the feeling of the Council that at the earliest opportunity the subject should come before it; but there were other reasons for pressing it, based partly upon the report from the Royal College of Preceptors. That report showed that only four persons passed in mechanics out of 274 candidates who were examined. The Council must not suppose that those 274 candidates were all medical students, because he apprehended that the examination included men intended for other professions. The Council would also remember that an application was made by the School Boards of Cambridge representing that candidates who had passed what was called the lower examination were recognised, while those who passed a higher examination were not. The Council was asked to grant an exemption, so as to make those two examinations at Cambridge equal, but they had not taken the matter into consideration.

Dr. A. SMITH seconded the motion.

Dr. HAUGHTON held that the cause of preliminary education would be better served and more carefully considered

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by the Council if it came, like a professional examination, through the Branch Councils. Without sufficient knowledge of the details of the various bodies the Council had yet made general recommendations about preliminary education. Take, for example, Trinity College. There they did not hold a preliminary examination in mechanics and hydrostatics; on the contrary, they required a year's teaching and study of those subjects, and never put them into a preliminary examination. Another year was spent in teaching heat, magnetism, and electricity. The idea of putting these extremely important subjects into a preliminary examination was not in accordance with their practice. He thought the Council had entered too much into small details, and that they should leave a body like that which he represented to teach mechanics and physics in its own way. Why not talk the matter over in the Branch Councils first and then consider it in the Council?

Dr. STRUTHERS was of opinion that it would be better for the Council to make some recommendations on preliminary examinations and then to place the subject in the hands of the Branch Councils.

Mr. MACNAMARA said that if ever there was a subject which the Council ought to discuss it was one which was now before them. If it was shunted, by being referred to Branch Councils, there would be a great difference of opinion in the separate branches as to the amount of preliminary education necessary, and then the matter would have to come back to the Council. Unless some general principle, which would be applicable to the three divisions of the kingdom, was laid down by the Council they would simply be putting off the evil day, for they would have to come to a decision eventually, when the reports came up from the Branch Councils. Let them proceed to the work for which they were summoned and not retreat from a difficulty which they ought boldly to face. He should vote against the suggestion to refer it to the Branch Councils.

Dr. HAUGHTON said he was quite ready to go on if it was the wish of the Council.

The resolution was then agreed to, and the Council thereupon resolved itself into committee.

Dr. HUMPHRY moved—"That, with the view of lessening the area and improving the quality of the preliminary examination, the subjects be as follows:—(*a*) Latin, including translation and grammar, the candidate to have the option of translating a portion from an author previously specified, or easy passages not taken from such author, or both; (*b*) arithmetic, including vulgar and decimal fractions; (*c*) geometry, including the first book of Euclid, with easy questions on the subject-matter of the same; (*d*) elementary mechanics of solids and fluids, meaning thereby mechanics, hydraulics, and pneumatics. The candidate to be required to answer the questions in such a manner as to satisfy the examiners that he has an adequate knowledge of English grammar and orthography." He said that good preliminary education was the corner-stone of their work, while the question of lengthening the curriculum or fixing a period at which a person might become a member of their profession was really of secondary importance compared with the ascertaining whether those who entered it were qualified to commence its study. The proposals he made were four, and he had limited them intentionally to that number in order to diminish the area. It might be said that he had reduced the examinations rather too much, but he would ask the Council to consider that any improvement in quality of a kind which he suggested was equivalent to a considerable diminution of the area. "Latin" was the first part of the motion, his desire being that that tongue should be one of the subjects, and that care should be taken to ensure that the candidate had, through Latin, acquired a thorough knowledge of language. The student, he thought, should have a specified subject. The old plan requiring translations from passages not previously seen, would, in the opinion of many persons, exclude a large number of those who would prove very good members.

Mr. TEALE seconded the motion.

After some further discussion,

Dr. HAUGHTON moved, "That the requirements of the preliminary examination in regard to the subject of Latin be as follows. Translation from two specified authors, one prose and one verse, and easy passages from another author, at the discretion of the examiner."

Dr. HALDANE seconded the amendment.

A discussion ensued with reference to the precise course to be adopted in further considering the question, and the result was that both the motion and the amendment were withdrawn, on the understanding that Dr. Humphry should be allowed on the following day to substitute another motion.

The Council then adjourned.

TUESDAY, OCT. 14TH.

SIR HENRY ACLAND, PRESIDENT, IN THE CHAIR.

The Council went into committee on the subject of Dr. Humphry's motion with regard to preliminary examination.

Dr. HUMPHRY, by permission, withdrew his motion, and substituted the following:—(*A*) "That the motion in Clause 1 of this programme be withdrawn, and that in place thereof the following be substituted: 'That the subjects now exacted for the preliminary examination, as set forth hereunder, be considered *seriatim*—viz., (1) English language, including grammar and composition; (2) English history; (3) modern geography; (4) Latin, including translation from the original, and grammar; (5) elements of mathematics, comprising (*a*) arithmetic, including vulgar and decimal fractions, (*b*) algebra, including simple equations, (*c*) geometry, including the first two books of Euclid or the subjects thereof; (6) elementary mechanics of solids and fluids, comprising the elements of statics, dynamics, and hydrostatics;[1] (7) one of the following optional subjects—(*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) logic, (*g*) botany, (*h*) elementary chemistry.'—(*B*) That the subjects be modified as follows: '(1) That the candidate be required to answer the questions in such a manner as to satisfy the examiners that he has an adequate knowledge of English grammar and orthography; (2) that English history be omitted; (3) that modern geography be omitted; (4) that Latin include translation from selected authors, and translation of easy passages not taken from such authors; (5) that instead of two books of Euclid there be the first book of Euclid, with easy questions on the subject matter of the same; (6) elementary mechanics, to be passed before registration; (7) that these optional subjects be omitted altogether.'" In regard to his proposal with reference to English, he said he thought the method he proposed for testing the candidate's knowledge was much better than that of a special examination. That method was adopted at Oxford and Cambridge, and by the most recently constituted examining boards. If a person could write English correctly he gave the best evidence of his knowledge of the language.

Mr. SIMON seconded the motion with regard to English.

Dr. STORRAR, in opposing the motion, said he knew that many schoolmasters regarded English as in no respect inferior to Latin or Greek as a means of mental discipline. He would suggest that the Council should go over the list of examinations conducted by universities and other bodies, and see whether any, and, if any, which of them should be eliminated and which should be retained, and then proceed to consider what would be done with those candidates who did not present themselves at the examinations that were retained. He should prefer that all the preliminary examinations be conducted by independent bodies like the universities, but the question was what was to be done for the residuum who went elsewhere.

Mr. MACNAMARA contended that English should be maintained in the curriculum. In Ireland English received great attention as a subject of education. If it were shunted by the Council the schools would take the hint, and English would in future be neglected.

Mr. TEALE said the question was not whether the student should be properly educated to write English correctly, but whether English should be the language on which the educational training should be based.

Mr. SIMON said the object to secure was that a candidate should have a good practical young man's knowledge of English, and that, in his opinion, was best tested in the practical way proposed—by seeing, for example, whether the candidate translated his Latin into well-spelled and properly constructed sentences. The Latin examiners might, indeed, be invited to give special attention to that point.

Dr. DUNCAN supported the motion on the ground that it was sufficient to test the student in one language. He had always understood that English was the worst subject to take for a grammatical examination, and that Latin was the best.

Dr. HALDANE, while objecting to a knowledge of English

[1] "This subject may be passed either before registration or before or at the first professional examination."

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grammar being made essential, thought that at the same time every student should be tested in his practical knowledge of the language, and that should be done by means of composition and writing from dictation.

Dr. BANKS said that English was lamentably neglected in the schools in the country in which he had the misfortune to live. He considered that such a knowledge of English as every respectably educated person should possess was one of the great essentials for a man commencing the study of medicine.

Dr. HERON WATSON said he should regret exceedingly if Dr. Humphry's resolution was passed by the Council. The object of a preliminary examination was not simply to test the amount of knowledge that an individual had at a given moment on a particular subject—that was only a means to an end; the object they really had in view was to determine whether a young man had really had an opportunity afforded him of having such a liberal education as would fit him for the commencement of his medical education.

Dr. HAUGHTON thought too much importance could not be attached to English. It was the finest language that any man ever spoke; it had the power of expressing any conceivable quantity of ideas and emotions; and in his opinion it would be a shameful thing if the educated classes left its study to School Board scholars.

Sir H. PITMAN was afraid the Council was very likely to fall into an error in this matter. He believed that for years past they had done very well with regard to the matter of English. The purport of the foot-note was to tell the educating bodies the way in which they were to ascertain how a candidate knew the subject on which he was examined. The result was that the Council was dictating to the examining bodies of the great universities of the country, who gave their lives to education, and to that great body to whom they entrusted the conduct of their common examination—the College of Preceptors; they were assuming that those bodies did not know how to conduct an examination in English. Surely, when the Council said that it required a knowledge of English grammar and composition, that was as much as it ought to say, and it should then leave it to the examining bodies to decide how the possession of that knowledge was to be ascertained.

Mr. MACNAMARA said that, while Sir H. Pitman told them they were not to dictate to the examiners, the Council, if it accepted Dr. Humphry's motion, would in fact be dictating in the most absolute way how the examiners were to proceed—namely, not by examination in the English language, but by an examination in other subjects.

Dr. HUMPHRY said his object was that the student should have a better knowledge of English, and he maintained that the mode to obtain that was to give the students a deeper and more careful instruction in one language, that language being Latin.

Dr. QUAIN said if there was to be no examination in English the result would be, that English would not be taught.

Dr. STRUTHERS congratulated the Council on the improvement that had resulted in preliminary education owing to its regulations. He said that before the Medical Act existed some of the examining bodies required no preliminary education whatever. He altogether dissented from the idea that the Council had in any way failed in the matter. He drew attention to the preliminary examinations required from students before entering upon medical studies in Germany and France as showing that those countries were a long way in advance of this country. He was surprised to hear what had been said with regard to this examination in English, for if he were tied down to have one subject only and put out all the others he would retain English composition and German.

Mr. MARSHALL thought that it should be left to the educational bodies themselves to settle the controversy that had arisen. The great object to be secured in future was the introduction of a preliminary scientific education between the early one and the strictly professional course. In the present state of things, however, he could not hold up his hand for the exclusion of English as a special subject for examination. The Council would be backsliding in the matter of education if it adopted Dr. Humphry's proposal.

The PRESIDENT, in putting the motion, said that the study of English had of late assumed an entirely different shape, and if he voted he should do so in such a way as to show his desire to do nothing that would disparage the cultivation of the language.

The proposal was then put, and rejected by sixteen votes against seven.

The Council then sat for some time in private, and documents were read in regard to a registered practitioner against whom a complaint had been forwarded by the Branch Council for Scotland. It was, after some discussion, resolved to leave it to the Executive Committee to take such steps as it might, under legal advice, deem proper for bringing the case before the Council at its next meeting.

Strangers having been readmitted,

Sir HENRY PITMAN said it seemed to him to be impossible to deal with the subject of Preliminary Examinations at the present sitting of the Council. He therefore moved, "That the Executive Committee be requested to consider what changes, if any, are required in the present regulations of preliminary education and examinations, and to communicate with the several Branch Councils on the subject, if deemed advisable, and to report to the next session of Council." He thought it would be far better to leave the matter undisturbed until it could be carefully and properly considered. The Executive Committee might meanwhile gather the combined opinions of the Branch Councils, and then bring up a report to the next meeting of the Council.

Dr. AQUILLA SMITH seconded the motion.

Mr. SIMON thought Sir Henry Pitman had put the Council in rather a false position. They had resolved on his motion to go into committee on the details of the Recommendations; they had been discussing it for some hours; their minds were full of the subject; and now they were asked not to proceed further. He (Mr. Simon) would prefer to proceed, and he thought the Council might make some progress in the matter.

Mr. MACNAMARA and Dr. PETTIGREW having expressed similar opinions,

Dr. STORRAR said his own personal feeling was that the Council was somewhat premature in going into this question at all. It was no very distant period since they had the whole of this preliminary examination under their consideration, and now they were setting to work to alter it again. Such a proceeding would unsettle the public mind, and he should advocate letting things remain as they were.

Sir HENRY PITMAN asked permission of the Council to withdraw his motion, and it was accordingly withdrawn.

A petition was then read from Mr. A. A. Sadgrove, asking that his name might be restored to the Register. He stated that he had been deprived of the privilege of practising for more than eighteen months, which meant a loss of £528 according to the position he previously held. He had since been obliged to refuse some very liberal offers, owing to his name not appearing on the Register. He enclosed a testimonial signed by the medical officers of the Paddington Provident Dispensary.

Strangers were then directed to withdraw; and on the motion of Dr. STORRAR, seconded by Dr. HAUGHTON, it was resolved, "That the Council see no ground for restoring the name of Arthur Augustus Sadgrove to the Medical Register."

It was also moved by Dr. FERGUS, seconded by Dr. SCOTT ORR, and resolved: "(*a*) That information be sent to all the licensing bodies that forged diplomas are in existence, and that this Council recommends the various bodies to be careful as to the recognition of foreign diplomas as admitting to final examinations. (*b*) That in all cases of doubt, or when the person presenting such diploma is not well known, the secretary of the licensing body should communicate with the university by which the diploma is said to have been granted."

The Council then adjourned.

WEDNESDAY, OCT. 15TH.

SIR H. ACLAND, PRESIDENT, IN THE CHAIR.

The Council went into committee for the adjourned consideration of the subject of preliminary examination of medical students.

On the motion of Dr. HUMPHRY, it was resolved, without discussion, that English history should be omitted from the subjects required for the preliminary examination.

Dr. HUMPHRY then moved, and Dr. STRUTHERS seconded, that modern geography be omitted.

Dr. STORRAR protested against the proposed omission, believing that geography was a necessary part of a medical student's education.

Dr. LYONS also objected to the proposal, and said that

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the subject was peculiarly important to medical men in connexion with the subject of the geographical distribution of disease, and the localities whence drugs are obtained.

Dr. CHAMBERS supported the motion.

Dr. HAUGHTON also spoke in favour of the motion, which was put and carried.

Dr. HUMPHRY moved: "That Latin include translation from specified authors, and translation of easy passages not taken from such authors." He said he did not suggest that the subjects whose omission he proposed were not unimportant ones in the way of mental culture, but what they had to determine was the selection of such subjects as would afford the best means of education. Hitherto the curriculum had been greatly overloaded, and the country was under the curse of the system of cramming a number of subjects into the heads of the poor students.

Mr. MARSHALL seconded the motion.

Dr. STRUTHERS objected to increasing the burden of Latin by adding passages from unspecified authors. He did not believe in Latin as the best subject for mental training. He had had large doses of Latin and Greek in his younger days, and had done his best to forget them, in which he had succeeded pretty well, except in regard to nomenclature. A minimum of Latin should alone be required, including a little translation and a little grammar.

Dr. PETTIGREW agreed with the remarks of Dr. Struthers, and hoped that the Latin examination would remain unaltered. A student might be much better employed than in studying ancient languages, which were inferior in utility to modern languages.

Mr. SIMON supported the motion, and said that the line had hitherto been drawn ludicrously low in regard to Latin, so that it could hardly be called a Latin examination at all. Now that two subjects had been withdrawn, he thought that some of the remaining subjects might be strengthened.

Dr. HERON WATSON supported the motion.

Mr. MACNAMARA said that as the curriculum had been lightened, it was only right that something should be done to render the examination in the remaining subjects more effective.

The motion was put and carried.

Dr. LYONS moved that Greek be inserted in the programme.

Dr. BANKS, in seconding the motion, said he was astonished at the remarks of Dr. Struthers, who, although coming from Scotland, had said that he would be satisfied with a minimum education in the dead languages. It was a strange way of raising the preliminary education to exclude Greek from the list of subjects of examination. He feared that it would be introducing the thin edge of the wedge.

Dr. HAUGHTON was satisfied to allow Greek to remain an optional subject, but strongly opposed its entire exclusion. The compromise formerly effected on the subject was, he believed, a wise one.

Dr. STORRAR, while highly appreciating Greek, and desiring it to be a necessary part of the training of a medical student, said it was impossible to secure that object, seeing that so many boys were not taught Greek at school. All that could be done was to retain it as an optional subject.

Dr. A. SMITH opposed the motion, which he contended was an impracticable one.

The motion was put and rejected.

Dr. HUMPHRY moved: "That instead of two books of Euclid, geometry comprise the first book of Euclid, with easy questions on the subject matter of the same."

Dr. HAUGHTON seconded the motion, which was carried without opposition.

Dr. HUMPHRY moved his next proposed modification—viz., "Elementary mechanics, to be passed before registration." He said it might not be possible to include the subject in one preliminary examination, but it might be passed separately before registration as a medical student.

Mr. MACNAMARA said that the proposal was a vital one for the Royal College of Surgeons of Ireland, where a preliminary examination was passed not including mechanics. If the proposed alteration were made the student would have to go through one year of professional study for which he would get no credit, as he could not be registered as a medical student.

Mr. MARSHALL thought the difficulty would be got over by allowing the student to pass the examinations at two different periods.

Dr. HAUGHTON said that Trinity College, Dublin, could not alter its regulations to suit the interests of one profession. The public entrance examination to that College did not include mechanics, but the subject was well taught in the Arts course. Their entrance examination was not intended for the medical profession alone, but for every profession. If the alteration were made the students who passed the entrance examination could not be registered as medical students. Indeed, only a degree in Arts would qualify the candidate for registration.

Mr. SIMON thought that the case of Trinity College, Dublin, could be provided for by a special clause.

Dr. STRUTHERS said that the examinations at the universities should be made to bend to the rules of the Council. Students might, he thought, take mechanics in the first instance, by a three months' course, before entering upon the other subjects. The subject was of great importance to the young medical student.

The motion was put and agreed to.

Sir H. PITMAN moved the following "foot-note" in substitution of the existing one: "This subject may be passed apart from other subjects at an examination conducted by any one of the recognised examining bodies."

Mr. E. MARSHALL seconded the motion.

Sir H. PITMAN, in reply to Mr. Macnamara, said that the object sought was that every candidate before being registered as a student should pass in all the subjects of preliminary education, but not necessarily at one and the same examination. At present there were many who did not pass in mechanics at all. The option was given them to pass at a subsequent professional examination, but there was no guarantee that they ever did so. When a candidate presented his certificate of registration, it was assumed that he had complied with all the requirements of the Council. The examining bodies could not be expected to act as policemen to see that the regulations were carried out. At the College of Physicians the registration certificate was accepted as a sufficient indication that those regulations had been complied with.

Mr. MACNAMARA suggested that a special entry might be made, in a space left for the purpose, as to whether the candidate had passed an examination in physics.

The REGISTRAR said that that was done at the office.

Mr. MACNAMARA said it would be the fault of the bodies themselves if students were allowed to evade the examination. The regulations of the Royal College of Surgeons of Ireland had received the sanction of the Secretary of State, and it would necessarily come into collision with the Council under its new Recommendation.

The motion was put and carried.

Dr. HAUGHTON moved, and Mr. SIMON seconded, the following "note": "Such (university) candidate shall be entitled to registration if the regulations of their universities necessarily involve a higher training and examination in mechanics than the preliminary examination in mechanics contemplated by the General Medical Council."

Mr. MACNAMARA pointed out that a student of Trinity College might pass the entrance examination (which did not include mechanics), and then, after being registered as a medical student, might leave the College altogether, and go through a medical course without taking mechanics at all.

Dr. HERON WATSON said he believed the medical studies at Trinity College, Dublin, overlapped the preliminary studies; whereas the desire of the Council was that the student in his medical course should be untrammelled by preliminary subjects.

Sir H. PITMAN called attention to a resolution passed by the Council in 1881, when the subject was fully considered: "That the examiners in general education conducted by the universities be accepted as heretofore, but that if in any of these examinations the subjects of elementary mechanics, solids and fluids, are not included, a knowledge of those subjects should be required at a subsequent examination."

Dr. HAUGHTON thought it would perhaps be better to leave out the "foot-note" with regard to the universities altogether, leaving Trinity College, Dublin, to deal with the situation as it best could.

Dr. Haughton then withdrew his proposal; and the "foot-note" No. 1 was also withdrawn.

Dr. HUMPHRY moved: "That the optional subjects be omitted altogether." His object, he said, was not to cast a slur upon the subjects in question, but to carry out the principle of diminishing the number of subjects required.

Mr. MACNAMARA, in seconding the motion, said he had voted for raising the Latin examination with the hope that some of the optional subjects would be thrown over. A man might be examined in Greek if he liked; but as to the

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other optional subjects, it was most desirable to lighten the ship of every one of them.

Dr. PETTIGREW was in favour of retaining the optional Council subjects, and thought the Council would err if it tied the student down to Latin.

Dr. BANKS spoke in favour of retaining the modern languages as optional subjects.

Dr. STRUTHERS thought that Greek must be recognised as one of the optional subjects. As to modern languages, the Council, in dealing with a profession which was essentially modern, ought not to refuse to encourage the study of French and German, and also Italian. He should not shed tears if logic were omitted; and elementary chemistry might with advantage share a like fate, because it was in all the professional examinations. He would, however, move that the subject of zoology be added to the list.

Dr. PYLE seconded the addition of zoology.

Mr. SIMON said he would gladly vote for Professor Humphry's resolution, which he considered an essential part of the reform which the Council was contemplating. The list of "optional subjects" represented to a great extent the crotchets or idiosyncrasies of individual members of the Council. Professor Struthers wished to add zoology, but why not add "things in general"? If the object were to give marks to any kind of knowledge—and it really came pretty nearly to that—why not say that a man who should pass an examination in Shakespeare or Milton should gain something? The purpose of the Council was that no man should be admitted to begin his medical studies without certain definite knowledge, and not to put after that requirement *plus* half a score of other accomplishments, many of which had been got more or less by chance.

Mr. MARSHALL dissented from the idea that the optional subjects represented the crotchets of the Council. He should like to see the profession joined by men of varied abilities; and if a candidate were an able French scholar he ought to be given due credit for it.

Dr. HAUGHTON thought it would be impossible for the Council, without committing a breach of faith, to remove Greek from the list, but elementary chemistry and logic might be excluded.

The motion for the omission of the optional subjects was then negatived, fourteen voting against it and seven in its support. The motion of Dr. Struthers, that zoology should be included in the list, was then put to the Council and agreed to.

Mr. MACNAMARA moved the omission of logic, but after a short discussion the motion was withdrawn.

The Council then adjourned.

THURSDAY, OCT. 16TH.

At the sitting of the Council in committee to-day, a resolution proposed by Dr. Struthers, "That the subjects of the preliminary examination for the registration of medical students be allowed to be passed at one or more examinations," was carried, after debate, by 10 votes to 8. The Council having resumed, considered and adopted the report brought up by the committee on the subject of preliminary education. It was also resolved that the amended regulations upon preliminary examinations should be communicated to those examining bodies whose examinations are recognised by the Council, but that they shall not come into effect until October 1st, 1885. Notices of motions by Dr. Haughton and Dr. Lyons were withdrawn, and on the motion of Dr. Lyons a committee was appointed to consider the question of a more suitable place of meeting for the Council.

This brought the business of the Council to a conclusion, and the session accordingly terminated.

THE WESTERN DISTRICT FEVER HOSPITAL.

FROM the annual report of the Medical Superintendent, Mr. R. D. R. Sweeting, we learn that during the year 1883 236 cases were admitted, 197 of these being scarlet fever, 18 enteric fever, and 13 typhus fever cases, the remaining 8 suffering from other diseases. The total number of deaths was 21, 15 of these being due to scarlet fever, 2 to intercurrent measles in scarlet fever cases, 3 to enteric fever, and 1 to inflammation of the kidney (tubal nephritis). The total mortality per cent., calculated by the Registrar-General's formula, was 7·92. That from scarlet fever was 6·77, and from enteric fever 14·63. Of the 8 cases admitted suffering from diseases other than scarlet, enteric, or typhus fever, 3 were cases of German measles, 2 of measles, 1 of tubal nephritis, 1 of diarrhœa, and 1 of gonorrhœal ovaritis; the cases of German measles, measles, and nephritis were sent in as being scarlet fever, those of diarrhœa and ovaritis as being enteric fever cases. Six cases of scarlet fever, also, developed eruptions of German measles in their course, the infection being started either directly from one of the cases admitted with the disease, or being due to the concurrent infection of one or more outside. Two cases, also, of chicken-pox coexisting with scarlet fever were noticed, in one of which the eruption of the former was just showing, in the other it was in a more advanced stage. These cases infected a scarlet fever convalescent. Five of the nursing staff and one kitchenmaid were attacked with scarlet fever, but none died; all were first attacks. An assistant nurse contracted typhus fever and died. Two others caught measles and enteric fever respectively, and recovered. Seventy-eight visitors paid altogether 258 visits to patients. None of the visitors were subsequently admitted with fever. Eight tables of statistics are appended to the report, which show that 83 per cent. of the admissions were scarlet fever cases, and 71 per cent. of the deaths were from that disease. September was the most active month in the point of admissions, which came to 41; of these 40 were scarlet fever cases. The mean total quarterly admissions were 59, and this was exceeded both in the third quarter (72) and the fourth (62). Kensington contributed 44 per cent. of the total admissions, Fulham 30 per cent. Of the total admissions of scarlet fever, 58 per cent. were under ten years. The mortality was greater amongst males, and heaviest in those under five years; the deaths from enteric fever were all male cases; no deaths from typhus fever occurred, 5 only as a matter of fact being treated, the others being transferred. Table 8 comprises (1) a list of complications and sequelæ observed in completed cases of scarlet fever; (2) a list of complications and sequelæ observed in completed cases of enteric fever. Amongst the kidney affections noted as complications and sequelæ of scarlet fever, acute desquamative nephritis and simple albuminuria hold equal positions, being equal to a percentage of about 12 on the total of completed cases; ascites was only present in one case. The cervical glands were enlarged in 105 cases; purulent otorrhœa was present in 33, and purulent nasal catarrh in 17. Uræmic convulsions were noted in 8 cases, and a true relapse in 10. Acute rheumatism figured as a complication four times, and there were three cases of retro-pharyngeal abscess.

DESTRUCTION OF THE CHRISTIANSBORG PALACE: ADDRESS TO THE KING OF DENMARK.

THE following is the text of an address presented to the King of Denmark by the English, Scotch, and Irish members of the International Medical Congress which met in Copenhagen last August. The destruction by fire of the beautiful palace, where the members of the Congress were so royally entertained, awakened general sympathy, which finds fitting expression in the terms of the address. The exact number of signatures appended to the address is sixty-three, every endeavour having been made to secure the signature of those who were actually present. The signatures were obtained by letter, and copied in facsimile on the vellum containing the address.

To His Majesty Christian IX., King of Denmark.

May it please your Majesty,—We, the undersigned English, Scottish, and Irish Members of the International Medical Congress lately held in Copenhagen, desire, very respectfully, to offer to your Majesty the expression of our profound regret at the destruction of the grand and beautiful Palace of Christiansborg. We very gratefully remember the honour conferred on us in that palace, where we were received and entertained with splendid and graceful hospitality by your Majesty and the members of your Royal Family. The recollection of that reception and of all the proofs of welcome which were shown to us in the City of Copenhagen impels us to offer, and to hope that your Majesty will graciously accept, this assurance of our sorrow for the loss which your Majesty and Denmark have sustained.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 18, 1884.

THE greatest apologists of the Medical Council would scarcely deny that the Council never appeared to greater disadvantage than it has done during the present sitting. We gave some illustrations last week of the questions on which members thought fit to spend hours and days of the Council's time. Since we last wrote, one or two questions of a graver and more practical kind have engaged the attention of the Council. But, for the most part, the order of business has been bad, indications of the sense of proportion have been slight, most of the questions that have been discussed had better have been left alone, and on the one subject of importance that has come before the Council a gravely wrong conclusion has been reached.

Whenever the Council does not know what else to do, or how otherwise to occupy its time, it falls back upon the subject of Preliminary Education. This is a theme that never fails. Fully a day or two is occupied in determining the shape that the discussion shall take, and the subject is one on which no two educationists are agreed. The rival claims of Latin and Greek, of modern and ancient languages, of literature and physics, of botany and zoology, of geography and history, are the questions on which the Council can always spend the best part of a week. It would matter less if its Recommendations were acted on. But they are not. And the Council is constantly laying itself open to uncomplimentary intimations from the universities and other bodies that they cannot adapt their examinations to the constant and capricious changes of the Council's regulations. There seems some fatal defect of memory on this subject in the most reasonable members of the Council. One such member said in the course of the present discussion, in reply to Dr. STORRAR, who urged that this subject was too often tampered with, that it had not been discussed for seven years. Turning to the minutes of the Council, we find it was most exhaustively discussed no further back than July, 1880. No less than four or five days were spent then in revising the regulations in regard to preliminary examinations. Here in 1884—actually only two years after the regulations then agreed to have come into operation—the Council deliberately opens up the whole subject, spends about three days and nearly six hundred pounds in going over the very same arguments and proposals, and in arriving at almost the identical results that were reached in 1880. Can it be wondered at that the universities are contemptuous of the Council and its Recommendations, and that school teachers and students are kept in perpetual and perplexing uncertainty? The actual changes made as the result of all this labour are the omission of English history and modern geography from the list of compulsory subjects and the inclusion of zoology among optional ones. One of the most curious facts in regard to this indefensible waste of time over an exhausted subject was that its discussion was initiated by Professor HUMPHRY, who ought to have remembered the rebuke administered by the chairman of the Board of Medical Studies of his university and the vice-chancellor of the University of Oxford to the Medical Council for not leaving such subjects, in accordance with its own expressed views, to the National Educational Bodies.

There are two subjects on which the Council will perhaps stake its reputation, and think that it has given a respectable judgment. The one of these was a motion by Dr. HUMPHRY, carried by all but three of the Council, "That no person shall be granted a degree, diploma, or licence to practise, registrable under the Medical Act, unless he has proved his competency in medicine, surgery, and midwifery, by passing examinations, in those subjects at one or more of the licensing bodies." The Council must really be very easily thrown into a state of self-complacency if it can be proud of itself for passing a resolution of this kind. *Cui bono?* Nearly every existing body does already examine in all the three branches of medicine. Probably only the Apothecaries' Societies do not. But even so, with one exception, their diplomas are not diplomas in medicine, surgery, and midwifery, but in one or other only of these branches. However complete the examination, in the existing state of the law the diploma is one-sided, and the student compelled to take two.

Another act of the Council, which many of its members seem to regard as a great feat, was the sanction of the conjoint scheme of the London Colleges, leaving out the Apothecaries' Company, on which we have already expressed an unfavourable opinion, and on which we shall next week have to say much more. The Scotch members to a man supported this resolution, but no less than ten members of the Council did not vote on the question. The vote, indeed, at the last was taken in a somewhat stormy Council, most of the members objecting to closing the discussion, desiring either to spend more time over the motion or to compel the co-operating Colleges to take in the Apothecaries' Society, which is left out in the cold to do an independent business, and which indeed has a good chance of doing a good business, giving a diploma which will cost but six guineas and will entitle men to registration and qualify them for five-sixths of the work of medical practice. It is intelligible enough that the Scotch members should unanimously have sanctioned a scheme which seems so well calculated to drive men for degrees and diplomas to Scotland. But how a General Medical Council could be found to sanction a scheme so unjust, so extortionate, and so impolitic we are at a loss to understand. We do not believe that even the Medical Council and the corporations can always resist the effects of such bad work as they have been doing of late. For the time being, with a demoralised and incompetent Legislature, such things may go on. But the day of reckoning will come.

THE Army Circular of October 1st contains a Royal Warrant, based on the report of Lord MORLEY'S Committee, amalgamating the Medical Department and the Army Hospital Corps. The Medical Officers and Quartermasters are in future to be designated "the Medical Staff"; and the Warrant Officers, Non-commissioned Officers, and men of the Army Hospital Corps, "the Medical Staff Corps." Besides this change of title, the Warrant makes a very

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important addition to that of June 10th in the following two clauses: (1) "The officers of the Medical Staff shall be the officers of, and shall command, the Medical Staff Corps, as well as all patients in military hospitals, and such officers, non-commissioned officers, and men as may be attached for duty to the Medical Staff Corps; but they shall not hold any military command outside the corps." (2) "An officer of the Medical Staff, selected by the Director-General and approved by our Commander-in-Chief, shall be appointed staff officer of the Medical Staff Corps." The Warrant gives medical officers the power, "when non-commissioned officers or men are guilty of misconduct, or show themselves negligent or indifferent while in the performance of departmental duty," to stop the whole or a portion of their departmental pay for the day. They have also the power to reduce first or second class orderlies to a lower rank, subject to the confirmation of the principal medical officer of the district or command. It must be very satisfactory to the army medical officers to have their position with reference to the men employed in hospital duties thus clearly defined, and the control of the establishments for which they are responsible entrusted to them, subject only to the administrative officers of their own service and the generals commanding districts at home or commands abroad.

Simultaneously with the promulgation of this Warrant, a General Order has been issued from the Horse Guards directing the establishment, in connexion with a general hospital at the base of operations in time of war, of a depôt, under the command of an experienced officer, for the reception and accommodation of men when discharged from the hospital. The duties of this officer will include the charge of the arms, equipment, &c., of the men, the settlement of their accounts, the issue of routes, the conduct of all correspondence not of a professional character, the interment of the dead and the disposal of their effects, and the report to their corps of the arrival and departure of sick and invalids and of deaths occurring in the hospital. "The depôt will be considered a necessary part of general hospital organisation, and will accompany a hospital on active service when and where it may be moved or established." It is distinctly laid down in the Order that the officer commanding the depôt "will have no authority over the hospital or its staff, and is not to interfere in any way with the discipline, order, or arrangement of the hospital, or its staff, or inmates, the whole of whom are subject only to the orders and control of the principal medical officer, under the general officer commanding at the base or in the district in which the hospital is established."

YEAR by year the importance of the duties performed by the Port Sanitary Authority of London, especially in so far as these relate to the protection of the health and sanitary interests of the metropolis, increase in importance, and the report which has just been issued by that authority and their medical officer of health, Dr. COLLINGRIDGE, for the first six months of the present year, deals with matters deserving considerable prominence. The limits of the port district have now been definitely defined, and the jurisdiction of the authority extends to Port Victoria, Sheerness, Queenborough, and to a portion of the Medway, in addition to the Thames and its banks as far as the Nore. The sanitary control of such a district, if efficiently carried out, must constitute one of the principal safeguards to the metropolis and to the country generally, with regard to the importation of infectious diseases and other matters, and it is evident that the existing administration leaves but little to be desired in point of efficiency. The river and its shipping are subject to constant inspection, a special steam launch is maintained to aid in this work, a deputy medical officer of health is available for the Gravesend portion of the river, an excellent infectious hospital has been erected in a suitable position on the banks of the stream, arrangements are in force for obtaining the earliest possible information as to the existence of infectious disease, means for the disinfection of clothing and other articles are available, and the whole system of work is under efficient supervision. The existence of cholera at Toulon and Marseilles, and later on at Naples and Genoa, would in years gone by have been a source of great alarm in connexion with the shipping coming from the Mediterranean ports to London; but this year, although the occurrence has necessitated much increase of vigilance and of work on the part of the port officers, yet the state of preparedness which had been attained enabled them to face the danger with a degree of confidence which has never yet before been possible, and the country itself, knowing all that has been done, cannot but share in the trust which may be placed in the organisation now established. Had it been necessary, the staff for inspection purposes would have been materially increased, the means of isolation were already available, and the system of protection against cholera importation on which we rely in this country would have been fully carried out. As it was, rigid inspection was made of ships and, where necessary, of crews and passengers, the utmost cleanliness as to water bilges, and all matters affecting the sailor was insisted on, and a notice was freely distributed as to the need for cleanliness and the early treatment of diarrhœa. A system of notification of infectious diseases has also been brought into operation. From the commencement of this year it became necessary that every master or person in charge of a vessel should report the existence of any case of certain specified infectious diseases not more than two hours after reaching either Gravesend or Greenwich, and since the issue of the necessary notices, wilful concealment of disease which was formerly practised has come to an end. Were any such organisation and appliances in actual working in foreign ports, the days for rigid quarantine measures would probably be nearing their end. But the work of the port officers is in no way limited to the protection of the country against infection. Our food supplies are subjected to a rigid inspection when arriving through the port of London, and owing to the imperfections still attaching to the methods for freezing meat and canning articles of food, it has been found necessary, after careful examination, to condemn large quantities of such articles. The labour involved in this is very great; it generally necessitates the examination of the whole consignment, and when unsound articles such as meat are discovered they are disinfected before removal so as to avoid nuisance, and then they are destroyed at certain depôts under the supervision of one of the port inspectors, the owner or consignee paying all expenses. The polluted condition of the Thames has also been a matter of continued concern to the authority, whose labours in the

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interest of maintaining our great watercourse in a reasonably wholesome state deserve the recognition of the whole public. During the past half year the state of the river has been worse than ever, and its fetid filthiness, previously somewhat obscured under the cold summers we have experienced, has been revealed in all its loathsome nakedness. The area of pollution seems also to be increasing as the metropolis becomes more populous, and Dr. COLLINGRIDGE reports that the whole river from Purfleet to Limehouse is of a dark colour, with blacker patches here and there, and has a most disgusting smell. The action of the Metropolitan Board of Works, in so far as they affect to deodorise the vast mass of sewage, is condemned as unsatisfactory, and it is difficult to conceive that it could be otherwise regarded.

DR. CRICHTON BROWNE is mercilessly vivisecting Mr. FITCH, so far as that gentleman may be embodied in his memorandum. In a series of lengthy but singularly lucid and, if we may say so, amusing letters in *The Times* the author of the report is administering a "policy of reprisals," of which the author of the memorandum forms the victim. We do not envy Mr. FITCH or his chief. They did not form an adequate estimate of the "knee-jerk" in Dr. CRICHTON BROWNE when they tried to sclerose him in the proliferating fashion of the great educational department presided over by Mr. MUNDELLA. Entirely in consequence of the tests applied it has come out reflexly that Dr. CRICHTON BROWNE was not a volunteer inquirer, as alleged for parliamentary purposes; that he did not take the first step in the matter, but was actually "sent for" and "asked" to investigate the subject of "over-pressure"; that Mr. FITCH was not less ill-informed than ill-mannered when he affirmed that Dr. CRICHTON BROWNE was unqualified by experience for the task he had undertaken. Nothing can be more destructive than Dr. CRICHTON BROWNE'S scathing though courteous rejoinder to Mr. FITCH; and the question at issue may now be lifted out of the region of departmental and personal strife, and placed on the basis of ascertained fact. There *is* over-pressure in elementary schools, let who will or may deny the fact and affirm its contradiction.

Moreover, the pressure proved to exist is very great and mischief-working. The undeveloped brains of half-starved children, in whom heredity, adverse surroundings, and too often actual disease combine to handicap energy, are strained and irritated by the application of a code framed in ignorance of the first principles of brain-life and function, and administered in an offhand and indiscriminate fashion. The results are damage and wreckage; and for every case that is brought under public observation there are many that pass unnoticed. Mr. MUNDELLA and his subordinate may deny or question these facts as they please. It is an all-sufficient answer that they *are* facts, and no amount of ingenuity can ignore them. The time has come to speak plainly on this subject. The moment Mr. FITCH was commissioned to annotate Dr. CRICHTON BROWNE'S report—a non-medical man to criticise and contradict the expressed opinion of a physician who is almost a specialist on the physiological aspects of the educational question—the Education Department of the Privy Council placed itself wholly and irretrievably in the wrong. It was only necessary to wait until the author of the report had published his rejoinder before taking up a formal position in the controversy. Dr. CRICHTON BROWNE has now disposed of the personal question, and we are free to speak.

In the name of common sense we ask, What does the Vice-President mean by such trifling with a grave question as that in which he has indulged with the aid of his inspector? When Mr. MUNDELLA sent for Dr. CRICHTON BROWNE, he must have had one or the other of two purposes in his mind, either to make evidence to bolster up his department, or to obtain an honest opinion on its administration. If Mr. MUNDELLA claims to have sought only a good professional judgment, why does he complain because it is against him; and, above all, why does he charge or allow a non-medical inspector to assail and insult the very physician selected by the Vice-President for the investigation?

When first we commented on this topic, we likened Mr. MUNDELLA'S commission to Mr. FITCH to that of the defendant who, having no case, instructed his counsel to abuse the plaintiff's attorney. The matter turns out to be one of far greater gravity than this comparison would serve to indicate. Mr. MUNDELLA has allowed his attorney to abuse the Judge—the Judge, be it observed, of his own selection, and to whom he deliberately appealed. This being so, we have no words strong enough to mark our sense of the insult Mr. MUNDELLA has by his agent offered to the medical profession, as represented by Dr. CRICHTON BROWNE. The strait in which the Department found itself cannot for one moment be accepted as an excuse for the offence committed. The facts have proved to be against the policy pursued, and a deliberate attempt has been made to deny or misconstrue them. It only remains to say that the allegations of Dr. CRICHTON BROWNE'S report are abundantly supported by independent evidence; and now that the bad faith of the Department stands confessed, the appeal must lie to the common sense of the community. It is intolerable that the policy of over-pressure should be pursued, and, with Dr. CRICHTON BROWNE, we say it must cease.

Annotations.

"Ne quid nimis."

HOSPITAL SUNDAY FUND.

THE Council of the Hospital Sunday Fund met on the 10th inst., to discharge a pleasant duty—viz., to dispose of £4500 which had been sent by His Royal Highness the Prince of Wales as the result of the recent hospital fête. In addition to this sum, £713, which had been paid into the fund since the last meeting, had to be distributed. The Council determined wisely to divide the money *pro rata* among the various hospitals and dispensaries which had recently received the bulk of the fund. One interesting feature of this incident is the proof which it affords of the confidence of the Prince and the public, which he so well represents, in the judgment of the Council of the Hospital Sunday Fund. This sum had of course no connexion with Sunday or any religious denomination, but yet was forwarded for distribution to the Hospital Sunday Fund. Dr. Glover argued that such proofs of public confidence made it incumbent on the Fund to consider whether in any other or further way they could promote the public support of hospitals. Referring to the recent discussion in *The Times*, in which

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Mr. Burdett ably shows that the income *from all sources* of all the hospitals has not fallen off since the institution of Hospital Sunday, but has, on the contrary, increased by 8·9 per cent., Dr. Glover maintained that hospitals had not suffered from, but had benefited by, the Fund, and that the treasurers of hospitals would be very sorry indeed to be deprived of the assistance of the Fund, and urged that the authorities of individual hospitals should increase their energy and inventiveness in devising new sources of support. His resolution, unanimously agreed to, was as follows: "That it be an instruction to the General Purposes Committee and the Distribution Committee to consider whether any, and what, means could be recommended for adoption by the Council for increasing the power of the Hospital Sunday Fund in its efforts to develop and extend the public support of the medical charities of the metropolis." Sir Sidney Waterlow expressed very powerfully an obvious objection to giving a "district" or localised character to the Sunday collection. This would debar the inhabitants of the rich districts from the pleasure of helping hospitals in poor districts, and it would tend to belittle and parochialise a great metropolitan movement. But this and all other suggestions, we may be sure, will be fully considered by the committees to which the instruction expressed in Dr. Glover's resolution has been referred.

PRECAUTIONS AGAINST CHOLERA.

THE War Office has just issued, in the October *Army Circular*, a new code of instructions to commanding, medical, and other officers of the army for "guidance at a time when there is reason to anticipate an outbreak of cholera, or when it is actually prevalent among the troops." They are divided into three sections, the first being the precautions to be adopted in anticipation of an epidemic; the second, additional measures when it has broken out among the troops or the surrounding population; and the third, the instructions respecting disinfection. The measures to be adopted when an epidemic of cholera is expected may be summarised as follows: great attention to the sanitary condition of barracks and camps, and the removal of nuisances in the neighbourhood; avoidance of crowding in barracks; attention to ventilation, cleaning and lime-washing of walls and ceilings, regular emptying of ashpits and cesspits, and flushing of latrines, sinks, and drains; examination of traps, ventilating shafts, and valves connected with sewers and drains; particular attention to the water-supply, and inspection of the rations and other supplies for the use of the troops. The night duties of the soldiers are to be reduced as much as possible, and arrangements made for speedily changing wet articles of clothing. A small body of men are to be exclusively employed in carrying out conservancy duties in barracks. The additional measures when cholera has broken out among the civil population are the prevention, as far as possible, of soldiers going into affected districts, the camping out of a portion of the troops if the barracks are overcrowded, the issue of tea or coffee to the men before going on early morning or night duties, the issue of two flannel belts to each soldier and the use of flannel shirts, and a careful watch for men suffering from looseness of the bowels. When a case occurs in barracks, the room is to be vacated, fumigated, and cleaned, and if the disease spreads, the troops are, on the advice of the principal medical officer, to be camped out when practicable, and the site of the camp changed if necessary. The evacuations of the cholera patients are to be "passed into vessels supplied with chloride of lime, cupralum, or carbolic acid powder, and thereafter buried in some place or disposed of in a drain set apart for the purpose." Under the third head—"Disinfecting Agents"—chloride of lime or quicklime is to be used when a considerable space and bulk of material are to be dealt with; cupralum is especially applicable for bed-pans, closets, &c., and carbolic acid powder for urinals, privies, dust-heaps, &c., as well as for bed-pans, and closets. For the purposes of fumigation, chlorine gas, nitrous acid gas, or sulphurous acid gas may be used, and detailed instructions are given as to the quantities required for the disinfection of 1000 cubic feet of space, and the mode in which these gases are to be prepared and employed. The instructions appear to us to have been carefully drawn up, to be very practical, and to be likely to prove useful in preventing the spread of the disease should it unfortunately break out among our troops or the civil population.

MEDICAL EDUCATION IN AMERICA.

THE current number of *Le Progrès Médical* contains a letter—the first of a series—from M. L. Thaon, giving an account of medical education in the United States. He has visited several of the leading schools on the route from San Francisco to New York, and his description will be read with interest. He points out that, unlike France and Germany, but like England, medical education in the States receives no support from Government, which is so prolific in its favours to primary education. The American is, he believes, the outcome of the English system, which "leaves medical instruction in the hands of a dozen free and independent corporations, who teach and confer diplomas without any Government interference"; but he points to the projected Medical Act as an indication of the desire on the part of the English profession to adopt the continental plan. There are "three medical schools in New York, besides the Women's College; two in Philadelphia, and one for women; two in Boston; three in San Francisco; one in Denver—a town which did not exist twenty-four years ago; and there is one in another small town in Colorado of only 6000 inhabitants." In addition to the regular schools there are the *irregular*—viz., homœopathic, eclectic, and physio-medical, which last defies definition. Altogether there are 139 medical schools in the United States and Canada, containing about 12,000 students—viz., 10,000 regular, 1200 homœopathic, 750 eclectic, and 50 physio-medical students. The total number of doctors is about 100,000, or on an average one to every 500 inhabitants. M. Thaon goes on to describe how easily such schools are founded, and how they are maintained occasionally by public liberality, of which the Johns Hopkins University and the recent gift of 250,000 francs of Mr. Andrew Carnegie to the Bellevue College of New York, to provide histological and pathological laboratories, are striking instances. The maintenance of most of the schools depends on the students' fees; and an institution with fewer than 400 or 500 students can only be maintained at a sacrifice, or with inadequate remuneration of its teachers.

INSURANCE OF INFANT LIVES.

MUCH attention has recently been drawn to the evil effects which result from the insurance of the lives of infants. In Burnley, according to a report by Dr. Airy of the Local Government Board, the deaths of infants under one year of age is excessively high, the average rate being 20 per cent. of the births registered. This result is in part due to the practice of mothers employed in mills leaving their infants with old women who profess to look after them. But, adds Dr. Airy, it is strongly suspected that the very general practice among the poor in Burnley of insuring the lives of infants results in many cases in the death, on which it puts a premium. This is what numerous medical officers of health have long maintained, and it is to be hoped that some statutory restriction will soon be put upon a practice which is reprehensible in the extreme, and to which it is to be feared that many infant lives in this country have been sacrificed.

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ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

WE believe that the sub-committee which was appointed shortly before the long vacation to prepare a scheme of reform has completed its labours, and that its report will be presented to the committee of the Association next Thursday. When the scheme has received the approval of the committee, it is contemplated to circulate a draft of it among the Fellows and Members of the College in order to secure the interest and co-operation of the whole of the members of the corporation. The details of the plan of reform have not yet transpired, but we are assured that when they are made known they will be found to aim at increasing the political and academic importance of the Fellows and Members, at the same time that they will add to the usefulness, influence, and dignity of the College.

INFLUENCE OF LIGHT ON THE DISSOCIATION OF OXYGEN BY PLANTS.

A CHEMICAL study, which may be mathematically investigated, is the question of the influence of light in disengaging oxygen from plants. The subject is one which has frequently received attention, but by no one more thoroughly than by Prof. Reinke. The method adopted by this observer was to calculate the number of bubbles of oxygen liberated by a given surface of a leaf, under the influence of varying intensity of light. The intensity of the light was obtained so as to be capable of exact measurement by means of a convex lens which transmitted light into a darkened chamber from a heliostat, which reflected the light of the sun. The intensity of light to which the leaf is subjected then varies according to its position in the double cone of rays formed by the lens. Working in this way, the author finds that the separation of oxygen obtains its maximum with light of normal intensity (i.e., at twice the focal distance of the lens, where the diameter of the cone of rays is the same as at the lens), that it rapidly diminishes with intensities of one-fourth, one-eighth, and one-sixteenth; but, on the other hand, remains almost constant when the intensity is two, four, and eight times the normal. The study of the influence of light of different colours on the disengagement of oxygen by plants has been investigated in a similar manner. The maximum disengagement of oxygen corresponds with the maximum absorption of the green colouring matter of plants, and is situated in the red, not far from the line B; the curve representing the degree of separation of oxygen descends rapidly towards the ultra red, more slowly towards the ultra violet; but, contrary to the experiments of Engelmann, there is no augmentation in the dissociation of oxygen corresponding with the absorption band, commencing between the lines *b* and F, and extending over the whole of the right side of the spectrum.

THE WIDTH OF STREETS.

MUCH advance has been made during recent years in securing increased space about inhabited dwellings, and modern regulations require that a certain minimum of space shall be given in the rear of houses, and also to the front, the width of the street being taken into account as regards the latter space. But in the State of Illinois the excessive width of the streets is reported as having of itself become a source of nuisance and of danger to health. Sixty feet and more are ordinarily given to new streets, even in the smaller towns; eight feet on either side are paved and devoted to pedestrians; and the remaining space, varying usually from forty-four to fifty-four feet, is devoted to carriage traffic. The result is that this wide carriage road, so often in excess of the requirements of the vehicles that have to travel over it, becomes a source of such expense as to forbid its being properly paved, cleansed, and channelled. The street consequently is soon turned into a vast surface of dirt mixed with filth, horse droppings, and other refuse, and when the weather is so dry that dust is formed, the air which is inhaled as the dust flies about is calculated to bring about disease as well as discomfort, instead of promoting the health of pedestrians. Dr. Gregory in bringing forward this subject fully concurs in the great importance of providing wide thoroughfares, and of keeping the number of inhabitants to each acre down to a proper maximum, and hence he declares that he would not on any consideration diminish by a single foot the width of the streets. But he would curtail the actual roadway, so that it shall only suffice for the proper demands of the carriage traffic, and between that limited space, which could then be properly kept at a reasonable cost, and the foot-paths, he would plant trees and lay down grass, so as really to provide in towns and cities such freshness and greenness as would go far to induce people to take that form of exercise which is most conducive to health. The hints given are as well worthy of attention in this country as on the other side of the Atlantic. Something has been done in this direction both in the metropolis and in other towns within the past few years, but there is still room for much that would help to render our town thoroughfares both more healthful and more attractive.

MIGRAINE AND TABES.

AMONGST the various prodromata of tabes dorsalis, attention was drawn by Duchenne, and later by Pierret, to the occurrence of neuralgic seizures closely simulating hemicrania; and the recent brochure of Berger, to which we have previously referred, mentioned this fact as a novel observation. Dr. H. Oppenheim of La Charité, Berlin, points out (*Berl. Klin. Wochenschr.*, 1884, No. 38) the priority of the French authors, and supplies some interesting details of twelve cases, from a total of eighty-five tabetics, who either were at the time of observation or had previously been subject to migraine, ten of the patients being females. The study of these cases leads him to conclude that hemicrania is far too frequent a feature in the history of tabes dorsalis to be considered an accidental event, and that it is far more common among tabetic women—e.g., ten times in thirty-two cases—than among men. The relations which the hemicrania bears to tabes are various. Generally it has been present many years before the initial symptoms of tabes; and the hemicranial attacks increase in frequency, intensity, and duration as the disease advances. Or the migraine may coincide with the onset of declared tabetic symptoms, or be associated with vomiting and gastric crises. In rare cases the hemicrania does not appear until tabes is developed. On these grounds, Oppenheim thinks it the duty of the physician, especially in migraine of increasing severity, to be on the alert for the recognised early symptoms of tabes—especially the absence of knee-jerk.

MEDICAL REGISTRATION.

WE publish this week, in our advertisement columns, a notice by the Registrar of the Medical Council calling attention to the importance of every registered medical practitioner sending information to the branch registrar of the division of the kingdom in which he may be practising of any change in his address or of the acquirement of any additional qualification, in order that such change or addition may be included in the forthcoming Medical Register; also of replying at once to any letter of inquiry that may have been sent in regard thereto. Carelessness in the above matter has frequently been followed by great trouble and inconvenience.

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HÆMOGLOBINURIA.

A PAPER on the above subject was read by M. Henrot at the recent meeting of the French Association for the Advancement of Science, and gave rise to an interesting discussion. (*Progrès Médical*, Oct. 4th.) Two cases were recorded in the paper. The first was that of a man aged thirty-two, with phthisical consolidation at one apex; he was also syphilitic. Occasionally, and as a rule after exposure to cold or muscular fatigue, he passed coffee-coloured urine. Before the attack, which was always pyrexial, the urine was clear and free from albumen; after the attack it contained albumen, but no blood-corpuscles. At the end of two years the hæmoglobinuria disappeared, but the urine became albuminous, and the patient eventually died of tuberculosis. The second case was that of a man thirty-five years of age, who had had four attacks, during which he passed characteristic urine containing albumen after the attack; urobilin was found in this urine. M. Henrot suggested that the dissolution of the blood-corpuscles in these cases was due to the presence in the blood of biliary acids. As to the treatment of hæmoglobinuria, he raised the question whether inhalations of oxygen might not be of use by increasing the resisting power of the corpuscles. In the cachectic period transfusion of blood might be resorted to. In reply to M. Maurel, he said that neither of the patients had shown any malarial symptoms; one had lived in Africa for some time. M. Hayem thought the rarity of icterus associated with hæmoglobinuria a forcible objection to M. Henrot's view. Another objection lay in the fact that for hæmoglobin to escape there should be a large quantity of it in the serum. In some experiments he made on this subject, he attempted to set the hæmoglobin free by injecting water into the blood, and found that it was not until a quantity of water equivalent to one-half the mass of blood in the animal was so injected that hæmoglobinuria (and then only transitorily) occurred. Yet the serum of the blood in cases of hæmoglobinuria is barely more coloured than normal, and the plasma contains about as much hæmoglobin as in health. Therefore, M. Hayem thinks, there is every probability that in this affection the hæmoglobin is altered, acting as if it were introduced from another species of animal, an experiment which immediately excites hæmoglobinuria.

ADJOURNED INQUESTS.

DR. DIPLOCK, coroner for West Middlesex, held an inquest at the Vestry Hall, Church-end, Willesden, touching the death of the Rev. William Spencer Edwards, who died suddenly at the residence of Dr. Keele, Cricklewood, Willesden. The evidence went to show that the deceased's health was greatly shattered, and that he suffered from great nervous prostration with excitement, which rendered advisable his removal from town to a quiet country place. The post-mortem examination was made by the divisional surgeon of police, who concluded that the fatal issue was from syncope consequent on cardiac disease. The jury, influenced, no doubt, by the facts disclosed during the hearing, considered themselves not justified in returning a verdict without further medical evidence. We do not wish to intervene between the jury and their verdict by discussing the merits of the case, but we cannot help thinking that when a dispute is likely to arise at the hearing it is well either that the coroner should appoint some medical expert approved by all the parties, or that each one should send its representative to witness the autopsy. In this way an adjourned inquest would in many cases be unnecessary, expense to the ratepayer would be saved, and what is of far higher importance, there would be less chance of the evidence as to the cause of death being destroyed by exposure and putrefaction of the body. We wish it clearly to be understood that we do not cast the slightest aspersion on the gentleman who conducted the post-mortem examination in this particular case, as we have no reason to doubt his probity and skill, but the event thus far shows the reasonableness of our suggestion.

VEGETARIANISM.

DR. B. W. RICHARDSON'S address, delivered at the dinner recently given by the Vegetarian Society at the Health Exhibition, was calculated in some measure to raise the hopes of those who look upon the flesh-pots as an abomination, and the consumers of animal food as guilty of depraved habits. Yet, although the speaker inveighed against the prevailing custom of a too exclusive indulgence in the carnivorous instinct, he discounted much that might have been taken as an advocacy of strict vegetarianism. There were, he said, vast social and commercial problems involved in the question that was now moving a section of the community to effect what they believed to be a reform in our national dietary. We have only to consider for a moment the utter confusion in the order of nature that would ensue on our refusing to resort to the animal world for a part of our sustenance. We are not of those who hold that the length of the intestinal canal is proof that man was never intended to regale himself with the luscious bivalve, or with well-seasoned game. Science teaches that structure and function are very closely connected, and a study of the doctrine of evolution reveals the fact that the anatomy of individual organs is largely dependent upon the work those organs have to perform. John Hunter showed this to be the case by the experimental feeding to which he submitted his tame gull. That the resources of the vegetable world are not drawn upon to anything like the extent that they should be we freely admit. Moreover, there can be little doubt that partial abstinence from, or in other words moderate ingestion of, animal food checks the craving for alcoholic stimulants, and thus proves itself a very desirable condition of life. But to declaim against the abuse of a particular viand is quite consistent with admitting its use. The members of the Vegetarian Society are to be congratulated upon the good they have already done and are still doing, but they must not be disappointed if they find that their arguments do not carry conviction to the minds of all those whom they address, or at any rate to the full extent of their desires.

THE METROPOLITAN ASYLUMS BOARD.

AT an ordinary meeting of the managers of the Metropolitan Asylums District on the 11th inst., the General Purposes Committee reported that one of the small-pox camps at Darenth had been disestablished and one of the hospital ships closed. The committee were of opinion that the time had now arrived when the several infectious hospitals under the control of the Board should be designated "fever hospitals," upon the understanding that at each of such hospitals isolation wards were to be set apart for the reception and treatment of small-pox or other patients, and the remainder of the hospital appropriated exclusively to the treatment of fever patients. The Board endorsed this opinion, and the hospitals will in future be described as fever hospitals. At the same meeting a letter was read from the Local Government Board authorising the managers to raise on loan an additional sum of £1630 for the adaptation of the *Castalia* as a floating hospital, and the finance committee was requested to prepare a return showing in detail the expenditure in the various asylums, hospitals, and camps during the year ended Michaelmas last, together with the daily number of patients and staff maintained, also the cost of maintaining them, the wards, steamers, and ambulance stations during the same period.

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THE COSTLINESS OF THE MEDICAL COUNCIL.

IT is always well, in stating the weak points of individuals or bodies, to err in the way of understating rather than of exaggeration. It has been pointed out to us that, in our leading article last week, we have understated the costliness of the Medical Council. We had good authority for our estimate, but we have still higher for the following, which shows that the

Cost per day, on an average, is	£191	14	0
Cost per hour ,, ...	48	0	0
Cost per minute ,, ...	0	16	0

This estimate is taken from a paper of the Registrar, Mr. W. J. C. Miller, published in the Report of the Select Committee. It is calculated from the actual cost of three specified sessions. Thus—

(1) Session of thirteen days (1877) ...	£2204	4	11
(2) Session of three days (1870)	640	0	0
(3) Session of one day (on various occasions)	414	15	0

The cost (3) of one day's sitting includes not only fees for attendance, but travelling expenses, hotel expenses for members not residing in London, &c., which have to be paid, whether the session lasts one day or thirteen.

CARIES OF BASILAR APOPHYSIS.

THE diagnosis of the seat of a coarse lesion of the brain does not give any definite information of the pathological nature of the lesion. In actual practice rare pathological states can hardly be taken into account in considering the probable nature of any case of cerebral disease. M. Suzanne has given a careful account of a case of caries at the basilar apophysis which led to nervous symptoms as the result of compression of the pons Varolii by some inspissated pus, the product of the osseous ulceration. The main symptoms were paralysis of the left side of the face and of both arms and legs. Caries of the basilar apophysis is an unfrequent affection, which is generally attributed to syphilitic disease. The indications of syphilis in the case above referred to were by no means clear. The paralytic symptoms were probably due to combined compression and inflammation, the result of extension, of the pons.

DEVELOPMENT OF SPINAL NERVE CELLS.

AN interesting essay on the formation and development of the nerve cells of the spinal cord of mammals has recently been read by M. Vignal at the Académie des Sciences. The nerve cells begin to make their appearance in the spinal cord of the embryo of a sheep at the period corresponding to the tenth week of intra-uterine life of the human embryo; they are formed by a transformation of the cells which compose the embryonic grey matter. The nerve cells appear simultaneously in this substance in two principal groups; the first is situated at the inner part of the anterior horn, the second at the external margin of the anterior horn. The two groups correspond respectively, in the dorsal part of the cord, to the anterior group and to the lateral group; some other cells may be seen to be irregularly scattered through the anterior horn. At first the shape of the newly formed cells is irregular and variable; they possess long slender processes, which are sometimes bifurcated; their nucleus is large, has a clear well-defined outline, and contains one or two distinct nucleoli. All degrees of change may be met with between the embryonic cell and those just described. At the period corresponding to the fourth month of human fœtal life the cells in the anterior horns are much more numerous; the embryo of the sheep measures ·10 metre in length at this period. The cells of Clarke's vesicular column make their appearance when the embryo of the sheep is ·17 metre in length. A vague striation may be seen in the protoplasm of the cells at the age corresponding to the sixth month of human intra-uterine life; previous to this time the protoplasm has a homogeneous aspect. The striation appears to be due to the granules in the protoplasm having become finer, and arranged in a linear series. Corresponding to the seventh month the striation is more extensive, and becomes so pronounced that excessively fine fibrillæ may be said to exist. The fibrillation is universal in the cells of the anterior horn, and also in their ramifications at the period corresponding to the ninth month; the changes occur at a later period in the posterior horn. At birth the nerve-cells are practically finished in every respect except size, and they never contain pigment granules, which absence would seem to show that pigmentation is a product of degeneration.

ROYAL VICTORIA HOSPITAL, NETLEY.

CONSEQUENT upon the abolition of the appointment of a Military Commandant at Netley, the Horse Guards have issued an addition to the "Queen's Regulations and Orders for the Army" on the subject of the duties connected with the administration of the hospital. The first regulation laid down is that "the Principal Medical Officer, Netley, will be entirely responsible for the discipline and for the general management of the hospital." An Assistant Adjutant- and Quartermaster-General is to be stationed at Netley as representative of the General Commanding the district. His duty will be to report to the corps to which they belong, the arrival and departure of invalids, and all deaths occurring in the hospital, to see that all discharge documents are completed, and to forward them to the proper authorities, to settle all claims, to issue all routes, and to conduct all correspondence with corps not relating to medical subjects. He will be required to visit the hospital frequently, but at such hours as do not interfere with the medical officers, and to report to the General and to the Principal Medical Officer any irregularities he may observe and any complaints made to him which he may not have been able to adjust. "He will, however, never interfere in any way with the arrangements nor give any orders to the orderlies or others employed in the hospital." He is also to be responsible for the military police, for the discipline of all officers and men not patients in hospital or belonging to the Army Staff Corps or nursing establishment, for all military clothing the property of Government, and for the disposal of the effects of soldiers who die in hospital, which are to be handed over to him by the hospital authorities. These regulations appear to provide sufficiently for the military requirements in connexion with the invalids, while they leave the management of the hospital free from non-professional interference.

ALCOHOLIC DRINKS.

OUR contemporary *The Times* has done its best to make amends for the recent publication of an article in which the evils of drinking were extenuated and the uses of alcohol were drawn very large. It has allowed Dr. Alfred Carpenter to contradict it point by point by reporting his paper, delivered at a meeting of the Society for the Study and Cure of Inebriety. Cardinal Manning has been speaking on intemperance at Sheffield with the force which characterises all his public speeches. His address was interesting from a medical point of view, as containing quotations from the sayings of Sir Andrew Clark and Sir Henry Thompson on the immense harm done by drink. Sir Andrew had told the cardinal that in seven out of ten of his hospital patients disease was caused by drink, and in the three others was often aggravated by it. "At last," added Sir Andrew, "I have sometimes said to myself, Shall I not do more for the health of man if I give up the practice of

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medicine and go about the country in a crusade to prevent the use of intoxicating drinks?" We trust Sir Andrew will stick to Cavendish-square, and from that pleasant vantage ground continue to "reason of temperance," like a favourite author of his, until a luxurious age begins to be convinced of its errors and to abandon its vices.

POLITICS AND SANITATION IN BELGIUM.

THE constitutional crisis which is disturbing the peace of Belgium gives special interest to the communal elections that are to take place throughout the country on the 19th of this month. Of course it is not our mission to interfere with the political points at issue; but, seeing how the whole national system of education has been disturbed and experienced teachers driven from their posts because they belonged to the opposition, we cannot but view the forthcoming elections with some anxiety. The municipal services in Belgium, but especially in Brussels, are admirably organised so far as the preservation of public health is concerned. In this Brussels is at least fifty years ahead of Paris; and, in some respects, in advance of the best organised towns in England. The *Service d'Hygiène* of Brussels, under the able directorship of Dr. E. Janssens, is a model institution, constantly visited by sanitary reformers from all parts of Europe, and serving as an example in all countries. The mortality tables, the system of disinfection, the methods of superintending, improving and controlling house drainage, the care of sickly children at primary schools, the organisation of the public vaccination office—in all these and many other services the most advanced methods have been employed and excellent results attained. Whatever, therefore, may be the issue of the present political struggle, we trust that the sanitary services will escape all disturbing influence.

YOUNG GIRLS IN LONDON.

SIR ANDREW LUSK spoke a few kind and sensible words in Islington on the 7th inst. in support of the Islington Young Women's Club and Institute. Sir Andrew said there were about 300,000 young women and girls in the warehouses and factories of the metropolis who had few comforts at home and few friends to advise them well and kindly. The young women of the metropolis with questionable taste are showing a tendency to prefer warehouse and factory work to domestic service. They have more liberty in such a career, but less of that discipline and duty of home life which is so good for human nature, especially in its female form. There is all the more need therefore of such institutes as that over which the worthy baronet presided.

THE TREATMENT OF TYPHOID FEVER.

AT the meeting of the German Scientific Association at Magdeburg a paper on the treatment of typhoid fever, based on an experience of seven and a half years—viz., from March, 1877, to September, 1884—was contributed by Professor Ebstein. The total number of cases was 235, and they were treated in the medical clinic at Holstein. The mortality was only 5·5 per cent., reduced to 2·5 per cent. by the exclusion of inevitably fatal cases. The author concludes that the so-called "abortive treatment" with calomel is useful and to be recommended. In the absence of any causal treatment, this can only be symptomatic—i.e., measures based on a consideration of the morbid phenomena and individual conditions. Above all, attention must be paid to judicious dietetic treatment and the maintenance of the nutrition of the patient. The control of high temperatures, even if of long duration, is only called for when they are associated with severe cardiac or nerve symptoms, or when the temperature attains such a height as to threaten life. The principles of treatment enunciated are, says Ebstein, far more satisfactory in practice and in their results than an exclusive adoption of "bath treatment" or other methods of strict antipyresis. Baths he regards as of value for their powerful stimulant action, and he would employ them where other methods seem to be insufficient.

THE HEALTH OF PROFESSOR HUXLEY.

MUCH regret will have been felt in many quarters at the announcement that Professor Huxley has been recommended to leave England for some months of perfect quiet and freedom from work. The position to which Professor Huxley has attained amongst scientific men is the result of severe and long-continued toil, taxing the powers of both mind and body to a very large extent. The preparation and delivery of lectures and addresses, the composition of memoirs to be read before learned societies, the writing of systematic treatises, the supervision of classes pursuing dissections, microscopic work, and physiological investigation, are duties that not only require a very active and versatile mind, but which cannot be discharged by any one man without a very severe strain on his powers of endurance. But Professor Huxley has done much more than this. As the champion of science and a strong advocate of its introduction into schools as a part of the mental discipline of the young, he has had a hard battle to fight with those who cling to ancient modes of thought, and who are unwilling to launch themselves into a surging sea of doubt and difficulty. For some years he was a member of the London School Board, where his knowledge, his earnestness, and the excellence of the objects he had in view, no less than the keenness of his intellect and his ready mother wit, soon taught his antagonists—and they were many at first—that he was a dangerous opponent. Still more recently the duties of President of the Royal Society and Inspector of her Majesty's Fisheries have been added to his other labours. He is about, we believe, to start for Venice, and we are sure the good wishes of our readers will go with him, that he may thoroughly enjoy his well-earned rest, and return perfectly restored to health.

DEATH OF PROFESSOR SOMMA.

To all who have watched the development of pædiatric studies in Italy, the sad intelligence of the death of Professor Luigi Somma of Naples, the founder and director of the recently established periodical devoted to the study of diseases of children, and entitled "Archivio di Patologia Infantile," will bring feelings of sincere regret and sympathy. A victim to cholera, the scourge which has so devastated the beautiful city in which he lived and laboured, he fell at the post of duty and of honour on Sept. 19th last, in the flower of his age, and in the midst of his philanthropic work.

NOTIFICATION OF DISEASE IN SUNDERLAND.

THE question of Notification of Infectious Disease is being discussed in Sunderland as part of a local Bill. So far as we can gather from the incomplete reports in the local papers, the profession in Sunderland is quite willing that the medical man should act in concert with the responsible householder, and at his request, but is much dissatisfied that the clause of the Bill should have been altered, as it has been, so as to allow anyone, even in a tenemented house, to require the medical attendant to act. We think that the medical men have shown great public spirit in agreeing to act with the householder in a matter in which the latter alone should be held responsible. But it will be intolerable to allow more than one person in the house to claim the action of the medical man. We trust the Town Council will see

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the reasonableness of consulting the feelings of medical men in this matter, and will not strain their good nature too far when they show so much disposition, as in Sunderland, to co-operate with the public sanitary authorities. Are we right in gathering from the reports that the Town Council is proposing either to give them no fee, or to cut them off with a shilling fee, for one of the most responsible and troublesome duties that can devolve on liberal-minded men. Surely great communities in using medical men to save them from infection ought to pay a fee which the medical man can accept with self-respect.

THE PAYMENT OF MEDICAL WITNESSES.

THERE can be no doubt that the law regulating the attendance of medical men and the payment of their fees for giving evidence in the courts is exceedingly vexatious. A short time since we drew attention to the anomalous state of affairs as regards the remuneration that a qualified man can claim for the aid he renders to the administration of justice. There is, however, a very distinct principle recognised by the highest legal authorities—viz., that a medical man is compelled under subpœna to testify to facts within his knowledge. Nor does this apply alone to our own profession. Even the Lord Chancellor could be summoned under such circumstances. It is certainly hard that a medical man should be compelled to leave his bed during the small hours of the morning to dress perhaps a cut head received in a common street quarrel, and then because he has given timely succour—it may be without compensation—that advantage should be taken of the knowledge of which he has become unwillingly possessed to compel his attendance as a witness in a county court or before a magistrate. We hold that the courts should have power not only to order a reasonable fee for the witness, but also to enforce the payment of such fee.

MEDICAL AND PHARMACEUTICAL EXHIBITION.

ON Monday last a Medical, Pharmaceutical, and Kindred Professions and Trades' Exhibition was opened at Humphrey's Hall, Knightsbridge. The Exhibition is said to be held in aid of the funds of University College Hospital; and its aim is to bring before the professions and trades concerned, as well as the public, the specialities of each particular class of exhibitors. The exhibit of leading interest was a portable iron hospital, erected by Mr. J. C. Humphreys, of Albert-gate, S.W. The model building is constructed externally of corrugated iron and is lined with wood. It contains a male ward and a female or children's ward; each would accommodate four patients. There are also a matron's room, a kitchen and scullery, with other offices. The cost of the whole would be about £300. Such a building can be constructed in a very short space of time, and there is a corresponding facility in moving it from site to site. We shall on another occasion devote a special article to the various exhibits at this Exhibition, which will remain open till Nov. 12th.

STATISTICS OF CHOLERA IN ITALY.

CONSIDERING the brevity of its duration, according to *La Gazzetta degli Ospitali*, the present epidemic of cholera in Naples has exceeded in severity all previous invasions, including the terrible one of 1837. That was the cause of 13,800 deaths in five months. The first death from cholera in Naples this year occurred on the 21st of August. From that day to midnight, Sept. 30th, the cases numbered 10,957, and 5778 deaths. In the hospitals the recoveries were 1121, the deaths 787. The actual population of Naples is 500,000. At Torre Annunziata 137 deaths occurred in 234 cases. From the 1st to the 30th of September 294 soldiers of the Naples garrison were attacked with cholera, 134 of them fatally. The mean mortality was 42 per cent. In the aristocratic quarter of Chiaja, during the whole of September 162 deaths occurred amongst 252 cases of cholera. By far the greatest number of victims were women. The municipality distributed 12,573 shirts, 14,505 sheets, 5484 blankets, and 1109 mattresses. The money contributions to the City relief fund amounted to £22,010, and to the White Cross Society £4822.

THE ALBERT MEDAL.

THE Albert Medal of the Second Class has been conferred on William Macgregor, M.D., C.M.G., chief medical officer and receiver general, Fiji, for having at the imminent risk of his own life rescued from drowning the captain and a passenger of the emigrant ship *Syria*, which on May 11th was stranded upon the Nasalai reef, some twenty-three miles to the eastward of Suva, Fiji. It is stated that but for the energetic, able, and cool way in which Dr. Macgregor led the relieving party, the loss of life, which was great—fifty-nine in all—must have been appalling.

M. GAVOY'S STETHOSCOPE.

AT a recent meeting of the Académie de Médecine, M. le Baron Larrey gave in a sealed letter containing a detailed description of a new form of stethoscope invented by M. Gavoy. The instrument is stated to be a telephone in miniature. The thoracic sounds, pulmonary or cardiac, are said to be amplified without being exaggerated by its means; the quality of the auscultatory signs is also believed to be unaltered.

MICRO-ORGANISMS AND DISEASE.

WE are pleased to find that Dr. Klein has published in book form the chapters on micro-organisms and disease which for the past few months have formed so attractive a feature of our contemporary, the *Practitioner*. The book ("Micro-organisms and Disease," Macmillan and Co, 1884) is very handy and compact, and abounds in illustrations, nearly all of which are original.

"GAYTHORNE HALL" is the title of a novel lately issued. It is the product of the fertile pen of a London physician, whose medical writings are well known for their original and vivacious character. The novel is a political one, dealing with the times of the Chartists, and the scene is laid in the North Country, where its author was, we believe, born and bred. The story told is not wanting in elements of sensation, but the author is to be commended for the care with which he has adhered to the historical facts that give the book a value and interest often lacking in fiction. It is dedicated to Oliver Wendell Holmes, of all medical men the foremost amongst those who have enriched general literature.

A DINNER for the reunion of old past students of the Meath Hospital and County Dublin Infirmary will be held on Monday, November 3rd, at the Shelbourne Hotel, at seven o'clock; William Moore, M.D., President of the King and Queen's College of Physicians, will preside. Mr. L. Hepenstal Ormsby, F.R.C.S., 4, Merrion-square West, Dublin, is honorary secretary.

THE American Academy of Medicine will hold its ninth annual meeting on the 28th and 29th inst. at the Johns Hopkins University, Baltimore, under the presidency of Dr. Benjamin Lee. The list of papers to be read include subjects of great practical interest to the medical profession throughout the world.

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DURING the past fortnight over one hundred cases of typhoid fever have been reported at Derby. The fever ward at the infirmary is full, but it is stated that during the past few days the outbreak has slightly abated.

DR. WILSON FOX read a most interesting and practical paper on the treatment of pneumonia at the annual meeting of the University College Medical Society on Wednesday night last.

DR. PARSONS, on behalf of the Local Government Board, has paid a second visit to Kidderminster for the purpose of thoroughly investigating the cause of the recent epidemic of enteric fever.

THE Gulstonian Lectures for 1885 will be delivered at the College of Physicians by Dr. Osler of Philadelphia; the Croonian by Dr. Herman Weber; and the Lumleian by Sir Andrew Clark.

SIR JOSEPH LISTER, Bart., is announced to read a paper at the opening meeting of the session of the Medical Society of London on Monday next.

THE BIOLOGICAL LABORATORY AT THE HEALTH EXHIBITION.

No. VI.

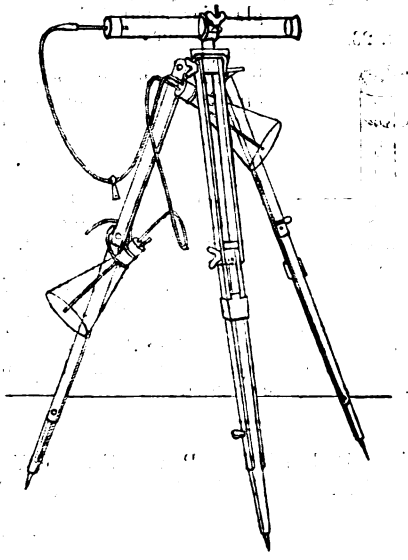
CULTIVATING MEDIA—(*continued*).

Gelatinised Meat Infusion may be used in a variety of ways. The modes of preparing test-tube cultivations and slide cultivations are described in the footnote on pp. 251 and 252 in THE LANCET of Aug. 9th. It may also be used for obtaining pure cultivations of different kinds of bacteria occurring in a fluid.

The way in which this is done may be illustrated by the method of *testing water*. The contents of a tube of the infusion which has been rendered sterile by steaming are gently heated to the melting-point. Some of the water to be tested is then drawn up into a pipette which has been sterilised by heat, and a drop is allowed to fall into the test-tube, the cotton-wool plug being removed for the purpose. (It is important in estimating the number of organisms in different specimens of water to use the same pipette throughout, or to measure the volume of the drop, in order that the amount of water added may be the same in each case.) When the drop has been added the tube is briskly shaken, so that the water may be thoroughly mixed with the infusion, and the contents are then poured out on the surface of a sterilised glass plate[1] (about 5 in. by 6 in. in area), which has been previously placed at the bottom of one of the flat glass dishes described above. In order that the liquid may not run off the plate it is made level by means of a levelling stand, on which the dish is supported, and a spirit level. When the infusion has been poured on the plate the cover of the dish is replaced, and the whole is allowed to stand. In the course of a day or two, the period varying with the temperature, there appear dotted about in the thin layer of solid gelatinised infusion the colonies formed by the multiplication of the organisms which were contained in the drop of water. These may be recognised by their naked-eye characters, assisted if necessary by microscopical examination and further cultivation. In this way the number and nature of the organisms present in a sample of water may be estimated and ascertained. In order to obtain a pure cultivation of an organism occurring among a number of others, the method is exactly the same, cultivations being made from the colonies which appear. Each of these consists of only one form, as the organisms are separated from one another when the drop is shaken up with the gelatinised infusion to which it is added.

The gelatinised meat infusion is also employed in the methods of testing air. With Dr. Hesse's apparatus (Fig. 25) the bacteria contained in a measured quantity of

FIG. 25.



Dr. Hesse's apparatus for testing air.

air are examined. It consists of a wide glass tube, which is supported on a portable stand, and an apparatus for sucking air through the tube. One end of the tube is closed by two indiarubber caps. The inner cap is perforated in the centre by a hole about three-eighths of an inch in diameter. The outer cap is not perforated, and covers the inner one. Into the other end fits a caoutchouc stopper, which is pierced by a piece of glass tubing, and this is connected by an indiarubber pipe with the upper of two flasks, which are attached to the stand, and constitute the apparatus by means of which air is sucked through the tube. The flasks are similar to one another. They are of one litre contents, and the mouths are closed by caoutchouc stoppers perforated by two glass tubes. One of these tubes is short, and the other reaches to the bottom of the flask. The indiarubber pipe mentioned above passes to the shorter of the tubes, piercing the stopper of the upper flask. Another pipe connects the long tube of the upper with the long one of the lower flask. In preparing the apparatus for testing air the wide glass tube is removed from the stand and the indiarubber pipe is disconnected from it, the tubing piercing the stopper being plugged with cotton-wool. A quantity of gelatinised meat infusion is then introduced into the tube and made to flow about until the whole of the interior is wetted by it. When this has been done the tube, with both the caps adjusted, is placed in the steaming box and steamed for half an hour on three days in succession, in order to sterilise it. As the infusion is solidifying after the third steaming, the tube is rotated about its long axis, so as to line the interior with a layer of the infusion. In using the apparatus the tube is placed on its stand, the cotton-wool plug withdrawn from the glass tubing, and the indiarubber pipe fixed thereon. The upper flask is then filled with water till it contains one litre. The apparatus having been placed in the air to be tested, the outer of the two caps closing one end of the wide tube is removed, and the upper flask is tilted until the water flows into the lower one. When once the flow has commenced the syphon arrangement of the tubes causes it to be continued, and air is by this means drawn through the tube to replace the water in the upper flask. Any bacteria in the air are carried against the gelatinised infusion on the sides of the tube, and there stick. When the upper flask is empty, the flow may be re-established by reversing the position of the flasks. The rate of the flow may be regulated by a screw-clamp attached to the indiarubber pipe between the tube and the upper flask. In this way any quantity of air may be made to pass through the

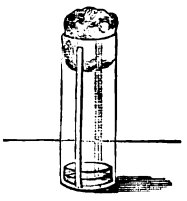
[1] The glass plates for this purpose are placed in a sheet-iron box and then heated for three hours to 150° C. They are kept in the box until they are used.

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tube. When sufficient air has passed the outer cap is replaced, and the tube may be dismounted and set aside. In the course of a few days colonies of different kinds of organisms spring up in the gelatinised infusion, resulting from the multiplication of those contained in the air. These may then be counted and recognised.

A simpler but less accurate method is to expose a dish of gelatinised infusion to the air for a measured length of time, so as to allow the falling dust to settle on it. The apparatus is represented in Fig. 26. It consists of a tall glass jar, a flat dish, which can lie at the bottom of the jar, and a brass lifter, by means of which the dish can be raised and lowered. The whole apparatus is first plugged with cotton-wool and then heated to 150° C. for three hours. The cotton-wool is then removed, and the dish having been raised to the mouth of the jar, the contents of a sterilised test-tube of gelatinised meat infusion, liquefied by heat, is poured into it. The dish is then carefully lowered and the plug reinserted. When the infusion has become solid, the jar is placed in the air to be examined, and the cotton-wool plug removed from the mouth for a measured length of time, and then replaced. In the course of a few days the organisms develop and form colonies, which may be counted and recognised.

FIG. 26.



Apparatus for testing air.

PROFESSOR FILIPPO PACINI'S NEW MICROSCOPICAL OBSERVATIONS ON CHOLERA.

UNDER the above title Dr. Aurelio Bianchi of Florence has just collected and published some manuscript observations made by his late teacher during the cholera epidemic which prevailed in Florence in 1855. The editor claims that Pacini was the first who instituted microscopic researches with a view to discover the nature of the Asiatic plague, and that he described with much precision and truth, under the generic name of vibrio, the organisms now known as microbes.

The discoverer of the Pacinian bodies deservedly established such a reputation amongst the original observers of his age, that special interest must be felt in Dr. Bianchi's small volume just issued (with the imprint 1885), by Vallardi of Milan. Having been favoured with an early copy, we purpose giving a summary of its contents, with a reproduction of some of the illustrations, so that our readers may form a just idea of the author's descriptions.

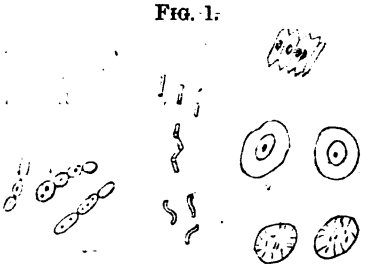
In a prefatory letter which Pacini addressed Sept. 12th, 1855, to Professor G. B. Ercolani of Bologna, he insists that it is no use searching for the specific cause of cholera in the excreta; but it must first be sought in the mucous membrane, the superficial destruction of which is the *pathological condition* of cholera. After the mucous membrane observations may be profitably instituted in the excreta, in the air, and in potable waters.

The first observations were made on the cadaver of M. G——, aged sixty, who died of Asiatic cholera in Florence, Feb. 12th, 1855. The attack lasted nineteen hours. The body was greatly emaciated and slightly cyanotic towards the extremities and the head. The right ventricle of the heart contained a loose fibrinous clot, with some black and almost pitchy blood. The stomach was nearly empty, but the small quantity of fluid which it contained was preserved. The intestines presented a livid red colour; the liver was greatly enlarged. The small intestines were almost completely empty, their inner surface almost wholly covered with mucus, but here and there could be seen the villi, of a scarlet-red colour and denuded of epithelium. The colon also was nearly empty. The parts submitted to the microscope were a small quantity of blood, the fluid from the stomach, and the small and large intestines, a piece of the anterior wall of the stomach, a portion of the small intestine about its middle, also its inferior extremity, the cæcum and its appendix.

These parts were placed in the following preserving solutions:—The blood in acetic acid 1, sublimate 2, glycerine 34, water 792·6; the fluid of the stomach, the small and large intestine in sublimate 1, salt 5, water 300; a part of the fluid of the colon in acetic acid 1, sublimate 2, glycerine 34, water 1000; another part of the fluid of the colon in sublimate 1, acetic acid 2, glycerine 17, water 500. Finally, pieces of stomach, small and large intestine, in sublimate 1, salt 5, water 300; and a small portion of the small intestine in sublimate 1, acetic acid 2, glycerine 17, water 500

On comparing the blood with healthy blood treated in the same manner, the microscopic appearances were not different. In the fluid from the stomach were (1) a large number of torula cerevisiæ; (2) in the mucus attached to the walls of the stomach were small masses of sarcina ventriculi, but none were found free in the fluid; (3) an immense quantity of vibrios, also found in the small and large intestines (fig. 1 represents the three appearances just referred to);

FIG. 1.



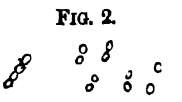
(4) small needle-formed bodies or spiculæ, like small elongated naviculæ, which were perfectly rectilinear and pointed; they strongly reflected light, but their motility could not be certified; in length they varied from 0·030 to 0·040 mm.; (5) epithelial cells from the stomach, in small quantity and much altered; (6) some epithelial cells from the mouth or œsophagus, with vibrios attached to them. In the mucus from the stomach the microscope displayed granular globules and cylindrical cells; also some masses of sarcina and a very large number of vibrios. A large quantity of vibrios was also found in a portion of the mucous membrane.

Of the vibrios met with in the fluids of cholera subjects Pacini gives (pp. 18, 19) the following description:—"Under a strong magnifying power (800 to 1000 diameters) these vibrios closely resemble a fragment of a fibril of a striated muscular fibre. In fact, every vibrio is represented by a series of exceedingly small globules, almost always perfectly distinct under that magnifying power, but sometimes a little less distinct. The smallest of these vibrios are formed of two or three globules; those of only one globule cannot be distinguished from other molecules of equal size. I have also found some formed of more globules, even as many as twelve or eighteen. When they are formed of six or seven globules they are not perfectly rectilinear, but slightly curved. Those formed of ten or twelve globules are, as a rule, slightly bent, in S or other shape.

Vibrios in which the globules are not very distinct are almost perfectly rectilinear. Perhaps the formation in globules and flexion is a commencement of division. One of these vibrios of four globules was 0·005 mm. long, and the diameter of these globules was a little less than 0·001 mm. The granular masses which are found in the ejecta, if transparent, may be recognised as masses of vibrios."

In order to examine with more accuracy the finest vibrios, Pacini caused the liquid to evaporate after it had been obtained from the mucous membrane. The vibrios were then specially evident, but they presented the following varieties, being all of the same diameter:—From 0·0005 to $\frac{1}{2000}$ mm. in length. The greater part, however, seemed formed of two slightly lengthened globules, and which sometimes were a little pyriform—that is, a little thicker at one end than the other. Of these also he saw a chain of four, as in Fig. 2, but the greater part were simply coupled, and thus united had a length of a little less than 0·002 mm. There were also an infinity of small isolated globules, which probably resulted from the division of the preceding. Sometimes the division of two globules was indistinct, and only indicated by a slight constriction, so as to give the appearance of a fine

FIG. 2.



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about 0·002 mm., and slightly narrowed in the middle and swollen at the ends. At other times these small globules were round rather than pyriform, and either isolated or united in twos and threes. Usually in the latter case the middle one was the smallest. At other times Pacini has seen some of these molecules which were lengthened and cylindrical and about 0·0015 mm. in length, but with a very slight indication of division in the middle. It is probable that all these varieties were only differences in development. When dried, the larger and more refracting globules referred to above disappeared.

FIG. 3.



In the vomit of another cholera victim were found an immense quantity of vibrios, which resembled the *vibrio rugula*. Some filaments had the appearance of an alga. (Fig. 3.) The detailed clinical and microscopical observations which constitute the remainder of the monograph are substantially confirmatory of the preceding ones.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 11th inst., 5322 births and 3319 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which had been 19·1 and 20·1 per 1000 in the two preceding weeks, declined to 19·8 last week. During the thirteen weeks of last quarter the death-rate in these towns averaged 22·8 per 1000, against 20·6 and 19·9 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 10·9 in Halifax, 14·9 in Birkenhead, 16·2 in Bradford, and 16·5 in Portsmouth. In the other towns the rates ranged upwards to 26·0 in Leeds, 26·2 in Preston, 30·9 in Sunderland, and 31·6 in Blackburn. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which in the seven preceding weeks had declined from 1311 to 548, further fell to 477 last week; of these, 222 resulted from diarrhœa, 76 from "fever" (principally enteric), 54 from scarlet fever, 47 from whooping-cough, 38 from measles, 31 from diphtheria, and 9 from small-pox. These diseases caused the lowest death-rates in Halifax and Birkenhead, and the highest in Derby, Newcastle-upon-Tyne, and Leeds. The highest rates of mortality from scarlet fever were recorded in Newcastle-upon-Tyne and Cardiff; from measles in Bolton and Preston; from whooping-cough in Sunderland; from "fever" in Salford and Derby; and from diarrhœa in Birmingham, Sunderland, and Hull. The 31 fatal cases of diphtheria in the twenty-eight towns included 16 in London, 3 in Liverpool, and 3 in Leeds. Small-pox caused 9 deaths in London (excluding 2 London cases registered outside Registration London). The number of small-pox cases in the metropolitan asylum hospitals situated in and around London, which at the end of the two preceding weeks had been 536 and 533, further declined to 504 on Saturday last; the new cases admitted were 68, against 129 and 106 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 162 and 182 in the two preceding weeks, further rose to 227 last week, but were 54 below the average. The causes of 71, or 2·1 per cent., of the 3319 deaths registered last week in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Leicester, Oldham, and in eight smaller towns. The largest proportions of uncertified deaths were recorded in Wolverhampton, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·0 and 21·1 in the two preceding weeks, rose to 22·8 in the week ending the 11th inst., and exceeded by 3·0 per 1000 the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 13·3 and 18·3 in Leith and Dundee to 25·9 in Paisley and 27·8 in Glasgow. The 551 deaths in the Scotch towns included 32 which resulted from diarrhœal diseases, 21 from "fever," 20 from measles, 20 from whooping-cough, 15 from diphtheria, 12 from scarlet fever, and not one from small-pox; in all, 120 deaths were referred to these principal zymotic diseases, against 131 and 137 in the two previous weeks. These 120 deaths were equal to an annual rate of 5·0 per 1000, which exceeded by 2·2 the average rate from the same diseases last week in the twenty-eight towns. The deaths referred to diarrhœa, which in the two previous weeks had been 52 and 56, declined last week to 32, of which 15 occurred in Glasgow and 6 in Edinburgh. The 21 fatal cases of "fever" exceeded by 7 the number in the preceding week, and included 16 in Glasgow. The 20 deaths from measles showed a further increase upon those returned in the two previous weeks; 11 occurred in Aberdeen and 8 in Glasgow. The 20 fatal cases of whooping-cough showed a slight increase, and included 13 in Glasgow. Of the 15 deaths from diphtheria, 8 were returned in Glasgow and 3 in Aberdeen. The 12 fatal cases of scarlet fever all occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns showed an increase, but were considerably below those returned in the corresponding week of last year. The causes of 100, or more than 18 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which in the two preceding weeks had been 30·2 and 26·3 per 1000, rose to 28·8 in the week ending the 11th inst. During the thirteen weeks of last quarter the death-rate in the city averaged 25·4 per 1000, the rate during the same period being 20·9 in London and 17·0 in Edinburgh. The 194 deaths in Dublin last week included 32 which resulted from the principal zymotic diseases, against 36 and 49 in the two previous weeks; of these, 15 were referred to diarrhœal diseases, 11 to scarlet fever, 4 to "fever," and 2 to whooping-cough. These 32 deaths were equal to an annual rate of 4·8 per 1000, the rate from the same diseases being 1·9 in London and 2·3 in Edinburgh. The fatal cases of scarlet fever, which had been 11 and 7 in the two previous weeks, rose again last week to 11. The deaths from "fever," which had increased from 1 to 8 in the three preceding weeks, declined to 4 last week. Eleven inquest cases and 5 deaths from violence were registered in the city during the week, and 43 deaths occurred in public institutions. The deaths of infants showed a slight decline, while those of elderly persons considerably exceeded the numbers in recent weeks. The causes of 31, or nearly 16 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ADMIRALTY.—The following appointments have been made:—Staff Surgeon John Kelly Conway, to the *Himalaya;* Surgeon Thomas Lyle Horner, to the *Dreadnought;* Surgeon Geo. Despard Twigg, to the *Mallard;* Surgeon Alex. John J. Johnston, to the *Dreadnought;* Staff Surgeon Richard W. Coppinger, M.D., to the *Nelson;* Staff Surgeon Horace E. Y. Cross, to the *Diamond;* Staff Surgeon Valentine Duke, M.B., to the *Vernon;* Staff Surgeon Robert W. Biddulph, M.B., to the *Duncan;* Surgeon James L. Smith, M.B., to the *Starling;* Surgeon William W. Jacobs, to the *Asia;* Surgeon Henry G. Strickland, M.B., to Plymouth Hospital; Surgeon George Y. Dean, M.B., to the *Achilles;* Surgeon John P. J. Coolican, to the *Minotaur;* Surgeons Robert A. Simpson and Francis J. Lea, to the *Nelson;* Surgeon Edgar Ralph Disney, to the *Diamond;* Charles Dundee to be Surgeon and Agent at Whitehead and Hillsport; William Stewart, M.B., to be Surgeon and Agent at Kirkwall, N.B.; John W. Wood to be Surgeon and Agent at Ramsey, Isle of Man.

ARTILLERY VOLUNTEERS.—1st Lancashire: Surgeon and Honorary Surgeon-Major Henry Hulme has resigned his commission.—1st Caithness: William John Henderson-Sinclair, Gent., M.B., to be Lieutenant.

RIFLE VOLUNTEERS.—1st Isle of Man: Albert Primrose Wells, Gent., M.A., to be Acting Surgeon.—2nd Volunteer Battalion (the York and Lancaster Regiment): Acting Surgeon William Makeig Jones resigns his appointment.

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Correspondence.

"Audi alteram partem."

SMALL-POX AND BLINDNESS.

To the Editor of THE LANCET.

SIR,—Within a month I have seen at University College Hospital, and at the Moorfields Eye Hospital, three cases in which, in addition to very deep scarring of the face, the sight of both eyes has been completely and irretrievably lost from recent attacks of small-pox. In two of the cases vaccination had not been performed, and in the third there were only three slight, almost inappreciable, vaccination marks on the arm. The unvaccinated cases were children about eleven years of age; the other case was a man aged twenty-nine years. Each case has its own peculiar lesson, but taken as a group the three cases are very significant and instructive. In only one was non-vaccination deliberate and culpable; in the other vaccination had been attempted but did not "take," and was not repeated. The circumstances of the case in which vaccination was wilfully omitted are noteworthy, and afford a striking proof of the malignancy of small-pox uninfluenced by vaccination, of the modifying influence of vaccination, even where it fails to afford complete protection, and, lastly, of the necessity of revaccination. The victim was a boy aged eleven years, the second of four children, and the only one in the family who had not been vaccinated. The other children had all been vaccinated in infancy, but in the case of this boy "the father objected" for some unexplained reason. Both parents were vaccinated in childhood and have not had small-pox. Last June the eldest child, aged about thirteen years, took small-pox, but "had it very slight; only queer about a week"; then the third child was seized, "it was only a bit queer for about a week," and then the second child (my patient) took it and was very ill and is now totally blind from collapsed and shrunken globes. The youngest child, aged seven, and therefore vaccinated within seven years, escaped altogether though exposed to the contagion for a period of many weeks. These "facts" speak for themselves. As showing the kind of mind that has an affinity for anti-vaccination arguments, I may state that the father of the child subsequently called at the hospital to tell me that he had "great hopes of his boy's sight even yet," and in reply to a question said "that some women were curing him by bathing the eyes."

I am, Sir, yours truly,

Harley-street, W., Oct., 1884. JOHN TWEEDY.

"BICYCLE RIDING AND PERINEAL PRESSURE: THEIR EFFECT ON THE YOUNG."

To the Editor of THE LANCET.

SIR,—Dr. Allbutt in his letter of September 27th says, "There are many men who have been great cycle riders from the times of the old 'dandy horse' to the present period, and are in the enjoyment of remarkably good health, both of mind and body." To this there are two answers—viz., that given by Dr. Strahan in his letter of Oct. 4th: that those in question commenced riding the modern machines at an adult age, and it was chiefly to the growing youth that our theories applied; and my own answer, that it is logically impossible to prove a universal rule by adducing particular instances.

Dr. Boothroyd says: "With regard to the spinal shocks made much of by Dr. Strahan, their influence is of a still more hypothetical nature." It is only quite recently that we have begun to study and understand the true nature of functional nervous diseases, yet it is already a fact well established and known to those who have much experience in the treatment of nerve-troubles that continued longitudinal vibrations communicated to the spinal cord are very injurious, and frequently set up a peculiar condition termed neurasthenia. In fact, so well is this a recognised fact that a special name has been coined, and these cases are commonly called "railway spine," particularly in America, from excessive travelling being the most frequent cause. Up to quite recently these cases were entirely misunderstood and classed as cases of dyspepsia, hypochondria, hysteria, &c. I have no hesitation in saying that in these days of competition for a livelihood and of competitive examinations, neurasthenia is really one of the commonest and most important complaints that we have to treat. Important, because a functional nerve trouble so frequently precedes an organic lesion, and if recognised in the first stage can so often be cured. These cases of railway spine—or as we shall, I am afraid, soon have to call them cyclist's spine—can be easily diagnosed by attention to the following points. In nearly every case you will find an increase in the quantity of urea excreted; sometimes as much as twenty grains per ounce is present. In most cases the secondary rise in the pulse trace as shown by the sphygmograph is nearly or quite absent, showing want of tone of the vaso-motor system of nerves, and other symptoms are generally present, such as flatulence; sometimes the stomach becomes enormously distended with wind, probably from some impairment of the functions of the vagus nerve, gastralgia, melancholy, feeling of "clutching" at the throat, with occasionally agarophobia and claustrophobia. No doubt dyspepsia is always present, but it is secondary, and caused by the nerve trouble. These cases recover readily by the use of nerve tonics, such as valerianate of soda, hypophosphite of soda, &c. Such being the case, and seeing how easily this disease may be referred to some cause other than cycling, when the physician has never dreamt that the latter was even capable of producing such a state, and consequently never thought of asking the patient whether he rode a machine, can we logically say that because up to the present time not many cases have been observed and traced to their true source, they are really very few in number? On the contrary, I believe that now the attention of medical men has been directed to the subject, and they know what to look for, we shall hear of many cases of neurasthenic dyspepsia among cyclists.

But however badly the present machines may vibrate, we are threatened with a great aggravation of the evil in the immediate future. The tricycle, like other things, arrives at its final form by a process of evolution. Its wheels are becoming smaller, but are made to revolve faster by a method of chain gearing. This is called, technically, "gearing up." Of course, the smaller a wheel is, the greater number of shocks are given in travelling a given distance at the same speed. This principle has been this year applied to bicycles, and one called a "safety" produced. Owing to the successful result of a race recently run on the latest of these, there is every probability of the market being inundated with several makes of these early next year, in some of which, I am informed, the principle has been carried to a very great excess, and the wheels made extremely small, with the effect of enormously increasing the number of shocks per second. If the makers ever succeed in producing a saddle and spring which will minimise the vibrations reaching the trunk, there will be still left those proceeding from the steering-handle of the machine to the hands and arms of the rider, and which I am inclined to think may be found to be even more disastrous in their results than the former. I have been informed by cyclists, and have myself observed, that in riding rough roads the vibration of the handle-bar has produced sensations like slight electric shocks in the hands and forearms. Now, although there may not have been much damage done by the comparatively slow vibrations of the present machines, yet when we come to the universal use of the small-wheeled "safety," doing one hundred miles in a little over seven hours, over rough roads, with its enormously quicker rate of vibrations, we may expect to see soon some tangible results.—Yours faithfully,

GEORGE HERSCHELL, M.D. Lond.

Moorgate-street, Oct. 6th, 1884.

To the Editor of THE LANCET.

SIR,—Will you allow me, as a practical bicyclist with considerable experience both of cycles and cyclists, to make a few remarks on the letters of Dr. Strahan, and others, on this subject. I quite agree with Dr. Strahan that attention requires to be drawn to the excessive use of bicycles by young growing boys, so many of whom ride bicycles too big for them, and with improperly constructed saddles. I beg, however, to entirely disagree with his opinions on the ordinary bicycle saddle, the manner in which it is sat upon, and the pressure it exerts on the perineum. He says, "The

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bicycle saddle is reduced to the smallest possible limit," that "it is just wide enough posteriorly to cover the ischial tuberosities, and it tapers off quickly to a long narrow horn in front on which the perineum rests;" but I hold, on which the perineum ought not to, and in the majority of bicycle saddles does not, rest. I maintain that a properly constructed bicycle saddle is an ideal seat, there being just as much as is necessary to sit comfortably upon, and no more. The anterior horn might be done away with if it were not for its use in fastening the saddle to the machine and keeping it steady in its place. In a properly constructed saddle the posterior part on which the ischial tuberosities rest ought to be as high as, or a little higher than, the level of the anterior narrow part. It should not, however, be carved up so much behind as to cause the tuberosities to slip forwards, such as is the case in some saddles on light racing machines. The anterior narrow part should rest on, and be closely applied to, the spring of the bicycle, and should not project or turn upwards at all. These conditions are fulfilled in the well-known and widely used "suspension saddles," and in the majority of saddles supplied with good class machines. Now, as to the manner a bicycle saddle is sat upon, I find by testing it when riding that when in an upright position there is a space of nearly two fingers' breadth between any part of my saddle and my perineum, and when leaning forwards going up hill there is still over one finger's breadth between. When leaning forwards the ischial tuberosities are not, as Dr. Strahan says, raised from the saddle at all, but a portion of the tuberosities, slightly more anterior than when in the upright position, is pressed upon. The only exception to this is when, by pulling on the handles, the whole body is raised up off the saddle and the whole body weight thrown on the descending pedal—standing on the pedals in fact, a method adopted by many good bicyclists when riding up a long incline, in order to save by the use of the weight an unnecessary expenditure of muscular energy. I find that when sitting on the saddle the tip of the anterior horn of the saddle is 4 in. in front of the origins of my long adductor muscles, and that therefore the anterior horn, which is only 3½ in. long, is entirely untouched by me.

Dr. Strahan imagines the leg is vertical when extended, and that therefore a properly made saddle, as suggested by Dr. Herschell, is impossible. Now, although it may be the case on some tricycles, yet the leg cannot be quite vertical when extended on the pedal, as the portion of the saddle sat upon is at least nine inches behind a vertical line drawn from the centre of the wheel.

With regard to Dr. Herschell's two cases, I would suggest that the stricture in the youth was due to an injury caused by slipping when getting on, or to his racing machine being too big for him; and that the stricture in the middle-aged man had some predisposing cause, or was due to his riding with his tricycle saddle raised too high or improperly inclined back.

I quite agree with Drs. Allbutt and Boothroyd that the healthy, vigorous out-door exercise of cycling acts as an anaphrodisiac, which more than counteracts the effects of any local excitation, if there be any, which I doubt. The influence of the "spinal shocks," so often talked about, is quite theoretical. On an ordinary road these shocks do not have any effect; if they did, they would cause nervous exhaustion on a long ride, which we find is not caused. The jolts, although perhaps more numerous, are much less than on horseback. What horseman, even with a change of horses, could ride a hundred miles a day for several consecutive days, a comparatively common feat on a bicycle—as, for instance, the distance of 930 miles, from Land's end to John-o'-Groat's, ridden by two bicyclists, one doing it in 6 days 23 hours, the other in 6 days 21 hours?

I am, Sir, yours truly,

GEORGE B. BATTEN, M.B., C.M.,
Late Sub-Captain, Edinburgh University Cycling Club.
Fife and Kinross District Asylum, Cupar, Oct. 6th, 1884.

"THE EXAMINATION OF SURGEONS-MAJOR."

To the Editor of THE LANCET.

SIR,—Almost invariably I allow anonymous communications to pass unnoticed, for the reason that I consider a writer who lacks the courage of his opinions sufficient to permit of his putting his name to his writings is beneath the notice of ordinary straightforward men. To this rule I am now reluctantly constrained to make an exception, as some unknown quantity, behind a shield of "X. Y. Z." has written to you in your issue of the 4th his views and opinions of my letter to you upon the subject of the examination of surgeons-major. Those views and opinions might be silently ignored in consideration of their innocuous imbecility, were it not that, in addition to his own ideas, "X. Y. Z." attributes to me criticisms upon the *Army Circular* of August 1st, 1884, to which I desire emphatically to disclaim any authority. I am supposed by your correspondent to look upon the knowledge of operative surgery and the practice of medicine in the minds of surgeons-major as parallel with the knowledge on the part of lieutenant-colonels of the goose-step. I expressed myself to the effect that questioning the knowledge of surgeons-major in operative surgery and practical medicine was parallel with questioning the knowledge of lieutenant-colonels of the goose-step. The fact of examining men in a subject implies a doubt as to their knowledge of the same; it is against this doubt that I protested. "X. Y. Z." is erratic in his mention of promoting surgeons-major from "executive to administrative rank," the rank of brigade surgeon being strictly speaking executive. He is also erratic in suggesting that surgeons-major should follow my example by taking the F.R.C.S.I., as no such suggestion or option appears in the circular connected with surgeons-major over twenty years' service. Your correspondent remarks that "it seems to be intended," &c. He can form his own opinions as to what "seems to be intended," without very materially altering those of many who are interested in the design and purport of the circular. Again, "X. Y. Z." informs us that "the Director-General does not seem," &c., and that "the Director-General appears to be perfectly satisfied with the qualifications to be obtained from any of the recognised colleges." If so, somebody ought to mention the fact, as it no where appears in the circular. Is there a germ of the mushroom growth, of which I have already spoken in this sudden inspiration, of what "seems" and "appears" to take place in the minds of those occupying "high places" in the department? I am perfectly aware of the circumstance to which "X. Y. Z." alludes with regard to medical officers of the German Army, although I am at a loss to understand what "middle-aged German medical officers" have to do with my previous letter to you. I could congratulate your correspondent upon his great-mindedness, evinced by his facility for being "amused," were it not that his hilarity has, unfortunately for me, enticed him into wandering far from the meaning and expressions of my letter, and towards the apparently very cloudy regions of his own inventions. His letter, however, satisfactorily elicits one fact—viz., that an examination in the goose-step would be superfluous, at all events for him, so far as a doubt could be entertained of his capacity for treading in those steps. I do not intend to take further notice of anonymous communications, but should "X. Y. Z." be desirous of addressing me, and if he will do so above his name, I shall have much pleasure then in endeavouring to reduce my phraseology commensurate with his capacity.

I am, Sir, yours, &c.,

Oct. 6th, 1884. W. J. WHEELER.

*** This letter was unavoidably crowded out of our last issue.—ED. L.

"THE BEQUEST OF SIR ERASMUS WILSON."

To the Editor of THE LANCET.

SIR,—Just before reading Dr. Wilks' letter relative to Sir Erasmus Wilson's legacy to the College of Surgeons of England, I had been reading Sir Charles Bell's letters published in 1870. From one dated Jan. 1831, I send you the following quotation:—"I told you, I think, of my election into the Council of the College of Surgeons (1830). There have been three meetings since I was a member, but I restrained myself for two that I might not be too forward, and that I might comprehend fully what the College was about and how situated. Yesterday I opened upon them, and drew a picture of their situation, their array of talent, their museum, their library, then declared their inattention in not demanding a control over these institutions. I showed what these institutions were, and how they would encroach on their ancient establishment, and concluded with a hope that they would institute such courses of lectures as would extend their influence and maintain their preponderance."

I am, Sir, yours obediently,

Oct. 1884. SPES.

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NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

NEWCASTLE HOSPITAL SUNDAY FUND.

THE annual meeting of our Hospital Sunday Fund having been held here on Tuesday last enables me to send you further and more exact particulars as to the work of this now well-established effort for the past year. The collections were: churches and chapels, £2172 1*s.* 10*d.*; factories and workshops, £1953 18*s.* 11*d.*; the total showing an increase of £294 4*s.* 3*d.* over the collections of the previous year. It was mentioned with satisfaction by the committee and some of the speakers, that for the first time in the history of the fund the collection had passed £4000, while the total amount collected for the fund since its establishment in 1870 was £44,000. The trade depression at present prevalent in Newcastle would, it was to be feared, increase the demands on our medical charities; but it was hoped, on the other hand, that a corresponding amount of support would be given in other quarters.

THE WATER-SUPPLY AT MORPETH.

The water-supply at Morpeth for the last two months has been in a very unsatisfactory condition and deficient, the upper portion of the town having to be supplied with barrels filled at a private well. Latterly the local Board of Health has been carrying on boring operations near the Tranwell reservoirs, which only yielded enough water for one day in seven. After many disappointments water has been at last "struck," and the supply is now sufficient to dispense with the carriage by barrels. In Newcastle the water-supply has given some uneasiness lately, as it was said to be only sufficient for a month. Our gathering grounds, however, on the Northumbrian hills are so good that the copious rainfall of the last few days must have considerably replenished our supply.

MUNIFICENT GIFT TO THE DURHAM COUNTY HOSPITAL.

Mr. John Eden Beamish, hearing that the committee had resolved to increase the accommodation of the Durham County Hospital by erecting a new wing, which would cost about £2000, has, in a most generous manner, intimated his intention of placing that amount at their disposal.

NORTH OF ENGLAND MICROSCOPICAL SOCIETY.

At the opening meeting held last week a discussion took place on micro organisms, particularly bacilli and cholera microbes. As to the former, some good observers stated their ability to demonstrate their existence in the secretions of healthy persons. The whole feeling of the meeting inclined to the view that too much was attempted to be proved in late discussions, and that with the light we had many were attempting to lead in a degree it would be scarcely safe to follow. I might mention, while alluding to microscopical matters, that at a late meeting of the Berwickshire Naturalists' Club the retiring President read a paper on Salmon Disease. He (Captain Norman, R.A.) held that the burial of fish affected by the fungus at or near the banks of the Tweed was not likely to eradicate the disease, but rather to spread it, because the characteristics of the spores of Saprolegnia ferox were similar in number and vitality. They would not be destroyed, and rains were likely to wash them back into the river. He suggested "cremating stations along the banks of the river, where the affected fish might be burnt." The subject is one of very great importance, for, as is well known, the destruction of food by this disease has of late years become very serious. It has been noticed here and elsewhere by some observers that since the more general use of artificial manures in farms the salmon disease has become more prevalent, but still it is a moot point whether these facts can yet be regarded as in the relation of cause and effect. There can be no doubt, however, that the surplus moisture in land near the banks of rivers must find its way to the streams, and thus carry with it possible germs of contagion.

THE NEWCASTLE EYE INFIRMARY.

On the 13th inst., favoured by the brightest of October weather, the foundation stone of our new Eye Infirmary was laid by the Duke of Northumberland, supported by Earl Percy and the Mayor and Corporation of our City. Before the ceremony a luncheon was served in St. George's Hall, which was well attended by the public and the representatives of Law, Physic, and the Church, including two bishops, and other dignitaries I have called it the new Eye Infirmary, but the institution itself came into existence as far back as 1822, and with it are associated the names of several prominent citizens as patrons or members of the staff. During the year just ended no fewer than 4854 persons received the benefits of the charity, yet the Eye Infirmary has never yet had a house or home of its own; it has frequently shifted its quarters, but always as a tenant paying rent. The necessity of providing suitable and permanent premises has been forced on the governors by the ever-increasing demands for accommodation for their patients. The building commenced to-day is on the most complete plan of a modern ophthalmic hospital. The present medical officers are Dr. G. Y. Heath and Mr. C. S. Jeaffreson, and it is a good deal owing to their exertions and interests in the work of the charity that the foundation stone of the new building has been laid.

Newcastle-on-Tyne, Oct. 13th.

IRELAND.

(From our own Correspondent.)

THE ROYAL UNIVERSITY.

THE President of the Queen's College, Belfast, in his recent annual report draws attention to the reluctance with which the students attending his College enter for the examinations of the Royal University. One of the reasons he states is an impression, which largely prevails, that the examinations are not in all cases perfectly fair. It is said that occasionally the papers set are not entirely within the scope of the prescribed course, or free from such questions as can be answered only by those who have been specially trained in the school or class of the examiner. Another reason is that not a few of the examiners continue to teach candidates long after their examination papers have been prepared—indeed, up to the very date of examination. This is considered unfair by the students of the Belfast College, who leave that institution in June, while most of the examinations are held in September. Yet another reason is the allegation that as there are many examiners, and as their papers are prepared and printed weeks before the date of examination, the subject-matter of the papers becomes known to certain candidates, and grave injustice is thereby done to others. Whether the foregoing allegations be true or false, the President states as a positive fact that they have given rise to much dissatisfaction among candidates from the north of Ireland, and many have thereby been prevented from entering for examination. It is worthy of remark that up to the present no authentic denial of the alleged acts has been made by the authorities of the Royal University. A good many are of opinion that no examiner should lecture or give instruction in the subject he examines in; in the Royal College of Surgeons of Ireland no examiner is permitted to be a lecturer or expected to "grind" pupils for the examinations of that College, and it would be more satisfactory if these conditions were imposed on all examiners in the Royal University, at all events for the medical portion of the curriculum. The degrees of the University obtained at the recent examinations will be conferred on the 22nd inst. at the University Buildings.

QUEEN'S COLLEGE, GALWAY.

The President, in his annual report, states that the students attending the College during the session 1883-84 numbered 103, being a decrease of 41 as contrasted with that of 1882-83. For this diminution it is easy to find an adequate cause in the dissolution of the Queen's University, of which the Galway College formed a part. In the last session the students numbered 103, of whom 41 were in the Faculty of Medicine; in the session preceding 144, of whom 70 were in medicine; and in the session 1881-82 they numbered 201, of whom 122 were in medicine. The decline is almost exclusively confined to the Faculty of Medicine, that department of the College which it was foreseen would be particularly affected by the reversal of the university system. The President trusts,

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however, that the depression will be but temporary, and he is slow to relinquish the hope that the College will yet regain and even surpass its former position.

THE BELFAST ROYAL HOSPITAL.

A bazaar and fancy fair will shortly be held in aid of the funds of this institution. On the last occasion a very considerable sum was obtained. It is satisfactory to find that the working classes in Belfast have during the past year contributed liberally to this hospital, and that its claims to their support are thoroughly recognised. A pleasing example of this took place recently, when at a meeting of the assistant-managers, overlookers, and operatives in the weaving factory of the York-street Spinning Company it was decided to contribute a donation of £50, thus rendering the manager eligible as a life governor of the hospital.

BELFAST HOSPITAL SATURDAY.

A meeting of the Hospital Saturday Committee and of the collectors was recently held to receive the report of the Committee. The total receipts amounted to £564 7*s.* 1*d.*, the expenditure to £33 6*s.* 3*d.* The subject of a Hospital Saturday first came before the Belfast Royal Hospital Committee, next the co-operation of the Trades Council was obtained, and ultimately the movement was successful. Arrangements will be made to hold a Hospital Saturday collection next year.

Dublin, Oct. 14th.

PARIS.

(From our own Correspondent.)

FRENCH VIEWS OF CHOLERA.

AT the discussion at the meeting of the Academy of Medicine last week on Cholera, M. Ricord made a few remarks on the disease in question, which, although not in his specialty, he had an opportunity of studying in 1832 while surgeon to the Hôpital du Midi. The number of cases daily occurring in Paris was so great that it was found necessary to send out of the hospitals all the patients who were able to walk, to make room for those affected with cholera. In this way M. Ricord remarked that, notwithstanding the excessive mortality, not one of the patients who were retained in the hospital became affected with the disease, nor did any of the medical staff or *employés* of the hospital. Moreover, M. Ricord was at the time engaged in giving lectures on operative surgery, when the bodies of the patients dying from cholera were used for the purpose, and yet none of the students contracted the disease. From these circumstances M. Ricord concluded that cholera was not contagious, and that it originated spontaneously under the influence of some cause the nature of which has as yet not been determined. M. Ricord, on the ground of the non-contagiousness of the disease, condemned quarantine as being useless, delusive, and dangerous, at least so far as it concerned persons in health who were flying from infected quarters. At a previous meeting of the Academy Professor Bouchardat remarked that the cholerigenetic bacillus was never produced spontaneously in Europe, but was always imported, and that the contagiousness of cholera being incontestable, the disease is necessarily of parasitic origin. But he does not admit that the cholerigenetic parasite is the comma bacillus of Dr. Koch. M. Jules Guérin said that he had no confidence in the comma bacillus as a specific cause of the cholera, nor could he have more in the creature imagined by M. Bouchardat. He (M. Jules Guérin) never believed in the contagiousness of cholera, except under certain circumstances, or that it was ever imported, but that it was always produced spontaneously under the influence of local causes. Consequently, sanitary cordons and quarantines, whether by land or sea, are perfectly useless. This theory, and that of the identity of sporadic with Asiatic cholera, the learned Academician has maintained unshaken for the last fifty years.

Dr. Maurin of Marseilles delivered a public lecture on Monday last on the Etiology of Cholera. He began by stating it to be his firm belief that the outbreak of the disease was caused, not by importation as was supposed, but by the development of cholera germs that were buried with the patients who died from the disease during the epidemic in 1865 and 1866. A short time before the recent outbreak some of the streets of Toulon were macadamised with earth brought from the burial-ground where cholera patients were interred, and Dr. Maurin thought that the setting in of the disease about the time was something more than a simple coincidence, and if the theory of the parasitic origin of the disease was correct, there was here sufficient evidence of the two circumstances standing in the relation of cause and effect. Dr. Maurin, in conjunction with Dr. Lange, in their investigations on the subject, had discovered a substance which they believed to be the pathogenetic agent of the disease, and to which they have given the name of "le mucor cholerifé e." This substance is described as being a species of mushroom, of the class of "mucorinées," which is developed on the fourth or fifth day in the dejections of cholera patients. This mucor has an extraordinary power of vegetation. It lives in a 10 per cent. solution of carbolic acid, salicylic acid, and the strong acids. It continues its evolution in a 20 per cent. solution of corrosive sublimate or of chloride of zinc. It survives a temperature of 120° C. But its vegetation is arrested by a solution containing $\frac{1}{1000000}$th part of iodine in the cultures, and $\frac{1}{10}$th when the plant is developed. It is composed of a mycelium, from which start filaments which terminate in "sporanges" or bulbs containing a quantity of spores in a state of maturity. The sporanges open, and their spores, whose dimensions are only the hundredth part of a millimetre, fly about in all directions. The practical consequences of this discovery are, according to MM. Maurin and Lange, very important. It is evident from what has been said that the rational prophylaxis of cholera consists in treating the choleraic dejections with tincture of iodine, and submitting all the articles that have been in contact with cholera dejections to steam above 200° C. Dr. Maurin states that under the above notions as to the nature of cholera, one might understand the futility of quarantines, and the conveyance of the malady by air, by human beings, or by articles worn by them. It will also be understood why cholera is not immediately contagious. When the mucor cholérifère has found a favourable medium for its propagation it develops, and its spores are launched into the air and water. Every person then comes under the morbid influence during an epidemic, because these spores are more or less ingested by the healthy stomach; a very few only are developed into germ-ferments in the intestine. But if the stomach is weak or diseased, the spores are not digested, the ferment plants are developed, they extract oxygen and heat from the blood, and from the parietes of the stomach and intestines, whence all the phenomena of cholera which terminate by a general interstitial asphyxia, and death consequent on the deficiency of water and of chloride of sodium in the blood. Dr. Maurin does not believe in the comma bacillus of Dr. Koch, at least so far as regards the *rôle* assigned it by the German biologist in the etiology of cholera, Dr. Maurin considering that the bacillus stands in the same relation to the production of the cholera fermentation as the spirillum does to the acetious fermentation; consequently the bacillus is the result or product of the disease, and not its cause.

M. Arousshon, professor of chemistry, has been deputed by the Minister of Public Instruction to proceed to Italy to study the etiological aspects of cholera, and the effects upon it of applied therapeutics.

Paris, Oct. 15th, 1884.

ROYAL COLLEGE OF PHYSICIANS.

AT a special Comitia of the Royal College of Physicians on Thursday last (16th inst.), Sir W. Jenner, Bart., President, in the chair, a report was read from the representative of the College in the General Medical Council.

The College then proceeded to consider the question of the appointment of "representatives of the College on the Committee of Management for the Examining Board for England, constituted by the Royal College of Physicians and the Royal College of Surgeons." Dr. Quain moved that the question be postponed until the next meeting, and urged that the subject in all its bearings was not thoroughly understood by the Fellows. The motion was seconded by Dr. Braxton Hicks; but an amendment, proposed by Dr. Sieveking, and seconded by Dr. Bristowe, that

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the nomination should be proceeded with, was carried almost unanimously. The following Fellows were nominated to serve on the Committee of Management: Sir H. Pitman, Dr. W. M. Ord, and Dr. Norman Moore.

ROYAL COLLEGE OF SURGEONS.

AT a quarterly meeting of the Council, held on Thursday, the 16th inst., the sanction of the General Medical Council was reported to the scheme for the conjunction of the Royal College of Physicians and the Royal College of Surgeons, under Section 19 of the Medical Act. Mr. Forster (the President) and Messrs. Marshall and Savory were appointed representatives of the College on the Committee of Management under this scheme. It was resolved that the regulations as to the curriculum of study should come into force from the 1st inst.

Mr. John Wood was re-elected a member of the Court of Examiners, and Mr. Henry Moon was elected a member of the Board of Examiners in Dental Surgery.

A committee of ten was appointed to consider and report to the Council what additional accommodation can be obtained for examinations and other purposes. It is desired to obviate the necessity of closing the library during the periods of examination.

The diploma of Member granted to Mr. Ebenezer Bryceson on April 26th, 1884, was recalled and declared to be void under Sect. 22 of the Charter of the 7th of Victoria.

A report was received that the College is the residuary legatee under the will of the late Sir Erasmus Wilson.

A letter from Mr. Wheelhouse relating to the uncertainty of the results of the examinations of the College was referred to the representatives of the College on the Committee of Management under the combination scheme.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on the 13th, 14th, and 15th inst.:—

Francis Pain, C. Stewart Pethick, W. Withers Ewbank, Percy H. V. Hammersley, Albert de Lisle, and Fred. R. Miller, St. Bartholomew's Hospital; J. Lorenzo Davison and Edw. Furrer, Toronto; Julius Z. Torres, Colombia; Fairlee R. Ozzard, Howell T. Evans, and Leonard Raby, London Hospital; Wm. H. Stevens and Arthur Leche, Bristol; George F. Johnston, John R. Davies, John T. Harvey, and William J. Morton, Edinburgh; Samuel H. Harrington, Liverpool; George W. Rowe and Edward T. Wynne, Cambridge; Jacob A. Nowell, Leeds; T. Alfred Robson, Andrew S. Brewis, Charles W. Steenberg, and Theodor Lund, Newcastle; William A. Loxton, Roger Bullock, and Alfred J. Bulger, Birmingham; William W. Paterson and John Huges, Glasgow; Edward H. Young, Edgar Jennings, and Lewis W. Pockett, University College; John H. E. Austin, Percy B. Mackay, and Harry R. Mansell, St. George's Hospital; Gerald C. Hayward, Middlesex Hospital; William F. W. Shells, Robert Thompson, and Joshua H. Harvey, Guy's Hospital.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on Oct. 9th the following degrees were conferred:—

DOCTOR OF MEDICINE.—William Edward Stevenson, Downing.

BACHELORS OF MEDICINE.—George Tucker Clapp, Charles Edward Henry Cotes, Gonville and Caius.

BACHELOR OF SURGERY.—Charles Edward Henry Cotes, Gonville and Caius.

The Examiners in State Medicine have issued the following list of those examined and approved for certificates in Sanitary Science:—

A. Allan, M.D. Edin.; C. J. Coverton, L.R.C.P. Edin.; John J. Eyre, L.K.Q.C.P. Ireland; D. A. Gresswell, M.B. Oxford; K. P. Ganta, F.R.C.S. Edin.; H. Handford, M.D. Edin.; J. B. Hurry, M.B. Cantab.; J. J. Macan, M.A., F.R.C.S.; T. J. M'Gann, F.R.C.S. Edin.; F. Marsh, F.R.C.S.; L. W. K. Phillips, F.R.C.S.; F. Welsh, F.R.C.S.; W. C. Wise, M.D. St. Andrews.

The Professor of Pathology (Dr. Roy) will deliver his introductory lecture on Monday, October 20th, in the lecture room of Comparative Anatomy, at two o'clock.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Oct. 9th:—

John William Lynch, Commercial-road.

BY the agency of the Metropolitan Public Garden and Playground Association, eight open spaces have been obtained for public use during the past year.

THE sanitary authority of Canterbury have failed to obtain a magisterial order to enable them to close certain wells in the city which are believed to be contaminated.

ON the 15th inst. the Archbishop of Canterbury opened the Royal Alfred wing of the Croydon General Hospital, the foundation stone of which was eleven months since laid by the Duke of Edinburgh.

THE LATE DR. LESLIE OF ALTON.—A five-light stained-glass window of artistic design to the memory of the late Dr. Leslie has just been placed at the east end of the Alton parish church.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—An Entrance Science Scholarship of the value of £100 has been awarded to Francis Charles Abbott, and one of the value of £60 to Charles James Martin.

THE residuary estate of the late Mrs. Hatton, of Leeds, amounting to about £20,000, is to be divided amongst five local charities, amongst which are the Leeds Infirmary and the Cookridge Hospital.

ON the 15th inst. their Royal Highnesses the Prince and Princess of Wales paid a visit to the Norfolk and Norwich Hospital, the foundation stone of which was laid by the Prince in 1879, and expressed their great satisfaction at the efficient state of the institution.

PRESENTATION.—On the 4th inst., Dr. Lorimer was presented by the nurses and patients of the Devonshire Hospital, Buxton, with a valuable timepiece and an address, on his retirement from the post of resident medical officer to that institution, a position which he had held for many years.

FRIENDLY SOCIETIES AND HOSPITALS.—The sum of £100 has been handed over to the Great Northern Central Hospital authorities as the result of the demonstration of the Amalgamated Friendly, Temperance, and Trade Societies which was held on Sep. 7th.—A large temperance demonstration took place on Sunday afternoon at Brentford in aid of the London Temperance Hospital. It is estimated that between 3000 and 4000 members took part in the proceedings.

DEATH OF MR. WILLIAM EPPRETT.—Many of the numerous visitors to the Museum of the Royal College of Surgeons will be sorry to hear of the sudden death from angina pectoris, on the 9th inst., of this worthy and most zealous assistant in the Museum, who was an especial favourite of Professor Flower, as indeed he was with all the officers and servants of the College, some of whom testified by their attendance at Kensal-green the great respect in which they all held him.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At the annual meeting of this Society, held in their rooms on the 9th inst., the following gentlemen were elected office bearers for the session 1884-85:—President: Dr. A. Napier; Vice-President: Mr. William Carr; Treasurer: Mr. E. Mac Millan; Secretary: Dr. David Tindall; Editorial Secretary: Mr. James Hamilton; Seal Keeper: Dr. Thomas Lapraik; Court Medical: Dr. Robert Park, Dr. A. Pearson, Dr. James Morton, Dr. James Barras, Dr. John White; Ordinary members to complete Council: Mr. John Glaister, Mr. W. J. Shaw, Mr. F. A. Freer.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The quarterly court of this Society was held in the room of the Royal Medical and Chirurgical Society on Oct. 8th; the President, Sir James Paget, F.R.S., in the chair. One new member was elected at the meeting, the election of a member was declared void, and the deaths of four were reported, including those of two vice-presidents—Mr. Cæsar Hawkins and Sir Erasmus Wilson. Dr. Quain moved, and Sir H. Pitman seconded, that the President be requested to communicate to Mrs. Hawkins and Lady Wilson an expression of the sincere

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sympathy of the Board of Directors of the Society on the occasion of their great loss, and to Lady Wilson their grateful appreciation of the munificent legacy of £5000 bequeathed by Sir Erasmus Wilson. On the recommendation of the acting treasurer, Mr. Fuller, it was agreed to give the usual present at Christmas to the widows and orphans receiving grants from the Society. Applications for grants were read from fifty-nine widows, five orphans, and three orphans on the Copeland Fund, and it was resolved that a sum of £1259 be distributed amongst them at the next court. Applications were read for the first time from two widows and five orphans, and grants were made subject to the approval of the Committee of Visitors. Another application of a widow for herself and child was referred to the visitors to report on at the next court.

FIFESHIRE MEDICAL ASSOCIATION.—At the third annual meeting of this Association, held at St. Andrews on the 30th ultimo, the President, Dr. Archibald, read an address relative to the history of St. Andrews and her University. In it he dwelt upon the antiquity and long-standing importance of them both, and urged that, rather than let the old University perish, steps should be taken to bring its teaching possibilities fully up to the level of the times. He considered that, in the Medical Faculty, the addition of a chair, say of botany or materia medica, would allow of students taking out two *qui medici*, and would also tend to the strengthening of the Faculty as a centre for the teaching of science. Dr. Dow exhibited the skull and gave a short account of Lilias Adie, Torryburn, witch, with extracts from the Kirk-Session records relative to her trial and death, which was listened to with much interest. The following were elected as office-bearers for the ensuing year: Dr. Dow (Dunfermline), President; Dr. K. Macdonald (Cupar), Vice-President and Treasurer; Dr. Douglas (Cupar), Secretary; Drs. Archibald (St. Andrews) and Whitelaw (Cupar), Members of Council. The members afterwards adjourned to an hotel, where dinner was served and a most enjoyable evening spent.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—At the annual meeting of this College, held on the 15th inst., the following office-bearers were elected for the ensuing year:—President: John Smith, M.D., LL.D. Vice-President: William Turner, M.B. Secretary and Treasurer: Joseph Bell. Librarian: Archibald Dickson, M.D. President's Council: Henry Duncan Littlejohn, M.D.; Patrick Heron Watson, M.D.; David Wilson, M.D.; Francis Brodie Imlach; Douglas Argyll Robertson, M.D.; John Duncan, M.D.; William Turner and Joseph Bell (*ex officio*). Representative in General Medical Council: Patrick Heron Watson, M.D., LL.D. Examiners: James D. Gillespie, M.D.; Henry D. Littlejohn, M.D.; Patrick H. Watson, M.D., LL.D; David Wilson, M.D.; John Smith, M.D., LL.D.; Joseph Bell; John Duncan, M.D.; Robert J. Blair Cunningham, M.D.; Alexander G. Miller; Peter A. Maclaren, M.D.; Johnson Symington, M.B.; Francis Cadell; James Dunsmure (junior), M.D.; William Craig; Charles E. Underhill. Dental Examiners: Patrick H. Watson, M.D., LL.D.; Henry D. Littlejohn, M.D.; David Wilson, M.D.; John Smith, M.D., LL.D.; Andrew Wilson, L.D.S.; George W. Watson, L.D.S. Assessors: William Brown; Archibald Inglis, M.D.; James Dunsmure, M.D.; William Walker. Conservator of Museum: Robert J. Blair Cunningham, M.D. Clerk: James Robertson, Solicitor. Officer: Colin Mackenzie. Assistant to Conservator: George Reid.

Medical Appointments.

N.B.—This column must be sent DIRECT *to the Office of The Lancet before 9 o'clock on Thursday Morning at the latest.*

[illegible] has been appointed Assistant Medical [illegible] Old Town Infirmary, vice Beattie, re[illegible]

[illegible], L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer to the Buckingham Palace-road Workhouse, St. George's (Hanover-square) Union.

BRUCE, J. MITCHELL, M.D., F.R.C.P.I., has been appointed Consulting Physician to the Royal Caledonian Asylum, vice Dr. A. Wood, deceased.

CHADWICK, CHARLES M., M.A., M.B.Oxon., M.R.C.P.Lond., has been appointed Physician to the Leeds Public Dispensary, vice Thomas Courton, M.D., resigned.

CREAGH, WM., L.R.C.S.I., L.S.A.Lond., has been reappointed Medical Officer to the Lullington and Rosliston District of the Burton-upon-Trent Union.

FRASER, JAMES A., M.R.C.S., L.R.C.P.Lond., has been appointed Surgeon to the Romford Union House.

GIBSON, CHARLES JOHN, M.B., C.M.Ed., has been appointed Medical Officer for the Stone District and Workhouse, Stone Union, vice Hopkins.

HALL, B., M.B.Lond., M.R.C.S., has been appointed Second Assistant Medical Officer to the Middlesex County Asylum, Banstead.

HARTRIDGE, GUSTAVUS, F.R.C.S., has been appointed Consulting Ophthalmic Surgeon to St. Bartholomew's Hospital, Chatham, vice Henry Power, F.R.C.S., resigned.

HARVEY, FRED. GEORGE, M.R.C.S., has been appointed Medical Officer for the Acton Burnel District of the Atcham Union, vice Glover.

INGOLDBY, FREDERICK J., M.R.C.S., has been appointed Assistant Medical Officer and Dispenser to the Infirmary, Fulham Union.

JOHNSON, SAMUEL EBENEZER, L.S.A.Lond., has been appointed Medical Officer for the Balsall Heath District of the King's Norton Union.

MURDOCH, J. WM. A., M.B., C.M., has been appointed Resident Medical Officer to the Riccartsbar Asylum, Paisley, vice Dr. Park, resigned.

NUGENT, G. P. L'ESTRANGE, M.B., B.Ch.Dub., has been appointed Assistant-Physician and Pathologist to the House of Industry Hospitals, Dublin.

PIGEON, W. H., M.A., M.B., B.C.Camb., M.R.C.S., has been appointed Resident Surgical Officer to the Royal Infirmary, Manchester, vice Bilton Pollard, M.D. &c., resigned.

ROBINS, GEORGE NORMAN, M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Rippingale District of the Bourne Union, vice Adams, resigned.

WILLIAMS, DAVID JOHN, M.D. St. And., F.R.C.S.E., has been appointed Acting Health Officer for the Port of Port Philip, vice Bulmer, resigned.

WILSON, FRANK, M.B., C.M., has been appointed Medical Practitioner to the Paisley Infirmary, vice Dr. Dickson, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BENNETT.—On the 8th inst., at Upper Berkeley-street, Portman-square, the wife of H. Selfe Bennett, M.B., of a son.

BRUNTON.—On the 11th inst., at Welbeck-street, the wife of T. Lauder Brunton, M.D., of a son.

HIND.—On the 11th inst., at Whitehall-place, Stockton-on-Tees, the wife of Henry Hind, F.R.C.S., of a daughter.

TUKE.—On the 20th ult., at Ranelagh House, Chiswick, the wife of Charles Molesworth Tuke, M.R.C.S., of a daughter.

WHITTINGTON-LOWE.—On the 10th inst., at Marine-parade, Brighton, the wife of R. Whittington-Lowe, M.D., Staff-Surgeon, of a daughter.

MARRIAGES.

BRYCESON—LAWSON.—On the 2nd inst., at Rectory-place Church, Woolwich, Ebenezer Bryceson, M.A., M.B.Camb., M.R.C.S., and L.S.A.Lond., second son of George Bryceson, Esq., of Shooter's-hill, Kent, to Jessie Ellen, second daughter of James Lawson, Esq., of Tilbury Villa, Fox-hill, Plumstead.

BUTTON—GARRARD.—On the 1st inst., at Tickenhall, Derbyshire, Henry Herbert Walter Button, L.R.C.P.Ed., L.F.P.S.Glasg., to Kate Garrard, second daughter of the late William Garrard, Esq., of Tickenhall, Derby.

JAMES—PERKINSON.—On the 7th inst., at the Parish Church, Bradford, Yorkshire, by the Rev. Canon Bardsley, D.D., Vicar of Bradford, assisted by the Rev. Knight Gale, Vicar of St. Andrew's, Bradford, the Rev. Gilbert Leny James, Vicar of Gresley, Derbyshire, to Mary Elizabeth, eldest daughter of the late William Parkinson, Esq., M.R.C.S. Eng., L.S.A.Lond., of Bradford.

JOHNSTONE—VAWDREY.—On the 7th inst., at St. Mary's, Handsworth, William Johnstone, L.R.C.S., L.S.A.Lond., of Smethwick, to Mary Leah, youngest daughter of the late Thomas G. Vawdrey, M.R.C.S., L.S.A.Lond., of St. Austell.

MILLAR—LIBERTY.—On the 7th inst., at St. Andrew's Church, Nottingham, by the Rev. Canon Morse, M.A., assisted by the Rev. Frederick Hart, B.A., James Millar, M.D., of Sowerby Bridge, Yorkshire (late of Asbroath, N.B.), to Kate, eldest daughter of Arthur Liberty, of Nottingham.

SMITH—RUSSELL.—On the 7th inst., at St. Luke's, West Holloway, T. F. Hugh Smith, F.R.C.S., eldest son of Henry Smith, F.R.C.S., of 82, Wimpole-street and the Orchard, Swanley, to Florence Mary, elder daughter of the late James Russell, of Charton, Faringham.

DEATHS.

BURNETT.—On the 9th inst., at Dover, Ferdinand Burnett, M.D., in his 81st year.

GUISE.—On the 4th inst., at The Knoll, Clifton, Surgeon-General Guise, late of Bengal, aged 68.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 16th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Oct. 10	29·43	N.W.	46	45	..	47	45	·27	Raining
,, 11	29·67	N.	41	37	74	49	37	·09	Cloudy
,, 12	29·79	N.W.	48	44	76	52	42	...	Cloudy
,, 13	30·09	N.W.	41	39	81	52	38	·05	Hazy
,, 14	30·10	W.	47	46	79	58	40	·06	Raining
,, 15	30·31	W.	50	47	..	56	45	..	Hazy
,, 16	30·33	W.	57	55	..	61	48	..	Cloudy

Medical Diary for the ensuing Week.

Monday, October 20.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Address by the President. Paper by Sir Joseph Lister, Bart.—At 8 P.M. a New Invalid Bed-lift will be shown by Mr. Newham.

Tuesday, October 21.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Charlewood Turner and Dr. Carrington: Dysenteric Abscesses in Liver.—Dr. Wickham Legg and Dr. Theodore Acland: Cases of Hæmophilia and Purpura.—Mr. Pepper and Dr. Silcock: Tabes Dorsalis, with Perforating Ulcer of the Foot.—Dr. Hadden: Two Fatal Cases of Alcoholic Paralysis.—Dr. Hale White: Coarctation of the Aorta, Chronic Ulcer of the Stomach, with Secondary Changes in the Pancreas (card).—Dr. Ormerod: A Case of Scleroderma.—Dr. J. F. Payne and Dr. F. Semon: Rhino-Scleroma (living).

Wednesday, October 22.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department, 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

HUNTERIAN SOCIETY.—8 P.M. Dr. Thorowgood: Some forms of Irritable Heart.

Thursday, October 23.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, October 24.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

QUEKETT MICROSCOPICAL CLUB.—8 P.M. Dr. W. B. Carpenter, F.R.S. (President): The Relations of the Various Types of the Genus Orbitolites.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Golding-Bird: A Case of Dislocation of the Patella.—Dr. James Anderson: A Case of Myxœdema.—Dr. Carrington: A Case of Eruption probably due to Bromism.—Mr. Godlee: A Case of Nephrectomy for Tumour in an Infant.—Dr. J. K. Fowler: Pigmentation of Tongue (living specimen).

Saturday, October 25.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to the Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

"AN IMPUDENT DEFENCE OF CANNIBALISM."

THE writer in the *Catholic Times* seems aggrieved at our remarks on his annotation on the terrible incident in connexion with the loss of the *Mignonette*. We readily accept his entire disclaimer of any sympathy with those who are disposed to extenuate murder for the purposes of cannibalism. We must still, however, object with some indignation to his statement that "it is no uncommon thing for doctors to administer to persons who appear to be, and probably are, dying of painful diseases, such drugs as not only allay pain, but will also surely hasten their end." This is an unwarrantable statement. We reproduce some remarks of our contemporary of last week on this matter:—

"Our accuser is by far the leading medical journal in England, and has a world-wide circulation. We are therefore at a loss to understand how its acute editor could fail to see that our comments were at one with his own opinions on the subject of murder and human flesh-eating. We can only conceive that a correspondent sent the editor a copy of our paper with the article marked, and that, the name 'Catholic' recalling the false stories of his school-days, he merely glanced hastily over the lines, and, seeing that it was about cannibalism, took it for granted that it must have been a defence of the barbarous crime. To read a sentence at haphazard was, of course, sufficient. This random sentence happened to contain an allusion to the doctors, and this riveted his attention. In using the word 'doctors' we meant 'some doctors.' But he exaggerates our observations into a charge against the whole medical profession. Nothing, however, could have been further from our intention. We gladly recognise that, whatever the profession may be in foreign countries, its twenty thousand British members are a noble band, whose earnest and self-sacrificing efforts to stay the ravages of disease, drunkenness, and crime, merit for them the gratitude and esteem of the community. In daily intercourse they are kind and considerate to our poor; and they are ever courteous to our clergy."

RIDING *v.* DRIVING.

To the Editor of THE LANCET.

SIR,—I should be glad, with your permission, to obtain the opinions of my professional brethren engaged in rural practice as to the comparative advantages of riding or driving on their journeys. I formerly had a country practice, purely rural, in which my rounds were usually twenty, and sometimes thirty, miles a day, and I always drove. The most handy vehicle for such work is, in my experience, a square shooting-cart with adjusting seat. I also used a Stanhope gig; but it is decidedly less safe and not so comfortable. Four-wheels are safest of all; but everyone in country practice knows that they wear out the horse, and are less expeditious; and expedition, with due regard to the horse, must be the first consideration. Is riding safer; especially at night? And would it be safe for a man not much accustomed to the saddle of late years and rather past middle age? Driving is probably more comfortable in cold or wet weather. I may remark I never used a hooded gig, as it adds to the weight and catches the wind; they are more used by practitioners in towns, and for short journeys. Hansom cabs, *et hoc genus omne*, are not worth consideration for long distances and cross-country roads. Cobs of about fourteen hands are more useful than full-sized horses. I preferred having a light-weight groom to drive, as I always found it adds very much to the fatigue to drive oneself, though many I know do so; it is certainly safer, as all my accidents were the result of grooms' driving. Accidents are common to most practitioners who are out a good deal by day and night. I do not know if any difference exists in the risks of riding or driving. I have known many fatal accidents happen both ways. Perhaps some of your readers will kindly give their opinions on this point.

I am, Sir, yours truly,

Oct. 6th, 1884. ATRA CURA POST EQUITEM SEDET.

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SUICIDES IN FRANCE.

OFFICIAL returns recently published show that in France the number of persons ending their lives by suicide is increasing in a remarkable manner. Five years ago the proportion of self-destroyers per 100,000 inhabitants was seventeen, now it is nineteen. Hanging and drowning appear most commonly resorted to, the modes of destruction next in favour being by firearms or charcoal fumes. The months of April, May, and June are those in which the highest number of suicides take place, there being, it is also remarked, generally fewer cases of self-inflicted death during the last than during the first three months of the year.

Mr. W. H. Bull.—References to cases in point will be found in THE LANCET of Feb. 16th, 1877, p. 223; Jan. 24th, 1880; Dec. 9th, 1882. But each case must, of course, stand on its own merits.

J. M. T. (Liverpool).—Yes. Dr. Fauvel, we believe, still holds to the view that the disease which has prevailed in France is different in kind from that which is witnessed in the East.

G. H. F.—The subject has already been thoroughly discussed in our columns.

J. H. R.—One swallow does not make a summer.

Devonian should consult his medical adviser. We do not prescribe.

A MODIFICATION OF DR. JUNKER'S INHALER.

To the Editor of THE LANCET.

SIR,—Dr. Buxton's paper on the above subject, which appeared in your issue of Oct. 4th, bears strong testimony in favour of this apparatus, which was first constructed by our firm in 1867, and has since been widely adopted by the medical profession in England and abroad, where it has been from that time in constant use in the principal hospitals and surgical clinics. This inhaler, it will be remembered, although originally designed for the administration of methylene—the use of which, however, has always been, at any rate on the Continent, very limited—owes the favour it has generally met with principally to its admirable efficacy and advantageousness for the administration of chloroform. One of its many advantages is that a much smaller quantity of the narcotic is required to produce and to keep up full narcosis than by other methods, but little more than one drop being the most which can be evaporated and administered with each compression of the bellows.

We admit that Dr. Buxton's modification of refilling the reservoir may have its advantage, provided the peg fit securely, which will not always be the case. If too tight, it will oppose great resistance at its removal; if too loose, it will be lifted and pushed out by the internal pressure of the air pumped into the receiver. Our screw-top obviates the latter accident, and its removal will barely cause more delay than that of a tight peg. The objection that the administrator has not a hand at liberty for any emergency will easily be overcome by a little skill and practice. We have repeatedly witnessed Dr. Junker's method, who manages, if necessary, with the same hand to hold the face-piece, to compress the bellows, and to feel the pulse of the maxillary artery, thus leaving the other hand free. The treadle for working the air-ball, instead of compressing it with the hand, has been introduced from the earliest date. Some administrators find it more convenient, while others return to the hand-bellows. The material of the face-piece is likewise a matter of individual preference; it has been made of leather, felt, flannel, and even of paste-board. We are, however, inclined to believe that a vulcanite face-piece is cleaner and more durable. The face-pieces we supplied to the Samaritan Hospital in 1867 are still in use, and are none the worse for wear. The face-piece should be held before, or but lightly against, the patient's face, when it will not leave any mark of pressure. The air-cushion adjustment around the rim of the face-piece has also had its trial; but it was quickly abandoned, and justly so, for the patient is not to breathe, and cannot breathe freely through the inhaler. Junker's inhaler appears to be misunderstood by many; for it seems not to be taken into account that by pressing the air-bellows the narcotic vapour is brought before the patient's face and nose in a concentrated condition, even if only two drachms of the anæsthetic be in the bottle, which must be diluted with not less than five times as much fresh atmospheric air, which should enter freely at the sides and valve of the face-piece. A closely fitting face-piece is therefore objectionable. A pocket-handkerchief folded lengthways and bound around the rim serves more efficiently; it does not prevent the easy breathing of the patient, is clean and safe, and does away with the necessity of a series of face-pieces. We are, Sir, yours obediently,

London, Oct. 13th, 1884. KRONNE & SESEMANN.

GLASGOW UNIVERSITY PROFESSIONAL EXAMINATIONS.

IN our Glasgow Correspondent's letter last week the number of candidates for professional examination at the University was accidentally misstated. The numbers should have been as follows: For the first examination, 156; for the second, 85; for the third, 62—numbers strongly suggestive of a weeding-out process.

A Student will find all the information he desires in our Students' Number, published on Sept. 13th.

Mr. Edward Lucas.—The matter is referred to in another column.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE first Primary Examination for the Membership of the College for the present session was commenced on Friday, the 10th inst., when 136 candidates presented themselves, against ninety-four at the corresponding period of last year. The following were the questions on Anatomy, and the candidates were required to answer four, and no more, between the hours of 1 and 3 P.M.:—

1. Describe Hunter's canal; its boundaries and contents. Mention the parts in relation to it.
2. Give the dissection required to expose the suboccipital triangle.
3. Give the attachments and relations of the pronator radii teres.
4. Enumerate the sutures of the cranium. Give their course, the bones which respectively enter into their formation, and the class of suture to which they severally belong.
5. Describe the origin, course, and termination of the saphenous veins, and enumerate their chief tributaries.
6. Give the attachments and relations of the pharynx.

The following were the questions on Physiology, to be answered between the hours of 4 and 6 P.M.:—

1. Describe the structure and uses of the different forms of cartilage met with in the human body.
2. What is the pulse? Why is it in general confined to the arteries? Under what circumstances does it appear in the capillaries and veins?
3. Describe the nervous mechanism of respiration? By what conditions, and in what manner, may the rhythm of respiration be modified.
4. Describe the distribution of blood in the liver. By what forces is the movement of the blood through this organ maintained?
5. What gases are contained in the blood? State the average amount of these gases in arterial and venous blood? How may these quantities be determined?
6. Describe the structure of the cornea. Name the refractive media of the eye in the order of their relative importance.

Mr. J. M. Waters.—As a rule, the passing of an examination is required before permission is given to practise in the countries mentioned.

SCARLATINA LATENS.

To the Editor of THE LANCET.

SIR,—On Friday, Sept. 19th, I was summoned to see two children—Maggie B——, aged three years, and William B——, eight years—who had been ill since the 15th. On that day a swollen gland was observed in both at the angle of the jaw. On the 16th their faces appeared puffy, especially about the eyes, this gradually increasing till the morning of the 18th, when the parents saw that the ankles were increased in size. They also noticed that their children were passing very little urine. Matters got worse till the morning on which I was summoned (the 19th). On examination of the urine I found great abundance of albumen in that of the girl, but none in that of the boy. I prescribed a compound jalap powder and a diuretic mixture of digitalis, with potash and broom, and poultices to the loins. The boy got gradually better under this treatment, and so I shall only refer to the girl. On the 20th only an ounce of urine was passed in the morning, and none the rest of the day. In the evening the patient's temperature was 103·5°, and she was very drowsy. I ordered a leech over each kidney, which temporarily relieved them, and the patient passed urine three times between that and the forenoon of the next day.—21st: Evening temperature, 103·2°; pulse, 108; respiration, 106, and tubular in character. The patient had vomited twice in the afternoon. To relieve the dyspnœa I prescribed a leech over the top of the sternum, the bleeding to be encouraged by fomentations. This gave immediate relief.—22nd: Morning temperature normal; pulse, 104; respiration, 50. Evening temperature, 100°; respiration, 60. From this date the patient was convalescent.—Oct. 4th: The urine, when allowed to stand fifteen minutes after adding nitric acid, showed a faint ring of albumen.

In these cases there was no history of sore-throat or rash, and examination revealed no desquamation; but in both there was a swollen gland, renal dropsy, and diminished urine, with albumen in the one and none in the other, as we sometimes find in scarlatinal dropsy.

I am, Sir, yours truly,

Glasgow, Oct. 6th, 1884. JAMES WILSON, M.D., B.Sc., M.B.

CHECKING GROWTH OF THE HAIR.

To the Editor of THE LANCET.

SIR,—In answer to a correspondent who asks in your last issue if the growth of hair on different parts of the body can be stopped, I beg to observe that if ordinary depilatories will not destroy the hairs sufficiently, electrolysis should be employed. I have pursued this method for some time with much success. I am, Sir, your obedient servant,

Sackville-street, W., Oct. 13th, 1884. JAMES STARTIN.

To the Editor of THE LANCET.

SIR,—I would refer your correspondent to Section 21:2 of the Medical Digest, where, under the heading "Depilatories," will be found all the suggestions that have been made by different contributors to the medical papers during many years past.

I am, Sir, yours obediently,

South Hampstead, N.W., Oct. 14th, 1884. RICHARD NEALE, M.D.

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ENGRAVINGS OF REMBRANDT'S PICTURES.

IN answer to several correspondents, we may say that copies of the engravings noticed by us last week may be obtained by order of Messrs. Williams and Norgate, Henrietta-street, Covent-garden, London, W.C.

Microbe.—See Dr. Timothy Lewis's letter in our issue of Sept. 20th, and our comments thereon in the same number.

Mr. Theodore Ewart (Salisbury).—The paper will appear shortly.

THE DEHYDRATION OF BODIES.

To the Editor of THE LANCET.

SIR,—You were kind enough in your last issue to notice my suggested process of dehydrating human bodies by a current of cool, dry, and germ-free air, and to express your opinion that it would afford one method of overcoming the disadvantage which cremation at present lies under of placing facilities in the way of poisoners. You naturally, however, reserve your opinion as to the practicability of the suggested process; and therefore I trust you will allow me space to point out that the process of mummification goes on spontaneously and successfully under conditions less favourable than those I recommend. The bodies buried in the vaults beneath the ancient church of St. Michan's in Dublin do not putrefy, but dry up to a species of mummy. This remarkable result is brought about, according to Drs. Cameron and Tichborne, who have investigated the matter independently, by the dryness of the air in the vaults and the absence of dust, and consequently of putrefactive bacteria. If this natural mummification is effected by dry germ-free air in the absence of antiseptics, it would seem to follow that a more perfect result would be obtained by the use of a current of air not merely dry in the popular sense, but chemically desiccated and freed from bacteria, especially as it would be easy to reduce the temperature to that indicated in the cold rooms of meat-carrying steamers traversing the tropical seas. As regards the production of the Egyptian mummies, I believe the function performed by the so-called antiseptics was much less important than is sometimes imagined. The molten asphalte or resin which was poured into the various cavities of the body was, I think, useful in filling them up, and so preventing them acting as reservoirs of air. The pickling process (for such it was), of course, tended to prevent immediate decay; but the efficacy of the process was for the most part due to the linen bandages which were so carefully and skilfully applied. The embalmers sometimes placed a thousand yards of linen upon a mummy, and they were very careful to avoid enclosing spaces of air. The linen, while not preventing the access of air and the consequent (perhaps slow) desiccation of the tissues, effectually filtered off the bacteria, and so prevented putrefactive change. In conclusion, I should like to say that the process I advocate is not really complicated. The owners of cargoes worth thousands of pounds constantly entrust them for months upon the ocean to the action of freezing machines, not furnished in duplicate, and the desiccation and filtration of air would offer no difficulty to the chemical engineer.

I am, Sir, yours faithfully,

Birmingham, Oct. 8th, 1884. THOMAS BAYLEY.

C. J. P.—We know nothing of the nostrum mentioned, and cannot undertake to warn the public against individual quack medicines.

Mr. Macdonald Brown (Edinburgh).—The lecture will appear in an early number.

Mr. W. H. Kesteven.—The article will be published shortly.

J. W.—Our correspondent, in our opinion, has no claim.

MANY communications are unavoidably held over till next week.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Box, Bristol; Mr. Watt; Mr. P. Ness, London; Mr. Elliott, Carlisle; Dr. Sexton, New York; Mr. Oakley, London; Mr. Macdonald Brown, Edinburgh; Mr. M. Martin, Glasgow; Mr. Perceval; Dr. Macalister, Cambridge; Mr. Knagga, Trinidad; Dr. Ormsby, Dublin; Mr. Ogier Ward, Tottenham; Mr. Headley Neale, Leicester; Mr. Henry Lee, London; Professor Wharton Jones; Dr. Crutchley, Holmcroft; Mr. H. Sewill, London; Dr. C. T. Ewart; Mr. Birchall, Liverpool; Mr. McGill, Leeds; Mr. Greenish, London; Mr. Taylor, Davos Platz; Dr. Marsden, London; Mr. Scott, Manchester; Mr. Percival, Leamington; Mr. Dority, Worcester; Mr. A. Smith; Dr. Rutherford, Dumfries; Mr. Woodroffe, Peterboro'; Mr. Baxter, Bristol; Miss Reid, Banbury; Mr. Brodey, Ilkley; Mr. Hewitt, Carson-street; Mr. Macpherson, Middlesbrough; Mr. C. P. Crouch, London; Mr. Rendle, London; Mr. F. E. Cane, Leeds; Mr. J. Chalmers, London; Mr. G. Smith; Mr. Chauncy Puzy, Liverpool; Mr. Stenson Hooker, Midhurst; Mr. Mayo Robson, Leeds; Mr. J. Startin, London; Mr. C. S. Jeaffreson, Newcastle; Dr. Lee, London; Mr. A. H. Cook, London; Dr. Herman, London; Mr. Pedley, London; Messrs. Redfern and Co., Leicester; Dr. Barron, Manchester; Dr. Latham; Dr. Musgrove, Pontefract; Dr. Tate, Notts; Mr. Oskell, Carlisle; Messrs. Bell and Co., Lancaster; Mr. Wilson, Leamington; Mr. Hughes, Kingsland; Mr. Hicks, Wakefield; Messrs. Benjamin and Son, London; Dr. Richard Neale, London; Mr. E. Lucas; Dr. Thompson, Ulverstone; Mr. Toller, London; Mr. Wingrave, London; Mr. Walker, Putney; Mr. Hayes, Birkenhead; Dr. Collier, Hastings; Dr. J. H. Martin, Chicago; Mr. Scott; Mr. J. Sharpe; Mr. Godlee, London; M.; G. T. M.; Spes; N. C., Liverpool; General Practitioner; Medicus, Southsea; Beaver; M. O. H.; An Undergraduate.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Bullen, Manchester; Mr. Hewer; Miss Sidney, Brighton; Mr. Moore, Bradford; Messrs. McGee and Co., Belfast; Dr. Murchison; Mr. Roberts; Mr. Richardson; Mr. Malcolmson, Kirby Moorside; Mr. Barrier, Hartlepool; Mr. Jaler, London; Mr. Rynd, Leeds; Mr. Duke, Brighton; Mr. Hurrier, Chard; Messrs. Grant and Son, Edinburgh; Mr. Jones, Sheffield; Mr. Hughes, Hanaworth; Mr. Bates, New York; Mr. Turner, Colchester; Mr. Deepway, Leicester; Mr. Barnes, Chesterfield; Messrs. Mackay and Co., Edinburgh; Mr. White, Bayswater; Mr. McGill; Mr. Head, Cambridge; Dr. Eberle, Thirsk; Mr. Bush, Chew Stoke; Messrs. Pope and Sons, Downham Market; Mr. Cornish, Manchester; Mrs. Parkinson, Bradford; Mr. Kinder, Leicester; Mr. Gottard, Alcester; Miss Meyer, Holloway; Dr. Harding; Mr. H. A. Thompson; Rev. D. Inglis, Halstead; Mr. Pope, Eardesly; Mr. Bigg, London; Mr. Brown, Pimlico; Dr. Heelar, Hampstead; Messrs. Keith and Co., Edinburgh; Mr. Appleton, London; Neurosis, Bembridge; S. W., Manchester; Medicus, Pomeroy; Clay, Wandsworth Common; Medicus, Ormskirk; Medicus, London; M. A. J., Woburn; Alpha, Clevedon; H. B., Liverpool; Georgius, Alpha, Cheapside; X. Y. Z., Plymouth; M.D., Hackney; J. W.; Medicus, Manchester; Omicron, Liverpool; Alpha, Blandford; M. M. M.; Medicus, Chelsea; Alexander; Rusticus; W., Manchester; Fidelitter, Clacton-on-Sea; E. A.; F.S.A.; M.D., Streatham; X. M., Cambridge; W. M.; Medicus, Bristol; Surgeon, Oldham; Medicus; Secretary; Consultant; H. T. W.

Southport Visitor, Western Mail, Sheffield Daily Telegraph, Harrow Gazette, Newcastle Daily Journal, Newcastle Daily Chronicle, Pioneer, Liverpool Courier, Manchester Courier, Sunderland Herald, Calcutta Englishman, Sunderland Daily Echo, &c., have been received.

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The Harveian Oration

DELIVERED AT THE

ROYAL COLLEGE OF PHYSICIANS,

October 17th,

BY J. RUSSELL REYNOLDS, M.D., F.R.C.P.,

FELLOW OF THE ROYAL SOCIETY,
PHYSICIAN IN ORDINARY TO H.M.'S HOUSEHOLD,
EMERITUS PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE AT UNIVERSITY COLLEGE.

SIR WILLIAM JENNER, HONOURED PRESIDENT OF THIS LEARNED COLLEGE,—Before entering on the subject which now brings us here, I must ask you to accept my thanks for the distinction you have conferred on me in selecting me for the office I have the honour to fill to-day—an honour, allow me to add, which carries with it a special gratification to myself, inasmuch as among the many distinctions conferred by this College on my grandfather, the late Dr. Henry Revell Reynolds, there was not one he prized more highly than that of having delivered, as he did, before the President and Fellows of this College, one hundred and eight years ago, the Harveian Oration.

MR. PRESIDENT, FELLOWS OF THIS COLLEGE, AND GENTLEMEN,—Sir Thomas Browne has said, in one of his sadder moods, "Our fathers find their graves in our short memories, and sadly tell us how we may be buried in our survivors. ..... The greater part must be content to be as though they had not been—to be found in the register of God, not in the memory of man." This is without doubt true, as he said, of the "greater part," but it is not true of all; for our meeting here to-day is an assertion that there is, at least, one who has not yet found his grave in our vanishing powers of recollection, but whose life, unburied, still breathes in the lives of living acting men.

It is not of the sorrows and "unavailing tears" that were shed, nearly 230 years ago, over Harvey's grave, that it behoves me now to speak; but rather of the fact that although the knells of nearly three centuries have been tolled since he became a part of this College, yet that only last year, on Oct. 18th, our College repaired to his grave in Hempstead to do honour to his memory, and with gratitude and gladness to assert, as we do again to-day, that he still lives "in his survivors," and that, although 306 years have passed since Harvey's life began, he at the present hour is neither dead nor sleeping.

I. Let me ask you, for a few moments, to think over that act of last year. It is not meet to call it a "ceremony" or "performance," for those words may have a doubtful meaning. It was a something done, and that with purpose. It was done with reverence and solemnity, and fitting formal circumstance. The like of it has not often been seen in this country. It was simple, but it told of much complex thought and feeling; it was grave, but it was not sad; it was official, but it was not heartless. It was unnecessary, but it was urgent; it was a duty to the remains of Harvey; but it was also an honour to ourselves. Its voice could not "provoke the silent dust," but its tone could stir the now living "ear" and heart, and quicken the still acting brain.

A. One thing that this College did last year was to show [illegible] for the *bodily* remains of Harvey. There was something of him, that neither painting nor bust could be, which we still wished to cherish. It would try to hold together yet longer the last remnants of what was once the medium through which he saw Nature, and by which he read many of her secrets and revealed them. This wish is natural, and old because it is so. If some Eastern nations, in their great reverence for the soul, have taken means to display their contempt for the body, such peoples have been the exception. The Pyramids, the abbeys, the great burial-grounds in town and country, and the world's great surface, scattered over with its complex or simple tombs, all tell the same story of regard for the dust and ashes of those who have gone. Even if the body have been burned, there has been found the urn to hold together the ashes that the flames have not had power to kill. We may know and admit "to what base uses we may return;" but still we resent or recoil from the degradation. There is a widely spread human struggle against allowing the bodies of those we have known and reverenced and loved to merge into the common earth. We set up our barriers against it; we entomb, and we embalm; we carry on a fight—as strong in feeling as it may be futile in effect, but still a real fight—against physical disintegration. This may be all very foolish and unscientific; but still we will, if we can, keep together something of the individual so long as time and outside forces are not too strong for us; and we utter a parable, as we do so, of our regard not only for the bodies, but for the lives of those individual men, as we tell of, or come to know, them, in the thousand biographies that surround us, each one of which is in its very essence "a feeble struggle with death."

The notion that some spark or germ of life might lie hidden in the ashes that were buried or inurned ("lateat scintilla forsan") may have had much to do with the careful keeping of the ashes in the past; but that is not all. Even if Science could quite put out this faint "scintilla," the human Instinct would remain; and would show itself beside almost every open grave, and sometimes display itself in such solemn and remarkable event as that which took place last year at the tomb of Harvey. It was a graceful and an honourable act of this College to take upon itself the work of "Old Mortality"; and to travel away from its ordinary home that it might chisel afresh the marbles that held the remains of its greatest son; but much more than this was accomplished at that time; for therein was shown a profound and still living affection, reverence, and gratitude for Harvey's life.

B. We again to-day would do homage to the *life* of Harvey; looking at it in its threefold aspect of moral, mental, and active energy. We commemorate his character; his rare combination of faculties; and his work achieved. In him there was that due proportion between all those powers which a great thinker of this generation has regarded as the root-fact of what we call "genius."

We like to picture to ourselves what he, now dead in body, resembled when he lived; how he thought; and about what he thought; how and what he did; in what light he regarded his own work; its relation to the work of others; to his ancestors in science, to his immediate predecessors, his associates, his antagonists, and to those who must come after him. This is as natural as is the regard for the bodily remains; but it is on a higher level. Ancient "songs" handed down, in earlier days, the noble deeds, thoughts, words, and characters of those whom it was a religion to venerate, and whose memory it was a bounden duty to prolong. Our short biographies in epitaphs, our longer biographies in books, bear witness to our dislike to the cremation of ideas and of individual life. There is, doubtless, much disintegration and cremation, of a very healthy sort, always going on among the works of the living as well as of the dead; and very small urns might hold all that is worth keeping of the life-work of many. Still even on these we should like to engrave the names. Perhaps in most lives there are many things that those who lived them might gladly see burned away; but, as Sir Thomas Browne says: "We cannot hire oblivion"; and even if "a wise oblivion be a greater good than a strong memory," we still like to preserve the individuality of the really great ones of the earth, and that with all their faults; and we resent—as we do with quite small people—either a flattering, or disparaging, or a one-sided picture.

Reading Harvey's own writings, his theses, their introductions, their dedications, his disquisitions, exercises, letters, and "obiter dicta," we find him writing, all unconsciously, his own biography; and this confers an unspeakable charm upon his works. He does not tell us of his birthplace, or parentage, or where he was taught, or how he lived—which, thanks to many who have written of these things, from Aubrey and Ent to Willis, we know fairly well,—but he reveals his very soul and life, his method of work, and his mode of thinking about it all; as he spent those long years of research, experiment, discovery, and disputation, together with all the toils of a teacher, and the cares of a busy practitioner of medicine.

Thoughts, discoveries, and lives are quickly disintegrated in this fast-moving, restless age, the rate of whose movement shows acceleration every year; and so there is much individual work that must soon pass into, and be lost in, the sum of common knowledge, and become only the groundwork upon which many a superstructure may be raised; but

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the personality of Harvey can never be lost sight of so long as this College stands, and so long as there are men who care to "read between the lines" of his great works, and find in them the portrait of himself.

It is important, in our attempt to realise this portrait, that we should look, in order to appreciate its value, at the background of the time in which the great artist sketched it.

a. Harvey's work of discovery, like that of all great discoveries, into whatever reach of knowledge and of thought they may have broken, was not unprepared. Men were eagerly looking for a light that they felt sure was coming; and there were streaks of dawn in the Eastern sky that led them to find the Man, and the Truth, for which they had been seeking; so that what before had been mysterious was now clear; what had been dark was now illumined; what they had sought for, now they found.

The contents of the "shell," on the like of which Harvey afterwards wrote so much, were teeming with a growing life, that showed but vague signs upon its smooth, unbroken surface; but Harvey broke the shell and there burst forth at once into a seen life a form and meaning for which all the growing processes within that shell were made. There was a new thing, a new thought, a new generalisation. There was the solution of the problem of yesterday, the answered riddle, the platform for to-morrow's work. All honour to those who, toiling slowly in the night, or in the dawn, with its mist and mystery, have yet made some headway forward and upward, and prepared the path for one among them who has shared their labour, their weariness, their disappointments, and their woes, but who suddenly makes, as it were, a leap to a wider range or to a higher level; and thence holds out the hand of strength and fellowship to place them by his side. We honour the worker, wherever he may be, so long as his labour is honest, and is his best; but we have only scant words to express the regard in which we hold the man whose discerning thought and practised skill have lifted all workmen higher; opened to them new ranges for their toil; given them new methods to follow, and left behind him footprints in which some of them may tread as he goes before them, and passes out of sight.

The peoples in this world have been always fighting, from the days of Cain and Abel until now; but yet there is a book, written not so very long ago, with the title of "The Fifteen Decisive Battles of the World," and perhaps time is yet too young for anyone to say that a sixteenth has been fought. But, in the great conflicts of schools of science, of thought, and of discovery with regard to human life, can we put our finger upon even so many as "fifteen" who have made such marks in history that their works have followed them as "decisive battles" gained? If there be, let us gladly thank all the great heroes who led these fights; but, if we look among them, there is no one whom the gathered-up roll of leaders in the world of thought can show who stands on a higher plane than does our own immortal Harvey.

b. If we would appreciate the value of his work, we must read the writings and become familiar with the beliefs current at his time. We may find their echoes in his replies to his opponents, and see quite plainly that the notions he had to contend with were not even "guesses at truth," but often merely pompous assertions of meaningless nothings—"traditions vainly received,"—but yet held with the cramp-like grasp of drowning men who clutch at straws; and yet uttered with the confidence of those who might be supposed, from the loudness of their cry, to be standing firmly and steadily on solid ground. Those who held them were quite incapable of perceiving that they were empty dogmata, without one particle of substance in their constitution, or one square inch of fact upon which to plant themselves. They seem so nonsensical now that it is almost impossible for us to imagine Harvey caring to reply to them. But in his day they were very real, very vexatious, and very hard to bear. To us they are less than distorted dwarfs; to him they were giants whom he had to fight, and with whom he did wrestle hard. As in the glory of an acknowledged triumph, and in the brilliancy of its reward, we may lose sight of the hard fighting, the heavy blows, the waiting, the misrepresentation by enquiries, and the desertion by his friends, through which the hero passed, as he fought and won; and as he may himself, when he could say with thankfulness and truth "I have fought a good fight," forget, amidst the acclaim of acknowledged victory, the horrors of the battle-field, although the fighting had been very real and the blows were very hard—so Harvey in the lull of opposition seems to have been sometimes at rest and in full enjoyment of the result of his fierce struggle; but while his own conception of the truth was developing day by day and month by month, he struggled hard with the prejudices, the open attacks of jealous competitors, and the scandal of men too dull to originate, too small to think, too dishonest to appreciate, and too weak to yield. When his great discovery saw the day, his soul rejoiced that a new truth was born, and may be he forgot the travail of its birth. But for all that the pain had been very real, and it must have needed all his confidence, all his perseverance, all his energy, and all his patience to have borne the trial without once wincing at the pain

Having said these few things with regard to the preparation made for Harvey by those who had preceded him, and having glanced at the conditions surrounding his active life, let me call your attention to his forethought and instructive prevision of some of the results obtained by the labours of those who followed him.

a. Great men have always foreseen much; or, at all events, have said or seen things of which they perhaps did not and could not fully appreciate the meaning. They have scattered germs of thought around them as they passed, through the varying fields of life, to the point or end that their determination impelled them to attain; and some of these seeds of future discovery have "fallen on good ground, and brought forth fruit." There is here some instance of the process of "evolution" in regard to scientific discovery. Harvey reaped much that he had not sown; but he sowed much more which others, after him, might reap.

The evolution of scientific discovery, which is a matter of simple fact, suggests questions which cannot be discussed on this occasion, but which we may do well to consider.

Is there any spontaneous generation of ideas? Can man never do anything outside the lines in which his forefathers thought and reasoned? Can he originate anything, as by a "sport;" or must all that he can think or know be but the outgrowth of the germ thoughts of others; or the mere learning of details quite far away from what we mean by discovery? There is ancient authority for believing that "there is no new *thing* under the sun;" but has there been no new *thought*? If creative energy be limited in matter, is it also limited in mind? If there has ever been an act of "creation," may not such an act be repeated? May I not further ask if, in the words of the really great men, there are so many fertile seeds, which alone are the germs of all that is to come, may we not, instead of adopting hastily, as we sometimes do, the most charming generalisations of the last few years, and saying, along these lines all thought must run, rather adopt the mood of the great scientific poet of Nature, and feel that "seeing of a thousand seeds, she scarcely brings but one to bear," we join him in his doubt, and "tremble where we firmly stood"?

If it be that Harvey was right, which modern scientific observation has shown that he was not, when he suggested that the force which converted sterility into fertility was one that pervaded the whole body,[1] and might last almost indefinitely, then by analogy we might argue that the thoughts of the great discoverers of all past time may have fertilised the whole race of the thinkers that followed them, and of the thinkers yet unborn; and so "discovery" and "originality" are "surds," for they could have had no beginning. To this it may be replied, The modern appliances of scientific research have shown that in some points Harvey had no means of correcting the dicta of his forerunners by his favourite appeal to Nature. Is it not possible that we are as yet unsupplied with all the *apparatus criticus* for determining whether or no there is such a possibility as an original thought?

b. As a means of estimating the largeness of Harvey's mind and the wide range of his vision, and how much there was that he "saw," but scarcely can be said to have "looked at," let me recall to your notice some of the more interesting of his *previsions*, as forming part of the work of the individual whose memory we meet to-day to cherish.

We find him saying, "In general the first processes of Nature lie hid, as it were, in the depths of night, and by reason of their subtlety escape the keenest reason no less than the most piercing eye."[2] In another paper, "All living things ... derive their origin from a certain primary something or primordium which contains within itself both the

[1] Theory of Conception.

[2] Anatomical Exercises on the Generation of Animals, p. 225.

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'matter' and the 'efficient cause'; and so is, in fact, the matter out of which, and that by which, whatsoever is produced is made."[3] Again, "It appears advisable to me to look back from the perfect animal, and to inquire by what process it has arisen and grown to maturity, to retrace our steps from the goal to the starting-place; ..... so that we shall perceive from what primary matter and from what efficient principles, and in what way from these, this plastic form proceeds ....."[4] Further on, in the same paper, we find him saying, "Man comes into the world naked and unarmed, ... as if Nature had desired that he should be guided by reason rather than be driven by force; therefore did she endow him with understanding, and furnish him with hands, that he might himself construct what was necessary to his clothing and protection. To those animals to which Nature has given vast strength, she has also presented weapons in harmony with their powers; to those that are not thus vigorous she has given ingenuity, cunning, and singular dexterity in avoiding injury."[5] In connexion with this, he proceeds to mention the "ornaments ..... offensive weapons, teeth, horns, spurs, and other implements employed in combat ..... the subject of dispute being no empty or vainglorious matter, but the perpetuation of the stock in this line or in that; as if Nature intended that he who could best defend himself and his should be preferred to others for the continuance of the kind."[6]

In the passages just read, we have, as it appears to me, very much the same ideas as are now conveyed by the terms "protoplasm"; "the relation of man and animals to their environments"; and the doctrine of "the survival of the fittest."

With reference to the significance of the primordium, the protoplasm, as seen by Harvey, let me read another passage from his writings. Speaking of the lowest forms of life known to him, he says, "These have no heart, as not requiring any impeller of nourishment into the extreme parts; for they have bodies which are connate and homogeneous, and without limbs; so that by contraction and relaxation of the whole body they assume and expel, move and remove the aliment.....The whole is used as a heart, or the whole animal is a heart."[7] Further on, "All local motion proceeds from and has its original in the contraction of some part."[8] Here we have, as it seems to me, an account of the simplest form of life; his counterpart of the "amœba," as we may find it described in the most modern and, to my mind, one of the most able text-books of physiology of our day.[9]

2. Another interesting forecast of Harvey's is found in his pointing to the local variations in blood-supply, as being dependent upon the vessels. He describes the extremities as becoming cold, "the nose and cheeks and hands looking blue;"[10] "the fact that in almost every affection, appetite, hope, or fear, our body suffers, the countenance changes, and the blood appears to course hither and thither. In anger the eyes are fiery and the pupils contracted; in modesty the cheeks are suffused with blushes; in fear, and under a sense of infamy, and of shame, the face is pale, but the ears burn as if for the evil they heard or were to hear."[11] "The blood, he continues, "varies greatly (in its rate of force and movement) according to age, sex, temperament, habit of body, and other contingent circumstances, external as well as internal, natural or non-natural."[12] In another place he says, "We allow to the arteries the same motions which we concede to the heart—viz., a diastole and a systole, or return from the distended to the natural state; this much we believe to be effected by a power inherent in the coats themselves."[13]

The direct object of Harvey in this passage is to show that the heart distends the arteries, and that they collapse by their own contractility; but, taken in conjunction with the other passages that have been quoted, it gives a forecast of what is now of such immense advantage to us—viz., a knowledge of vaso-motor change. He perceived the altered calibre of vessels; he saw this in both contraction and dilatation; he referred this to a power inherent in the coats themselves; he pointed out the relation between these changes and external conditions; also between them and emotional excitement or depression, and yet again, to contingent *internal* circumstances.

A hundred and eighteen years after Harvey published his treatise on the Circulation, Robert Whytt, the President of the Royal College of Physicians in the sister city of Edinburgh, wrote these words: "Some grow pale upon anger; which effect may be owing to a spasm, or continued contraction of the small arteries of the face, by which the motion of the blood will be retarded;" and again, further on, "In blushing, the increased motion of the fluids through the vessels of the face is accompanied with a glow;" and yet again, "The sense of cold and shivering is owing to a spasmodic contraction of these vessels, in consequence of that irritation which the nervous system suffers from the febrile stimulus or the beginning inflammation."[14] Whytt does not discuss the circulation of the blood as described by Harvey, he assumes it as an established dogma; he makes no allusion to any anterior suggestion of change in the calibre of vessels; but he seems, chronologically, to hand down the light of Harvey's torch to these more recent days, in which Claude Bernard, Lister, Brown-Séquard, and others have shown, by their researches, the importance of the knowledge that we now possess of the vaso-motor system of nerves, and its effects upon the function and structure of organs; as well as its relation to the doctrine, diagnosis, and treatment of disease.

3. Another illustration of Harvey's speculation and forecasting of ideas comparatively new to us, but occurring to him as the result of his observations on the mysteries of generation, will have much interest now. "Let physicians cease to wonder [he says] at the manner in which epidemic, contagious, and pestilential diseases scatter their seeds and are propagated to a distance through the air, or by some 'fomes' producing diseases like themselves, in *bodies of a different nature*, and in a hidden fashion *silently multiplying themselves by a kind of generation*, until they become so fatal and with the permission of the Deity spread destruction far and wide among man and beast, since they will find far greater wonders than these taking place daily in the generation of animals."[15] We seem to hear in this sentence the thoughts suggested by the works of Pasteur, Koch, and many others; and while feeling with them, with Seneca (whom Harvey quotes) and with himself that there is truth in saying "agents greater in number and of more efficiency are required in the construction and preservation of an animal than for its destruction .....; yet, following Harvey as he followed Seneca in seeing the analogy between the origin of disease and the process of generation, wonder with him as he exclaims, "How long a time is conception to be carried out to parturition—with what labour and tenderness is an infant reared, ... but by what a nothing is it destroyed? It takes an age to establish cities, an hour to destroy them."[16] Such thoughts may lead us to ask ourselves, in face of the recent calamities in Marseilles, Naples, and Toulon, Do these visitations give sanction to the law of the "survival of the strongest," which was the idea of the generalisation of Harvey, or "survival of the fittest," which was that of Darwin. Man dies, nations become extinct, but the microbe lives on. His earnest cultivators provide him with change of scene, of temperature, of food, and all possible surrounding conditions; and we may almost fancy that we hear the well-tended and well-cultivated tyrant singing, to some ghastly accompaniment:—

> "Men may come, and men may go;
> But I go on for ever."

4. It is difficult to refrain from giving yet another illustration of the mode and degree to which Harvey had forestalled or prepared the way for one of the greatest discoveries since his own time—viz., that of the "reflex action" of the spinal cord. In a letter to Horst, written in 1654–55, he says, looking forward to the work of those who were to follow him, and speaking of himself as "not only far stricken in years, but afflicted with more and more indifferent health ..... I do not doubt but that many things still lie hidden in Democritus's well that are destined to be drawn up into the light by the indefatigable diligence of coming ages."[17]

In his Exercises on Generation, after distinguishing be

[3] Thesis on the Uterine Membranes and Humours, p. 551.
[4] Introduction to Exercises on the Generation of Animals, p. 168.
[5] Ibid., p. 425. [6] Ibid., p. 426.
[7] An Anatomical Disquisition on the Motion of the Heart and Blood, p. 76. [8] Ibid., p. 81.
[9] Introduction to Michael Foster's Text-book.
[10] On the Motion of Heart and Blood, p. 69.
[11] Disquisitions on the Circulation of the Blood, addressed to John Riolan, p. 129. [12] Ibid. [13] Page 113.
[14] On the Nature, Causes, and Cure of Nervous, Hypochondriac, and Hysterical Disorders, pp. 64, 221.
[15] On Generation, p. 322. [16] Ibid., p. 332.
[17] Letters to Horst and others, p. 613.

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tween the action of the organs of sense and that of the "sensorium commune," he proceeds to say that there are "some actions and motions the government or direction of which is not dependent on the brain ..... that there is a certain sense or form of touch (meaning contact or impression) which is not referred to the common sensorium, nor in any way communicated to the brain, so that we do not perceive by this sense (i.e., impression) that we feel ..... and this sense we therefore distinguish from the proper animal sense." Harvey termed it a *natural* sense, as distinguished from *animal* sense; and he continues, "such a sense do we observe in zoophytes or plant animals, in sponges, the sensitive plant, &c." Using the word "sense" with this interpretation, he treats of many animals, "who are endowed with both sense and motion without having a common sensorium or brain ..... so also [he adds] do certain natural actions take place in the embryo, and even in ourselves, without the agency of the brain, and a certain sensation takes place without consciousness." After speaking of the difference to be observed between "regulated contractions and relaxations to perform any movement, such as progression or prehension," he compares these movements to "the muscles or organs of motion, when affected with spasms or convulsions from an irritating cause," and points out their resemblance to those of "the decapitated cock or hen.....the convulsive movements of the legs and wings, but all confused and without a purpose, because the controlling power of the brain has been taken away."

The explanation of these movements given by Harvey—viz., that they "proceed from the power of the heart, and depend on it," is certainly not true in the sense in which he intended it, but he gives a most interesting illustration of his physiological insight when he says, "We have an excellent example of both these kinds of motion (animal and natural) in respiration. For the lungs, like the heart, are continually carried upwards and downwards by a natural (i.e., unconscious and involuntary) movement, and are excited by any irritation to coughing and more frequent action; but they cannot form and regulate the voice, nor can singing be executed without the assistance, and in some sort command, of the sensorium commune."[18]

In another paper Harvey gives an interesting account of parturition in a "young woman ..... in a profound state of coma, ... but in whom the application of a powerful sternutatory ..... excited convulsions throughout the body, beginning at the shoulders and gradually descending to the lower extremities. As often as the stimulus was applied the labour advanced ..... until the child was born, without the consciousness of the mother, who still remained in a state of coma."[19]

A hundred years after these words were written, Unzer developed the idea still further, in his Treatise on "Animal Nature in Relation to purely Animal Forces, or Vis Nervosa"; and after him Prochaska, in his "Dissertation on the Functions of the Nervous system," defined accurately the limits of the reflective centre; but it was left for Sir Charles Bell, and much more to our own distinguished Fellow, Marshall Hall, to expound the meaning of these movements; to comprehend and reveal the physiology and pathology of action in the spinal cord; to apply this knowledge to the explanation of many diseases, and to devise means for their control or cure. In doing this, he again prepared the way for later researches upon the reflex function, as it affects "local" circulation, and so render possible a knowledge of many of the finest points of neural and vascular action, which we, directly, owe to the labours of those great workers to whom allusion has already been made, when dealing with Harvey's foresight of that matter. Again, in the passage quoted from the paper on Parturition, we find a curious forecasting of the ingenious application of the reflex theory of Hall to the interpretation of the action of the uterus which was made by Dr. Tyler Smith.

In thus sketching some of the motives which led to the event of last year, and also to the fact of our meeting here to-day, it has been my wish to show that we still hold in reverential regard the perishing remains at Hempstead; and also the living force that is with us, now and here; and which comes to us from our knowledge of the individual, Harvey, in his relation to the past, the surrounding conditions of his time, and his outlook towards the future.

C. There is one thing more, however, that this College has done for many years, and that is, by this annual Oration, to *hand down* to coming generations the memory of him from whom we have learned so much, and to whom our debt of gratitude is larger than we, perhaps, as yet can know; certainly much larger than it falls within the range of my powers to express.

We speak of the "immortal Harvey," but in what sense? To many, his own words would convey all the meaning of that attribute. "The eternity of things," he says, "is connected with the reciprocal interchange of generation and decay; and as the sun, now in the east, and then in the west, completes the measure of time by his ceaseless revolutions, so are the fleeting things of mortal existence made eternal through incessant change; and kinds and species are perpetuated, though individuals die."[20] True, grandly but sadly true, and yet our meeting of this day is a declaration that such truth is not universal. Much of his work has become a part of common knowledge; and so will live on in the lives of those who are the "interpreters of Nature," so long as Nature lasts. But the wish that animates us to-day is to hand down to those who follow us some knowledge of the individual to whose life we owe so much, and whose personality we would not "willingly let die." There are many ways in which this may be done, but I will allude to only two.

1. The *names* of some great men have been associated with the discoveries that they have made; and they perhaps are used, many of them, in such familiar way that they convey little or no suggestion of their meaning. In some generation or two yet to come may it not be that the etymology of such words as Fallopian tube, Meckel's ganglion, Bright's disease, Addison's disease, Corrigan's pulse, galvanism, faradaism, an ohm or a volt will have become somewhat obscure? Or if the meaning of such phrases may be found in lexicons, are there many who will try to find out those meanings? It seems to me probable that individuality will not be maintained by such means; and that future students may sometimes be disposed to ask—as I once heard the question put quite seriously—whether or no the "portal vein" was not named after the distinguished French physician Portal!

While the progress of science is constructive of generalisation and so-called "laws," it is destructive, as Harvey says, of the individual life; but yet we give "names" to organs, functions, forces, and shrewd connotations of phenomena, in order—while finding them convenient at the time—to delay, if not arrest, the disintegration of the work of those men whose names we thus hand down to those who follow us.

Do we not think it probable that, as future research proceeds, some of these names, which have passed into many countries and many tongues, may be lost sight of, and be so decomposed that they pass out of common use?

At this hour, and still in the lifetime of our honoured President—whom may God long preserve!—the phrase "continued fever" has passed into practical disuse; and this has been due mainly, if not exclusively, to the industry and genius which led him to disintegrate the name, trace out the causes, and define the maladies that had long passed under that common term.

2. Again, there are certain *days* by which the memory of great men is perpetuated. From very olden times until now; and from the far East to the far West, "days" are set apart for the purpose of recalling individual lives. Ceremonies, of all kinds, have been parts of these human, national, and instinctive acts. They begin in the smallest families with the "birthdays," and they stretch out to the acts of the greatest nations.

This is St. Luke's Day in the calendar of millions, but there are days still set apart compared in antiquity with which the observance of St. Luke's Day is but a modern event. Two hundred and eighty years have passed since Harvey was a member of this College; for two hundred and fifty-six years his great work ("De Motu Cordis et Sanguinis") has been before the world; two hundred and twenty-seven years have elapsed since he was buried in the quiet little church of Hempstead. And yet, only one year has passed since this College removed his remains still "lapt in lead" from the vault in which they had lain so long, and placed them in the safer keeping of new and carefully selected marble.

With us, although it is not so named, this is "Harvey's Day," and three hundred years have passed since he was born. How long this commemoration will continue we

[18] On Generation, p. 432, *et seq.*

[19] On Parturition, p. 535.

[20] On Generation, p. 226.

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cannot tell. Our knowledge of the future, if we have any, is but scant. Who knows whether, when another sixty-nine years have passed, "Waterloo Day" will be kept in memory of Wellington?

No one can answer us in our questions. But this we may do; we may look to the past, and learn its lessons; we may look to humanity, and read its instincts; we may read the record of this College, and know its feeling; and of this we may be sure, that, although Harvey's name may be unknown to many in the days to come, yet so long as disease lasts, so long as the movements of the blood form part of the study of the physiologist and the art of the physician; so long as any further light is to be thrown upon them by cardiograph or sphygmograph, or by any as yet unthought-of method of investigation—so long as "the circulation" is a recognised fact of science, his work will live; and although much of it may lie hidden in the common notions of the future, yet the life of Harvey will be maintained in its integrity by the future Fellows of this College, and the greatness of his character will be brought again and again to light by many who will, more adequately than I can do, discharge the duties of this day.

It has been my wish, in what has hitherto been said, to lay before you some explanation of the motives that bring us together now; and also of those that led this College, last year, to the grave of Harvey. But further.

II. If we would now appreciate the work of Harvey, let us for a moment try to eliminate from our knowledge the fact of "the circulation of the blood," and then imagine ourselves to be face to face with the diseases that we are daily treating; with fever, apoplexy—hæmorrhagic, embolic, or diathetic; with dropsy, with cardiac disease, recent or old; with degeneration of structure, or with functional derangement. It requires some force of fancy to realise what would be our position. The thermometer might teach us much; but it is difficult to see in what way either stethoscope, cardiograph, or sphygmograph could do other than augment our bewilderment. Those who have made out for us the meaning of the cardiac sounds; those who have skilfully constructed apparatus so as to make the heart itself record, in some fashion, its own marvellous movements; and those who have delineated, in some sense, the curve and time-ordered elements of the radial pulse, would all admit that their work was based upon this foregone conclusion, the accepted fact that the blood moved onwards in a circle. They have attained to knowledge that Harvey could not reach; but let me ask could they have known what they now do unless Harvey had raised the platform upon which they stood? "The thoughts of men are widened with the process of the suns;" and, by slow degrees, others might have done the work, or made the discovery, that he made; but the effect of his energy was a grand upheaval of the crusted surface of the past; a Titanic throe that brought to the birth a new and mighty force and fact; and, when some of the dust and boulders had been cleared away, placed all who followed him on a higher plane, and in a clearer light. It is given to the few great men to save the time and labour of the many. They not only take strides that would be impossible for those of lesser build, but they carry with them, over the bridge that they have thrown across the great gulf between the question of yesterday and the answer of to-day, all those who have eyes to see, ears to hear, and hearts to follow.

III. Next, let me bring before your notice some of the main features of Harvey's "character," as this displays itself in his written "work." Chronologically, his character must precede his work; but the former was developed by the latter. These things act and react; moral forces become greater as our toil grows harder; and, in so doing, give not only fresh impulse, but increased strength for work.

Throughout Harvey's writings there is an eminently religious tone; a devout and reverential recognition of God; not only as the great primal, ever-acting force, behind, outside, and before all the works of Nature; but as the Being, "the Almighty and Eternal God," to whom, as he says in his last will and testament, "I doe most humbly render my soule (as to) Him that gave it; and to my blessed Lord and Saviour Jesus Christ."[21]

But Harvey did not let his religious convictions hold him in the tight grasp of what has been termed the "theologic stage" of development; nothing prevented him from seeing all that he could see, and frankly telling all that he believed; and so we find him spurning some of the figments about "the spirits ..... of a sublime, lucid, ethereal, celestial, or divine nature," when they are employed to fill up gaps in the physiology of his day; and comparing those who use them to "the vulgar and unlettered, who, when they do not comprehend the causes of various effects, refer them to the immediate interposition of the Deity."[22]

Harvey, although saying that "the Divine mind of the Eternal Creator which is impressed on all things creates the image of itself in human conceptions;"[23] and, again, that all the arts are but imitations of Nature.....as our reason or understanding is a derivative from the divine intelligence manifested in his works;" and still further to affirm as follows—"wherefore, according to my opinion, he takes the right and pious view of the matter, who derives all generation from the same eternal and omnipotent Deity, on whose nod the universe itself depends;" yet shows his freedom from theologic dogma, and his wide range of thought in adding, "Nor do we think that we are greatly to dispute about the name by which this first agent is to be called or worshipped; whether it be God, Nature, or the soul of the universe—whatever the name employed—all still intend by it, that which is the beginning and the end of all things; which exists from eternity and is almighty; which is author or Creator, and, by means of changing generations, the preserver and perpetuator of the fleeting things of mortal life; which is omnipresent, not less in the single and several operations of natural things than in the infinite universe."[24] We are reminded by this passage of the well-known dialogue, in which Faust, replying to Margaret's examination of his creed, says—

> "Call it whate'er thou wilt—heart, love, or God,
> Or happiness!—I cannot give it name."

And the fair Margaret makes answer—

> "All that is very good and true;
> Nearly the same the Priest says too,
> Only in somewhat other words than you."

But Harvey recurs to the same theme, and after saying that "the most perfect man, whose highest excellence is that he knows himself," adds, "we ourselves, as is seeming in these days (hold) as the Almighty first cause of all things ..... the Creator and Father of all that is in heaven and earth, on whom animals depend for their being, and at whose will and pleasure all things are and were engendered."[25]

"It is true," said he, in conversation with Dr. Eut, "the examination of the bodies of animals has always been my delight; and I have thought that thence we might not only obtain an insight into the lighter (? higher) mysteries of Nature, but there perceive a kind of image or reflex of the omnipotent Creator himself."[26]

If Harvey, though a devout believer in God, was yet free from all the restraints of the so-called "theologic stage"; he also, although a learned and keen metaphysician, had escaped from the trammels of what has been termed the "metaphysic stage." He had "cast them off with as much ease as Samson his green withes." He meets the metaphysician on his own ground with clever dialectic; but he pours contempt on those "who advocate incorporeal spirits, having no ground of experience to stand upon;" adding that "their spirits are indeed synonymous with powers or faculties, such as a concoctive spirit, a chylopoietic, &c., they admit as many spirits as there are faculties or organs." And, before this, with regard to the nature of "the spirits," he says, "There are so many and such conflicting opinions, that it is not wonderful that the spirits whose nature is thus left so wholly ambiguous should serve as the common subterfuge of ignorance. Persons of limited information, when they are at a loss to assign a cause for anything, very commonly reply that it is done by the spirits; and so they bring the spirits into play upon all occasions; even as indifferent poets are always thrusting the gods upon the stage as a means of unravelling the plot, and bringing about the catastrophe."[27]

If it be asked what was, then, Harvey's position, and what was the method he employed? my reply is that he, being one of "the freemen whom the truth makes free," held the position of an observer, a questioner, and interpreter of Nature. In the letter by which he dedicates to the President and Fellows of this College his "Anatomical Disquisition on the Motion of the Heart and Blood in

[21] Will of Harvey, p. lxxxix.

[22] On the Circulation, p. 120. [23] On Conception, p. 582.
[24] On Generation, p. 370. [25] Ibid., p. 402.
[26] Epistle Dedicatory, p. 146.
[27] On the Circulation, p. 115, *et seq.*

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Animals," he declares himself "the partisan of truth alone."[28] And throughout all his writings that follow he never swerved from the position he had taken. To him "virtue," as it has been well said by Emerson, "lay in the adherence in action to the nature of things, and the nature of things made it prevail."

The intense love that Harvey felt for Nature led him to choose her as his constant companion, and his guide in the search for truth. There was nothing that she could show him that was too great for him to attempt to understand; nothing too small for him to pass by, or to regard with other feelings than those of affection, of reverence and wonder. The teaching of Nature was to him absolute in its authority. "The facts cognisable by the senses," he say, "wait upon no opinions, ... the works of Nature bow to no antiquity; for indeed there is nothing either more ancient or of higher authority than Nature."[29] Harvey "observed" the facts before him, and he had eyes to see; but not content with the "experiments prepared by Nature," he "made" new facts by his skilful manipulation of the materials that were lying at his hand; and thus he asked pertinent questions, and obtained their answers. He thought about all these things; he reasoned upon them all; he sought and found all the help that metaphysical method and learning of the schools could render him; and, then, he became their "interpreter."

His mode of progression may be defined as "longitudinarian" (if I may use the word, coined some years ago in opposition to one very familiar to us all)—i.e., he looked and worked straight from end to the end. His line was the shortest one that he could draw between the simplest, the first, fact observed and the most remote object of his gaze. He thought in "a straight line;" he never swerved in his forward march; but, as he passed onwards, he saw things outlying on by-paths, but his own force of movement dragged them into his own well-chosen course, and he made them help him on his way. Arrived at his goal, he arranged his materials with care, and proceeded to explain their meaning by a simple inductive process. But, still keeping the same point in view, he approached it from other sides. Sometimes his lines, although converging, did not meet at the point he quite expected. Here his power of thinking outside of and beyond the facts came to help him; he made new observations, new experiments, and at last focused them on a point made bright by the rays of his own genius. Dr. Ent spoke but the truth when he said to the President and Fellows of this College, "Our Harvey rather seems as though discovery were natural to him—a thing of ease, and of course, a matter of ordinary business; though he may nevertheless have expended infinite labour and study on his works."[30]

Harvey made use of working hypotheses; but he never confounded them with either facts, inductions, or laws. He claimed in one of his ingenious theses the liberty which he willingly yielded to others, "to put forward as true (in matters full of obscurity) such things as appear to be probable until proved to be manifestly false;"[31] and after demolishing many theories of others, "prayed for a place" for his own "conjecture until something certain should be established in the matter."[32]

If some fact, apparently opposed to a truth that Harvey believed himself to have established, confronted him in his way, he rode over it, with a force that could only come from the momentum that his strong conviction had given to his movement onwards. For example, he says, "There is one experiment which I would have everyone try who is anxious for truth, and by which it is clearly shown that the arterial pulse is owing to the impulse of the blood. Let a portion of dried intestine..... be taken and filled with water, and then secured at both ends like a sausage: by tapping with the finger at one extremity, you will immediately feel a pulse and vibration in any other part to which you apply the fingers, as you do when you feel the pulse at the wrist." After referring to the manner in which such percussion may be made of use in distinguishing between air and fluid in the abdomen, he continues, "Having brought forward this experiment I may observe that a most formidable objection to the circulation of the blood rises out of it, which, however, has neither been observed nor adduced by anyone who has written against me;" and then he falls back upon his observations which show that, in spite of this seeming difficulty, the circulation has been proved. He says that he had "already satisfactorily replied to this difficulty;" and such is true, inasmuch as he had pointed out that all the blood did not pass through the vessels, but that some of it was detained for nutrition; he had spoken of the contractility of the arteries, and of the impulse wave; but his solution of the difficulty, that he himself alone had seen, was founded on his confidence in the truth of his main assertion.

Boldness was a great feature of Harvey's character when he told any of the truths he knew. "It were," he says, "disgraceful ..... with this most spacious and admirable realm of Nature before us ..... did we take the reports of others upon trust. ..... Nature is herself to be addressed; and the paths she shows us are to be boldly trodden. ....."[33] And again, at a later period, he writes: "The doctrines inculcated on the subject of the humours, and which, as being entertained by the ancients, Fabricius regards as certain truths, requiring no further proofs, are inconsistent and false."[34]

But Harvey, although bold and strong, was meek, cautious, and polite. He preferred "being wise with the few ..... to going wrong with the many."[35] Dr. Ent, in conversation with Harvey, said to him: "You yourself, I well remember, informed me once that you had never dissected any animal—and many and many a one you examined—but that you discovered something unexpected, something of which you were formerly uninformed."[36] He was "greatly afraid lest he might be charged with presumption, did he lay his work before the public at home or send it beyond seas for impression ..... unless (as he says) I had first proposed its subject to you (the President and Fellows of this College), and had confirmed its conclusions by ocular demonstrations in your presence, had replied to your doubts and objections, and secured the assent and support of our distinguished President."[37] Perhaps it might be well if a similar submission were sometimes adopted in this nineteenth century. But so much has been added to what is called our scientific literature during the third quarter of this century, and its now current fourth, that, perhaps, no officer of the College will thank me for the suggestion.

Harvey fully realised the value to be attached to the "conclusions to which others had come who had looked" at facts for themselves; but he adds, "he who truly desires to be informed ..... must be held bound to *look for himself* ..... for it is our duty to approve or disapprove, to receive or reject, everything only after the most careful examination.....to examine, to test whether anything has been well or ill advanced, to ascertain whether some falsehood does not lurk under a proposition.....it is imperative on us to bring it to the proof of such, and to admit it or reject it on the decision of such."[38]

In much of his writing, Harvey was both humorous and eloquent, and he could exhibit high indignation when he dealt with his detractors, yet "to return evil speaking with evil speaking" he held to be unworthy in a philosopher and a searcher after truth." The passage, however, that follows this, shows that Harvey could (as Sir Anthony Absolute did), if he were tempted to do so, use "strong language"; for he comforts Riolanus by assuring him that "it cannot be helped that dogs bark, and vomit their foul stomachs, or that cynics should be numbered among philosophers; but care must be taken that they do not bite or inoculate their mad humour, or with their dog's teeth gnaw the bones and foundations of truth;"[39] but we must remember that this was not said *to* his detractors, but only *of* them, said to his friend Riolanus, and moreover it was said in Latin, and that makes all the difference.

But, with the exception of a few scattered passages of just wrath, Harvey was always dignified, lenient, and calm. He was, as his contemporary Ent said of him, "beyond all praise," and it may be justly repeated of him, when regarding the strength and gentleness of his great heart:—

> "He has outscored the shadow of our night,
> Envy and calumny, and hate and pain,
> And that unrest which men miscall delight
> Can touch him not and torture not again."

He acquired Fame, which certainly was not to him "the spur" that might his

> "clear spirit raise
> To scorn delights and live laborious days."

[28] On the Motion of the Heart, p. 7. [29] On the Circulation, p. 123.
[30] Epistle Dedicatory, p. 149. [31] On Conception, p. 577.
[32] Ibid., p. 580.
[33] Introd. to Ex. on Gen., p. 153. [34] Of the Humours, p. 557.
[35] Intr. to Ex. on Gen., p. 152. [36] Epistle Dedicatory, p. 146.
[37] Dedication to Royal College of Physicians of thesis on the Motion of the Heart and Blood, p. 5.
[38] On the Circulation, p. 131. [39] Ibid., p. 110.

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It may be, as was said of others in his day, that it was "the last infirmity of noble minds," but it was not so with our illustrious Harvey. "Think me not eager," he says in one of his Introductory Letters,[40] "for vainglorious fame, rather than anxious to lay before you observations that are true, and that are derived immediately from the nature of things." Truth was what he sought, and what he found; and if Fame went with him, and followed him to his grave, and waits upon him now, there was no seeking for it on his part; nor could he well have imagined, with all his force of fancy, such a tribute to his memory as that of last year in the churchyard of Hempstead.

Harvey's great achievements were the result of his method—viz., that of observation and experiment. Nature "displays" much; "the heavens declare the glory of God," and she is always "revealing" as she moves, and she is never still; but Nature is ever moving "onwards" to some unknown goal, and at each onward step she, while revealing, "hides," leaves behind in her wake something of the past, which now we cannot see, and presents new facts and new combinations for man—one of her factors—to interpret.

Harvey was one of her keenest and most devout interpreters. To him, as he stood by and listened, the Nature-spirit sang, and with profoundest meaning,

"So work I at Time's rushing loom,
And weave the living robe of God."

In reverence Harvey knelt before her; but not satisfied with what he saw and heard, he asked her *questions*—and this, with no notion of confusing her, or misreading what she had already said or written,—for he was just the kind of questioner to ask the kind of question to which she readily gave answer. He examined her "in chief" to find out the *right*; he "cross-examined" her, but in no unfriendly tone, to bring her answer to a "yes" or "no," and so disprove the *wrong*, the untruth which other questioners had placed in evidence. "Nature," said he to Ent, "is the best and most faithful interpreter of her own secrets; and what she presents either more briefly or obscurely in one department, that she explains more fully and clearly in another. ..... Truth," he continues, "scarce wants an advocate."[41] Nature to him was a perfect verity: the one witness that could never be abashed or shaken; the one witness in whom there could be no false way; the one witness who could not lie. There was no need to put her "on her oath," for she, in her prime, had been adjured, by the Most High God, to tell "the truth, and nothing but the truth." This she has always done, and now is doing, and will, as we believe, go on to do.

But can she tell "the whole truth?" Will Nature ever tell or teach us this? I cannot presume to answer the question which yet I dare to ask; but my own conviction is that she neither will nor can do this thing until the last hour of Time has struck, and has ushered in the dawn of that one, long, clear, eternal day, whose "sun shall no more go down," and in whose ever-growing light we may hail the presence of that

"far-off Divine event,
To which the whole creation moves."

[40] On Generation, p. 166. [41] Dedicatory Epistle, p. 146, *et seq.*

SANITATION IN SHOREDITCH.—At the meeting of the Shoreditch Vestry on the 15th inst. the sanitary state of six houses, owned by a prominent member of the Hackney Vestry and District Board of Works, was discussed. The sanitary officer presented a statement, in which he said that the houses had been periodically flooded with sewage in the basements for eight years; that repeated notices (nine in number) had been served without avail; and that fourteen letters had been addressed to the owner, several of them expressing the utmost dissatisfaction with his work. In defence, the owner contended that he had done nine-tenths of the work required, and, after a brief but excited debate, the Vestry adjourned without adopting the committee's report.

THE winter course of lectures at the Parkes Museum will commence on Thursday, Nov. 13th, when Mr. G. J. Symons, F.R.S., will give an address on the Relation of Meteorology to Hygiene. On November 27th Dr. Alfred Carpenter will speak on Progress and Co-operation in Sanitary Work. Other lectures will be given by Sir Spencer Wells, Bart., Mr. Shirley Murphy, Mr. Cantlie, and Dr. Crichton Browne.

An Address
ON
CORROSIVE SUBLIMATE AS A SURGICAL DRESSING.

Delivered at the opening Meeting of the Medical Society of London, October 20th, 1884.

BY SIR JOSEPH LISTER, BART., F.R.S.,
PROFESSOR OF CLINICAL SURGERY IN KING'S COLLEGE.

MR. PRESIDENT AND GENTLEMEN,—When, in an address delivered at the opening meeting of last session, I expressed myself in what some of my hearers regarded as terms of overweening confidence in the trustworthiness of antiseptic treatment, I little thought that, a year later, I should have to tell you of failures on my own part; yet such is the case. Several instances have occurred, within the last few weeks, of results deviating from our typical experience in antiseptic treatment, such as I was in no way prepared to meet with, and in one case a fatal event ensued. A lady, on whom I operated for scirrhus of the mamma, with removal of the axillary glands, died of a spurious pyæmia, or a variety of septicæmia, an occurrence such as I have not met with for many years past. We dressed the wound in the usual way. Two days after the operation there was pus already present at the anterior part of the incision. There happened to have been an unusual flow of blood at this part, where we do not as a rule expect much. It is a very unusual thing for pus to appear so early. We used to say, in what I may term the pre-antiseptic days, that, if we operated upon sound tissues, suppuration occurred, provided primary union did not take place, in from three to four days, three days in children, four days in adults, and, perhaps, in warm weather, rather earlier than four days. For pus to occur to the amount of several drachms at the end of two days was therefore very unusual, and some special form of organism, I have no doubt, was present. Micrococci were indeed found after death in abscesses which had formed within the pleura. Nevertheless, though I believe some unusual organism was present, we have been accustomed to consider ourselves free from the apprehension of such ill effects; and though no other fatal case occurred, I am thankful to say, there have been several instances of deviation from the typical course, where, instead of union without suppuration at all, we have had healing retarded by the formation of more or less pus, undoubtedly of a septic character—in the sense in which we now use the term septic—that is to say, dependent upon the development of micro-organisms, although no smell was perceptible. Now, Sir, I need hardly say that one such result as that to which I have referred, a fatal event under circumstances which we have been accustomed to consider absolutely free from danger, made me reflect most seriously; and the other cases, though less disastrous, were also grave cause for reflection.

In looking for the source of our misfortunes, it was to the external dressing that we naturally turned our attention. The experiences of Mr. Cheyne and Professor Ogston indicate pretty distinctly that the means which we ordinarily use are sufficient for the purpose of rendering our wounds free from mischievous micro-organisms at the time we put on our dressings. Both Mr. Cheyne and Professor Ogston have found, by using the most advanced methods of investigation, that if a carbolic acid gauze dressing is changed daily, no organisms are met with in the discharges. That, I say, seems pretty conclusive evidence that the means which we have adopted hitherto for the purpose of keeping our wounds pure, up to the time when the dressings are applied, are sufficient. With regard to our external dressings, our suspicions tended to turn upon the eucalyptus gauze. Eucalyptus oil is undoubtedly a powerful antiseptic, and I have been using it in the form of gauze for a considerable time past. One difficulty with it is its great volatility. In the first instance I employed gum dammar, instead of common resin, in the manufacture of the gauze, because I found that gum dammar held the eucalyptus oil more securely

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than the resin does; but gum dammar is an expensive gum, and, after some trials with common resin, I thought I was justified in substituting the cheaper material, and for a while we seemed to get good results with this arrangement. But, as I have already said, more recently the results were not satisfactory. I mean that, now and again, a case occurred which was unsatisfactory. On making inquiry of the manufacturer of our eucalyptus gauze, I found that he had deviated from the instructions which he had received as to the manufacture; that he often left the gauze, for a considerable time after it had been charged, exposed in the air before folding it up, thus affording opportunity for the escape of the volatile constituent in large amount; and in hot weather, such as that during our recent summer, this was more especially apt to occur. We found, as a matter of fact, that the eucalyptus gauze supplied to us had not the softness which it ought to have, caused by the adequate amount of eucalyptus oil. I was thus led to attribute our disasters to imperfection in the manufacture of the eucalyptus gauze.

These circumstances led to a reconsideration of the subject and to an appreciation afresh of the disadvantages of any volatile antiseptic substance. Volatile antiseptics have their own advantages, to which I need not refer, but they have great disadvantages. In the first place, we are at the mercy of our manufacturer. The resin and paraffin so glue the folds of the gauze together, if it is allowed to cool in mass, that it must be opened up while warm, and upon the way in which this is done by the manufacturer much depends as to the quantity of the antiseptic present in the gauze. In the next place a volatile antiseptic, such as either carbolic acid or eucalyptus, has the disadvantage that it requires careful treatment by the surgeon himself. The material containing it must be kept in well-closed metallic vessels; otherwise evaporation soon impairs its qualities. And, in the third place, there is this disadvantage attending all volatile antiseptics, that the longer the dressing is kept upon the body the less efficacious does it become; and who is to say when the time arrives when it has become so inefficacious that it is necessary to remove it? I have been accustomed to regard a week as the limit of the time during which a carbolic acid gauze dressing may be regarded as effectual; but beyond the fact that, with this period, our results were, on the whole, satisfactory, we had no precise grounds to go upon. In that respect a volatile antiseptic must always be at a disadvantage, as compared with a non-volatile one, which will be just as efficacious at the end of a month, or six weeks, as it is when first applied, provided it is not soaked with the discharge.

Salicylic acid is a non-volatile antiseptic; but salicylic acid, as I ascertained from experiments several years ago, is very far from being as powerful in antiseptic qualities as carbolic acid, and therefore I have never ventured to use it for serious cases. Iodoform, while volatile, is very slowly volatile, and, at the same time, so little soluble in the discharges, that in these points of view it seems an admirable antiseptic; but iodoform is by no means a potent agent in its action on micro-organisms. I ascertained some years ago, for example, that, taking a 10 per cent. iodoform wool, the strongest used, and soaking this with milk, the lactic fermentation was only a short time retarded, and in the course of a few days, not only the *bacterium lactis*, but multitudes of other kinds of bacteria were seen, in abundance, in the milk. Again, uncontaminated urine being made to soak such a piece of wool, and then inoculated with putrefying urine, I found that the ammoniacal fermentation was only a short time retarded by the iodoform. Hence I was not surprised to learn that in the practice of Schede of Hamburgh, and others, it had been found that erysipelas occurred under the iodoform dressings. It is remarkable that iodoform has such an effect as it has in preventing putrefaction, but it is by no means a powerful germicide.

But there is another non-volatile antiseptic, corrosive sublimate, to which attention has been more especially directed of late years by Dr. Koch; and here I may be permitted to give my tribute of praise to the admirably conceived and conclusive experiments which he has performed upon this subject. Koch proceeds in this sort of way: he dips a very small piece of silk thread into a fluid containing the spores of the bacillus anthracis, known to be highly resisting to the various agencies inimical to low organisms. After this silk thread has become dry he dips it in the antiseptic solution to be tested, keeping it there for a minute, half a minute, five minutes, or any length of time that is required. He then, by means of water or alcohol, or some fluid known not to influence the vitality of the spores, washes away the antiseptic from the thread, and brings into play his beautiful method of solid culture-material. He places the little bit of silk thread upon a piece of gelatine properly provided with nutritious material, and of course scrupulously pure, and observes, by means of the microscope, whether the spores in the silk thread develop or not. He ascertained by experiments of this character that a solution of only one part of corrosive sublimate in 20,000 parts of water was amply adequate absolutely to destroy the vitality of the spores of the bacillus anthracis, about the most resisting spores that are known. But he found also that as weak a solution as 1 of the sublimate to 300,000 parts of a solution of extract of meat was sufficient to prevent the development of the spores so long as they remained in it; but when the silk thread, having been for any length of time in this exceedingly weak solution, was withdrawn from it, washed, and then placed upon the nutritious gelatine, development occurred as if the spores had not been exposed at all to any injurious agency; and thus Koch established in a most definite manner the distinction, and a very important one it is, between two different effects of antiseptic agents—one, the action by which the vitality of organisms is destroyed; and the other, that by which development is simply arrested, or prevented temporarily from occurring, without the vitality of the spores being interfered with. The former we may term "germicidal action." For the latter, it is somewhat difficult to find a good English term. I happened, I believe, to be the first to use the word "inhibitory" in English physiology, by the advice of my old friend, Dr. Sharpey, with reference to an early paper I was about to publish on what the Germans term the Hemmungs Nerven-System; and as this same word Hemmung is used by the Germans for this checking or suspending action of antiseptics, without destruction of vitality, and as it is very important that we should have some term which distinguishes the one action from the other, I may venture to employ this same word "inhibitory"—a good old English word—for this action of antiseptics, and to speak of their "inhibitory action" as distinguished from their "germicidal action."

Now, these properties of corrosive sublimate were such as no other antiseptic agent had ever been ascertained to possess in anything like such dilute solutions. With regard to our purposes in antiseptic surgery, the inhibitory action of the antiseptic would be sufficient, provided we were satisfied that our wound is left free from injurious organisms, and that the dressing which we apply, itself contains no such organisms still alive. Then, all we require is that the dressing should be able to prevent the development of organisms from without into the discharges with which the dressing may be soaked. That is obvious.

Corrosive sublimate has been used extensively already by our German brethren, chiefly in the form of sublimate wood-wool, as it is called, in which ½ per cent. of corrosive sublimate, with an equal part of glycerine, is mixed with what is termed "wood-wool"—namely, pinewood reduced almost to a state of powder by suitable machinery. This is highly absorbent. It is employed in large masses, and, so used, has given many excellent results. At the same time, it is somewhat unwieldy in its application. Under certain circumstances it is not convenient to have so large a mass as is essential for its safety, and we have also varying reports as to its efficacy; and I may remark that we find some surgeons satisfied with what others would regard as a very mediocre kind of success with antiseptic treatment.

The circumstances to which I referred at the beginning of this address naturally made me turn my attention to corrosive sublimate; and I was desirous, if possible, to use it in a more concentrated form, so that it might be employed in a less bulky fashion; accordingly I prepared a gauze containing, instead of ½ per cent., 1 per cent. of the sublimate.

The first case in which I used it was that of an elderly lady, from whom I removed the mamma and cleared out the axillary glands. I put immediately over the wound a piece of prepared oiled silk, which I dipped in a 1 to 500 solution of corrosive sublimate; then, over this, sublimate gauze, and outside all an abundant eucalyptus dressing. On the following day, when we changed the dressing, I found that, under the oiled silk, exactly corresponding to its extent, the skin was highly irritated, and was covered with small vesicles. I also found that the inner side of the arm, where there was no wound, was in the same state of intense irrita-

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tion. I covered the irritated parts of the inner side of the arm with eucalyptus gauze, dipped in a weak solution of carbolic acid, and I applied to the wound the 1 per cent. sublimate gauze without any intervening protective oiled silk. On the following day I found that the little vesicular pustules, which had formed on the first day under the protective, had healed, and that the inner side of the arm also had recovered from its irritation. How were these facts to be explained? I believe the explanation to be this. The 1 to 500 watery solution of corrosive sublimate, prevented by the oiled silk from escaping, had acted as a powerful irritant upon the skin; but when the 1 per cent. gauze was applied directly to the wound, the oozing of albuminous discharge from the pustules and from the edges of the wound mitigated the action of the corrosive sublimate, and so prevented further irritation there. Again, in the case of the arm, what had occurred was, free perspiration had taken place, and the perspiration forming, with the corrosive sublimate in the gauze, a watery solution, had produced irritation where the perspiration was, on the same principle as the watery solution had caused irritation under the protective.

I continued to use a corrosive sublimate dressing in this case. It so happened that there was a very free hæmorrhage after the operation. I never before saw small vessels so atheromatous. We had to tie multitudes of little rigid arteries, and, in spite of this, a considerable effusion of blood took place, and bagged under the skin. She left town with the outer angle of the wound still unhealed, and having the remains of the blood-clot exposed in it; the dressing employed being a piece of absorbent cotton-wool charged with about 5 per cent. of sublimate, secured in its place with collodion, and she came every few days to London to have the dressing changed. On these occasions I found that although the serous discharge had soaked the wool more or less, there was no irritation caused by it; and the blood-clot, in course of time, presented an appearance which I never happen to have seen before. From the epidermic edges of the little wound the epidermis crept over the surface of the blood-clot like the white claws of an animal extending over the dark coagulum. We are familiar with the organisation of the coagulum in exposed wounds, and we are also familiar with the fact that in the course of time the superficial clot may be removed, and a scar found under it, without any suppuration having taken place, or any granulation, strictly speaking; but I never happened to have seen before this formation of epidermis extending over the surface of an exposed coagulum; and the explanation I believe to be that, while a sublimate wool rendered the wound for surgical purposes perfectly aseptic, the albuminous discharge from the wound prevented the sublimate from coming into operation as an irritant, and so we had, in a peculiarly perfect manner, complied with the essential conditions for the treatment of superficial sores—namely, the exclusion on the one hand of septic agency, and on the other of the irritating property of our dressing. I may add that the wound healed without a particle of pus having been formed from first to last.

While this case showed that in the sublimate we had an agent that might give very beautiful results, it also indicated that we were dealing with an edged tool, which, while it might do admirable work, was very apt also to cut our fingers; and the question suggested itself, Was it, after all, possible to use corrosive sublimate in such a way as to get the advantages without the disadvantages? The question, for instance, suggested itself, Suppose the discharge had been more considerable in this case, so as to soak thoroughly through and through the dressings, what might then have been the result? What is the action of the albumen of serum or blood upon corrosive sublimate? How do they act upon each other? It is, I believe, a very general view in the profession, not to say among professed chemists, that albumen forms, with corrosive sublimate, an insoluble, or very sparingly soluble, albuminate; and that this albuminate is inert; whence the efficacy of white of egg as an antidote in corrosive sublimate poisoning. In the fourth edition of Miller's "Chemistry" it is distinctly stated that an albuminate of mercury is formed as a precipitate when a solution of albumen is treated with corrosive sublimate. In the third appendix to Watts's "Dictionary of Chemistry" the albuminates are still spoken of, and, in the intermediate appendices, there is nothing said to interfere with the view expressed in the original work—viz., "Mercuric albuminate is a white substance obtained by precipitating corrosive sublimate with albuminate of sodium (white of egg)." If it were really true that the albumen, acting in a certain proportion on the corrosive sublimate, would form with it an absolutely inactive compound, this would be a very serious consideration for the use of corrosive sublimate in surgical practice. The albuminous (proteid) constituents of the blood are enormously abundant; while the quantity of corrosive sublimate we can use in our dressings cannot be very great. According to the most recent views regarding albumen, its chemical equivalent is about six times that of corrosive sublimate; but the quantity of albuminous material in the serum of the blood is very much more than this in proportion to any amount of sublimate that we could have in our dressings. My first experiment upon this matter was as follows. I made a solution of albumen from white of egg, and then introduced it into some sublimate-wool, the quantity of albumen used being double that which would be requisite to neutralise the corrosive sublimate, according to the view to which I have referred. After leaving the albuminous fluid in the wool for a certain time, I squeezed the wool, and obtained a clear fluid, and I was surprised to find that this clear fluid tasted strongly of corrosive sublimate—an albuminous fluid containing twice the quantity of albumen that was essential, according to the views to which I have referred, for neutralising the corrosive sublimate—had picked up from the wool corrosive sublimate enough to give the fluid that came out a strong taste of that substance. I mixed this liquid with an equal part of milk obtained from a dairy, and the milk remained perfectly free from souring, showing that the albuminous fluid which had come through the wool had antiseptic qualities, as well as the taste of corrosive sublimate.

I afterwards made other experiments with blood itself, and that to which I will now refer was with the serum of horse's blood. My first attempt to obtain serum from horse's blood failed. I wished to get the blood in an aseptic state, so far as one conveniently could without going too much into detail; and I used a glass jar which I had had by me for a long time past, and which had been used for experiments with regard to catgut, and had certain impurities adhering to it which could not be cleaned off. I purified this with 1 to 500 solution of corrosive sublimate, and then introduced into a horse's jugular vein a glass tube purified in the same way, and through this tube drew blood into the jar and allowed it to coagulate, intending to use the serum which should ooze out of the clot as it contracted. I was baffled, however, by finding myself again in presence of a fact which I described some years ago, where antiseptic precautions had been used in obtaining blood; the clot never contracted.

When I first witnessed this fact, having found the novel procedure of antiseptic precautions in taking blood followed by the novel phenomenon of failure of the clot to contract, I was disposed to attribute the one to the other, and to imagine that the destruction of the septic organisms was in some way or other the cause of the absence of the shrinking. Then it was suggested to me that Liebig had shown, in his "Letters on Chemistry," that if glasses are heated they lose for a time their usual property of causing certain phenomena of crystallisation; and, as my glasses had been always purified by heat, there might be some peculiar physical property in the glass to account for the circumstance. But here we find the same phenomenon cropping up, although the glass had not been purified by heat, and although it had not even a clean smooth surface.

It may be interesting to you to observe that, though the antiseptic precautions used were but of a rough kind, still no genuine putrefaction has occurred, in spite of the hot weather, in this blood taken on September 9th; but the remarkable fact to which I wish to direct your attention is that, while the buffy coat peculiar to horse's blood can still be recognised, it has entirely failed to contract, and is to be seen adhering to the surface of the vessel. I must confess it seems to me barely conceivable that the development of organisms can be the cause of the contraction of the clot under ordinary circumstances, considering how soon that contraction begins to come into play. Yet to what else are we to attribute it? It is to me, I confess, a perfect mystery. At the same time, to us surgeons it must be admitted to be highly interesting, because in antiseptic surgery, at all events, this is the very condition of things in which we find the clot. We do not find a clot shrink away, or tend to do so, from the sides of the wound, but it retains its original bulk until it is gradually diminished by absorption and organisation; and if a clot forms in the vicinity of a ligature upon a large artery, it seems very important that it should not shrink away from the sides of the vessel; but

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remain there in its original dimensions to serve its purpose of a plug.

On the same occasion on which I obtained this blood, I received a portion into another vessel, and stirred it during coagulation so as to remove the fibrin. This whipped blood answered my purpose perfectly, because by virtue of the remarkable tendency that the red corpuscles of the horse's blood have to aggregate into dense masses, and so fall rapidly in the course of a short time, the mixture of serum and red corpuscles was found in three hours to consist of about one-half corpuscles and one-half serum, and therefore I could use the serum for the purpose of my experiment.

The experiment was performed in the following manner. A glass tube such as this (three-quarters of an inch in calibre and three inches in length), open at each end, was packed with a certain weight of antiseptic dressing to be tested, say sublimate wool, occupying about two inches of the tube; then a weighed quantity of serum, just enough to to soak the wool, was poured in at one end of the tube held vertically; it was then left for about half an hour in a warm box, at the temperature of the body, after being put into a stoppered bottle to prevent evaporation; then the serum and the sublimate in the dressing having been allowed to act upon each other for about half an hour, a little more serum was poured in, the tube being in the same position as before. The result was that a certain quantity flowed out below, and was received into a test-tube. The lower part of the wool and the serum in the test-tube were next inoculated with putrid blood, diluted with ten parts of water, to prevent the smell being so great as to make you think that putrefaction existed when none had occurred, a tenth of a minim being applied by means of a suitable apparatus. Lastly, the wool-tube in its stoppered bottle, and the test-tube with a cap of thin mackintosh tied over its mouth, were replaced in the warm box. The object of this was to ascertain whether the dressing, after having been thoroughly soaked through and through with serum, would resist a potent septic inoculation; and also whether the fluid that had come through the dressing was itself an antiseptic fluid. If such should prove to be the case, we should have all the requisites we could desire for an antiseptic dressing. It was a very severe test, for it is comparatively rarely that we have such intensely putrefying substances applied to the surface of our surgical dressings, and it is also comparatively rarely that the dressings are soaked so very thoroughly with blood or serum.

I used three kinds of sublimate-wool, one containing 1 per cent.—twice as much as there is in the wood-wool—one 5 per cent., and the other 10 per cent. I have mentioned that it was on September 9th that this was done, and all these three wools remain perfectly pure, so far as the sense of smell can detect, to the present time. The bottles are before you, and even in that containing the 1 per cent. wool you will find nothing but a smell something between mortar and the inner bark of some trees, which is the immediate effect of the action of corrosive sublimate upon the serum. The serum that had come through the dressing equally resisted the inoculation. By means of a process of testing with which I will not now trouble the Society, I could ascertain pretty exactly the proportion of corrosive sublimate present in these liquids that had thus come through. The corrosive sublimate made the liquids turbid in the case of the wool with stronger proportions; but in the case of the 1 per cent. it had not rendered the serum turbid, and therefore I was able, without the use of the microscope, to judge by the existing transparency, and also by the presence or absence of scum on the surface, whether any organisms did or did not develop; and none whatever occurred. As regards the strongest wool, the liquid which came through contained about one part of corrosive sublimate to 160 parts of the fluid. I tasted this, and found it had the peculiar metallic nauseous taste of corrosive sublimate. I also mixed some of it with five parts of milk got from a dairy, and, therefore, as we know, teeming with bacteria of various kinds. Here is the milk, still fluid after the lapse of nearly six weeks, although when it was mixed with the serum it was already advancing towards septic changes. The first of those changes—namely, lactic fermentation—has been prevented, otherwise the milk would not have been fluid, as you see it to be. There is not the slightest smell either of the lactic or butyric fermentation, but only that which Pasteur pointed out to occur as the result of oxidation of the fatty matter of milk—a little odour of suet. That is exactly the smell that you have in boiled milk kept for a few weeks in an aseptic state.

Thus, Mr. President, we had evidence that corrosive sublimate forms, with the serum of the blood, a material whether we call it a chemical compound or not, which retains the properties of the corrosive sublimate, both as to taste and as to antiseptic virtue. Now, it seems to me highly unlikely that both the characteristic taste of corrosive sublimate and the antiseptic virtue would be retained if the corrosive sublimate were decomposed in any way; and, therefore, I venture to think, speaking with all deference to chemists, that we have not here a chemical combination in the ordinary sense, but an association of particles, such as occurs in solution; not an albuminate of mercury, but an albuminate of sublimate, if I may use such an expression: a loose association of particles of chloride of mercury with albumen. If such be the case, I need hardly point out how important this may be with reference to the surgical uses of corrosive sublimate. The discharges, in passing through a sublimate dressing, may acquire from that dressing chloride of mercury, still in solution, though associated with albumen, and still retaining antiseptic properties.

I may conclude this matter of the relations of the blood-serum to corrosive sublimate by showing some illustrative specimens. I found that if serum is mixed in small proportion with corrosive sublimate in a mortar, the result is the production of a thick opaque, slimy material; but if you add a little more, and still a little more, you get this material redissolved in the serum, until, if you use as much as 150 parts of serum to 1 of sublimate, you get a clear solution. This test-tube contains serum from the blood of a horse mixed with one-two-hundredth part of corrosive sublimate. You will see that there is no precipitate here at all. This other test-tube contains the same amount of corrosive sublimate (1 to 200); but the liquid mixed with it, instead of being serum simply, is serum with an equal part of distilled water; and here we have what the chemists describe as a precipitation of the albumen, the upper part of the liquid being clear. Now, this upper part of the liquid contains exceedingly little corrosive sublimate; it has almost all gone down with the albumen; but, if we take some of this precipitate itself and mix it with more serum, it will be redissolved by that serum. This afternoon I mixed some of this precipitate with some serum already containing one-four-hundredth part of sublimate, and the result has been the clear solution that you see here. This albuminate, if we are to call it so, is therefore highly soluble in blood-serum, and that is one important point to which I wish to direct attention.

While the sublimate is thus, so to speak, intact when associated with albumen, it is rendered very much milder in its action. I took some of the serum which had come through the 10 per cent. wool, containing one part of corrosive sublimate to 160 parts liquid, soaked a piece of lint with it and applied it to my arm, put over this a piece of thin mackintosh cloth to prevent evaporation, and secured this with rubber adhesive plaster. I retained this in position for twenty-four hours, and on its removal found an absolute absence of any irritation, although my own skin is pretty sensitive. We have seen how, in twenty-four hours, 1 part of sublimate to 500 of water already produced pustules; yet here 1 part to 160 of serum produced no irritation whatever. The association, then, of the albumen with the corrosive sublimate greatly mitigates its action, and makes it much less irritating. Thus we are able to understand how the discharges coming from a wound soaking a sublimate dressing may not cause irritation, although the dressing may contain a large proportion of corrosive sublimate. Such being the case, I hoped that we might be able to use corrosive sublimate in pretty strong proportions in a gauze for the dressing of wounds; and therefore, not very long ago, in a case of psoas abscess, I applied gauze containing 5 per cent. of corrosive sublimate with a little gum Arabic to prevent the crystals flying off. On changing the dressing the following day, I saw in the vicinity of the wound all perfectly satisfactory; but the discharge having gone principally backwards, I found that the further I looked towards the sacrum, the more and more evidence of irritation did I find, until over the sacrum itself, beyond the edge of the dressing, there was absolutely a large vesicle. How was that to be explained? The expanation I believe to be simply this. If an albuminous discharge travels through a dressing containing corrosive sublimate only, it, in the first instance, forms, with the corrosive sublimate, a non-irritating albuminate, so to speak, but leaves

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more or less of its albumen behind in the form of a precipitate. As it goes further, and meets with more corrosive sublimate, it leaves more albumen behind, and so, as it advances, becomes more and more nearly a watery solution of corrosive sublimate, producing the highly irritating effects with which we are familiar. This result I confess made me at first despair of using corrosive sublimate in anything like a concentrated form as a surgical dressing. But it afterwards occurred to me, might it not be possible, as corrosive sublimate associated with albumen is so little irritating, to associate albumen with the corrosive sublimate in the dressing? Where should you get your albumen from? Well, we may get it from horse's blood. There are in every town horse-slaughters. If you stir horse's blood while it is coagulating, you may get from one animal some gallons in the form of serum. There is the albumen for you, if it only can be made useful. There is a horse-slaughterer in the north of London who will let us have this serum absolutely for nothing; it is simply a useless material to him. This being so, I ascertained in what proportions the serum and the sublimate might be mixed, so as to give a workable article; and I find that you may employ them in almost any proportions. If you use a very small amount of serum, you get, indeed, a thick opaque substance; but this can be perfectly well blended with gauze or other materials. Here is a gauze which has been charged with serum containing 1 part of corrosive sublimate to 75. Two and a half parts of the liquid are required for one part of the gauze; and you will see that this is not at all an unpleasantly constituted substance, physically. It is destitute of odour; you will scarcely perceive it to the taste; and you would hardly believe that it contained nearly three parts per cent. of corrosive sublimate.

The corrosive sublimate is so intimately blended with the serum that when it dries (as seen on this plate of glass) no separation of crystals takes place. Whether we use 1 to 100, 1 to 70, 1 to 50, or even 1 to 30 parts of blood-serum, they are perfectly amalgamated, and therefore, from a gauze like that, no corrosive sublimate can fly off. It can be manipulated as you please. And as applied dry to the skin, it is absolutely unirritating. If, however, such a gauze is torn, it gives off a dust which irritates the nostrils. It is therefore better to cut it with scissors. Then, in the next place, it is unirritating as acted on by the perspiration. If water is made to act on sublimated serum dried, it does not redissolve it, as serum does, but it renders the mass opaque, the water being only partly absorbed into it; and the water which remains unabsorbed contains exceedingly little of the corrosive sublimate, which is almost all retained by the albumen. Hence, when perspiration soaks into such a dressing, though it moistens it, it does not produce irritation. I made some gauze with serum so strong with corrosive sublimate as to have 1 part to 30, which implies more than 6 per cent. of corrosive sublimate in the gauze. I moistened a piece of this with distilled water, and fixed it on my arm for six hours in the manner before described; and, when I removed it, I found the skin free from irritation. Thus, you will observe that, by associating albumen with the corrosive sublimate, we seem to be able to get rid of its irritating properties.

But the important question arises, Does corrosive sublimate, when thus associated with albumen, retain sufficient antiseptic virtue for surgical purposes? The method of experimenting which I have described is adapted for testing the efficacy of any antiseptic dressing, and I have used it for various others besides sublimated ones. I have employed it with serum for salicylic cotton-wool, for iodoform cotton-wool, for eucalyptus gauze, and for carbolic gauze. I have mentioned that the test is an exceedingly severe one, and I find that after the lapse of a few weeks, salicylic wool soaked with serum and inoculated as above described stinks, and the same is the case with iodoform wool; the eucalyptus gauze, however, if freshly prepared remains pure, as also does carbolic gauze. We have seen that the 1 per cent. sublimate-wool resisted, still more the 5 per cent. and the 10 per cent. In accordance therefore with our previous experiments with iodoform and salicylic acid, they did not stand the test as well as carbolic acid, or eucalyptus, or the corrosive sublimate. But we get a different result if, instead of using serum of blood, we use serum mixed with blood-corpuscles, such as we readily get from the cow, in which the corpuscles do not aggregate so closely as in the horse, but remain suspended in the serum. I need not, of course, tell any members of this Society that the corpuscles are enormously richer in proteid substances than the serum is, so that serum and corpuscles contain about two and a half times as much of proteid material as the serum does; and as albuminous materials mitigate the action of the corrosive sublimate, they cannot fail to interfere more or less, also, with its antiseptic action; and when we use serum and corpuscles, instead of serum only, we find that the sublimated wood-wool (which I should have said did very well with the serum so far as the sense of smell indicates) fails completely. The 1 per cent. sublimate-wool failed also; the 10 per cent., however, stood the test perfectly, even with blood in substance. Now, as to our gauze made with albumen associated with the sublimate, the sero-sublimate gauze. Such a gauze prepared with 1 part of sublimate to 100 of serum stood the test absolutely when tried with serum. It therefore proved itself superior to salicylic and to iodoform wool. But with the blood in substance, how does it behave? The tube in this bottle contains a portion of the gauze treated with the cow's blood, serum and corpuscles, and inoculated nearly a month ago in the same potent manner to which I have referred, and you will observe that it has no putrid odour. Really, then, this sero-sublimate gauze seems to stand the test completely. I may say that, when tried with corpuscles and serum, our best eucalyptus gauze failed utterly, so that everything failed that I have tried except the stronger sublimate preparations and the carbolic acid gauze.

Then the question comes, How far may we go in the strength of our sublimate combined with the albumen without causing irritation? During the last three weeks, my cases at the hospital have been dressed with this material. We have used the kind of gauze which you have in these bottles, made with 1 of sublimate to 100 of serum, and also one made with 1 of sublimate to 50 of serum. We find that the 1 to 50, in the majority of cases, has caused no irritation whatsoever, but in a very few it has caused some irritation, which, however, has disappeared, and the sores caused by the 1 to 50 have healed when the 1 to 100 has been substituted for it. Therefore it looks as if we were very near our limits, as if that prepared with 1 of sublimate to 100 of serum was trustworthy and unirritating, even to all skins, and that prepared with 1 to 50 was unirritating to most skins. Now, there is this to be observed for our comfort, that the discharge both from wounds and from abscesses antiseptically treated is a serous discharge, not a bloody one, except in the case of wounds during the first twenty-four hours; and even in the first twenty-four hours, except in cases in which the dressing has to be taken down for reactionary hæmorrhage, the blood is always more or less diluted with serum. If, therefore, we have a dressing which has stood our severe test with serum mixed with the full amount of corpuscles, we are surely not wrong in regarding it as trustworthy.

Last Friday I amputated at the hip-joint in a boy twelve years of age, on account of a sarcoma of the lower half of the femur. The wound was exceedingly vascular, and there was a great deal of bloody oozing in the first twenty-four hours, but very little escaped externally, because this gauze absorbs very much better than our carbolic acid or eucalyptus gauzes do, containing as they do resin and paraffin; and I would strongly recommend that during the first twenty-four hours this gauze should be used in abundance, in at least sixteen layers. It is now three days since the operation was performed, and, from the perfectly normal temperature and returning appetite and strength, I think we may be satisfied that the boy is already out of risk of septic complications. And this, you will observe, is a very testing case.

I may mention one other case, that of a boy six years old, from whom, nearly three weeks ago, I removed a portion of a rib for the purpose of allowing free drainage to empyema. We let out thirty ounces of thick odourless pus, and a great quantity came out afterwards. He has been dressed with sero-sublimate gauze; and he is one of the instances in which gauze prepared with the 1 to 50 serum caused irritation which disappeared under the 1 to 100.

In him we have witnessed the beautiful course which, I believe, we can only see under antiseptic treatment efficiently managed, of no more pus formed after the first pus has been evacuated, nothing but a serous oozing rapidly diminishing; and it was astonishing to see, on coming back after a fortnight's absence, how plump the emaciated little fellow had become. And the serous discharge is now so slight that I

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believe it would be already safe to remove the drainage-tube. This case, I think, proves that our dressing is aseptic, that the germicidal properties of the corrosive sublimate have come into play in the preparation of the dressing, so that any injurious organisms which existed in the blood or in the gauze before they were brought into preparation, have been destroyed; because, if there had been merely the inhibitory influence of the sublimate upon the organisms, the serum pouring out from the pleura, and washing away all the antiseptic in the vicinity of the wound, but leaving the organisms lodging among the fibres, then we should have had putrefaction, or other disturbing causes, showing themselves. No such thing having occurred, this case seems of itself sufficient evidence that our dressing is really a safe one, in so far that it contains no living organisms of importance to start with.

I have here a sample of a very cheap fibre, sent me from the south of France, prepared with this sublimated serum, and then teased out, showing that we may use this material for charging various fabrics. This is highly absorbent; and I may remark that, if we have a very highly absorbent dressing, we may, and must, use a larger proportion of the sublimate. A gauze will absorb only about three times its weight of liquid; cotton-wool will absorb ten times its weight; and therefore you observe, when the one dressing is saturated it has three times as much of the liquid in it, and thus has the sublimate three times as much diluted. Being so much diluted it will be in proportion less irritating, but the stronger proportion is required to make it safe unless you use it in a very large mass. I believe the French charpie made of old rags, or even old rags themselves, might be quite well prepared with sublimated serum. I have here some rags which have been so treated, and which are quite absorbent, and therefore the dressing promises to be a very cheap one. If the serum is treated with a certain proportion of sublimate, not sufficient to make it solid, it may be kept for any length of time. For aught I know, this sublimated serum may come to be an article of commerce, which may be used in hospitals, or even in private practice. I also think it possible that a material of this kind, dried and reduced to powder, may come to be used for the purpose of mixing with vaseline for an antiseptic ointment, or even for dusting in, under certain circumstances, among our dressings.

I regret that time has not allowed me to bring this matter more completely to an issue as regards its practical application. At the same time, though the subject is, to a certain extent, immature, I ventured to hope that the interest of some of the points to which I have referred might justify me in bringing it before your notice.

ON "LAWN-TENNIS LEG."

By WHARTON P. HOOD, M.D.

THE great popularity of lawn-tennis has given the above name to an accident which has long been known to surgeons, but which the particular kind of effort required by the game has of late years rendered much more frequent than heretofore. It consists of the rupture of some portion of the muscular or tendinous structure of the calf.

Several years ago, when writing for THE LANCET some papers on so-called "bone-setting"—papers which were afterwards republished in a volume,—my attention had already been called to the very protracted disability by which this injury was sometimes followed when treated in the ordinary way. The Hon. Spencer Ponsonby Fane kindly furnished me, for the work in question, with the particulars of an accident of the kind which happened to himself in November, 1864, and by which he was crippled until June, 1866, a period of nineteen months. Mr. Fane then came under the care of the late Mr. Hutton, who told him that his "ankle was out," and who performed an operation for the purpose of "putting it in." This operation immediately cured his lameness; but when the details first came to my knowledge, I was unable to explain what had happened. By the light of subsequent experience I was led to believe that the elevation of the foot and extension of the limb, which followed the injury, had caused the weight of the body to throw upon the injured tendon, thus producing irritation which led to the formation of adhesions, and that these adhesions were broken through when the imaginary dislocation was reduced. However this may be, it is certain that the patient was cured. I need hardly say that the duration of disability in Mr. Fane's case was exceptional; but every surgeon knows that weeks, or even months, may elapse before recovery from a similar injury is complete. I was led by this consideration to adopt a method of treatment by which I hoped to obtain better results, and it has been so successful in my hands, that after a large experience of its efficacy I am desirous to make it known to the profession. It is based upon two essential points—namely, adequate support for the structures of the calf, coupled with immediate and uninterrupted use of the limb.

As soon as possible after the occurrence of the rupture, the patient should be placed upon a sofa, with his injured leg raised above the level of his head; and should be kept in this position for five minutes. This is an important preliminary, because the position alone will be sufficient to empty the limb of superfluous blood, and thus to reduce the swelling which is commonly present. A calf which is much enlarged, and very hard, will frequently return to its natural dimensions within the time specified; and the patient will at once obtain relief from the oftentimes distressing feeling of tension. Moreover, if the elevation of the limb be neglected, the plaster next to be described will soon be loosened by the subsidence of swelling, and will require to be replaced within a few hours. After a sufficient period of elevation, and while the leg is still raised, strips of adhesive plaster, each an inch and a half in width, and of length adapted to the size of the limb, should be applied from two inches above the ankle-joint to above the thickest part of the calf, somewhat as strapping is applied in the treatment of chronic ulcers of the leg. When the plaster is well adjusted, it disperses the effusion of blood and lymph and restores the natural flow of the circulation; while at the same time it holds all the muscular and tendinous structures firmly together, and practically converts the sound portions into a splint for those which are torn. As soon as the plaster is applied, the patient should be directed to walk about the room and to place the heel firmly, or at least fully, on the ground at each step. For the first dozen steps he will probably hesitate, and will maintain more or less of the limp with which he entered; but after a short time, finding that his pain is diminished, or possibly removed, he will gain confidence, and will walk with a pride in his own performance which is very interesting to witness. Until this point is reached, he should not be suffered to depart; for, if he does not walk properly before he leaves the surgeon, he will hesitate still more when alone, and will be likely to return to the ungainly progression which he exhibited at the commencement of the interview. Success in walking, in the first instance, will depend largely upon the temperament of the injured person. A resolute man, who believes in his doctor, will walk at once, while a more timid patient will require coaxing and urging. The chief trouble will be with the sceptical man, who has his own "views" about the injury, and who will express them in such questions as "Well, but do you not think there is a risk of inflaming my leg?" "Shall I not make the internal wound larger?" and so forth. With reasonable care neither to jerk the leg nor to twist the ankle on uneven ground the patient, as soon as the plaster is applied, may walk about as usual. By the third day the plaster will be somewhat loose, and the patient will say that he is not quite so comfortable as before, and is less inclined to trust his leg. The strapping should be reapplied, and he will at once feel more secure and better able to walk. Four days may elapse before the next strapping, which may be left untouched for a week, but the application should be continued at intervals until the patient is quite convinced of his ability to do without it. On the first occasion very little pressure is desirable, and more laying on of the plaster will be sufficient. Subsequent strappings should be tighter, but never so tight as to produce a sense of unpleasant constriction, a rule which must be especially borne in mind in applying the first and last strapping. The amount of walking should be increased daily, and after the third day the patient should go up and down stairs only in the usual manner. Until then his ascents and descents may be infantile.

The above described method of treatment is always successful with, and as a rule is more necessary for, old or elderly than the young. With the latter [illegible]

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reasons, the accident is of rare occurrence. When it does occur the sufferer is eager to get back to his games. He makes light of his pain, has no fear of inflammation, covertly uses his limb, even in defiance of medical orders; and, as his cure is rapid under any treatment, he is usually believed by his surgeon to have sustained only a slight tear. The elderly man, on the other hand, is probably inclined to think that he has been foolish at his time of life, and with his muscles out of training, to engage in a game requiring active exertion. He regards the accident as a lesson in prudence, is fully alive to the value of a sound limb, and sets himself to nurse the injury, with the idea of obviating a wholly imaginary danger of inflammation, or of retarded union of the ruptured parts. By strapping and compulsory exercise he is, in fact, protected against himself. In addition to the rapid cure which it effects, to the prevention of loss of health from want of exercise, and of loss of other kinds from absence from business or occupation, my method has the further advantage of diminishing the liability to recurrence of the accident. The prolonged rest and raised heel, which have generally been enforced in such cases, have a tendency to produce contraction, or a cramped or shortened condition, of the whole of the muscles of the calf, and thus to permit the torn fibres, when united, to be shorter than those around them. At the termination of a case treated in this manner, when absence of pain indicates cure, the patient is able to walk with comfort on even ground, but has acquired the trick of doing so with an almost imperceptible degree of flexion of the leg. When called upon for any extra exertion he is apt to be reminded of his old trouble by a sensation of tearing, or an actual tear, at the seat of the former rupture. This sensation may arise from simple stretching of the cramped muscles, and is then only transitory; but sometimes, from perfect extension being suddenly attained, the contracted portions are compelled to bear the entire strain of the movement, and actual rupture may be the result. In either case the pain is looked upon as evidence of a recurrence of the accident, and a further period of rest is enjoined. All this may be avoided by insisting from the outset that the heel shall be placed fairly upon the ground whenever exercise is taken.

The foregoing observations are founded upon the experience of the last fourteen years, and upon a large number of cases; but this year, among many others, I had what I may fairly call a typical example of the injury in the person of Dr. W. G. Grace, the justly celebrated cricketer. He came to me on the 13th of June, having had the characteristic feeling of having been smartly struck on the calf on the previous evening while playing at Lord's. He was compelled to discontinue his innings, having made sixty runs. He limped into my room, expressing the opinion that "he was done for for the season." On passing a finger down his calf a distinct sulcus could be felt, and his impression was that "he dare not put his heel to the ground to save his life." I strapped up the leg, and he walked away, putting his heel fairly to the ground. The next morning he continued his innings, having some one to run for him, and he added twenty-four runs to his overnight score. He did not cease playing cricket, and an extract from a letter from him, dated July 13th, will finish what I have to say about his case. "You will be glad to hear that my leg has been improving ever since, and is, in fact, well. The accident happened at Lord's on June 12th, and I consulted you the following morning, and found immediate relief from your treatment. You strapped it up from time to time, the last time on June 26th, on which day I played at the Oval against the Australians, and ran for myself 107 runs. My leg was no worse after this, and has been improving every day. I felt myself quite well at Manchester on July 10th, so my leg was cured under the month. I never rested my leg a single day."

The more speedily the strapping is applied after the injury the better will be the result, a point which is well illustrated by the following case. I was playing lawn tennis with a friend whose weight is fifteen stone. I served a ball to him, and he ran forward to take it, but missed it; and then stood still on one leg, like a large bird roosting, gazing round the court. Seeing him remain in this position, I asked what he was looking for. His reply told the whole story. "Some one threw a stone or a ball at me, and hit me on the calf; and, by Jove, it hurts." He went home with me, I strapped up his leg, and in three weeks I had the pleasure of playing three "sets" with him. He had all his customary activity, and, like Dr. Grace, he had not laid up for a single day.

Seymour-street, W.

ON THE PATHOLOGICAL IMPORTANCE OF FLEXIONS OF THE UTERUS.

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OBSTETRIC PHYSICIAN TO THE LONDON HOSPITAL, LECTURER ON MIDWIFERY, ETC.

(*Continued from p. 675*)

2. *Post-mortem Evidence.*—There is proof that flexion of the uterus may prevent the exit of fluid—(*a*) if the uterus be fixed in the bent position by adhesions, and (*b*) if the wall of the uterus be thinned by senile atrophy; conditions which impair the contractile power of the uterus. I have in the papers to which Dr. Hewitt refers quoted the cases which support these two propositions. Dr. Hewitt complains that I have slurred them over; but I have admitted there, and would here again express myself convinced, that there is sufficient evidence in favour of these two propositions. There is another case on record which bears on the question, and which I infer Dr. Hewitt thinks important, while I do not. It is very briefly reported by Scanzoni; it is mentioned only, not described. Scanzoni expresses strongly his opinion that flexions *per se* cause no trouble. If this briefly mentioned case were really conclusive or important, surely it would have influenced the opinion of the distinguished writer who saw and examined it. In the absence of a description so detailed as to enable the reader to draw inferences for himself, I think we are not justified in assuming that the case negatived the view taken by the reporter; and we must assume this, if the case is to support Dr. Hewitt's views. Beyond these cases, there is no post-mortem evidence that so far as I can discover has ever been adduced to show the correctness of the diagrams which appear in many books (Dr. Hewitt's among the number), representing the uterine canal sharply bent, narrowed at the point of flexion, and the uterine cavity dilated above the constriction. On the contrary, every specimen that is to be found in museums (except those in which the uterus is fixed by adhesions) exhibits the canal bent in a gentle regular curve, without any constriction, and with the walls of the uterine cavity quite as close together as they are in uteri which are straight. The importance of post-mortem evidence in the controversy relating to the effects of uterine flexion depends upon the view which it is sought to substantiate. The absence of post-mortem evidence does not prove that flexion never causes dysmenorrhœa; and therefore, if it be only maintained that flexion sometimes and rarely produces dysmenorrhœa, this view is not contradicted. But if, as Dr. Hewitt believes, flexion is the cause of the vast majority of functional uterine disturbances; if the diagrams in his book represent conditions present in the majority of women who consult medical men for dysmenorrhœa; then I think it astonishing that morbid anatomists should never find anything to show the past or present existence of such common changes; and I think the absence of specimens illustrating these changes is a strong presumption that the changes are at least not so common as they are supposed to be, if they even exist at all. There is a condition demonstrable anatomically upon which I have laid stress,[1] but my references to which Dr. Hewitt dismisses as mere trifling—viz., the effect of unusually well-developed utero-sacral ligaments when the body of the uterus has been forced down between them. I will not go over again the considerations which lead me to attach importance to the effects of these structures. I will only say that the possibility of the effects described can be observed by anyone who will examine fifty or a hundred female dead bodies, and that the actual production of them has been proved by a well-observed case; and so much as this cannot be said for the morbid changes which are assumed to result from mere flexion of the uterus. Dr. Hewitt regards the condition of which I speak as unimportant, because he has not always been able to feel these bands. I submit that the examination of the relations of the uterus in the dead body is less liable to error than vaginal and rectal examination during life.

3. *The Interpretation of Signs and Symptoms.*—It is here that I find myself most at variance with Dr. Hewitt. Some of the common clinical observations which to him seem important appear to me scarcely to need considerations

[1] Obstetrical Transactions, vol. xxiv.

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while other facts, which to my mind tell powerfully against the flexion theory, he makes no attempt to explain; and at to a third class of observations, his experience is so different from mine, and from that of others who have studied the subject, that I cannot reconcile them, but must leave it to those interested in the subject to observe for themselves and decide which is right. Dr. Hewitt puts forward as clinical evidence of the morbid effects of flexion the escape of menstrual and leucorrhœal discharge in gushes, the passage of clots at the menstrual period, and enlargement of the body of the uterus at the menstrual period. To give these clinical phenomena any value as evidence bearing on the question, it ought to be shown that they occur only or with much greater frequency in those women in whom flexion of the uterus is present. Dr. Hewitt does not seem to have instituted any inquiry into the frequency with which clots are passed and fluid said to escape in gushes in women with bent and straight uteri respectively. I have not made any such inquiry myself, not thinking it worth the trouble; but if such evidence is thought worth consideration, it appears to me that this is the first point to be settled. Were such an inquiry made, I believe it would be found that the clots and gushes would be described pretty nearly as often, in proportion to their number, by women with straight uteri as by those with flexion. I do not think it of moment, because in the great majority of cases in which clots are passed, it is impossible to say whether the blood coagulated in the uterus or in the vagina. It is my rule, when patients say that they pass clots, to ask them to bring them for me to see; and I generally find them small and recent, and telling nothing by their shape of the place in which they were formed. As to the gushes, the correctness of the fact rests entirely upon the patient's statement, and patients—females especially—can so seldom describe with scientific accuracy, that to build a theory on such descriptions seems to me to be building on sand. Of course we must take the patients' statements when it is only through them that we can get the information we want, and I quite agree with Dr. Hewitt that their complaints ought not to be treated as fanciful; but subjective symptoms stated by patients ought not to be seriously put side by side with things seen by trained observers. Granted that discharge does escape in gushes, what evidence is there that the accumulation was in the uterus, and not in the vagina? It is common enough for secretions, and occasionally air, to be retained in the vagina in much greater quantity than the unimpregnated uterus will hold. In short, these phenomena do not influence my opinion, for the reasons—(1) That the fact of the occurrence of the gushes rests only on the sensations of patients; (2) if gushes and clots do escape there is no evidence that the expelled products were retained in utero; (3) no evidence has been adduced to show that they are at all peculiar to women whose uteri are bent.

There is an observation of Schultze's bearing on the supposed accumulation of fluid in the uterus behind a bend in it, which I quoted in one of my papers, and which I must allude to here because Dr. Hewitt, doubtless through my fault, misrepresents its meaning. I did not cite the mere fact that Schultze had passed the sound into an anteflexed uterus during the height of the menstrual pain as evidence that the canal was not obstructed. The point of the observation, which Dr. Hewitt does not mention, is this: that when the instrument was so passed, at the height of the pain, no escape of blood followed its withdrawal—showing clearly that in the case or cases examined there was no accumulation of blood in the uterine cavity. Schultze's statement as to the patency of the canal during the pain has been recently confirmed by observations made by Dr. J. E. Burton of Liverpool.[2]

There are other clinical phenomena of which Dr. Hewitt offers no explanation. Some of the most striking instances of benefit from treatment by pessaries are furnished by cases in which the uterus is quite straight, being simply retroverted, not retroflexed. No theory as to obstruction of the canal, or strangulation of the vessels by flexion, helps us here. The removal of symptoms must have resulted from the removal of some condition quite other than flexion. The promptness of the relief following mechanical treatment shows that it is a condition associated with the displacement, and the number of cases of retroversion which do not cause trouble shows that it is a condition not present in every case. I believe the elucidation is to be found in the disposition of the utero-sacral ligaments. Dr. Hewitt, although he condemns this as "mere trifling," yet has no explanation of these cases to put in its place. Again, there is, to use Dr. Hewitt's words, the "liability to greater congestion in retroflexion than in anteflexion cases." This needs explanation, but Dr. Hewitt offers none. Anteflexion is frequently met with so acute that the lower part of the cervix is parallel with the body of the uterus, while retroflexion so extreme as this is uncommon. If congestion depended on the flexion, it ought to be in proportion to the acuteness of the bend, which it is not, as Dr. Hewitt, in the sentence quoted, practically admits.

(To be concluded.)

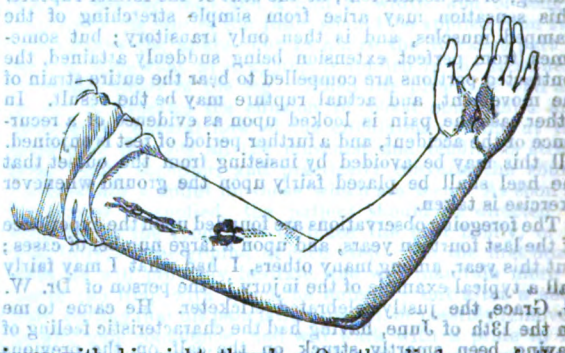
[2] British Medical Journal, Sept. 27th, 1884, p. 607.

CASE OF DOUBLE WOUND IN THE SAME LIMB FROM A SINGLE GUNSHOT.

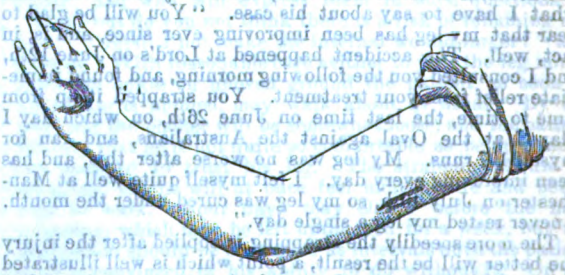
By BRIGADE-SURGEON G. L. HINDE, A.M.D.

THE following case of conservative surgery presents many points of interest:—

Private R. S——, 7th Dragoon Guards, aged twenty, when at rifle practice, seeing his carbine, which he had lent to a comrade, lying on the ground, the hammer at full cock, and not knowing it was loaded, proceeded to ease the spring. To do this he leaned his left hand on the muzzle and pulled the



trigger with his right thumb. On the discharge of the weapon he was severely wounded both in the hand and in the upper arm. The arm and hand were temporarily tied up with handkerchiefs, and the man was brought to the Station Hospital, Shorncliffe, where it was found that the bullet had perforated the hand in its centre through a small circular wound. The whole integrity of the hand seemed to be loosened, and there was a large irregular opening at the back, extending from the metacarpo-phalangeal joint of the ring finger obliquely across to the centre of the metacarpal bone of the index finger, and then back to the os magnum. The



second metacarpal bone was gone with the exception of its head; the first and third metacarpal bones were exposed for almost their entire length; and the os magnum was chipped at its metacarpal articulating surface. The extensor tendons of the second finger were also destroyed, the others much displaced. All ragged tissues and those hardened from powder and fire were removed, and the wound cleansed from all clots and débris by syringing with tepid carbolised water, and then packed with lint steeped in carbolic oil, and the whole supported by a light bandage. Further examination showed that the bullet had also perforated the upper arm on the

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inside, somewhat anterior to the artery, and fractured the humerus at the junction of the middle and lower third, and then passed out at the back of the arm, the entrance wound being small, the exit irregularly circular, about two inches in diameter, with everted edges, and having a mass of muscle protruding. Inside the integuments a large cavity was found lined with broken up tissues mixed with fragments of bone. One large piece of bone, which appeared to be of almost the entire circumference of the shaft, and one inch and a half long, having plenty of attachments, was brought into position between the fractured ends of the shaft, so as to give a base for the deposit of callus, it being hoped that it would have sufficient vitality not to become a foreign body. Having removed all spiculæ, ragged fascia, and muscle, the cavity was cleansed from clots by syringing, and filled from both sides with lint saturated with carbolic oil; the limb was then placed on a jointed arm-splint in a semiflexed position. All the wounds were covered with carbolised gauze, and kept moistened with carbolic lotion. There was very little swelling, and little constitutional disturbance for the following five days. On the sixth day the patient complained of burning pain in all the wounds, suppuration being fully established. I proceeded to dress the wounds of the hand. On removing the plugs profuse hæmorrhage occurred, apparently from both palmar arches; so, after consultation, it was decided to tie the brachial artery. The operation was carried out immediately. A ligature was placed upon the artery where most superficial in its upper third, and all wounds were dressed with carbolic oil. Catgut ligatures were tried, but, being found unsound, silk was used. The night following the temperature went up to 102·4°. After a purgative enema the temperature began to decrease. The next morning it was only 101·2°. With the aid of cotton-wool the hand and arm retained natural warmth. All the wounds were dressed daily antiseptically. The ligature came away on the tenth day, and steady progress continued. Some slight changes in treatment were required—such as strapping a gaping wound, and a short febrile attack combated—otherwise it might be said that the treatment was uniformly antiseptic and simple. On this (the 108th) day the state of the limb was as follows:—The elbow had a good motion, but its action was limited owing to cicatrices being adherent to the biceps and the triceps muscles. All motion was complete in the wrist-joint. Motion in joints of fingers good. Apposition with thumb returned under passive motion and daily practice. The second finger had lost all power, but retains its shape; all joints perfect under passive motion; it may require operative interference hereafter. The upper arm is shortened about three-quarters of an inch. The above drawings show the relative position of wounds.

NOTES OF A

CASE OF POST-HEMIPLEGIC HEMICHOREA ASSOCIATED WITH INSANITY.

BY C. THEODORE EWART, M.B., M.CH.

SENIOR ASSISTANT MEDICAL OFFICER, FISHERTON HOUSE ASYLUM, SALISBURY.

ALTHOUGH the following notes are meagre, they may be of some slight clinical interest.

E. M——, cab-driver, aged forty-two, was admitted into the Fisherton House Asylum on March 29th, 1884. The patient is a fairly well nourished man suffering from aphasia, and has extreme difficulty in speaking. Hesitation, delay, irregularity, and jerkiness are noticed in his articulation, "from the incoördinate action of the cerebral centres, whose function it is to translate thought into the corresponding motor acts of speech." I understand that on two occasions he has lost consciousness, the symptoms being of an apoplectic nature. There is no history of hereditary predisposition to insanity. His mind is depressed, and he is irritable, obstinate, and taciturn. His perception is defective, indicative of failure of brain power, and he does not seem capable of conceiving an exact idea of his situation. He has never had rheumatic fever, and there is no cardiac mischief. There are violent choreic movements of the right arm, and, though to a much less degree, the right leg. The left arm is not affected by spasm, but is partially paralysed. The movements on the right side are so severe that his face is bruised from the self-inflicted wounds, and his hand hurt from striking against his bed. The force is such that an attendant's face coming in the line of motion his eye received a severe contusion. The upper right forearm is an inch larger than the left, and this increased muscular development must be due to the constant movement, which only ceases during sleep. The muscles of the face are very much contorted. By the influence of the orbicularis and neighbouring muscles the mouth is drawn into odd positions. The forehead is wrinkled, and the whole face presents the most contradictory expressions; in fact, there is a "delirium of the sensori-motor ganglia." A certain amount of anæsthesia is present, but there is no great loss of tactile sensibility in the affected hand, which grasps with greater firmness than the other. The sense of hearing is blunted, but sight, taste, and smell are not. Mastication and deglutition are imperfectly performed. When attempting a definite movement the spasmodic action is much exaggerated. The hand is alternately supinated and pronated, extended and flexed, and so combined as almost to defy description. Control over the bladder and rectum is retained. No albumen in the urine. Knee-jerk and ankle clonus exaggerated.

Treatment.—Cod-liver oil was ordered three times a day. Twenty minims of the tincture of Indian hemp combined with twenty grains of bromide of potassium were prescribed every four hours, and a draught containing thirty grains of chloral hydrate and ten grains of bromide of potassium was given at bedtime to procure sleep. As soon as the spasmodic action ceased he was put on fifteen-drop doses of the tincture of perchloride of iron. The bowels were kept open. The diet consisted of beef-tea, milk, eggs, and brandy. The right arm was bandaged to his side; at first when this was done the lower extremity of the same side was violently affected, and had also to be bound. In a fortnight he was able to button and unbutton his coat, and could dress himself; in another week he could converse in an intelligible manner. He carried his hand in the pocket of his coat, so as to prevent its disordered movements. He is now able to execute any intended movement, but in a slightly tremulous manner, and there is no difference in the size of the two forearms. There is still a fidgety manner, which shows itself in grimaces, needless haste, and a want of precision.

Remarks.—I consider from the symptoms that the hæmorrhage must have occurred in the corpus striatum, optic thalamus, and medulla oblongata. Raymond says that in six cases where a post-mortem examination was made the lesion was situated in every instance in the posterior part of the optic thalamus, and involved the fibres of the internal capsule. The lesions which have been found to give rise most frequently to hemichorea are yellow cicatrices, the remains of old hæmorrhages, or softening from occlusion of the posterior external optic artery, although choreiform movements have occasionally been observed during the growth of tumours in this region. The symptoms do not appear to depend upon lesion of the optic thalamus itself, inasmuch as they are never present unless some of the fibres of the sensory peduncular and pyramidal tracts are injured; nor does it even appear to be caused by injury of the sensory fibres, since hemianæsthesia with bilateral hemianopsia may be present without being associated with choreiform movements. It would seem, therefore, that injury to some of the fibres which lie in front of the sensory pedunçular tract is the cause of hemichorea (Ross).

SCHOLARSHIPS.—At the Westminster Hospital Medical School the Fence entrance scholarship of £40 per annum, tenable for two years, has been awarded to Mr. James Dickinson; and the entrance scholarship of £20 per annum, tenable for two years, to Mr. George Thomas James.—At King's College the entrance scholarships have been awarded as follows:—Warneford scholarship of £75 each to Messrs. A. S. Sandifer and T. B. Beach; Sambrooke Exhibition of £50 to Mr. H. S. Ballance; and Clothworkers' Science Exhibitions of £50 and £25 to Messrs. T. G. Brodie and C. W. Atkinson.

THE portrait of the late Duke of Albany, by Mr. Walter Goodman, recently exhibited in the Guildhall Galleries, has been purchased by the Secretary of the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, on behalf of the Board of Management of that Institution.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

THREE CASES OF EPITHELIOMA OF THE TONGUE AND FLOOR OF THE MOUTH.

(Under the care of Mr. MORRANT BAKER.)

FOR the following notes we are indebted to Mr. Toller, house-surgeon.

CASE 1. *Epithelioma of the Tongue; Operation through Cheek; Removal by Ecraseur; Recovery.*—Henry H——, aged fifty-three, builder, was admitted to Darker ward on Dec. 14th, 1883, suffering from epithelioma of the tongue. Six years ago he first noticed a soreness in the centre of his tongue, without being able to assign any apparent cause. He consulted a medical man, and after using a gargle appeared to obtain relief for a time, and for two years slowly improved, although unable to take solid food; from that time the improvement continued until four years ago, when he felt well, and was able to eat solids. In August, 1883, the soreness again appeared, when he again sought advice, and after the application of a gargle and nitrate of silver his trouble rapidly increased. There was no family history of cancer, and no syphilitic history. The patient had been subject to gout; the urine was normal. He had smoked to a great extent up to twenty-seven years of age, but since that time very little.

On admission, on the right side and posterior two-thirds of the tongue there was an indurated, ragged ulcer, with sloughing, everted edges extending across the median line, and involving part of the left half of the tongue. The tongue was fixed, and could not be protruded beyond the teeth, which in the right lower jaw were in a carious condition. An enlarged lymphatic gland could be felt below the angle of the jaw on the affected side.

On Dec. 19th Mr. Morrant Baker removed the tongue. The cheek on the right side was transfixed and the incision carried forwards one inch and a half to the angle of the mouth. Each half of the tongue was removed separately by the écraseur. A hard mass could still be felt extending back as far as the base of the epiglottis and involving the right tonsil; this was drawn forward by a silk suture and a ligature passed behind the mass, which was then removed with the scissors, a part of the soft palate and right tonsil being involved in the removal. The edges of the cheek were then brought together with harelip pins.

The patient had a fair night. Next morning the temperature was 101°. Milk, eggs, and brandy were given at intervals through an elastic tube and funnel. The mouth was constantly syringed with Condy's fluid.

On Dec. 28th he was going on well, and the wound was healing. He could swallow easily without the tube. He had a slight attack of gout.

On Jan. 11th he was discharged well.

CASE 2. *Epithelioma of the Tongue and Floor of the Mouth; Removal of the whole of the Tongue, Floor of the Mouth, Submaxillary Glands and Anterior Portion of Lower Jaw; Recovery.*—George B——, aged fifty, painter, was admitted to Harley ward on Feb. 14th, 1884, suffering from epithelioma of the tongue and floor of the mouth. The patient had noticed a small swelling beneath the tongue in the centre of the floor of the mouth for two months which had rapidly increased, causing great pain and inability to masticate solid food.

On admission the growth occupied the whole of the under surface of the tongue and floor of the mouth, extending forwards to the symphysis of the jaw which it invaded and posteriorly involved the gums nearly to the base of the tongue. The surface was irregular, deeply ulcerated and hard, and was partially covered by a thick greyish-white slough. The edges were raised and indurated; the tongue could not be protruded, but could be moved freely in the mouth. The submaxillary and other glands were enlarged. The salivary flow was greatly increased and trickled from his mouth. The urine showed a faint trace of albumen. No gouty or syphilitic history could be obtained.

On Feb. 27th Mr. Morrant Baker proceeded to remove the morbid growth. A vertical incision from the centre of the lower lip to the under surface of the symphysis was made, the parts were then reflected back for an inch and a half on either side by means of an incision along the lower border of the jaw at right angles to the previous incision. The alveolar process being invaded, was then removed by the aid of Dr. Bonwell's surgical engine. It was found, however, that even this procedure did not permit the whole of the disease to be satisfactorily removed; a portion therefore of the whole thickness of the horizontal ramus of the jaw was removed from about the first molar on one side to the second bicuspid on the other, the bone having been first deeply notched by the circular saw and the section completed with bone forceps. The structures forming the floor of the mouth being affected were removed, including the submaxillary glands of both sides. The tongue was then divided from the tip to the base and each half removed by the scissors; the base of the tongue was then fastened to the floor of the mouth, the lip wound was then brought together by harelip pins and dressed with sanitas oil lint.

On the 28th the patient passed a restless night, notwithstanding three subcutaneous injections of morphia, one-sixth of a grain each time. He was fed through an elastic tube and funnel without discomfort. Next day the wound of the lip was found to be healing by first intention.

On the 29th there was some swelling at the base of the tongue; the tube could not be passed for two days, during which time he was fed per rectum. The mouth was dusted freely with powdered iodoform, and syringed frequently with Condy's fluid.

On March 24th he took liquid food from a feeder. The wound was healed, with the exception of a fistulous track leading from the submental region into the mouth, the remains of a part of the wound which had been utilised for drainage during the after-treatment. The patient was discharged on April 4th.

CASE 3. *Epithelioma; Removal of the Right Half of the Tongue through an Opening in the Cheek; Rapid Recovery.*—Mary D——, aged thirty-two, married, was admitted to Sitwell ward on March 27th, 1884, suffering from epithelioma of the tongue. Seven months previously she noticed a small swelling on the right half of the dorsum of the tongue, which was painful and gradually increasing in size. There was no family history of cancer; all her children were healthy, the youngest being six months old.

On admission the growth involved the right posterior half of the tongue, extending to, but not beyond, the median line. The tongue could not be protruded beyond the lips. There was a slight glandular enlargement at the angle of the jaw of the same side.

Mr. Morrant Baker removed the right half of the tongue on March 29th. The right cheek was transfixed about two inches behind the angle of the mouth, and the incision carried forwards into the mouth; the tongue was then divided from tip to base, and the right half removed by the cord écraseur. The cheek wound was brought together by harelip pins.

The patient had a fair night. The wounds were dusted with iodoform and syringed with Condy's fluid every few hours. Nourishment was administered by the elastic tube.

Eleven days from the operation the patient was discharged, the mouth looking very well, and the wounds quite healed.

Remarks.—Mr. Morrant Baker remarked that these cases were all of them examples of advanced epithelioma of the tongue and neighbouring parts, in which removal was undertaken, more for relief from present and future pain than with any expectation of a long freedom from recurrence. In the event of the operation being followed by recovery, it was anticipated that there would be great relief from the severe pain produced by gradually increasing pressure on the nerves, especially the gustatory; and that, in the event of recurrence, the pain would be very much less than in the case of no operation having been performed. In all the cases there might be a fair expectation that the ulcerating tumour would never reach the same dimensions as originally, and that not improbably recurrence might not happen to any extent in the mouth, but in the lymphatics which were out of reach at the time of the operation. In cases of removal of epithelioma of the tongue at an early stage it frequently happened that in the event of return of the

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disease in the cervical lymphatics the mouth remained quite free, and therefore the removal was the means of infinite relief to the patient. Early removal could not be too strongly insisted upon, and in a very large number of cases surgical interference is actually necessary in order to give as much relief as possible to the sufferer.

DEVONSHIRE HOSPITAL, BUXTON.

HEREDITARY CONGENITAL MALFORMATION OF HANDS AND FEET.

FOR the subjoined notes we are indebted to Mr. W. J. Tilley, assistant house-surgeon.

The following case is of peculiar interest, because similar malformations exist in several members of the patient's family.

C. S——, aged forty-four, single, was admitted with rheumatism. She was a strong healthy-looking woman and well developed, except in the extremities of both upper and lower limbs. The hands were normal, except for the absence of the two terminal phalanges of all the fingers. The feet, with the exception of the toes, were well formed. The right had four toes, the inner two being normal; the third contained two bones (metatarsal phalanges), the two terminal phalanges being absent; the fourth was very small and had but one minute bone. The left foot also had but four toes, the two inner being normal, the third contained one bone only. The fourth presented a slight longitudinal groove, suggesting the fusion of the two toes, but only one metatarsal phalanx was present.

The patient was one of a family numbering ten. The condition of the other nine members was given by the patient:—First child, male. Fingers and toes normal. Second child, male. Fingers and toes normal. Third child, female (patient). Condition described above. Fourth child, male. Fingers all short; toes normal. Fifth child, female. Two fingers (index and middle) normal. The others had but one bone; toes normal. Sixth child, female. Index and middle fingers have two bones and small nails on each; ring and little fingers have but one bone in each; toes normal. Seventh child, female. Fingers and toes normal. Eighth child, male. Fingers all short; toes normal. Ninth child, male. Fingers and toes normal. Tenth child, female. All fingers short; toes normal.

The patient's father had short fingers (but one bone in each). Several (paternal) uncles had deformities of both hands and feet, but patient was uncertain what the exact condition was in each case, as no detailed account was taken. Two of the patient's sisters are married, No. 5 and No. 7 in the list. No. 5, who had malformed fingers, has three children; two girls are free from deformity; the third is a boy, with ring and little fingers containing but one bone. No. 7, whose fingers were normal, has several children without deformity. One of the patient's uncles is married, and has children with deformed fingers. One of these children, a daughter, is married, and her fingers are all short; she has four children, two boys and two girls, all having short fingers. The patient has been told by her parents that her paternal grandmother had short fingers.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Dysenteric Abscesses in Liver.—Hæmophilia and Purpura.—Tabes Dorsalis with Perforating Ulcer.—Alcoholic Paralysis.

THE first ordinary meeting of the new session of this Society was held on Tuesday last, Mr. George Lawson, a Vice-President, in the chair. The meeting proved to be full of interest, the papers and discussion were good, and the microscopical specimens all that could be desired.

Dr. CHARLEWOOD TURNER read a paper on Dysenteric Abscesses in the Liver. In the first case there were two abscesses of old date and several smaller abscesses of recent formation. The patient was a man aged thirty-four, who on his voyage home from Singapore felt pain about the hypochondrium, and had frequent vomiting and severe diarrhœa with bloody and slimy stools. At Port Said he was sent into hospital, a hepatic abscess was tapped and five ounces of thick pus withdrawn. His health somewhat improved, but when again on board the dysenteric symptoms returned. When he reached London he was taken into the London Hospital, where he died two days after admission. He had had pain all over the abdomen and dragging sensations in the rectum, with all the usual symptoms of dysentery and hepatic suppuration. The liver was enlarged but not tender; there were marked anæmia and signs of pleurisy at the base of the right lung. At the autopsy extensive destruction of the mucous membrane of the colon was discovered, with some extravasation of fæcal matter into the peritoneal cavity at this site. The intestines were coated in places with lymph, and patchy hyperæmia was also visible. The coils of the bowels were slightly adherent. In the anterior part of the liver a large abscess, which occupied the quadrate lobe and almost destroyed it, was found. A second large "primary" abscess was seen in the middle of the upper surface of the left lobe; this was smaller than the first and of the size of a hen's egg. The two large abscesses were bounded by thick fibrous walls, had a smooth lining membrane, and were connected with neighbouring structures by firm adhesions. The next important feature was the presence, scattered all over the surface of the right lobe, of small abscesses and areas of actual or commencing suppuration. There were none of these in the left lobe. There was no cirrhosis of the liver; the lungs were congested and œdematous; the right lung was adherent; the kidneys were enlarged and weighed sixteen ounces; the spleen weighed four ounces. Dr. Turner said that the features of the case were entirely in accordance with the generally accepted views on dysentery and hepatic abscess. A point to explain, however, was the limitation of the multiple abscesses to the right lobe of the liver. Septic micro-organisms probably played a part in the infection of the liver from the disease of the bowels. No doubt the presence of other conditions than mere absorption of poison was necessary in order to interpret the peculiar features of the case. A condition affecting the nutrition of the right lobe of the liver, and which so placed it at a disadvantage with the left lobe, was found in the state of the right branch of the hepatic artery at the point where the cystic artery was given off; here it made a sharp turn backwards. He thought that the association of fresh hepatic disease with the commencement of a fresh outbreak of disease of the bowels was of a causative kind. Infective micro-organisms in the follicles of the colon or in the contents of the bowel were the probable agents in producing the disease of the liver. Local conditions were of chief importance in determining the occurrence of these abscesses, and the possibility of the partial dependence of the primary abscesses on some local injury, such as a blow in the epigastrium, was speculated upon. As an illustration of these remarks, a case of traumatic aneurysm of the renal artery as the result of an injury to the abdomen was cited. Heubner and others had discussed the causes of the recrudescence of the disease after apparent recovery. The restoration of the absorptive function of the mucous membrane of the colon might play a part in the renewal of hepatic disease.

Dr. CARRINGTON read notes of a case also of Dysenteric Abscess of the Liver. The first case was that of a man, aged twenty-two, a Portuguese sailor, who was admitted on August 6th into the Seamen's Hospital, Greenwich, in a state of high fever. Marked wasting, rigors, and other usual signs were present, and an exploring needle allowed pus to be withdrawn. At first the diagnosis between empyema and hepatic abscess was impossible. A free incision into the swelling in the lower aspect of the right axilla let out two or three pints of the peculiar grumous fluid found in hepatic abscess. The fever continued, and the patient gradually sank three weeks after admission. At the necropsy the liver was much enlarged, and two large abscess cavities were seen in the upper part of the right lobe of the liver. One of these had been tapped, and the other contained a quarter of a pint of thick pus. Besides the large abscesses, the whole substance of the liver was riddled with many small abscesses, about the size of a small pea, or less; in some of these areas a small vessel like a vein could be detected. Deep ulceration extended throughout the whole of the large intestine. From his experience he could say that this association of small with large abscesses in the liver was comparatively rare. The walls of the tropical abscesses were very thick, and proved its older date. If these abscesses were due to septic absorption what was the source of the infection? The

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multiple abscesses were found in every part of the liver, and as no track of disease could be found in the portal vessels, he suggested that the lymphatics were the carriers of the infective material.—Dr. EWART referred to two patients suffering from hepatic abscess, both of whom had served in Egypt; one, however, recovered, and the other died. The first case was that of a man aged twenty-eight, who recovered after aspiration. The other patient, also a man aged twenty-eight, was suddenly seized with acute pain in the abdomen and a feeling as of something having burst. Aspiration was practised two or three times, and finally a free opening was made into the hepatic abscess; he finally succumbed after having suffered for two weeks before death from dysentery. The liver was found to be riddled with small abscesses, the appearance of which suggested necrosis rather than free suppuration. The large abscess had an indurated wall. The appearance of the colon, which had a pale, waxy, sodden, necrotic aspect, was almost precisely like that of the liver. He thought that the infection must have proceeded along the portal vessels.—Dr. CURNOW referred to the question in saying that the views of Dr. George Budd on the causation of tropical abscess—viz., that it was of pyæmic origin from dysenteric disease—were fast gaining ground in England, notwithstanding the influence of Dr. Murchison's work. In his (Dr. Curnow's) experience there never had been a case which was not dysenteric in origin; the evidence of dysentery rested on post-mortem examination, the actual presence of the classical symptoms, or a clear history of it. So that he now doubted whether the view, as held by many Indian surgeons, that no direct relation existed between the two diseases, was really correct.—Dr. SAMUEL WILKS, whilst agreeing with the remarks of the previous speaker, said that there must be strong grounds for the views held by surgeons of large Indian experience. Sir Joseph Fayrer, and a French surgeon who had had much experience in Algeria, were sure of the occurrence of hepatic abscess apart from dysentery. In mild climates, too, ulceration of the intestines frequently took place without hepatic abscess resulting; so that climate probably had some influence in the causation.—Mr. GEORGE LAWSON said that, surgically, the difficulty was to treat the multiple abscesses.

Dr. WICKHAM LEGG brought forward some specimens illustrating the anatomy of Hæmophilia. About three years ago he had shown specimens of the mucous membrane and skin taken from a fatal case of hæmophilia, in which no alteration from the natural state could be discovered. Those specimens and some new ones had been investigated by Dr. Klein, who also concluded that no morbid changes were present. The case of a little boy, aged thirteen, who died from epistaxis, was next referred to. He had had bleeding from many parts and swelling of the joints. This was the sixth case in which the tissues had been examined. In four cases the examination showed nothing abnormal. In one case reported by Lindwurm the skin was such a remarkable specimen of ichthyosis that the patient had not a sound place from top to toe, and Dr. Legg was inclined to reject this instance. The other was a case of Dr. Percy Kidd's, in which extensive changes in the vessels were discovered. Dr. Legg next handed round specimens of the joints in hæmophilia. This was only the fourth case in which the arthritic disease had been demonstrated after death. Poncet of Lyons and Sir William Jenner had examined two, and he had placed the other two on record. The first stage of the disease was an extravasation of blood into the joint, and the cartilages remained sound. In the second specimen the synovial membrane was seen to be rusty-coloured, and slight erosion of the cartilage of the femur was present. In the third specimen the synovial membrane was of a deep-red colour, and the cartilage was deeply eroded and destroyed. It was thus shown that the arthritic disease was caused by the extravasation of blood.

Dr. THEODORE ACLAND showed specimens of the Thymus Gland in cases of Hæmophilia and Purpura. The nature of the changes were doubtful. He described spheroidal masses of concentric appearance which were many times the size of the concentric corpuscles of Hassell. The first case was that of a boy aged 7, who had sustained a wound of the tongue by which death from loss of blood was caused. There could be no doubt that the boy was a genuine bleeder; he had one brother who suffered from frequent epistaxis, and another who had bled from the gums and bowels. The patient had had many petechiæ and bruises. The three girls of the family were healthy; a grandfather on the mother's side had suffered from the malady. The blood after death was profoundly altered, being much paler and more watery; the white corpuscles were in excess. All the tissues were perfectly natural with the exception of the parotid and submaxillary glands, sections of which presented numerous small darkly stained cells in the acini; probably the result of irritation from the lingual wound. In the thymus gland round spherical masses, which were probably related to the striated corpuscles of Hassell, and which were bounded by a layer of flattened elongated cells and contained epitheloid cells having a faint nucleus, were to be seen. The fibrous tissue was much increased in many places. The gland was of considerable size. Whether these curious bodies were stages in the evolution of striated corpuscles he could not state. He had examined several thymic glands from healthy children with a negative result. It was significant that he had found these bodies in purpura and hæmophilia. The case of purpura was that of a girl with pelvic abscess in which the purpuric eruption was almost universal.

Dr. WICKHAM LEGG read notes of a case of Purpura, which two years before death had had a hard chancre. The man had been a heavy drinker, and had been ill and sparely fed. When first seen, the purpuric eruption, which came out in greater abundance one month before death, was associated with swelling of the joints of the knees, ankles, and of the hand. About five days before death a recrudescence of the purpura set in in the form of urticarial wheals, into which, within a few hours, hæmorrhage occurred. The purpura began at one elbow, and next appeared symmetrically at the other elbow, and finally became widespread. The patient died exhausted by diarrhœa. At the necropsy there was severe ulceration of the intestines, extending all along after the first four feet from the duodenum had been passed. The occurrence of intestinal ulceration was not at all uncommon in cases of fatal purpura. On microscopical examination a large amount of corpuscles in all the tissues of the skin were found to be extravasated in and around the sweat glands and between the vesicles of the fatty tissue. Besides the scattered red corpuscles, there were masses of red discs; some of the corpuscles had one end rounded and the other irregularly shaped. The blood proceeded from ruptured bloodvessels. There were changes in the papillæ, and the vessels under the epidermis were distended and dilated. The arteries were greatly thickened, especially the inner and middle coats, abundant nuclei being seen on section. In the villi of the intestine a large number of hæmorrhages had taken place, and in places areas of infiltrated white corpuscles were to be seen. Scurvy was probably not the cause of the disease; there were no swollen gums, and the patient had not undergone any very great improvement by treatment. The purpura of alcoholism was negatived by the absence of cirrhosis, and that of rheumatism was supported only by the swollen joints, which were probably of hæmorrhagic origin. Syphilis remained as the probable cause. In cases of erythema nodosum and of purpura urticans (Bateman) we had somewhat similar appearances, but there had been no burning or itching sensation at first in Dr. Legg's case. The presence of considerable disease of the vessels of the skin in syphilis was not impossible, and reference was made to the case recorded by Dr. Wilson Fox, in which fatal purpura was probably of syphilitic origin. In all his cases Dr. Legg had found no micro-organisms; Ceci, working with Klebs of Prague, in 1881, had described micro-organisms, as had also Barthelemy of Paris, and there were altogether only a few cases in which micro-organisms had been discovered.—Dr. BUZZARD agreed with Dr. Legg that the case was not one of scurvy, but he had never seen such a condition as the result of syphilis. In alcoholic patients he thought such changes in the vessels were to be found. He referred to one case in which the vascular changes were exactly similar to Dr. Legg's specimen.—Mr. VICTOR HORSLEY said that the concentric bodies which Dr. Acland had described recalled the descriptions of Affanasieff, who believed that such structures were the result of endarteritis of small vessels; there was every stage between those bodies and Hassell's corpuscles. The alliances of the concentric bodies to specimens of psammoma were also indicated.—Dr. PERCY KIDD referred to the case of hæmophilia which he had published in the Medical and Chirurgical Transactions for 1878. There were extensive changes in the veins and capillaries not only of the diseased parts, but also of remote vessels like the vasa vasorum of the aorta and vena cava. He thought that an affection of the wall of the vessel would probably be found to be the real cause of hæmorrhage.

Mr. PEPPER read a paper on a case of Tabes Dorsalis asso-

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ciated with Perforating Ulcer of the Foot. In May, 1883, the patient, a woman aged sixty years, first came under notice. She had been in India, and had had ague of a severe character. There was no history of alcoholism, syphilis, or injury. There was very decided numbness of the second toe on the right foot. She had been successfully operated on for double cataract at the Middlesex Hospital. There were "stinging" sensations all over the body; and a painful corn had developed in the sole of the right foot. Here there was to be seen a heaped-up mass of epithelium. Decided anæsthesia of both feet was detected, and there was absence of the knee-jerks. The gait was not attended with any noticeable ataxia. There was partial ptosis on both sides. Later on very acute inflammation of the skin over the dorsum of the foot occurred, and the inflammation rapidly went on to gangrene. Throughout the case the urine was normal. The patient left the hospital on June 10th. Later on, June 18th, she was taken into the hospital, and the foot was removed with strict antiseptic precautions. For the space of four days there was no sign of local disturbance, but after that time the heel flap became purple and sloughed. Thence onward the case went rapidly to the bad; bedsores of surprising acuteness, and attended with no previous sign of inflammation, formed, turned black, and the tissues speedily disintegrated. There was generally no fever, and 101° F. was registered only once.—Dr. SILCOCK read the notes of the morbid appearances. The sinus in the stump ran up on the inner side of the tendo Achillis, and much pus infiltrated the tissues upwards as far as the popliteal space. The lower end of the tibia was necrosed. The brain was sound, with the exception of the atheromatous vessels; the spinal cord showed grey degeneration of the posterior root zone. The mitral valve was much diseased. The liver and kidneys were toughened, but the other organs were normal. On microscopical examination the whole cord was found to be affected with diffuse sclerosis, which was not limited to special parts. Around the grey matter, more markedly in the posterior columns, there was much thickening of the neuroglia. The posterior cornua and posterior roots were also involved, and in the grey matter some spaces bounded by ragged irregular walls and having a reticular or granular appearance, sometimes homogeneous, were to be seen. In places what seemed to be altered myelin was observable, but the clear spaces just described in the grey matter were probably due to recent inflammatory softening, and were almost exactly like those to be seen in a case of tetanus reported by Mr. Pepper. The bloodvessels of the cord were notably thickened. In the posterior root zones no normal nerve fibres were observed. The chief part of the changes was probably of considerable standing. Reference was next made to the state of the sciatic and internal popliteal nerves; there was evidence of hyperplasia of the endo- and epi-neurium, and the myelin had segmented, whilst the axis cylinders were much altered. The changes described by Messrs. Savory, Butlin, Déjerine, Pitres, and Vaillard, as occurring in cases of locomotor ataxia associated with so-called trophic lesions, were compared with those present in the case narrated, and the conclusion was come to that the trophic lesions were, with far more reason, attributable to structural alteration of the peripheral nerves than to changes in the spinal cord.—Dr. SAMUEL WILKS objected to the use of the term "tabes," which had no definite meaning.—Dr. BUZZARD inquired whether the morbid alterations in the nerves had been traced from the periphery to the centre. The changes described by Déjerine, Pitres, and Vaillard were confined to the actual periphery of the affected nerves, and if the changes were continuous from the periphery to the central portions, the observations of Dr. Silcock would be a valuable complement. He could not help suggesting the idea of the possibility of the dependence of the neural changes on the thickened condition of the vessels of the periphery of the arterial system.

Dr. PAYNE and Dr. F. SÉMON showed a living specimen of Rhinoscleroma, and Dr. ORMEROD a case of Scleroderma.

Dr. W. B. HADDEN read a paper on Two Fatal Cases of Alcoholic Paralysis. A married woman, aged thirty-three, was admitted into St. Thomas's Hospital under the care of Dr. Harley on April 7th, 1883. She had always been a heavy drinker, especially for the last twelve months. She had been married thirteen years, but had never been pregnant. Four months ago she began to have pain in the head and twitchings of the face and hands. She had fallen down unconscious several times and was said to have epilepsy. She had had mental symptoms with loss of memory for three months. Ten days before admission she lost the use of her legs. On admission the legs and thighs were œdematous and she had retention of urine. The legs were almost powerless and the knee-jerks absent. Delirium set in. The lower edge of the liver could be felt two inches below the costal arch. Sensation was fairly good. The delirium continued; the paralysis of the legs and arms became more marked, and the muscles failed to respond to the strongest interrupted current. Sensation later on was noticed to be decidedly delayed in transmission. There was slight fever for a few days before death. At the necropsy there was acute tuberculosis of nearly all the viscera. The brain, medulla oblongata, and spinal cord were healthy to the naked eye, and no change was detected microscopically. The nerves were not examined. The second case was that of a woman, aged forty-two, who was a patient of Dr. Stone's. She had had seven children, six of whom were alive. Two months ago she had flooding after a miscarriage. About a year before admission she became delirious on board ship. It was ascertained that she had been drinking freely and had had delirium tremens. Weakness of the legs came on three months before admission, and for the last six weeks she had not walked without assistance. On admission complaint was made of severe pains, which started in the great toe and passed up to the hip, coming on in paroxysms. The legs and arms felt as if they were being screwed. There was no loss of control over the bladder and rectum. She slept very little, and had delusions at night. The arms were much wasted, and there was "dropped wrist" on each side. All the muscles of the arm were weak, but the extensors more than the flexors. The reflexes were absent. The muscular sense and sensation were normal. There was great weakness of the muscles of the trunk. The voice was feeble, and she had a high-pitched cough. No anæsthesia of the trunk was detected, and there were no superficial reflexes. The legs were extremely emaciated, were kept drawn up, and were very painful when touched or moved. Before death a number of bullæ appeared on the limbs. The signs of broncho-pneumonia were present, and also those of cirrhosis of the liver. There was atrophy of the brain in the frontal region. In the spinal cord the grey matter was obscure in the cervical and upper dorsal regions, and lower down the cornua seemed slender and pale. The right sciatic nerve showed the nerve tubules to be much reduced in size; the endo-neurium and neurilemma were much thickened, but not the peri-neurium; the diminution affected chiefly the medullary sheath of the nerves. In many parts there were deeply stained areas of thickened connective tissue, and the axis cylinders were deprived of their medullary sheaths. The changes were more advanced in the centre of the bundles, where there were large bundles of newly formed connective tissue, but no segmentation of the myelin. The changes in the cervical and dorsal regions and the granular appearance of the medullary sheaths were probably artificial and post mortem. These were the signs of peri-neuritis. The right median nerve showed similar changes, though less marked. In the muscles there were deeply stained nuclei which in some parts took the place of the muscular fibres; the muscular corpuscles were increased, and some of the muscular fibres were atrophied and granular. These observations showed that alcoholic paralysis was not of spinal origin, and agreed with the views that the cause was a disease of the peripheral nerves as found by Lancereaux, Dreschfeld, and others. In his case, however, the change was not a primary neuritis. Dr. Reginald Thompson had recorded in 1868 cases in which there was atrophy of certain nerves and early fatty changes in the muscles, with patches of softening in the cord, but no microscopical examination had been made. The change in the liver, nerves, and muscles was identical. Reference was made to a case in which nystagmus occurred, and to another in which motor paralysis of the arms and legs with nystagmus, atrophy of the left half of the tongue, and paralysis of the right recurrent laryngeal were associated. The hypoglossal nerve was found to be atrophied and the liver was cirrhosed; there were signs of acute tuberculosis in all the organs. The presence of cirrhosis of the liver and acute tuberculosis in combination with cases of alcoholic paralysis was frequent, and possibly not without significance.

The following card specimens were shown:—Dr. Hale White: Ulcer of Stomach with Secondary Changes in the Pancreas. Dr. Mansell Moullin: Vacuoles in Liver. Mr. John Hopkins: Bones and Joints in Locomotor Ataxia.

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MIDLAND MEDICAL SOCIETY.

A SPECIAL and ordinary meeting of the above Society was held on the 8th inst., the President, Dr. Bodington, in the chair. After the nomination of the officers and members of Council for the ensuing session,

Dr. SAWYER read a paper entitled Practical Comments on Pulmonary Consumption. Briefly reviewing the pathology and clinical features of the various forms of phthisis, he said there were four well-marked varieties of pulmonary consumption—namely, miliary tubercular phthisis, lobular phthisis, lobar phthisis, fibroid phthisis. All these forms might be variously blended in any particular case. He did not believe in the tubercle bacillus. He did not doubt that a certain microscopic organism is to be found in and around tubercular cheesy masses in phthisical lungs and in the sputum of phthisical persons, but he doubted that there is a bacillus which is the veritable essence and infection germ of tubercle. He regarded chronic pulmonary consumption as a chronic inflammatory process. He had never found laryngeal phthisis apart from coexisting pulmonary phthisis. He had found ergot the most trustworthy drug in small and continued hæmoptysis, while he preferred gallic acid in copious pulmonary hæmorrhages. Careful observation of the pulse was of high diagnostic and prognostic value in phthisis. Dr. Sawyer commended chloride of calcium as a good general remedy given in ten-grain doses twice daily after food. He had used several volatile inhalations with success.

Mr. CHAVASSE showed a large Meningocele, weighing eleven ounces, that he had removed from the forehead of a child, aged fourteen months, under the care of Mr. Evans of Sutton Coldfield. At the time of birth the tumour was the size of a small apple, but gradually enlarged until the integument covering it was tense and shining. The case progressed well for twelve days after the operation, when, owing possibly to the eruption of several teeth, convulsions supervened and the child died in five hours.

Mr. SIMON showed a living case of Keloid, also a man suffering from a large Ventral Hernia.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

THURSDAY, OCT. 16TH.

SIR HENRY ACLAND, PRESIDENT, IN THE CHAIR.

THE Council having resolved itself into committee for the adjourned consideration of the subjects of the preliminary examination of medical students,

Dr. STRUTHERS moved, "That the subjects of the preliminary examination for the registration of medical students be allowed to be passed at one or more examinations."

Dr. FERGUS seconded the motion.

Dr. HAUGHTON said this proposal entirely subverted the intentions of Dr. Humphry. The examination was elementary and paltry enough to be passed at one time, and for a student to pass first in Latin and subsequently in mathematics was to lower the standard still further.

Dr. HALDANE, while agreeing that it was desirable that all the subjects should be passed at the same time, yet thought that if this regulation was not carried, a very small number indeed would pass the preliminary examination. He thought they ought to allow those who failed in certain subjects to be subsequently re-examined in those subjects without again having to submit to the entire examination.

Dr. STRUTHERS said the Council had recognised that principle to the fullest extent in the case of professional examinations. If a man passed his Latin or mathematics well, there was surely no reason for troubling him to pass another examination in those subjects, and that was all that was intended by his motion.

Dr. BANKS agreed with Dr. Struthers in thinking it would be very unfair to the student to oblige him to keep up a knowledge on some subjects that in future life would be of very little use in the practice of medicine.

Dr. STORRAR said if the motion was passed it would be putting the axe to the root of the work in which the Council had been so long engaged. The object they had in view was to narrow their requirements in order to secure thoroughness. It seemed to him to be perfectly reasonable that a lad on leaving school to enter on medical studies should be required to show that he had an intelligent apprehension of the subjects of examination. This system of remanets was nothing more than a bait held out to young men to come up in a state of unpreparedness with a chance of getting through on all the subjects, but passing a few and allowing one or two other subjects to be remanets.

Mr. MACNAMARA said he understood the object of the motion was to divide the examination into two parts, classical and scientific. If a man failed in the scientific branches and was remarkably good in the classic, he thought it would be a great hardship to send him back to work up his classics again; it would be much better for him to study those subjects in which he was weak. He thought there was a great deal in Dr. Struthers' suggestion, and should vote for it.

Dr. HAUGHTON said if this resolution was passed it would make their preliminary examinations even more contemptible than they were at present. To say that a schoolboy could not pass the first book of Euclid and Latin in the same examination was to say that he was of a very low type indeed.

Dr. HERON WATSON said the result of passing the resolution would simply be that a person who could not pass in one of the subjects would go back and cram in the subject, so that his eventually passing would be no indication of his having been properly educated.

Dr. AQUILLA SMITH said that allowing students to pass any examination by instalments was a very great evil, and the practical effect would be that they would drop the subjects in which they had passed and consider that they had done with them for ever.

Dr. FERGUS thought, on the contrary, that instead of this resolution lowering the preliminary examination, it would really raise it to a higher position.

Mr. MARSHALL said that if it was passed it would completely overturn a resolution of the Executive Committee so late as March last, by which it was resolved that all the subjects required at any preliminary examination must be passed at one examination.

Dr. STRUTHERS, in reply, said he was very much surprised to hear that he was lowering the examination, for his idea was that it was rather the opposite. If there was anything in Scotland in which it was superior to England, it was in general education. They had no difficulty at all in their preliminary education.

The resolution was then put to the Council, and carried by ten votes to eight.

The Council then resumed, and the following report was brought up:—

"That the following resolutions, passed by the Council in Committee with regard to preliminary examination of medical students, be adopted:—That the subjects now required for the Preliminary Examination, as set forth in the Regulations of the Council, be modified so as to stand as follows: No person shall be allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as specified in the following list: (1) English language, including grammar and composition; (2) Latin, including grammar, translation from specified authors, and translation of easy passages not taken from such authors; (3) elements of mathematics, comprising (*a*) arithmetic, including vulgar and decimal fractions; (*b*) algebra, including simple equations; (*c*) geometry, including the first book of Euclid, with easy questions on the subject matter of the same; (4) elementary mechanics of solids and fluids, comprising the elements of statics, dynamics, and hydrostatics [1]; (5) One of the following optional subjects: (*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) logic, (*g*) Botany, (*h*) zoology, (*i*) elementary chemistry."

Paragraph 1 having been agreed to,

Dr. HAUGHTON moved the omission of the footnote by which the Council presumed to teach the universities how to examine.

The question being put to the Council, Dr. Haughton's motion was agreed to, and the footnote was struck out.

On Paragraph 2,

Dr. LYONS moved that Greek be included. He did not

"[1] The General Medical Council will not consider any examination in English language sufficient that does not fully test the ability of the candidate:—(1) To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (2) to write correctly from dictation; (3) to explain the grammatical construction of sentences; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use."

"[2] This subject may be passed apart from other subjects, at an examination conducted by any one of the recognised examining bodies."

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desire to reopen the discussion, but merely to move it *pro forma* in order that it might be on record.

Dr. BANKS seconded the motion.

The motion was negatived.

The report having been adopted by the Council, Dr. STRUTHERS' motion, "That the subjects of the Preliminary Examination for medical students be allowed to be passed at one or more examinations," which had been carried in committee, was put to the Council and carried.

Dr. HUMPHRY said the whole tenour of the efforts of the Council had been that the examinations in preliminary education should be conducted as far as possible by the universities, and he thought it would be wise therefore on the part of the Council to carry any resolution which would distinctly hinder the acceptance of the preliminary examination at one of their great universities. He thought that the universities should be left as far as possible free to conduct those examinations, as to which they really must be better judges than members of the Council, and more especially as it was desired that in their early examinations medical students should conform as far as possible to the general mass of students preparing to enter other professions. When the College of Surgeons and the College of Physicians in loyalty to the Council gave up their preliminary examination, it was in the hope that the examination would be mainly conducted by the universities, but their apprehension also was that it might fall into hands no better than their own. He thought under all the circumstances it behoved the Council to be extremely careful how they in any way interfered with the examinations conducted by the great universities. He spoke mainly in reference to the position of Trinity College, Dublin, and was it desirable that they should increase the difficulty of their students passing the higher examinations of that university or that they should throw its students upon other examinations? He therefore proposed that the following be added to their resolutions:—"That the examinations in general education conducted by the universities will be accepted as heretofore, but if in any of those examinations in which the standard in mathematics is higher than in the examination here proposed, and in which the subject of preliminary mechanics is not included, a knowledge of that subject will be required at a subsequent examination." Thus in Trinity College, Dublin, where the men passed a considerably higher preliminary examination altogether in mechanics, they should allow them to pass their mechanics at a subsequent examination.

Dr. BANKS seconded the motion.

Mr. MACNAMARA said the Council were doing a most serious injustice to the University of Dublin by insisting on the resolution that mechanics must be passed before registration. They were imposing a regulation which if complied with would mean giving up a year's education in mechanics for a simple trifling examination at the commencement of the student's career. The result would be that the Council would stand in the position of refusing access to their student's register to Dr. Haughton's pupils because he gave them a better education in mechanics than the Council required.

Mr. SIMON dissented from the principle of Dr. Humphry's motion. He said the Council had deliberately decided that it would require elementary mechanics to be preliminary to medical education, and he believed that the Council had never given a vote more deliberately. He was prepared to admit that there might be one or two exceptional cases, but they must be very carefully guarded and must not trench on the principle that four years was required for medical education. Of course, if there was an institution which had a curriculum of five or six years, and it happened that there was a certain quantity of intermingling of mechanics and, perhaps, anatomy in the earlier of those years, the Council would not wish to push its regulations pedantically against such students, but the principle must be maintained that they required to be satisfied that there were four years of medical study exclusive of any of the preliminary subjects. His own impression was that they had better not move further in the matter at present. Let them take time to consider it and consult, if necessary, with the Colleges, and make exceptions that should just cover right cases and no more.

Dr. STRUTHERS said he would never be a party to deliberately opening a back door for the convenience of certain universities. Before the proposal was carried into effect a year must elapse, during which Trinity College would have time to consider what it should do, and no doubt they would be able to appoint examiners for the elementary mechanics' examination.

Dr. HAUGHTON said Trinity College would not alter its plans in a hurry, and he was quite sure would not do so in order to suit the convenience of the Council. There were no penal consequences attached to the regulations of the Council, and Trinity College certainly would not come down from a higher platform in order to take up a lower one.

Dr. HUMPHRY said they had been reminded that the Council was not making "laws," but only "recommendations," and what he wished was that they should not run into opposition to the great universities, because, if so, their recommendations would indeed cease to be law. At present those bodies had striven to bring themselves into accord with the regulations of the Council, and he knew what serious deliberations had been necessary at Cambridge in order to do this as far as they could. There was nothing so much to be desired, in order to promote the high education and gentlemanly tone of members of their profession, as that they should associate themselves with those great bodies which gave a truly liberal education. He hoped, therefore, that the Council would accept the resolution.

Mr. MARSHALL thought the question ought not to be decided in that way. It was quite clear the Council would not be unanimous. He did not see any great harm in making a communication to the different bodies of the changes already proposed by the Council without going into the mode in which they would affect any particular institution. No harm would be done by a little delay, and then the Council might ascertain what the bodies themselves had to say about those important changes.

The resolution was then put to the Council and lost, six voting for it and nine against.

Mr. MARSHALL then moved, "That the General Council's amended regulations for the preliminary examination of medical students be communicated to the examining bodies whose examinations are recognised by the Council; that their attention be drawn to the changes that had been made; that they be informed that these amended regulations will not come into force until October 1st, 1885; and that on and after that date no person will be allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as specified in the following list," &c.

The resolution was seconded by Dr. STORRAR and agreed to.

With the consent of the mover and seconder, Dr. Struthers and Dr. Pettigrew, the following motion was referred to the consideration of the executive committee, "That the junior local examination of the University of Aberdeen, and the junior local examination of the University of Glasgow, be added to the list of preliminary examinations recognised by the Council; the certificates to include all the subjects required by the Council."

Owing to the evident desire of the Council to bring the business to a conclusion on that day,

Dr. HAUGHTON said that after a conversation with Sir H. Pitman he had decided to ask the Council for permission to withdraw two motions of which he had given notice, believing that the best place in which he could express his views upon them was in the lobbies of the Houses of Parliament. The motions were as follow:—1. "That, in the event of a conjoint scheme or schemes of curriculum and examination being adopted, it is not desirable to include in such schemes any university that can prove its curriculum and examinations to be distinctly in advance of the curriculum and examination contemplated in such scheme or schemes." 2. "That the Medical Act (1858) should be amended by requiring a degree or licence in each of the three subjects, medicine, surgery, and midwifery, to be produced to the Medical Registrar previous to the candidate's name being placed on the Medical Register."

Dr. QUAIN said that in a previous debate he had referred to a return showing the percentage of the licentiates of the College of Physicians who held the diploma of the membership of the Royal College of Surgeons. He then stated that "93 per cent. of the licentiates of the College of Physicians also got the qualification of the College of Surgeons voluntarily; but what was more strange was that 30 per cent. of them got the licence of the Apothecaries' Society." That statement was founded on an old return, but on examining the Medical Register of the last two years it was found that out of 160 licentiates of the College of Physicians, 134 held the M.R.C.S.E., and twenty-two the L.S.A.Lond.

MEDICAL LEGISLATION.

The following motion had been placed on the programme of the Council by Dr. LYONS:—

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"That the Council consider the following propositions: (*a*) That a one-portal system can only be worked on the basis of a minimum. A minimum must necessarily paralyse intellectual activity in teachers and learners, arrest all forms of healthy competition, impede the progress of medicine as a scientific pursuit, and degrade the medical service of the public and the State. (*b*) A well-regulated many-portal system admits of being worked on the principle of competition upwards. Such upward competition can be secured by energetic supervision and control on the part of the Medical Council, with the best results to the public and the State. (*c*) To secure effective supervision, inspection, and control over teaching and examination, more direct power must be entrusted to the Medical Council by Parliament. The relations of the Medical Council with respect to the medical authorities and the Privy Council require to be reversed; the General Medical Council to be in the position of a court of first instance, with right of appeal on the part of the medical authorities to the Privy Council. (*d*) It does not appear to be either possible or necessary to enforce the *bonâ-fide* triple qualification in medicine, surgery, and midwifery universally. But no person should be allowed to practise midwifery whose name is not on the Register as possessing a special qualification. It will vitiate the whole system of registration if, for personal or other considerations, rigidity of examination in midwifery be relaxed to enable A, B, or C to fulfil colourably the clauses of a statute which shall pretend to enforce uniform triple qualification. (*e*) It appears to be a natural right that a representative body like the Medical Council, now probably to be endowed with larger powers, should be elected by a more extended representation of the profession than at present. This enlarged representative privilege may perhaps be most safely entrusted to the members of the medical authorities, taking a limit of years in practice, possession of special degrees, or other qualifications, as limitations. (*f*) The right of appeal will in all probability be exercised henceforth, and as the questions of appeal will involve special expert knowledge, it seems but proper that special and expert knowledge should be represented on the Courts of Appeal."

Dr. LYONS said he desired to say a few words in explanation of his bringing forward these very important resolutions. It appeared to him that the time had almost come in the history of the Council when it would be proper for that body to give its consent to some such propositions as he had drawn up. He could not, however, be blind to the fact that the present time was inopportune for their discussion, at the close of a period of as close and continuous study on the part of members of the Council as he had ever been called upon to go through. He thought that notwithstanding the cloud that at present appeared on the political horizon, there was strong reasons for believing that next year medical legislation would come to the front. He believed that the public desired more specific information with regard to the views of the Council upon that legislation than it at present possessed. Members of Parliament said, "Why do not you and the Medical Council take this in hand—you who can deal with it so much better than we of the House of Commons alone can hope to deal with it?" Representing as it did every constituent in the medical profession, the Council could no doubt offer great assistance in the settlement of matters which must appear complicated to those outside. One important point to be considered was the power to be entrusted to the profession at large in regard to its regulation and government through a body like the Medical Council. They knew that public opinion had taken a particular direction in regard to a general system of representation, and there was no doubt good ground for demanding it. At the same time they might be guided with a direction that would give full and complete satisfaction to the profession without bringing in the somewhat disturbing element of universal suffrage. He was, if he might venture to say so, in favour of a large extension within proper limits within the profession, and within the bodies corporate forming the profession, of the area of the suffrage by which men could properly be returned to the various bodies represented in that Central Council. With reference to medical legislation, it would be a great advantage if the Council were to consider the lines upon which a measure might be drawn up; for even if it should not run exactly on the lines on which the Legislature intended to work, both schemes might be considered by a select committee, and a Bill drawn which would include the best ideas emanating from both sides. Having made this general statement of the objects he had in view, he would for the present, considering the lateness of the session, withdraw his propositions, reserving to himself the right to reintroduce them at a future sitting of the Council.

The propositions were then, by leave of the Council, withdrawn.

The following letter to the President from the Master of the Society of Apothecaries in London, on the subject of the exclusion of that Society from the Conjoint Scheme, was read:—

[COPY.]

Apothecaries' Hall, Oct. 15th, 1884.

DEAR SIR HENRY ACLAND,—I beg leave to acknowledge the receipt of the several reports of the meetings of the General Medical Council during the past week, which have been forwarded to me as Master of the Society of Apothecaries. Permit me to point out to you a serious discrepancy in these reports, which materially endangers the interests of the Society. It will be in your recollection that when a Conjoint Board for England was originally proposed (see "G.M.C. Revision," June, 1877), the Society of Apothecaries could not then join in the movement with the two Royal Colleges. In order to do so we were compelled to make important sacrifices and surrender certain powers and privileges. The basis of that scheme, approved and adopted by the General Medical Council in February, 1879, consisted in giving a majority of examiners in medicine to the Royal College of Physicians; the Society was accredited with a majority of examiners in chemistry, materia medica, &c.; whilst the departments of surgery, anatomy, &c., were to be undertaken by the Royal College of Surgeons, since the Apothecaries Act does not confer the power of examining in surgery for our licence. Final arrangements were further made for carrying out the three portions of the Conjoint Board in its examinations: the first was to take place at the Apothecaries' Hall, the second at the College of Surgeons, and the third at the College of Physicians. From this scheme the Royal College of Surgeons withdrew some time after the above arrangements. In your address on Oct. 7th you suggest the adoption of three short clauses legally binding on the examining boards, in the first of which the Council shall not admit to the Medical Register any person who has not passed an examination satisfactory to the Council in medicine, surgery, and midwifery. The Society of Apothecaries adopted the scheme of 1878–9 upon these very grounds, and which the General Medical Council approved and sanctioned at that period. But now it appears that the Council have negatived their four resolutions in rejecting the amendments marked A, B, C, and D to Sir H. Pitman's motion of Oct. 9th, 1884, by which (B and C amendments specially) the Society of Apothecaries is refused the privilege of co-operating with the above-named Colleges, though the General Medical Council had previously agreed to adopt the scheme above referred to. In deference to the judgment of the General Medical Council, it appears that two errors are now committed: one of injustice in allowing the two Colleges to combine at all after the decisions of 1878–9; the second is a still greater injustice, in excluding the Society of Apothecaries, who were the parties most interested in that scheme, and who had made the greatest sacrifices in furthering the views of the General Medical Council in their Recommendations. I wish to press upon the attention of the General Medical Council that the Society is still willing to recur to the original project as laid down by the Committee of Reference in their report of the co-operating medical authorities, and approved by the General Medical Council, February 1879, Parts 1, 2, and 3.—I remain, dear Sir H. Acland, yours truly,

GEO. CORFE.

Sir H. ACLAND, President of the General Medical Council.

A proposition that the letter be placed on the minutes was negatived.

Dr. LYONS proposed: "That a committee be appointed to consider the question of a new, more wholesome, and more suitable place of meeting for this Council, whether by renting some more suitable building, or by the erection of a new structure; and that the said committee be requested to report to the Council at its next meeting."

Dr. WATSON seconded the proposition, which was agreed to, and a committee was appointed comprising Dr. Lyons, Sir Henry Pitman, Dr. Quain, Mr. Marshall, and Dr. Storrar.

This concluded the business, and after a few remarks from the President as to the time of their next meeting, the session terminated.

New Inventions.

GLYCERINE PAD PESSARY.

THE pessary here depicted is identical in construction with that invented by Dr. Greenhalgh, and called the "air pad pessary." Pessaries inflated with either air, water, or padded with moc-main or other substances, after a short period invariably become useless, as air escapes,



water evaporates, and padding becomes hard. This invention is intended to obviate these defects; the padded end is filled with glycerine, which always remains soft, and yet offers sufficient resistance to render the instrument effective. The pessaries are made by Messrs. Arnold and Sons of West Smithfield.

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THE LANCET.

LONDON: SATURDAY, OCTOBER 25, 1884.

THE *magnum opus* of the Council, at its late meeting, was the discussion on Preliminary Education. It was commenced by Sir HENRY PITMAN, who soon perceived the questionable nature of the work, and evidently wished to recede from it. But the Council kept him to his resolution, and spent days over the subject. The chief objects were, as Dr. HUMPHRY put it, to limit the area of subjects in the Preliminary Examinations and to raise the quality of the examination. The chief results were to exclude English history and modern geography from the examination. The English language itself as a special subject of examination, as it is now, had a narrow escape, even Dr. HUMPHRY and Mr. SIMON proposing to ascertain the candidate's knowledge of English merely indirectly, from his answers to questions. But the patriotism of all the nationalities saved the Council from this discreditable result. A thoroughly sound examination in English would of itself be no mean Preliminary Examination, and the proposal to omit it was certainly a new anomaly in this most anomalous body.

One marked feature of the meeting was the disposition to recognise the Branch Councils more than has been hitherto the practice, and to give them work to do. This disposition found marked expression in a motion of Mr. SIMON'S, pledging the Council at its next meeting to reconsider its Recommendations on the subject of the age for licence to practise and of professional education and examination, and requesting the Branch Councils in the meantime to review these Recommendations, to confer with the licensing bodies in regard to them, and to communicate to the President any suggestions they may have to make for their amendment. It is hoped in this way to bring the question before the General Council in a state much more fit for discussion, and to avoid waste of time. Apart from experience of the working of the Council, one would willingly join in such a hope. But in the light of our knowledge of the Council and its ways we can hope for little from such an attempt to give the Branch Councils serious work to do. They will be likely to waste much time and money over their own parochial discussions, and to come to the General Council only the more determined to assert their national peculiarities, and to base on them objections to regulations intended to promote fairly equal arrangements and examinations in each division of the kingdom. Sir HENRY ACLAND, indeed, magnified the motion. He had little doubt that if the motion were carried, it would prove to be one of the most important acts that had ever taken place since the formation of the Council. It would carry out the spirit of one of the most important recommendations of the Royal Commission—viz., that a portion of the work of the Council should be done by the Branch Councils. Sir HENRY is a charitable man. He has that happy suavity of mind that can see the best of all arrangements and forget the worst. We shall not try to discourage him or to undeceive him. We will only remind him that it is one thing to take the Recommendations of the Royal Commission in their entirety, or even in the order of their importance, and quite another to pick and choose: to take that which is agreeable to the whims of the nationalities, and to refuse that which is meant to make them work together for the good of the whole empire. Sir HENRY ACLAND is by far the most responsible man in the Council. He is so by reason of the office he holds, and to which he has been no less than three times elected. He is so still further as being one of the few members of the Council who has been such from the beginning, and who, in spite of his charitable and optimistic nature, must be convinced that the Council works badly, and never will work well. He is so, finally, as holding a position of considerable independence in the profession and in the Council. He is no doubt high in the Councils of the College of Physicians, but he is mainly identified with the ancient University of Oxford, and as such ought to look at questions of medical education from an independent point of view. There is no man who has greater opportunities, and if he liked to use them, greater powers of convincing men of different schools and nationalities of the undignified position in which they have placed themselves and the Council by their opposition to the Government views of reform. By such a use of his opportunities and his powers he would do a service to medical education and the medical profession which cannot be over-estimated. But he must cultivate a little more of the *fortiter in re* if he is to achieve this service, and to leave his mark on the medical profession of the future. He cannot but have been pained to learn from the letter of the Vice-Chancellor of his own University, from Dr. HAUGHTON, and others, how lightly the Recommendations of the Council are esteemed by the great universities. He must have been similarly affected when he heard from Sir HENRY PITMAN—after all the labour of the Council in formulating Rules for preliminary examination in mechanics three years ago—that in the past year of 274 candidates examined by the College of Preceptors only four passed in Mechanics. The President must be under no delusions. He must not imagine that the reference of a subject to Branch Councils will make up for the loss of the Medical Bill. The "wicked will do wickedly," and the Medical Council will act according to its nature—incompletely, inharmoniously, and ineffectually.

Dr. LYONS, indeed, still dreams of medical legislation, or rather of an ambitious minister being still desirous to succeed where others have failed. This is very likely. But Dr. LYONS is a very sanguine man. He must think with exaggeration of the patience of ministers if he imagines much of it can survive the notice of 185 amendments in a Medical Bill, including one of his own, for achieving no less a feat than an alteration of the constitution of the House of Lords. No; only one of two or three things can make medical legislation possible. The chances of an election that might remove men from the House who have so terribly wrecked the train of medical reform; a radical alteration in the rules of the House, fitting it to work instead of to talk; or the influence of a man like Sir HENRY ACLAND, who could be suspected of no personal or official purpose in trying to convince medical bodies and public men how

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lamentable is the powerlessness of the Medical Council, and the sentiment of disrespect for it entertained in the profession.

IN his address at the Medical Society of London, which we print in our columns to-day, Sir JOSEPH LISTER deals in his own accurate and scientific way with the use of corrosive sublimate as an antiseptic surgical dressing. To learn that this is the "newest" antiseptic agent may perhaps suggest the reflection that "there is nothing new under the sun," for the use of corrosive sublimate as a dressing dates far back. Quite recently, however, it has been introduced into practice as a good substitute for carbolic acid, iodoform, and the other powerful antiseptic agents with which we are familiar. It has been largely used on the Continent, and some of our own countrymen have employed it for some time with, we believe, considerable success. Dr. PAUL BRUNS has just published in LANGENBECK'S *Archives* (Bd. xxxi. H. 1) a short paper containing his results of the use of this antiseptic agent for a period of fifteen months. He has employed it in the form of a lotion (1 in 1000) for cleansing and irrigation, and has used for his dressing "wood-wool," or a mixture of "wood-wool" and cotton-wool impregnated with a one-half per cent. solution. He has found it to afford complete protection against erysipelas and other wound diseases, and states that he has obtained the primary healing of wounds with greater frequency by this than with other forms of antiseptic dressing. Of a total of 557 cases of operation and accidental wounds thus treated only 10, or 1·7 per cent., died; the causes of death in these cases were diphtheria (2), croupous pneumonia (2), miliary tuberculosis (2), ileus (2), amyloid degeneration (1), and shock (1). Much of the success thus recorded is to be attributed to the fact that the dressing was a "dry" dressing, and was allowed to remain unchanged for periods varying from one to three weeks, and that equable elastic compression of the parts was maintained all the time. It is an error to suppose that the nature of the antiseptic agent used can exert any direct influence over the primary healing of the wound, provided only that it be not so severe an irritant as to excite inflammation. Primary healing is a natural process, governed by laws of which we know at least as much as this. The antiseptic prevents the development of organisms which would interfere with primary healing and expose the patient to the danger of systemic infection; but provided the antiseptic be not itself an irritant, and the other essential conditions be complied with—such as rest, coaptation of surfaces, fixation, absence of tension,—primary union takes place quite independently of the nature of the particular antiseptic agent employed.

Sir JOSEPH LISTER'S experiments detailed in his address threw a flood of light upon the practical application of the sublimate. It is obvious that this substance offers great advantages as an antiseptic agent. It is cheap, non-volatile, very readily soluble, and extremely potent as a germicide. But Sir JOSEPH saw that its practical value must largely depend upon the strength in which it can be used without causing local irritation or general poisoning, and also upon the effects produced by an admixture with the albuminous fluids of the body. It is well known that albumen yields with corrosive sublimate an insoluble coagulum of a so-called albuminate of mercury, and there appeared some ground for the fear that serum or blood soaking into a sublimate dressing might destroy its antiseptic properties, and destroy its power of protecting against decomposition. The large proportion of albumen in blood and wound-discharges, and the necessary dilution of any sublimate dressing, made this additionally probable. By experiments, however, he demonstrated that this inert coagulum of albuminate of mercury is soluble in excess of albumen, and that this new solution, containing possibly a double albuminate of mercury, retains all the antiseptic virtues of the original sublimate solution, whilst its irritant properties are greatly mitigated. For the details of the conclusive experiments by which Sir JOSEPH has proved these points we must refer to the report of his address. The fact that the inert coagulum of "albuminate of mercury" is soluble in excess of albumen is by no means new. The caution not to give an excess of albumen in cases of corrosive sublimate poisoning lest the coagulum at first formed should be redissolved is insisted on by teachers of toxicology; and SQUIRE, in his Companion to the Pharmacopœia published in 1877, states that the white of one egg is equivalent to four grains of the sublimate, and that more than that proportionate amount must not be taken. By using, not a simple solution of sublimate, but a solution of this double albuminate or sero-sublimate, Sir JOSEPH LISTER obtained a cheap, fixed, and very powerful antiseptic, which is totally devoid of poisonous or irritating properties in any strength in which it may be necessary to employ it. In this, then, we appear to have an agent possessing for surgical purposes nearly all the properties of a perfect antiseptic. Professor LISTER has employed a gauze saturated with 1 in 100 of this double albuminate, and he has found it as trustworthy as the best carbolic gauze. Its use in some measure simplifies an antiseptic dressing, for it renders unnecessary the protective and the impermeable mackintosh cloth. The sublimate solution cannot be employed for cleansing instruments, and is less penetrating than carbolic lotion, which is therefore superior to the sublimate for cleansing the skin around a wound. It is efficient when used to irrigate a wound, and can be employed as a spray, but its action on instruments renders it for this purpose far inferior to carbolic acid.

Sir JOSEPH LISTER did not confine himself to a consideration of the surgical uses of corrosive sublimate, but somewhat incidentally mentioned certain other important facts. He alluded again to the circumstance that, although iodoform is a very powerful preventive of putrefaction, it is not a safeguard against erysipelas, that it is not a potent germicide, and delays but for a short time the lactic fermentation of milk or the ammoniacal fermentation of urine. He stated that he had met with imperfect results while using eucalyptus gauze, and in one case had to record a death from septicæmia. This was due, not to the failure of eucalyptus to prevent the development of septic organisms, but to the fact that the gauze had been carelessly prepared, and the volatile antiseptic had been allowed to evaporate. This is a source of danger in the case of all volatile antiseptics that requires to be kept constantly in view, and unquestionably accounts for many failures to obtain the usual results of aseptic surgery. One of the most remarkable facts presented by Sir JOSEPH LISTER was in reference to a blood-clot which he exhibited

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to the meeting. The blood, which was from a horse, had been drawn into a glass vessel rendered aseptic by corrosive sublimate; it coagulated in the usual way, but even in an interval of several weeks not the least contraction of the clot had taken place. Sir JOSEPH had met with the same result in some cases where the blood had been drawn into vessels rendered aseptic by heat, and had suspected that it might be explained by some special physical change produced in the glass by heat. Without stating that the absence of living organisms was the cause of the non-contractility of the coagulum, Sir JOSEPH LISTER remarked that the fact pointed in that direction, and he was unable otherwise to explain it. The practical interest of this fact is immense, and we hope further light will be thrown upon it.

A MAJORITY of the members of the General Medical Council, after two days' discussion, has, for various and even contradictory reasons, sanctioned the proposal of the Royal College of Physicians of London and of the Royal College of Surgeons of England to co-operate in order to form a common joint examining board for granting their respective diplomas in medicine and surgery. Sir HENRY PITMAN, representative of the College of Physicians, moved, and Mr. MARSHALL representative of the College of Surgeons, seconded, that the Council should give its sanction to this proposal. After several amendments had been proposed and negatived the original motion was put to the vote, when fourteen of the twenty-four members of the Council voted for its adoption, while the remaining ten did not vote. Though carried, the motion therefore received the direct and active approval of only a very small majority of the Council. Apart from the importance of the matter at issue, it is worth while to consider the character and constitution of this majority. There were the two representatives of the English Colleges; a gentleman who, though nominally representing another body, receives over £400 a year as a member of the Court of Examiners of the Royal College of Surgeons; and all the (five) representatives of the Scotch universities and corporations. In other words, at least eight of the fourteen members of the Council who voted in favour of the adoption of Sir HENRY PITMAN'S motion represent or are otherwise interested in institutions that are likely to be more or less affected by the change. By combining with the College of Physicians the College of Surgeons doubtless hopes, among other things, to do something to wipe out the stigma and reproach of having for eighty-four years sold a qualification for practice which implies no satisfactory guarantee of proficiency in medicine and midwifery; while the College of Physicians sees an easy way of greatly increasing its income if every applicant for the Surgeon's diploma can, *nolens volens*, be forced to pay its fee of fifteen guineas for examination in medicine and midwifery. On the other hand, the representatives of the Scotch universities and corporations, with characteristic and perhaps truer foresight, anticipate that English students will not permanently submit to the extortion of paying thirty-six guineas for a so-called "double" qualification, which may be obtained in Scotland at considerably less cost in labour, thought, and money. They probably also foresee that students may likewise discover the advantages of pursuing their professional studies where they will be examined, and of receiving their instruction at the hands of those who will eventually examine them. Time alone will prove which is the truer forecast, that of the English colleges or that of the Scotch examining bodies. Meanwhile, the Council of the College of Surgeons, with remarkable promptitude and dexterity, has taken steps to give immediate effect to the combination. In its zeal it has even resolved that the regulations shall be retrospective. The sanction of the General Medical Council was formally given on the 9th inst., and exactly a week later the Council of the College of Surgeons resolved that the Regulations should have force from the 1st inst. Whatever of good there may be in the combination, the plan of carrying it out is faulty, and, above all, the fee is impolitic, extortionate, and unjust.

THERE are few diseases which in their origin, mode of development, and course better harmonise with the doctrine of a dependence upon pathogenic micro-organisms than diphtheria. Its contagiousness, the character of its local manifestations, the manner of extension of the false membrane, and the varying intensity of the general symptoms, apparently due to the absorption of a more or less virulent poison—these and other clinical facts of the disease can admit of but little explanation, except that afforded by the germ theory. Hence it is that the attention of pathologists was early directed to diphtheria; and yet in spite of many elaborate researches the precise nature of the diphtheritic virus is still a matter of doubt. Of those who have studied the question from the pathological and experimental side, the majority declare in favour of a specific micrococcus; which is to be found not only embedded in the membranous deposit, but in the lymphatic spaces beneath the mucous membrane, in the blood, and in internal organs. Amongst those who have declared in this sense are OERTEL, EBERTH, and KLEBS, and the most recent advocates are Drs. H. C. WOOD and H. F. FORMAD of Philadelphia. Their report, which is intended as an Appendix to the Report of the National Board of Health, 1882, is issued this year in a separate form, but we regret to add that the character of the letterpress, and of the illustrative engravings, is wholly unworthy of so important a document. In spite of these very obvious blemishes, it is plain that their work is the outcome of much painstaking research, microscopical and experimental, although it is not easy to extract therefrom any very definite and precise conclusions. This, however, may be said: they find invariably in the membranous exudations of diphtheria masses of micrococci, which are indistinguishable from similar organisms found in the buccal and pharyngeal mucous membrane in other conditions. In many cases, especially those which occur in epidemics, rather than in sporadic cases, similar organisms were detected in the blood and various internal organs. They are to be found in epithelia and in the substance of white blood-corpuscles. Cultivation experiments prove that they multiply best at a temperature between 37° and 40° C., and they do not appear to require a large supply of oxygen to maintain them. Inoculation in rabbits produced varying effects, according as the original source of the virus was from a malignant or a mild case, in the former case a fatal result being rapidly brought about, whilst in the latter often but slight effects followed. In fact, the report tends to show

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that the diphtheria micrococcus is identical with a non-pathogenic organism, and that in its history we have an instance of that assumption of virulent properties in particular conditions, which Dr. KLEIN has proved to be of such rare occurrence. And as to the membranous inflammation that characterises diphtheria, that is not the special result of the virus, but only an index of intense inflammatory change.

LOEFFLER, in his lengthy memoir contributed to the second volume of the Reports of the German Imperial Board of Health, recounts an extensive experimental inquiry upon diphtheria in animals and man. He, too, confirms the fact that micrococci prevail in the diphtheritic membrane, mingled with other forms of bacterial life which find a suitable nidus in the necrosed and decomposing tissue. But he lays more stress, from the etiological point of view, upon the presence of a bacillus the detection of which was first made by KLEBS—an organism that invariably occurs in association with the micrococci, but presenting far more than those the attributes of a specific virus. Thus, whereas inoculation experiments with cultures of the micrococcus were for the most part negative, cultures of the bacilli proved very virulent in action, at least on guinea-pigs. LOEFFLER's research upon diphtheria in pigeons and calves pointed to the probability of the disease in animals being due to a variety of bacillus different from that which excites it in man. But in every case the diphtheritic process would seem to be at first entirely local, the constitutional effects of the disease being due to a poison developed by the specific organism at the original seat of attack.

EMMERICH (*Deutsch. Med. Woch.*, No. 38) has arrived at different results from any hitherto recorded, the material for his research being furnished by eight severe cases of human diphtheria and six of the same disease in pigeons, the latter obtained from a Munich fancier who last spring lost seventy young birds from the disease. The micro-organism which EMMERICH claims to be distinctive, which occurred in the diphtheritic lesions both of the pigeon and of man, is neither a coccus nor a bacillus, but a short, thick bacterium, which in gelatine cultures forms a pellucid greyish colour, assuming a whiter appearance as it develops, and not liquefying the gelatine. Upon potato it forms a thick yellowish-white layer, thriving luxuriantly; but in blood serum this bacterium does not grow well. In form, size, and mode of growth the diphtherial bacterium of man is identical with that of the pigeon. Moreover, inoculations were readily and successfully practised with pure cultures of this organism. Pigeons, rabbits, and mice were subjected to such experiment. A culture obtained from a diphtheritic membrane in a child was applied to the tracheal mucous membrane of a rabbit. The animal died in three days, exhibiting a dirty yellow infiltration of the tracheal mucosa, which was also coated with a coherent croupal membrane. Similar effects followed inoculation in the pigeon. These bacteria were also obtained from the blood, liver, spleen, and kidneys, and cultures of them derived from those regions were used for inoculation with like results to those directly made from the diphtheritic membrane. The symptoms produced in the pigeon by inoculation from human diphtheritic membrane were identical with those occurring in the spontaneous disease. The bacteria were met with in the blood and internal organs, especially the kidneys, of all the animals so inoculated, and the characteristic colonies obtained in cultures from these. Frequently the number of bacteria was too small to be detected microscopically, but their presence was ascertained on cultivation.

This cursory sketch will suffice to show that amongst the bacteriologists themselves very great differences of opinion prevail as to the morphology of the diphtherial fungus, and the list might be greatly extended if the older notions of more highly developed fungi being specific to the disease were included. But there is also lacking unanimity upon the mode of action of the parasite—e.g., the necessity of its being conveyed bodily into the blood, or whether a poison is developed at the locality of inoculation, which being absorbed produces the general malady. On either view, the doctrine that diphtheria is at first a local disease, and that the constitutional symptoms depend upon general infection from this local lesion, is the one to which all investigations tend, and this most harmonises with our clinical knowledge. EMMERICH thinks that researches such as his should incite us to redouble our efforts to ascertain the conditions under which the diphtherial germ can exist apart from the body; and in this regard special attention must be directed to the condition of dwellings. He reminds us of the explanation he found of the recurrence of outbreaks of pneumonia in Arnberg prison, and in the discovery of the pneumonia micrococcus between the floors of the building. Diphtheria, he thinks, is essentially a house-disease, prevailing in those seasons in which dwellings are most likely to be overcrowded. Measures of prophylaxis based upon bacteriology must, however, lie in the future, and most of us will be content with the enforcement of general hygienic laws without reference to the supposed habits of a special form of micro-organism. The actual treatment of the disease by the early and efficient destruction of the local manifestations, the best means of doing this, and the methods of combating the severe constitutional depression which marks the further progress of the malady, are questions which have always engaged the attention of physicians since diphtheria came to be recognised as a distinct entity.

THE time is rapidly approaching, if, indeed, it has not arrived, when some serious attempt must be made, in the interests of public morality not less than of personal health and happiness, to place the question of insanity in relation to suicide on an intelligible footing. It will not be denied, and it can scarcely be doubted, that as matters now stand there is, and always must be, a sentimental impulse in the mind of every juryman, of every coroner, of every medical witness, to give the fullest benefit of the doubt, whenever the least colourable reason for doubt or question can be discovered, as to the alternative hypotheses of culpable self-murder and irresponsible suicide. It is only natural that there should be this desire, and it will always exist, so long at least as grievous penalties are attached to the crime of self-murder—penalties which are now felt to be visited on the bereaved friends rather than on the offender. In the old days, when burial according to the rites of a Church was held to ameliorate the final or intermediate state of the departed, the penalty of burial with maimed

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rites, or without any religious service at all, was felt to be one of extreme severity; and probably the dread of such treatment after death may have acted as a deterrent. Those days have passed, and popular feeling is changed too, whether for better or worse is not the question before us. The fact we have now to face is that, particularly since the insurance companies generally have made assigned policies indisputable, there has been nothing beyond a vague dread of undefined contingencies to influence for good the mind of the intending suicide. It is almost certain that, except in the most flagrant case of suicide by a murderer, the verdict returned will be one in which "temporary insanity" is hypothecated to clear the charge and wipe out a possible blot on the family escutcheon. Our present contention is that it is important that there should be some rational endeavour to make the distinction between insanity and life-weariness apparent.

Are we about to allege that a coroner's court and jury constitute a tribunal before which the issue raised in hese cases can be intelligently or justly tried? Most certainly not. Nothing could well be more at variance with our view. We think such an issue as this can only be decided by a medical judgment, and even by that with great difficulty, when there is no trustworthy evidence as to the actual state of the mind of the deceased person shortly or immediately before death. It is not, we hold, except in rare instances, practicable to form any good inference as to the state of the mind from the manner of the death. Of course, if, as occasionally happens, the mode of self-murder is in itself conclusive evidence of insanity, that may be available as proof of the existence of mental unsoundness, but in ordinary cases of suicide by drowning, hanging, cutting the throat, or taking poison, this inference is impossible. Again, absence of apparent motive is valueless, because "the heart knoweth its own bitterness," and under the calmest exterior there may be hidden a hell of remorse or despair from which even the sane mind seeks to escape, at all hazards as to the future. Such conceits as that no sane man would kill himself unless he were in the immediate presence of the extremest personal suffering or ignominy, or that the mind must be unsound that refuses to believe in a future, are too puerile to call for serious discussion. It must be admitted, whether we like it or not, that "self-destruction" is a mode of exit from this world of worries and disappointments which men and women in perfect enjoyment of their senses have in all ages from time to time adopted. What or who, then, is to determine, in any particular instance, whether self-murder was committed with a sane or with an insane conscience and purpose? We are bound to confess that, except in the extremely rare cases to which reference has just been made as implying insanity by the mode of death selected or carried out, and even in these cases great care needs to be exercised, there is positively no evidence available, and no means of forming a judgment outside, or in addition to, the inference deducible from the story of the deceased person's life.

We are strongly of opinion that this life-story, so far as it can be ascertained, ought in every case to be submitted to a committee of experts, and that no coroner's court or jury should be empowered or permitted to adjudicate on the issue "sane or insane?" let the dependent consequences be what they may. There is no need to hurry a judgment. The exceptional verdict which carries with it the penalty of interment at uncanonical hours, in unconsecrated ground, and without religious ceremonial, is, as we have said, never returned except in cases of murder, as well as suicide, and when the circumstances are so clear that no doubt or question can afterwards arise. All other cases should, we repeat, be reserved, and the issue of sanity or insanity carefully worked out. The interests of society require that this or some other precise procedure should be adopted. Suicides are on the increase, and, setting aside all questions of retributive or deterrent penalties for the crime of self-murder, it is imprudent to brand the craven crime as an act of ignominious cowardice, which, indeed, it generally is. We do not believe in "temporary insanity" as a common cause of, or excuse for, self-slaughter. We believe the great majority of persons who die by their own hands do so with an intelligent consciousness of what they are doing. It is not their psychical, but their moral, condition which is at fault. They want to flee from the trials and troubles of life. They do not like to be disappointed and indigent; they "cannot bear" the loss of property or friends. They are unable to face the ignominy of some exposure, or they find consciousness unendurable on account of some secret poignant remorse. These are the *true* causes of suicide, and the self-murderer takes life in a state of excitement it may be, indeed is likely to be, but he is as sane for all practical purposes, and in a scientific sense, as those around him, who are perhaps equally tried, but more patient. We fully and clearly recognise that mind is brain-function, and we are not forgetful of the way in which the mental part of man's nature acts upon, and reacts from, his physical organism; but we are not materialistic enough, yet at least, to look upon the human organism, with its consciousness, as a mere machine or apparatus by means of which correlated, concordant, divergent, and antagonistic forces work out a mean mental result. Until we do, if ever we do, arrive at this finality of surrender of all that is noble or even worthy in man, we must insist that the laws and usages of the community should be so ordered as to provide and supply incentives to right conduct and self-control, and deterrents from wrong-doing and self-surrender to passion and impulse. The charity that makes coroners' juries return verdicts of "temporary insanity" covers a multitude of sins—sins that ought not to be committed, and cannot safely be condoned.

MR. J. NOAKE, Severn conservator, in a recent letter to *The Times* states that the fact that some sort of fish are well known to congregate at the mouths of sewers seems to imply that diluted sewage is attractive to these fish, either as an alterative in their diet or medicinally, and otherwise grateful to the piscine stomach. During the late summer salmon disease has entirely disappeared from the Severn, although, owing to the length and extreme heat of the season, the Severn was correspondingly low, and therefore must have been, in proportion to the small quantity of water, more than usually polluted.

A DEPARTMENT of hygiene and bacteriology has been opened in connexion with the chemical laboratory of Prof. Fresenius at Wiesbaden. Dr. F. Hueppe, who has done much work under Dr. Koch at Berlin, has been appointed to the charge of this department.

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Annotations.

"Ne quid nimis."

"A DOCTOR'S HEROISM:" SAMUEL RABBETH, M.B. LOND.

ON Friday, the 10th inst., a child aged four years, in the Royal Free Hospital, Gray's-inn-road, suffering from diphtheria, was threatened with suffocation, and to avert this Dr. Samuel Rabbeth, the senior resident medical officer, performed the usual operation of tracheotomy. The obstruction of the breathing was not relieved by the operation, and to save the child from the immediate danger of death by asphyxia Dr. Rabbeth, without the slightest hesitation, and well aware of the nature of the disease and of the peril involved, sucked the tube and cleared it of the obstructing membrane. The child was saved for a time, but afterwards sank and died. On Monday, the 13th, Dr. Rabbeth felt ill and weary; on the 14th symptoms of sore-throat appeared; during the next day or two diphtheritic patches were seen on his fauces and palate, and he expectorated large flakes of false membrane; on the 18th he was much worse; on the 20th he became cyanosed, and in the evening, about 7.30, he expired in a paroxysm of dyspnœa, which had lasted from two to three minutes. Needless to say, everything that colleagues and friends could suggest was tried. Drs. Cockle and West attended him, and Dr. Sainsbury was with him continually during his illness. Dr. George Johnson saw him on Monday afternoon, but the symptoms gave no ground for hope. He had expelled a complete cast of the trachea and one bronchus in a single piece and his exhaustion was extreme. The immediate cause of death was probably due to the formation of a clot in the pulmonary vessels. Such is, in brief, the melancholy story of the death of one of our young doctors, and the startling character of the narrative has brought forth a eulogium from many of our contemporaries. Single-hearted devotion to duty demands such a eulogium, and we are glad to find that the world can occasionally recognise and praise a hero in our profession as well as in others. To us it seems braver for a surgeon or physician to risk his life for a patient with no claims on his self-sacrifice or gratitude than for an officer against all odds to endeavour to save his comrade from the foe, even though that comrade be only a private soldier. There are ties of comradeship on one hand, duty only on the other. Many doctors die silently and unknown in the faithful discharge of their duty; cases like this move the public sympathy and teach them some of the perils of the profession and the spirit in which doctors have been taught to deal with them. Dr. Samuel Rabbeth was the son of one of the most trusted officials in Messrs. Coutts' bank in the Strand, and was educated at King's College School. He entered in the Easter Term of 1869, being then twelve years old, and steadily worked his way up to the highest form in 1876. In 1877 he matriculated at the University of London, and on the 1st of October entered the Medical Department of King's College. He passed the preliminary scientific and 1st M.B. Examinations of the University, and in 1880 gained a prize in Clinical Surgery and certificates of honour in other subjects. In the next year, having taken a medical diploma, he was appointed Assistant House Physician to King's College Hospital, and in the following May became full House Physician. In 1883 he obtained the Scholarship and Gold Medal in Midwifery at the M.B. Examination of the University, and was elected an Associate of King's College. In April, 1884, he succeeded his friend and fellow-student, Mr. R. Brooks, as Senior Resident Officer at the Royal Free Hospital, so that he had only held the appointment for some six months. In conclusion, we may add that apart from rapid perception and great intelligence, Dr. Rabbeth was always remarkable for decisive action and able organisation. His unselfishness was as marked in his student career as in the noble act which caused his death. Invariably genial and cheerful in the company of his fellow-students, as able in games of skill as in the examination-room and by the bedside, courteous to his superior officers, beloved for his many kindnesses by patients, nurses, and junior pupils, everyone with whom he had come into contact is now regretting his death as a personal loss.

EXAMINATIONS FOR PROMOTION IN THE ARMY MEDICAL SERVICE.

WE regret to learn that a considerable amount of discontent has been called forth by the recent Army Circular on the subject of examinations previous to promotion in the Army Medical Service. We have always held that the abolition of the examination of surgeons in 1874 was a great mistake, and that, in the interests of the soldier, it was requisite that means should be taken to ascertain that the medical officer, after obtaining his commission, had continued his studies with a view to keeping up and increasing his professional knowledge. We do not think that any reasonable objection can be raised to the resumption of such examinations, and on this point we believe the discontent is confined to a very small body of officers. It is to the examination of surgeons-major before they can be selected for promotion to the grade of brigade surgeon that exception has been chiefly taken. It has been stated to be an insult to officers who have attained the rank and the age of the surgeons-major to call upon them to submit to an examination. We confess that we cannot look upon it in that light. Among the improvements which have been introduced into the department has been the selection of officers for the administrative ranks, instead of the old disastrous system of giving it by seniority, irrespective of all other considerations. But if a selection is to be made, it is not unnatural that the Director-General should desire to be satisfied that the officer to be selected is acquainted with the rules of the service and the nature of the duties which he will be called upon to perform. It has been stated by some of the non-contents that brigade surgeons are not administrative officers; but they are liable to be called on, in certain circumstances, to perform administrative duties; and it appears to us better that they should be required to prove their fitness at an early period of their service rather than when they are just approaching its close. With one exception the subjects stated in the circular as those with which he must prove himself acquainted are all administrative and sanitary, and are such as every administrative officer ought to know well. The one exception is—"Questions on operative surgery and practical medicine will also form part of this examination." We think it would be judicious if the Director-General were to expunge this paragraph. The officers will be required to prove their knowledge of these subjects before promotion to the rank of surgeon-major, and it appears unnecessary again to subject them to an examination upon them. There does not appear to be any greater insult in examining a surgeon-major on those points relating to special duties than there is in the College of Surgeons examining members before admitting them to the Fellowship. On one point the circular is not explicit: it does not state at what period of his career an officer may present himself for the examination. If he is permitted to do so shortly after attaining the rank of surgeon-major—that is, after twelve years' service—he will still be comparatively a young man. We think there is much to be said in favour of an examination, in the interests alike of the patients and the medical staff; but we would suggest that it should be taken at as early a period as may be convenient, and that it should be confined to administrative

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duties and to the organisation and working of the department and its relation to the other branches of the service.

BLOOD-PRESSURE IN AORTIC DISEASE.

THAT the arterial pressure is not, as commonly supposed, diminished in aortic insufficiency is the outcome of a clinical and experimental research by MM. Potain and Franck, who related their results at the meeting of the French Association for the Advancement of Science. M. Potain said that although the sphygmograph appeared to show a diminution of the blood-pressure, it was really inadequate to do so, and he exhibited a series of tracings taken simultaneously from the same patient, which showed remarkable variations. The sphygmograph, whilst indicating the relation between the propelling power of the heart and the peripheral resistance, does not inform us of the absolute cardiac force. An instrument invented by Bach attempts to supply this defect; it consists of a rubber bag connected with a manometer by a tube of the same material, and it yields fairly accurate results. By its use M. Potain studied the blood-pressure in fifteen cases of aortic insufficiency, simple and complicated, and found that in the former group at any rate the pressure is equal to, or even higher than, the normal. In one case only was it lower, and that was complicated with phthisis, and had probably some myocardial change. When insufficiency is not pure the pressure may descend below the normal. From these results it is argued that the old idea referring all the symptoms of aortic regurgitation to a diminution in the blood-pressure should be abandoned; the usual dietetic restrictions may be modified, and digitalis should never be given, or only with much caution. M. Franck substantiated the clinical inferences by experiment, producing artificial lesions of the aortic valves in animals, with the effect of a marked increase in the energy of the cardiac contractions, and in the number of pulsations. In attempting to determine the conditions which should suffice to maintain the normal blood-pressure in aortic insufficiency, M. Franck found that it is necessary that the heart's force should be increased and the peripheral outflow be diminished—e.g., by narrowing of the peripheral vessels. These conditions are precisely those which take place in man in this disease. Moreover, the phenomena of the affection are just as well explained on the high-pressure theory as they are on that of low pressure.

OVERCROWDING RAILWAY CARRIAGES.

A SINGULAR defect in law was exposed by a decision given at Westminster Police-court a few days ago. A gentleman who had been subjected to a good deal of annoyance, and had even sustained some personal injury in an attempt to prevent the overcrowding of a railway carriage on the North Western line, applied for instruction as to the power of the law in such a case. He was informed that in consequence of some oversight in drawing up the Railway Bills, the Companies were in this regard not liable to legal correction. The subject would appear to have been treated as an affair between the railway officials and the passengers, to be settled in the readiest way, and uncontrolled save by varying inclination or by length of purse on one side or the other. It is not to be expected that any department of the public service would persist in quarrelling with those who support it on a mere point of convenience, but exceptional temptations may easily arise under pressure of business, and to meet them the generally good intentions of custom should be fortified by rule. In railway travelling many circumstances render this advisable. Apart from the innumerable lesser discomforts which arise from such a fault as overcrowding, real and sometimes serious danger may be thus occasioned. The ventilation of carriages is too apt to be either draughty or inadequate. How far it shall be satisfactory is more or less at the option of individual passengers. The difficulties connected with its management are necessarily much increased by the careless herding together of surplus occupants in the restricted space. One cannot tell, moreover, who his fellow-passenger is. Perhaps he has come from an infectious sick bed, or is unconsciously himself the seat of an incubating fever. The altogether inordinate packing of excursion trains again is a colossal error, difficult, perhaps, to obviate entirely and at once, but capable, under judicial regulation, of very great amelioration. On account of the frequent occurrence and the increasingly wide extension of this practice, the danger from accident and illness inherent in it, and the deserving need of the class whom it especially affects, it is to be hoped that legal powers may be obtained which shall stretch the present economy of railway companies to a measure consistent with safety and convenience.

MODERATE DRINKING.

THE Bishop of Exeter and others have been declaiming against moderate drinking. It is high time to define what moderate drinking is not. It is not drinking in public-houses; it is not drinking on the sly; it is not drinking early in the day; it is not drinking by itself at other than meal-times; it is not drinking to procure sleep or to relieve pain. All men, and especially all women, who do such things, are not moderate drinkers, and had better beware. A moderate drinker takes a very limited quantity once or at most twice a day, *with food*, such a quantity as does not make him stupid or even sleepy, such as leaves him cool and unexcited. The moderate drinker takes the lightest forms of alcohol, and takes even these with care. He knows the power of alcohol to produce disease, and is on the look out for any indication of harm or excess. We do not think it proved that such persons become drunkards. It is terrible, however, to see how soon a drunkard is made by *thoughtless* drinking, and how complete is his physical destruction often before he, or perhaps she, comes under medical notice. Jaundice, or dropsy, or albuminuria, or delirium tremens, may have been reached before friends, unwilling to admit what they fear, will send for the medical adviser and make a clean breast of it. Alongside all the teetotalism that exists there is still an appalling amount of tippling which does not distinctly intoxicate, but saturates the principal organs and destroys them more quickly than an occasional debauch. But, as we have said, this is not moderate drinking—it is mortal drinking.

DISTILLED WATER IN CALCULOUS DISORDERS

IT is now some years since Dr. Murray drew attention to the fact that the continued use of soft water brought about in many instances the disintegration of small renal calculi. Since then soft or rain water has been extensively employed, not only for the solution of calculi, but also for the relief of dyspepsia associated with persistent deposits of urates and oxalate of lime crystals. In the country, with opportunities for the storage of rain water, there is no difficulty in procuring a sufficient supply of soft water for the purpose, but in large towns considerable difficulty has been experienced in obtaining soft water in quantity and also sufficiently fresh to be palatable—the distilled water sent out by chemists in gallon jars, which is generally resorted to, being apt to become stale and acquire an unpleasant flavour by keeping. This difficulty has been met by supplying distilled water in an effervescing form by charging it, we believe, with carbonic acid gas. This renders the water brisk and palatable, without, as a rule, impairing its solvent action. Still there are some cases, notably those

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attended with persistent deposits of oxalate of lime in the urine, in which the ingestion of large quantities of water charged with carbonic acid is not advisable, and it would be a distinct advantage if, in addition to distilled water rendered sparkling with carbonic acid, we could procure a water simply charged with compressed air; whilst a water so charged, but with an additional volume of oxygen introduced, would often be a distinct advantage. Independently of its use as a solvent, it must be remembered that distilled water is one of the best and simplest diuretics, and that in a pleasant and palatable form it could be employed with benefit in many of those cases of dyspepsia in which the urine is highly concentrated, and which Murchison considered to be the result of lithæmia.

MEDICAL SOCIETY OF LONDON.

THE first ordinary meeting of this Society was held on Monday last, Mr. Arthur E. Durham, F.R.S., President, in the chair. The event of the evening was a dissertation on Corrosive Sublimate as an Antiseptic Dressing, by Sir Joseph Lister, Bart. The meeting began with a brief address by the President, in which he commented on the satisfactory condition of the Society in every particular. The library was gradually getting into a state of order due to the exertions of the hon. librarian, Dr. W. H. Allchin, and already 2000 books on anatomical and physiological subjects were catalogued and placed on the shelves of the library. Reference was also made to the losses from death sustained by the Society. Sir Erasmus Wilson had been a benefactor of the Society, as he now was to be by his munificent bequest to the Royal College of Surgeons, to the medical profession, and to the world at large. A resolution proposing a vote of condolence with his widow was moved by the President in the following terms:—"The Fellows of the Medical Society of London beg to express the deep sorrow with which they heard of the death of Sir Erasmus Wilson, their former President, whose services to and whose interest in the Society they so highly appreciated, and to offer to Lady Wilson every expression of sincerest sympathy in her irreparable loss." The resolution was seconded by Mr. R. W. Parker, and unanimously passed. The loss of Drs. Henry Aldred, Kempthorne, and Benjamin Terry Hodge, Fellows of the Society, was also mentioned. The illness of Mr. John Gay was referred to with much regret. The congratulations of the Fellows of the Society were offered to Dr. Wiltshire on his reappearance amongst them. The annual volume was placed upon the table, and its early completion must be ascribed to the energy and industry of the hon. secretaries, Mr. Pearce Gould and Dr. Kingston Fowler. Sir Joseph Lister then read his paper, which will be found in full at page 723. Owing to the lateness of the hour, no discussion followed the reading of the address, which was highly applauded. Before the meeting began Newham's patent invalid bed-lift was exhibited.

THE STATE OF THE THAMES.

OUR contemporary, the *Metropolitan*, attacks us for ascribing the present dangerous and disgraceful state of the Thames to the Metropolitan Board of Works. We can only reply by reiterating our statements. The present system was devised, and the present outfalls were selected, by the engineers of the Board; and the Board, availing itself of the almost unlimited powers conferred upon it by the Act of 1858, carried out the works in spite of the strong protests of the referees appointed by the Government in 1856. The whole story is told so well in the recent report of the Metropolitan Sewage Discharge Commission, that we need only refer our readers to that valuable State paper. In a sense it is, of course, true that the Board worked under Parliamentary powers, which, however, were exceptionally great; but that the Board suggested and made itself responsible for the scheme, and pressed it with the utmost energy, is no less true than that it has recently spent a large sum of money in the endeavour to prove that no nuisance exists, and that the present state of the river is satisfactory. On April 6th, 1858, Mr. (now Sir Joseph) Bazalgette, and the two engineers appointed by the Board to assist him, advised that Barking and Crossness should be selected for the outfalls, and scouted the suggestion of the referees that the sewage should be taken to Sea Reach in these remarkable words:—"The plan recommended by the referees is needlessly large, excessively costly, and, as a work of construction, all but impracticable." We presume Sir Joseph has changed his opinion on the last point. The simple fact is that the Act of 1858 left the disposal of the sewage of London to the discretion of the Board, subject only to the conditions that the sewage must be taken out of the metropolitan area, and that no nuisance should be created. There was, it is true, one other condition, which, unfortunately, was not inserted in the Act. It is best stated in the words of Mr. Disraeli, then Chancellor of the Exchequer. "We make it a condition with the Metropolitan Board of Works ..... that provision shall be made for such temporary and *permanent* works of deodorisation as the metropolis has a right to require." On the whole, we must agree with the sagacious remark of the *Metropolitan*, that "public writers ought to make sure of their facts before they begin."

THE NEW ENTRIES.

THE following are the numbers of new students at the Medical Schools from which returns have been received:—

	Full course.	Occasional.	Total.
St. Bartholomew's	125	13	138
University College	76	60*	136
London	83	46	129
St. Thomas's	86	24	110
Guy's	68	11†	79
King's College	37	28	65
Charing-cross	46	12	58
St. Mary's	35	21	56
Middlesex	39	4	43
St. George's	24	11	35
Westminster	9	9‡	18
Owens College	81	0	81
Newcastle-on-Tyne	30	49	79

* For Preliminary Scientific Examination. † Including three for Preliminary Scientific. ‡ Including one dental student.

AMERICAN FEELING TOWARDS ENGLAND.

ON his return home from Europe Dr. Shoemaker was entertained by his friends and fellow-citizens at a banquet, at which, in responding to the toast of the evening, he spoke in feeling terms of the universal kindness and courtesy he had received at the hands of his *confrères* in England. "Let me assure you from personal experience," he said, "that English physicians will always be glad to extend to you the right hand of fellowship, to welcome you to their homes, to conduct you through their well-equipped hospitals, and make you feel at home at their meetings. They are the stock whence we sprang; go back to the parent, imbibe some of its practical thoughts, and you will be amply repaid for your visit." In the *Medical Bulletin* Dr. Shoemaker, speaking in his editorial capacity, reiterates these sentiments, and says: "From the moment we landed upon the shores of Great Britain, during our stay upon the Continent, and until our departure, everything was done to make our visit a memorable one. It will be a green spot in our memory to recall in after years; dear with us as long as life continues to

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exist. Our Transatlantic brethren certainly possess the tact of making their guests comfortable, and it is done with such heartiness and good will that you cannot but help feeling that it is genuine, and that they mean to prove to you that in our grand profession we are all brothers, intent upon doing good, not only to the laity, but to each one of the brotherhood. In taking leave of our kind hosts it is with regret that we have not more warmly expressed our sentiments, and can only conclude with a hearty wish that the opportunity will soon be given us of showing them that we have learned well the lesson of hospitality taught us." We most heartily reciprocate these sentiments, and trust that it will not be long before Dr. Shoemaker and his colleagues again visit our shores.

MUSHROOMS.

THE genial autumn which has now nearly passed has been favourable to the growth of mushrooms, and has not been unmarked by the accidental illnesses which are apt to arise from the use of a food so uncertain in its qualities. Fifteen cases of fatal poisoning from eating mushrooms are reported from France, besides several others, in which death was barely averted. Misfortunes of equal magnitude are likely to happen from time to time, where only some popular chance test, as in the above-mentioned instances, is relied on for their prevention, and slighter forms of indisposition have never been rare under the same circumstances. The order of Fungi contains many poisonous as well as wholesome varieties, and authorities of note have occupied themselves with establishing the grounds of difference between these two great sections. According to them, the noxious forms are distinguished by one or other of the following peculiarities: their rank odour or high colour; their tough or watery flesh, and scaly or spotted surface; their pungent, spicy, or bitter taste; their growing in clusters, and commonly in wet or shady places. The esculent types, on the contrary, are usually white or brownish, not scaly or spotted, dry, brittle, bland, grow singly, and prefer dry pastures. A pale pinkish hue characterises the "gills," or hymenium, of the common edible mushroom, while a dark colour marks those of its poisonous imitator. Of artificial tests, none are very trustworthy. The blackening of a silver coin when placed in the saucepan with the fungus while it is being cooked has been held to indicate danger. It failed to do so in the cases we have referred to, and this is not surprising, for if it have a meaning it is that decomposition has begun and sulphuretted hydrogen has been generated. Many mushrooms, it is clear, are hurtful independently of any such condition, though doubly so if it be present. Uncertainty in selection does not therefore arise from any want of general rules to guide us in distinguishing natural appearances, but from the great difficulty to any but the proficient eye in recognising these when seen, the more so that intermediate forms of doubtful character link together the innocent and the injurious varieties. Poisonous properties, too, are wont to develop in wholesome kinds under certain conditions. Thus gardeners are careful to exclude rotting wood from the soil in cultivating mushrooms for the table, believing that absorption from such substances is hurtful. Some fungi are edible when young, like the puff-ball, but become poisonous as they ripen. Habitat has probably a modifying influence, which is seen in the divergence of the properties of the agaric of open fields from those of the very similar growth which clusters in the shadow of grassy woodlands. The symptoms of mushroom poisoning are more or less familiar to all practitioners of medicine, and need but a passing notice. They are briefly those of an irritant of the digestive tract, sometimes complicated or even in great part replaced by delirium and coma. Treatment must accordingly aim at combining the removal of the poison by emesis or purgation with a sedative action. Prevention is always better than cure, and the public would do well to avoid the use as food of any fungus, especially if exposed for sale, which has not come under the inspection of a skilled and experienced judge.

REDUCTION OF DISLOCATION OF THE SIXTH CERVICAL VERTEBRA.

IN the current number of the *American Journal of the Medical Sciences* Dr. Wiest records a case of dislocation forwards of the sixth cervical vertebra, the reduction of which was attended with apparent benefit. The patient was a man, thirty-three years of age, who was knocked down by the falling limb of a tree which struck him on the left temple. When seen four hours later there was complete motor and sensory paralysis as high as the nipples, only diaphragmatic respiration, and impaired sensation and motion in both arms. The head was extended and rotated to the left side, and there was a deep depression above the seventh cervical spine. Two days after the accident an attempt at reduction was made. The shoulders were fixed, and the head was extended and rotated first to the right and then to the left; a loud snap was heard, and was also felt by the patient, and the cervical spines were found to slide into their proper position. Extension was maintained, but unfortunately the head and shoulders were raised instead of being allowed to lie flat on a firm mattress, with a well-adjusted support for the neck. The patient died on the thirty-fifth day, but the report does not state in any way fully the progress of the case after the reduction, or the mode of death. In addition to the dislocation of the sixth vertebra forwards and to the right, there were three fractures through the right half of the atlas. There was no injury to the cord apparent to the naked eye, but the microscope showed the "connective tissue torn" and the "nerve tubules disarranged." The case is certainly one that encourages surgeons to follow out the same line of practice where there is evidence of the persisting displacement of a vertebra. Although the cord is generally seriously crushed at the moment of the accident, the removal of all pressure upon or irritation of the bruised part is the best way to obviate the ascending myelitis, which is a frequent cause of death.

FEVER AND SANITARY ADMINISTRATION AT NEWARK.

WITH the information that sixty cases of typhoid fever with four deaths have occurred in the borough of Newark, there comes in an account of the meeting of the town council and in a correspondence to the local press a revelation of sanitary administration that is most discreditable. To begin with, one of the aldermen announces to the council that the duties of the inspector of nuisances are to be in abeyance for some months, because his work as collector will take all his time, and this is confirmed by the subsequent reports of the inspector himself and of the medical officer of health. Such a state of affairs would be astounding even if Newark stood at the head of all British towns for health and cleanliness, but the announcement comes at a time when typhoid fever is epidemic; when correspondence to the local press declares the sanitary state of the town to be "a disgrace," and also points to the general existence in the borough of foul matters, refuse, and piggeries; and when the Local Government Board are pressing the corporation as to their polluted wells, as to the dangers to health "associated with the faulty construction and position of privies," as to the "large accumulations of excreta and refuse in the vicinity of dwellings," and as to the insufficiency of closet accommodation. What a town like Newark can have to do with surface wells must be surprising to anyone having the barest knowledge of the first principles of sanitation. The

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town is an ancient one, on the surface soil of which people have lived for centuries; the old system of cesspools and privy-pits would appear to continue to some extent, and apparently much after the same style, as it doubtless did centuries ago. The surface of the soil is, we gather, besprinkled here and there with those accumulations of refuse to which reference has been made, and sewers and drains have been constructed to course through that soil beneath the surface. Of all the places from which to seek drinking water, we should have thought that such a soil would have been the last one, and yet so tenaciously is this source clung to by some members of the corporation, that even now they are talking of analyses whilst fever prevails, and the medical officer of health reports that "no action has been taken with respect to the polluted wells enumerated in his report." The corporation are, however, by no means in ignorance of the state of affairs which exists, and of its possible consequences. Their medical officer of health is one of the most experienced in the kingdom, and many of the town councillors trust him fully. Notwithstanding this, the state of Newark at present deserves the strongest condemnation, a point evidently felt by at least one worthy alderman, who reminded his fellow-councillors, to whom has been entrusted the health of the inhabitants, that if they were not careful a Government officer might come down and expose the state of the town. Worse things than this might happen to Newark.

SMALL-POX IN THE DIAMOND FIELDS.

EVEN yet the epidemic that has for so long visited the diamond fields gives little sign of relaxing its deadly grip. From a local paper, dated Sept. 6th, we find that the weekly record of the sanitary authorities contains a report of eighty-one cases, thirteen of which were fatal. Nor has the spirit of controversy—we had almost said of animosity—between the medical men of Kimberley abated in vigour. On Sept. 3rd, Dr. Matthews gives "an outspoken opinion on the 'prevailing disease,' the value of fumigation and the cordon." In this he endeavours to show that the name "small-pox" is a misnomer, and that the "so-called small-pox" is non-contagious. His contentions, on the face of them, seem to lack the very essential bases—accurate observation and statement of facts. In the first place, he substitutes a mere assertion for a logical conclusion; then he makes no attempt to prove the opposite of the theory he condemns; and, lastly, he resorts to the argument *ad hominem* to support what, in our way of thinking, is a bad case. Whilst denying that the "prevailing disease" is small-pox, he accuses the Board of Health of the insufficiency of the means taken to arrest its spread. Quite ingenuously he cites a case in which the brother of an affected person is allowed free access to his relative with the result that the disease is communicated to him, or, as Dr. Matthews puts it, he catches it through being exposed to the same causes. What the nature of "the same causes" is there is no evidence to show, not even is reference made to the question. Is it "telluric?" as Dr. Jameson contends; or is it some unknown aerial spirit working evil among the people? Dr. Matthews's remarkable communication is made still more amusing by the addition of some original thoughts on the inefficacy of fumigation. On this latter point he seeks shelter behind some partial experiments made by M. Pasteur, which are recorded in THE LANCET of July 26th, to test the disinfecting power of sulphurous fumes. It will readily be seen that the conditions under which M. Pasteur experimented were not those which are generally, and should always be, taken to prevent the spread of specific contagious disorders. Following closely upon Dr. Matthews's "plain speaking" is a rejoinder from Dr. Sauer, the medical officer of health. Whilst congratulating the latter upon the common sense shown in his dealing with the facts of the case, and upon the acumen with which he argues from these facts, we regret to find this "criticism on an out-spoken opinion" is something more than rhetorical; it is captious. Nothing is to be gained by returning blow for blow; "A soft answer turneth away wrath." We have all along given Dr. Sauer the credit of having recognised the true nature of the Kimberley outbreaks, and with having stood up boldly in defence of his opinions. In future we trust that he and his opponents will make common cause against the common enemy.

THE EPIDEMIC AT KIDDERMINSTER.

WE expressed astonishment a short time back at the mere passing visit which Dr. Parsons had been instructed to pay to Kidderminster; and although the value of a more complete inquiry is somewhat lessened by delay, we are glad to find that he has returned to make a much more exhaustive investigation into an epidemic which, from the nature of its extent, and from the obscurity which surrounded it in so far as causation is concerned, is one of very great public importance. Although the epidemic as such appears to have largely subsided, yet there have already been between eighty and ninety deaths from typhoid fever in the borough, and although the suspected well is now only put to a modified use, yet many of the inhabitants still object to any resort to it whatever, and doubtless but little of the water is consumed. A further investigation as to the precise influence of this water on the health of the town is evidently wanted; and though it might fairly have been expected that when the necessary lines of inquiry had been pointed out to the authority they could themselves, with sufficient skilled aid, have carried out the work, yet it is satisfactory from a public point of view to know that the work will now be done, or at least inaugurated, by an independent official. Much more is also wanted to be known as to the precise conditions which favoured the spread of the disease, and as to the actual conditions of sewerage and drainage which have caused such loud complaint. This information will now probably be forthcoming. In the meantime private charity is doing much. Carriages are provided for poor convalescents, about eighty gallons of milk are daily given away, and many necessaries and luxuries are provided for the sick.

VACCINATION BY UNQUALIFIED ASSISTANTS.

THE *Bradford Observer* of October 16th contains a good report of an action brought by Mr. Edmund Strickland, surgeon, of Halifax, to recover one guinea for medical services, chiefly vaccination of twins and visits, including medicine. The defendant objected to the charge, and alleged that Mr. Strickland agreed to vaccinate the twins for 5*s.*, and brought with him "an inexperienced man who cut the arms too deep" and then wanted to charge 21*s.* Mr. Strickland denied all this. And the magistrate did not seem to believe more of it than that the assistant was unqualified. He reflected severely on Mr. Strickland for allowing an unqualified practitioner to perform the operation, especially when there was abroad so much unreasonable prejudice against the operation. He allowed only 6*s.* for visits and disallowed the charge for the operation. The case is somewhat unfortunate. We do not doubt that the operation was well done and will protect the defendant's children from small-pox, for which he should be more grateful. But for legal purposes it was a mistake to take the case into court. The law is explicit enough, and properly so, in requiring a vaccinator to be qualified. An unqualified assistant might possibly be a better vaccinator than his qualified principal, but the law takes no notice of exceptional facts, and should not have been relied on to do so.

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CLOSET TESTING AT THE HEALTH EXHIBITION.

THE members of the Jury No. 9, undoubtedly the hardest worked jury at the Health Exhibition, have only just completed their labours. Theirs was the truly sanitary section, for it embraced all that related to house and town drainage. But, not content with carefully examining all the exhibits, they felt, and justly, that practical tests were absolutely necessary before a definite opinion could be pronounced. More than 300 experiments have been made of hydraulic rams, pumps, valves, waterclosets, and traps. No less than 120 exhibitors expressed their readiness to send their closets to the testing house, but when the nature of the crucial experiments was generally known, the number gradually dwindled down to seventy-one. The experiments involved the answering of thirty-three different questions, comprising the precise measurement and form of each closet, the amount of water held in the pan, in the trap, and in the waste preventer, the pressure of water when it comes direct from the main, the size of the delivery pipe, of the exits to the soil pipe, the means of ventilation, the depth of the dip in the water seal, the force required to set the closet in action, the number of seconds taken to flush the closet, &c. The efficacy of the working was tested by placing four pieces of paper, a sponge, and ten small apples in each closet. These objects were all to be carried away both from the pan and the trap by a single flush. After this the sides of the pan were painted over with black plumber's soil or paint, and the closet tried, to see if one flush would wash all the paint away. This was a very severe test, as the paint was daubed on right up to the rim of the pan. The practical result of these experiments has been to demonstrate that it was nearly impossible to wash the pan thoroughly and to clear the trap with less than two gallons of water. As each closet took nearly half an hour to test, the work that these experiments involved may be readily surmised, and the jury deserve the warmest praise for the trouble they have taken in the conscientious fulfilment of their duty. One fault only can be found—namely, that the experiments with the closets were of a purely national description, and, as such, not in keeping with an international exhibition. All the thirty-three questions apply to waterclosets; but, speaking internationally, the enormous majority of mankind do not use waterclosets, and have never even seen such contrivances. In by far the greater number of towns as at present organised throughout the Continent and the East, there are no waterclosets, no water-supply, and a two gallon flush is absolutely out of the question. We trust that the jury, in their report, will acknowledge this fact, so as not to appear too insular in their ideas.

"ADJOURNED INQUESTS."

AN annotation headed as above, which appeared in our last issue, was suggested by what had recently transpired at an inquiry into the cause of death of the Rev. W. Spencer Edwards. It will be remembered that an adjournment was decided upon owing to the jury not being satisfied with the medical evidence. Since then a second post-mortem examination has been made, the result of which completely confirmed the truth of the opinion expressed in the first instance—viz., that death was due solely to heart disease. But to their verdict, which was warranted by the medical testimony, the jury added a rider which tells very unfairly on Mr. Keele, the gentleman in whose house Mr. Edwards died. The deceased, although under the general care of Mr. Keele, was attended by his medical man, Mr. Tait. The latter gentleman enjoined perfect repose, and it was in the course of carrying out the instructions given to him that Mr. Keele declined to allow a daughter of Mr. Edwards to have an interview with him. We are glad to find that the summing up by the coroner, Dr. Diplock, and his subsequent remarks were not in agreement with the finding of the jury, "that death was hastened by the refusal of those in charge to allow deceased to see Mrs. Hanmer and a solicitor." We maintain that such a conclusion was not in accordance with the evidence as reported, and that the stigma incidentally cast upon Mr. Keele was unmerited.

SMALL-POX AND ENTERIC FEVER IN THE NORTH.

OUR Newcastle correspondent writes:—Small-pox continues to spread in the city; there are at present thirteen cases in one street alone. The disease is fortunately mild in type, but we hear of its extending to the adjacent colliery villages. Every effort is being made by the authorities to check the spread of the infection, but the ignorance or carelessness of the poor on the subject is lamentable. For instance, a woman attended the police court the other morning who admitted, in reply to a question from the chief constable, that she had at that time three children suffering from small-pox at home.

Several cases of enteric fever have prevailed at the east end of North Shields, and there are at the present time twelve cases in the fever hospital; measures are being taken by the authorities to prevent the spread of the disease. The water-supply should be well looked to, for it will be remembered that the town suffered severely from this source a few years ago. Many people think that the reservoirs are too near the town to be safe, and that the water is not sufficiently exposed to pure air to cause its safe oxidation; however, it is certain that the town always contrasts unfavourably as to health with its sister borough, South Shields, which has its water-supply from a different source.

OUR MILITARY PRISONS.

WE regret that we are again obliged to comment in most unfavourable terms on the manner in which the information respecting the health of the soldiers confined in the military prisons is given—it would be more correct to say withheld—in the annual Report of the Inspector-General. Last year we were informed that steps were being taken to improve the mode of compiling the statistics on this head. This year it is stated that "steps have been taken, with the aid of the medical inspector of the convict and local prisons, to bring about greater uniformity of procedure in filling up the returns, and it is believed that the figures from the different prisons now represent such cases as would be deemed hospital cases in the civil prisons—i.e., cases requiring *bonâ-fide* hospital treatment, and not merely trivial cases needing only some simple remedies. They represent therefore similar and comparable facts." But something more than this is wanted as regards military prisoners. It is not a comparison of the health of military with that of civil prisoners that is required, but the means of ascertaining in what respect the health of soldiers in confinement is affected as compared with their comrades doing duty. And this is not afforded by the Inspector-General's returns. But there are also other defects to be remedied. In the table of the "Return of Sickness" the percentage of the cases is calculated on the total number of prisoners who were confined for any period during the year, instead of on the average number of prisoners. The result of course is to show a very low percentage of sickness, but it is completely misleading. We do not know in what terms the instructions of the medical inspector referred to were issued, but the result is unsatisfactory, as we find twenty-three cases returned as the aggregate number in Chester, while the medical officer in

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his report says, "There were only 188 cases of sickness amongst the prisoners." Again, the column for deaths has been omitted from the table; and the number constantly sick, which is an important element in the statistics of health, finds no place in the returns. It is much to be desired that some arrangement might be made by which these reports on military prisons should afford the requisite information to enable us to estimate the effects of imprisonment on the health of soldiers. This could be done without any difficulty if the Inspector-General would put himself in communication with the Director-General of the Army Medical Department. We commend the subject to the notice of those members of the House of Commons who take an interest in military questions, with a view to their bringing under the notice of the Secretary of State for War the very unsatisfactory manner in which information is at present furnished. In addition to the number of cases treated in hospital, and as casual sick in the wards of the prison, it would be most desirable to have a return of the diseases for which they were treated; the deaths occurring, whether in hospital or the prison; and the mean daily sick in each prison.

SIR MOSES MONTEFIORE.

THE Patriarch of Israel in these latter days, as Sir Moses Montefiore may well be held to be, attained his hundredth year yesterday, and with him old age brings honours and troops of friends who hail him father. Lives such as that of this great and good man are lessons of love and righteousness to mankind. Probably the gracious deeds of Sir Moses Montefiore have done more to raise his people to their proper level in the estimation of statesmen and philanthropists in all contemporary communities than could have been achieved by any other means, save the calm and patient well-doing and the liberality and geniality of personal feeling and conduct which have been consistently exemplified in his well-spent life. It is rarely in any age that a man of note reaches his centenary amid circumstances so propitious and evidences of kindly and reverential friendliness so sincere.

ROYAL UNIVERSITY OF IRELAND.

A MEETING of the Convocation of this University takes place this week. Notice of the following motion has been given by Mr. Maguire, LL.D., F.L.C.D.:—"That, in the opinion of Convocation, steps should be taken with reference to Dr. W. K. M'Mordie's statement that the examination papers of the Royal University are known beforehand to certain candidates, and that there is much to confirm Dr. M'Mordie's statement." The allegation is a very serious one, and has already been referred to by our Dublin correspondent when commenting on the Report of the President of the Queen's College, Belfast, for the past session.

THE SURGICAL FINGER-NAIL.

A SMALL brass instrument of simple construction was shown by M. Motais at the recent French Congress held at Blois. It consists of a metallic plate which has the shape of the finger-nail, which it covers, the finger itself being engaged by means of a ring. The author has employed it for the removal of glands from the axilla in cases of cancer of the breast, and states that it would be found useful in the removal of uterine polypi as well as in stripping the periosteum from a bone. The small instrument does not, like that of Amussat, pass beyond the level of the finger-nail.

THE outbreak of typhoid fever at Derby still continues to show signs of abatement.

SCIENCE has to regret the death of Dr. Heinrich Neumann, Professor of Psychology at the University of Breslau, in his seventy-first year. He was recognised in Germany as one of the leading authorities on mental disease. Besides his contributions to strictly professional literature, he had also, by various monographs, especially one on Lear and Ophelia, taken a place among the numerous contributors in Germany to Shakspearian criticism.

THE death is announced of Mr. Charles Barham, the oldest physician in Truro, at the age of eighty. Mr. Barham graduated as M.B. at Cambridge in 1827, and afterwards studied in Edinburgh and Paris. In 1860 he proceeded to the degree of M.D. He was a Justice of the Peace for Truro, a Vice-President of the Royal Institution of Cornwall, and Consulting Physician to the Royal Cornwall Infirmary.

THE Metropolitan Board Teachers' Association has passed the following resolution, which is stated to represent the opinions of 2078 adult board teachers in 320 London schools. "The Metropolitan Board Teachers' Association endorses generally the report of Dr. Crichton Browne on the over-pressure and worry in schools, and thanks him for the report."

DR. WM. GONNERMANN, the joint author with Professor Rabenhorst of the Mycologia Europæa ("The European Fungi"), a highly valued work, died a few days ago at Coburg, at the age of seventy-eight. The last few years of his life were spent in an extended study of the cryptogams, and it is hoped that his notes will be a very valuable accession to the existing knowledge on this subject.

AN experimental and clinical study on a new method of producing anæsthesia is the subject of a work, recently published, from the pen of M. Colombel. A combination of atropine (two centigrammes), morphia (twenty centigrammes), and chloroform (twenty grammes) is the mixture recommended. Some of the surgeons at Lyons speak very favourably of its use.

AT the first meeting of the Berlin Medical Society on the 15th inst., the President, Prof. Virchow, referred to the conference upon cholera held in July, when Dr. Koch detailed his experiences upon the cholera and its bacillus. He added, that in spite of recently published statements, Dr. Koch still adhered to his belief in the specificity of the comma bacillus.

SMALL-POX has appeared in various parts of Victoria, especially near Melbourne. Should the disease become general in the colony, as there is too much reason to fear will be the case, "the mortality among our practically unvaccinated population," says the *Australian Medical Journal*, "will be something appalling."

BY a unanimous vote, Dr. William Osler of Montreal has been elected to the chair of Clinical Medicine in the University of Pennsylvania, in the vacancy created by the transfer of Dr. Pepper to the chair of Theory and Practice of Medicine.

THE French lady medical students have an active champion in M. Paul Bert, who is seeking to secure for the ambitious fair ones the privilege of attending the wards of the Paris hospitals.

WE regret to announce the death from cholera of Surgeon-Major Mark Anthony, M.D., of the Army Medical Service, which took place at Fatehgurh in India on August 28th.

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THE

BIOLOGICAL LABORATORY AT THE HEALTH EXHIBITION.

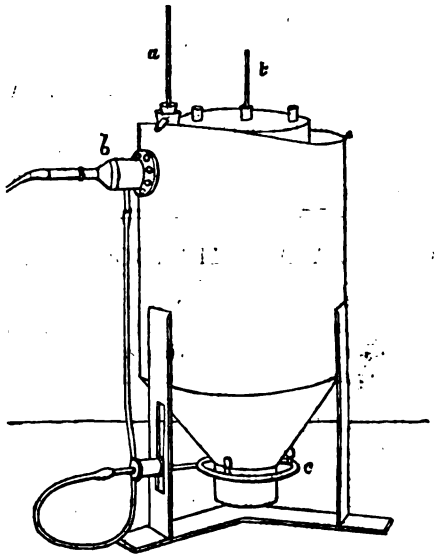
No. VII.

INCUBATORS.

FOR the purpose of maintaining cultivations at a constant moderate temperature, such as that of the human body, incubators of various kinds are employed. Two are in use in the laboratory.

The étuve d'Arsonval (Fig. 27) is a cylindrical vessel with double walls. The walls contract below in a conical shape. The interior of the incubator communicates with the exterior by means of an aperture at the bottom of the vessel, which is closed by a grating, and there is a perforated floor at the junction of the cylindrical and conical parts which support the objects placed in the interior. The cylindrical part of the apparatus comes to a termination above in a plane which is slightly oblique, and it is at the highest part that the aperture is placed, through which the space enclosed between the walls is filled with water. This arrangement allows the space to be completely filled without any air being enclosed, which, as will be seen, is essential to the proper working of the apparatus. The aperture

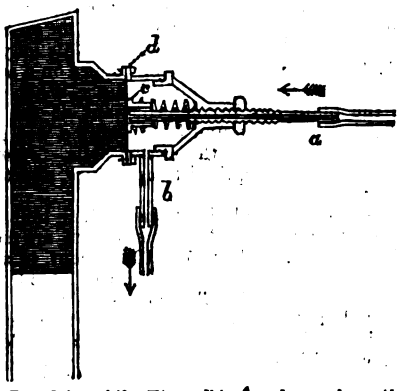
FIG. 27.



The Etuve d'Arsonval.
a, Pressure tube. *b*, Regulator. *c*, Burner. *t*, Thermometer.

mentioned is closed by a caoutchouc stopper, which is perforated by the end of a narrow glass tube (*a*). The interior is closed above by a lid which, like the sides, is double to contain water, and is in a horizontal plane. It is perforated by several apertures, one of which admits a thermometer (*t*). The apparatus for regulating the supply of gas (*b*) is attached to the side close to the upper part of the wall. A section of it is represented at Fig. 28. A hole in the outer of the two walls of the incubator is surrounded by a ring which has a flat lip. To this is applied the corresponding lip of a sort of box. The two lips, however, are not in actual apposition, for they are separated by the margin of a diaphragm of indiarubber (*d*) which intervenes between the water enclosed in the double wall of the incubator and the cavity of the box. It will be convenient to regard the diaphragm as forming the floor of the box. Its sides are vertical, and its top which is screwed on to the sides is conical, being perforated in the middle by a long pipe (*a*), which again can be screwed backwards and forwards in the top. This tube (*a*) projects in the cavity of the box so that the end of it approaches the diaphragm. Round the end of *a* is a loosely fitting collar (seen in section at *c*), which is kept applied to the diaphragm by means of a spiral spring. From the lowest part of the side of the box passes down a tube (*b*). An indiarubber pipe attached to *b* is in connexion with a circular pipe which surrounds the lower part of the incubator, and is provided with three burners by which the apparatus is heated. The gas enters through the tube *a* (fig. 28), and escapes between its mouth and the diaphragm into the cavity of the box, whence it passes through *b* to the burners. When the water is heated it expands, and as it completely fills the space between the walls of the incubator it at once begins to rise in the tube represented at *a*

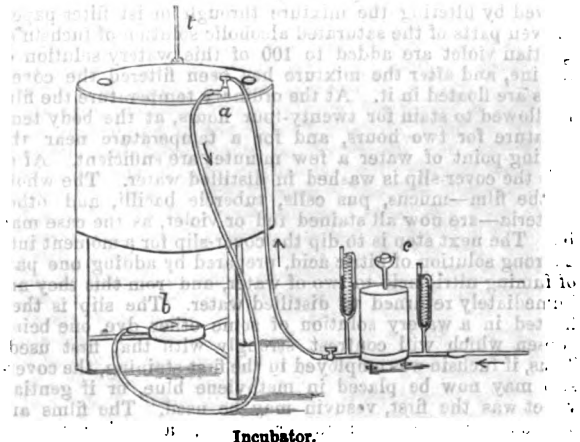
FIG. 28.



The Regulator of the Etuve d'Arsonval, seen in section.
a, Afferent Gas-pipe. *b*, Efferent Gas-pipe. *c*, Collar. *d*, Diaphragm.

in fig. 27. Now the pressure on the diaphragm exercised by the water in this tube is equal to the weight of a column of water of which the diaphragm is the base, and the distance between the surface of the water in the tube and the diaphragm is the height. This pressure causes the diaphragm to bulge outwards towards the mouth of the tube supplying the gas. When the temperature has attained the required height the tube *a* (fig. 28) is screwed inwards until its mouth is so near the diaphragm as to partially shut off the supply of gas. When this is done the temperature of the water falls, less pressure is exerted on the diaphragm, and it

FIG. 29.



Incubator.
a, Regulator. *b*, Gas-burners. *c*, Pressure regulator. *t*, Thermometer.

recedes from the mouth of the tube, so admitting a larger supply of gas. In this way the pressure exercised by the heated water is made to check the heating of the water, and by adjusting the mouth of the supply tube relatively to the diaphragm, any desired temperature, within the limits of working of the apparatus, may be maintained constant, or at least with variations only within half a degree.

The other form of incubator is represented at Fig. 29. It is a cylindrical box with double sides, floor, and lid, and these enclose water. It is heated from below by means of a gas burner (*b*). It is regulated by Reichert's regulator (*a*), by means of which the heated water causes the mercury

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enclosed in a bulb immersed in it to rise in a tube and check the supply of gas. The principle is similar to that of Page's regulator. The pressure of the gas is rendered constant by means of the regulator (*c*).

METHODS OF STAINING BACTERIA.

In order to stain bacteria from a cultivation, or when they are present in a liquid, a small portion of the cultivating material or of the liquid, containing them is placed on a thin cover-slip, another cover-slip is placed over this, and the two are firmly pressed together. The two slips are then slid one from the other, and each with a very thin layer on it is set aside to dry. In preparing to stain, the cover-slip is first heated, either by being passed three times rather slowly through the flame of a spirit lamp or else by being gently baked for an hour at a temperature of about 110° C (100°–120°) This may be done conveniently by arranging a plate of copper on a stand and heating one end of it with a spirit lamp. When the temperature of the plate has become constant at the different parts, the boiling-point is found by drawing a wet glass rod over it and noticing where the water boils. Just beyond this is the region of the required temperature, and the cover-slips are arranged here.

The aniline dyes, methyl violet, methylene blue, fuchsin, gentian violet, vesuvin, and Bismarck brown are commonly employed for staining. About 5 to 10 per cent. of a concentrated alcoholic solution of one of these is added to water and the mixture is filtered. The cover-slip which has been heated is floated on this solution with the film downwards until it is stained, after which it is washed in distilled water, dried, and mounted in Canada balsam. In order to obtain a finer preparation, the cover-slip may be left longer in the staining solution and then immersed in a dilute solution (½ to 1 per cent.) of acetic acid. This removes some of the colour. It is then washed and mounted as before. An alkaline solution of methylene blue is better for the bacteria associated with glanders, typhoid fever, and some others. This is prepared by adding thirty parts of a saturated solution of the dye to one hundred parts of a dilute solution of caustic potash (1 in 10,000).

Tubercle bacilli may be demonstrated in sputa in the following way:—Some of the thicker parts of the sputum is placed on a cover-slip and dried and heated in the manner above described. After it has been so treated it is stained in a solution of fuchsin or gentian violet prepared by the Weigert-Ehrlich method. To prepare such a solution water is shaken up with aniline oil until it is saturated with it; it takes up about 3 per cent. The undissolved oil is removed by filtering the mixture through moist filter-paper. Eleven parts of the saturated alcoholic solution of fuchsin or gentian violet are added to 100 of this watery solution of aniline, and after the mixture has been filtered the cover-slips are floated in it. At the ordinary temperature the film is allowed to stain for twenty-four hours, at the body temperature for two hours, and for a temperature near the boiling-point of water a few minutes are sufficient. After this the cover-slip is washed in distilled water. The whole of the film—mucus, pus cells, tubercle bacilli, and other bacteria—are now all stained red or violet, as the case may be. The next step is to dip the cover-slip for a moment into a strong solution of nitric acid, prepared by adding one part of fuming nitric acid to two of water, and from this they are immediately returned to distilled water. The slip is then floated in a watery solution of some other dye, one being chosen which will contrast strongly with that first used. Thus, if fuchsin was employed in the first staining, the cover-slip may now be placed in methylene blue, or if gentian violet was the first, vesuvin may be used. The films are stained for half an hour or longer, according to the strength of the solution, and are then washed, dried, and mounted in Canada balsam. The result of this process is that the tubercle bacilli remain stained by the first dye used, while all the rest of the film has been so acted on by the nitric acid that the first dye is replaced by the second, and thus the tubercle bacilli stand out red on a blue ground, or violet on a brown ground, as the case may be.

A *tissue* which contains bacteria should be hardened in absolute alcohol or methylated spirit; in the former case for one or two days, in the latter for two or three weeks. When sections are cut it is best to freeze the tissue. It is first soaked in water until the alcohol is removed—i.e., until it sinks, in all cases except lung specimens—and then in strong gum. The solution of gum may conveniently be kept sweet by adding a little salicylic acid to it. When an ice and salt freezing machine is used, the pure solution of gum sets to too brittle a mass to be cut without injuring the sections; in order to prevent this five or ten minims of methylated spirit may be added, or a mixture of two parts of gum and one of syrup may be used. In an ether freezing machine the required consistence of the mass may be obtained by moderating the supply of spray. The sections are floated in water to dissolve the gum. The best stain for most bacteria in tissues is the alkaline solution of methylene blue above described. After being stained from one to two hours they are washed in dilute acetic acid, then successively in distilled water, absolute alcohol, and oil of cedar, and mounted in Canada balsam. The oil of cedar takes out the colour less than oil of cloves. The watery solutions of fuchsin, methyl violet, and gentian violet may also be used.

In order to stain the bacteria one colour and the tissue another, the sections may be placed first in methyl violet, or gentian violet, and then in picrocarmine; but this method requires considerable practice. Gram's method is for the same purpose, and in many cases gives good results. The sections are transfered from water to absolute alcohol, and thence to a Weigert-Ehrlich solution of gentian violet, for from one to three minutes. In some cases it is better to place the sections in absolute alcohol between this and the next stage. They are then placed in a solution composed of one gramme of iodine, two grammes of iodide of potassium, and 300 cubic centimetres of water, where they remain for three minutes or more, and are then passed on to absolute alcohol, oil of cloves, and Canada balsam. The bacteria are stained violet and the tissue pale yellow. In order to deepen the colour of the tissue the section may be immersed for a moment in vesuvin solution after the alcohol bath succeeding the iodine solution. It is then placed in alcohol and oil of cloves, and mounted in Canada balsam. Sections of tubercular tissue may be treated by the nitric acid method in the same way as the cover-slips. After the second stain they are passed through absolute alcohol and oil of cloves, and mounted in Canada balsam.

In staining sections for photography, a saturated watery solution of vesuvin is used, the brown colour coming out dark on the plate.

CHOLERA AND ITS PROGRESS.

FOR the past fortnight there has been a further diminution of the cholera mortality in Naples, but it has been by no means a steady one, the deaths having varied from thirteen to seventy a day, and it is to be feared that some time must yet elapse before the disease will have ceased to exist in the city. Up to the 20th inst. the deaths that had been admitted by the official records exceeded 6500 in the city, in addition to over 700 in the province of Naples. The other provinces to which the disease clings with most tenacity are those of Genoa, Cuneo, Bergamo, and Cremona; but with the exception of Genoa, from which information does not come very regularly, the mortality is a diminishing one, and there are grounds for hoping that, even so far as the town of Genoa is concerned, a very material abatement in the virulence of the outbreak has taken place.

From France the news is more cheering than it has hitherto been since the commencement of the epidemic. Only very occasional deaths are now occurring in either Toulon or Marseilles, and although a somewhat persistent prevalence of cholera was maintained in the Department of the Pyrénées Orientales during the earlier half of the present month, yet an absence of news as to fresh deaths in that portion of France may, it is to be hoped, be taken as an indication that the outbreak has practically subsided.

Much the same may be said as regards the Spanish outbreak. Up to about October 10th a daily return of cholera deaths was made as regards the province of Alicante, where the disease first appeared, and where the mortality was largest; but now, although no authoritative announcement has been made as to the cessation of the epidemic, the absence of news gives some hope that this result may, at least, be near at hand.

As regards the future, there is some hope that the terrible visitation of 1884 will not be thrown away. From Naples comes news that early steps are to be taken to secure the proper sewerage of the city, and to enforce the closure of the

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many wells which are resorted to, and which must obviously from their surroundings be subjected to constant pollution. But much more than this is needed in Naples, and it is perhaps in part owing to the gigantic scale on which sanitary reform is needed that so little improvement followed on the previous epidemics which devastated the city. The overcrowding of houses in area and of people in dwellings is such that purity and wholesomeness of air cannot possibly be secured, and, together with a reconstruction of much of the town, there must proceed the erection of buildings to take in those who will be ejected from the old tenements. Whether Naples can undertake this large task except with the aid of the national purse has to be seen. But until it is undertaken the city will remain a source of danger to the Peninsula.

Public Health and Poor-Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hampstead.—The parish of St. John, Hampstead, not only continues to enjoy a small death-rate, but after making allowances for the deaths of non-parishioners in public institutions, the rate for 1883 is reported by Dr. Gwynn as being the lowest on record—namely, 11·26 per thousand. The zymotic death-rate was also low. As regards the influence of the North-western Hospital of the Asylums Board in the district, Dr. Gwynn states that there has been no special incidence of scarlet fever in its vicinity. He attributes this in a very great degree to the fact that a severe epidemic during the two previous years had used up the material necessary for its development; but it must, at the same time, be admitted that, quite apart from this condition, a careful administration has all along prevented any spread of this disease in the neighbourhood of the London Fever Hospital. Since the end of 1883 small-pox wards have also been opened at Hampstead, but the number of patients is to be limited to forty. The question of the efficient removal of house refuse bids fair before long to become a pressing one in Hampstead, as it has done elsewhere in the metropolis and in large centres of population, and it is anticipated that the difficulty will have to be met by the erection of a destructor. The provision of baths and washhouses is in contemplation, and improvements in the ventilation of the sewers are about to be undertaken.

Islington.—In St. Mary's, Islington, the death-rate was 17·1 and the birth-rate 32·8 per 1000 in 1883. Passing from statistics, Dr. Tidy gives some account of the epidemic of enteric fever which prevailed mainly in St. Pancras last year, which was due to milk infection, and which spread also into the Islington district. An account follows as to the other infectious diseases which prevailed, there is a short summary of the sanitary work of the year, an account of the quantity and quality of the water supplied to the district, and then follow the four quarterly reports issued during the year as to proceedings taken under the Sale of Food and Drugs Act.

Kensington.—During 1883 the death-rate for Kensington was 15·5 per 1000, a lower rate than any known since vital statistics for the parish have been available. In dealing with the prevalence of infectious diseases in the parish, Dr. Dudfield shows that considerable care is taken by his department to prevent the spread of infection, employers being communicated with in the case of persons having scarlet fever in their houses, and other kindred precautions being taken. Reference is made to an outbreak of enteric fever which occurred last autumn in the neighbourhood of Earl's Court-road. The prevalence appeared almost certainly to be associated with a special milk service; but though every facility for an investigation was rendered, the actual source of the infection was not discovered. The existence of the Fulham or Western District Hospital in the immediate vicinity of an important portion of the Kensington district leads Dr. Dudfield to report in detail as to the operations of the Metropolitan Asylums Board, and he next proceeds to consider a localised outbreak of small-pox which occurred in the vicinity of that hospital during the course of the past summer. This outbreak led to a renewal of Mr. Power's investigations as to the influence of the Fulham hospital, but according to Dr. Dudfield the prevalence had commenced before any patients were admitted into the hospital. If this be so, the information to be derived from the inquiry will probably be limited, but Mr. Power's report must be waited for before any definite opinion on the subject can be expressed. In the absence of any system for the compulsory notification of infectious diseases, a plan has been arranged by which Dr. Dudfield receives a large amount of voluntary aid in this matter from registrars, relieving officers, the resident medical officer of the Kensington Dispensary, the Chief Commissioner of Police in so far as constables and their families are concerned, the postal authorities in connexion with postmen and their families, school authorities, clergymen, district visitors, and many private medical practitioners. From one or other of these sources several hundred cases of illness annually come under notice, and much useful work results; but still the number of concealed cases remains very large, and no voluntary system can be expected to be thoroughly efficient. These and other points of general sanitary interest are fully discussed in Dr. Dudfield's report, but at the same time he does not fail to supply a large amount of information as to the local circumstances of his district, and also to indicate the directions in which sanitary action has been taken. The Kensington reports are, in short, amongst the most complete that are issued.

St. Giles.—Mr. Lovett reports a death-rate of 21·5 per 1000 for the district of St. Giles and a birth-rate of 30·7; the zymotic rate was 2·20 per 1000, or somewhat below that for London generally. Reference is made to a heavy zymotic death-rate in the Peabody Buildings in Great Wild-street. Careful examination of the premises failed to discover any sanitary evil, and in view of the fact that the majority of the deaths were due to diseases such as measles, the circumstance, affecting as it did only a population of some 1500, must probably be regarded as exceptional, and as having but little bearing on the healthiness of the buildings. Considerable improvements have been effected in St. Giles's, as regards dwelling accommodation, during recent years, and more work of the same description is in contemplation. In the general report issued by the Board of Works for this district we note with regret that the erection of public retiring rooms for females has been opposed and deferred, and that no present effort is to be made to meet this crying want in a city which is so vast in area that the need for supplying it is greater than anywhere else.

Wandsworth.—Taking the district as a whole, the birth- and death-rates were 35·1 and 17·8 per 1000 respectively, and the rate of mortality from the so-called principal zymotic diseases was lower than in any of the last seven years. The general sanitary work of the year is stated to have been greater in amount and of more importance than that which has hitherto been accomplished. It included a detailed inspection of dwellings, the removal of a large number of nuisances, and measures to prevent the spread of infection. The scavenging of the district, however, remains very imperfect, and considerable inconvenience and nuisance is hence occasioned to householders. Following on the general report is a separate one by each of the five medical officers of health. In the report on the Putney and Roehampton division reference is made to a serious epidemic of diphtheria which caused twenty-four deaths. Unfortunately, however, the investigation which followed failed to show how the disease had been brought about. In West Battersea complaints were made by the inhabitants as to the dirty and unwholesome state of the water; this was, on inquiry, found to be due to the fact that the dead end of a water-pipe had long remained uncleaned, and when it was first opened the fluid which came forth was for several minutes of a most filthy description. This dead end has since been done away with, the circle being completed by joining the pipe on to another one.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 18th inst., 6060 births and 3545 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which had been 20·1 and 19·8 per 1000 in the two preceding weeks, rose last week to 21·1. During the past three weeks of the current quarter the death-rate in these towns averaged 20·3 per 1000, against 20·7 and 19·4 in the corresponding periods of 1882 and 1883. The lowest rates last week in these

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towns were 13·6 in Halifax, 14·9 in Portsmouth, 16·6 in Brighton, and 16·7 in Hull. The rates ranged upwards in the other towns to 26·9 in Newcastle-upon-Tyne, 28·2 in Liverpool, 29·9 in Preston, and 30·2 in Bolton. The deaths referred to the principal zymotic diseases in the twenty-eight towns included 167 from diarrhœa, 74 from scarlet fever, 68 from "fever" (principally enteric), 56 from whooping-cough, 39 from measles, 33 from diphtheria, and 14 from small-pox. These diseases caused the lowest death-rates in Portsmouth and Huddersfield, and the highest in Derby, Preston, and Bolton. The highest rates of mortality from scarlet fever were recorded in Leeds, Sheffield, and Cardiff; from measles in Bolton; from whooping-cough in Sunderland and Nottingham; and from "fever" in Plymouth and Derby. The 33 deaths from diphtheria in the twenty-eight towns included 21 in London and 4 in Liverpool. Small-pox caused 10 deaths in London (exclusive of 18 London cases registered outside Registration London), 2 in Sunderland, 1 in Liverpool, and 1 in Birkenhead. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 536 and 504 in the two preceding weeks, rose to 555 on Saturday last; the new cases admitted were 144, against 129, 106, and 68 in the three previous weeks. The deaths referred to diseases of the respiratory organs in London, which had risen from 159 to 227 in the four preceding weeks, further increased last week to 286, but were 34 below the average. The causes of 71, or 2·0 per cent., of the 3545 deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. The largest proportions of uncertified deaths were recorded in Sheffield, Bristol, Preston, and Birkenhead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which in the two preceding weeks had been 21·1 and 22·8 per 1000, declined to 21·3 last week, and slightly exceeded the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 12·5 and 16·8 in Leith and Perth to 23·2 in Paisley and 25·2 in Aberdeen. The 514 deaths in the Scotch towns included 23 which were referred to diarrhœal diseases, 18 to measles, 18 to scarlet fever, 18 to whooping-cough, 13 to "fever," and 11 to diphtheria; in all, 101 deaths resulted from these principal zymotic diseases, against 137 and 120 in the two preceding weeks. The 101 deaths were equal to an annual rate of 4·2 per 1000, which was 1·5 above the average rate from the same diseases in the twenty-eight English towns. The 96 deaths referred to acute diseases of the respiratory organs in the eight Scotch towns showed a considerable increase, and were 11 above those returned in the corresponding period of last year. The causes of 72, or 14 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 26·3 and 28·8 per 1000 in the two preceding weeks, further rose to 30·2 in the week ending the 18th inst. During the first three weeks of the current quarter the death-rate in the city averaged 28·4 per 1000, the rate for the same period not exceeding 18·1 in London and 17·6 in Edinburgh. The 203 deaths in Dublin last week showed an increase of 9 upon the number in the previous week, and included 25 which were referred to the principal zymotic diseases, against 49 and 32 in the two preceding weeks; of these, 10 resulted from diarrhœa, 10 from "fever," 5 from scarlet fever, and not one either from small-pox, measles, diphtheria, or whooping-cough. These 25 deaths were equal to an annual rate of 3·7 per 1000, the rate from the same diseases being 1·8 in London and 3·6 in Edinburgh. The deaths referred to "fever," which had been 8 and 4 in the two previous weeks, rose last week to 10, and exceeded the number recorded in any preceding week of this year. The 5 fatal cases of scarlet fever were 6 less than in the previous week. Six inquest cases and 4 deaths from violence were registered during the week, and 54 deaths occurred in public institutions. The deaths of infants showed an increase, while those of elderly persons slightly declined. The causes of 29, or nearly 13 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

STOPPING TEETH AT GENERAL HOSPITALS.

To the Editor of THE LANCET.

SIR,—Every dentist who has held a hospital appointment will agree with the statements of Mr. Fitzroy Benham in THE LANCET of to-day; but it is only the dentist who is able fully to realise the vast amount of suffering which dental diseases inflict upon the poorer classes. This suffering, because it does not involve direct danger to life, is usually made light of; yet it is often enough alone to make life as miserable as it can be made by any kind of physical torment. It would be a good thing for the poor, as well as for medical and dental students, if the dental departments of general hospitals could be so extended as to allow of the performance of all operations, including stopping teeth. This is impossible while the present rule exists of having only one dentist on the staff, and no properly organised corps of dental dressers. To prepare and fill a simple cavity of decay will occupy an expert operator on an average half an hour, and when an exposed pulp or other complication is present several sittings of equal length may be needed. Want of time, therefore prevents, as a rule, at present the hospital dentist from doing more than extract teeth in cases of acute toothache. There seems no reason why every hospital should not have on its staff two or three assistant dental surgeons; there is no lack now of qualified and accomplished young practitioners eligible for such posts. These assistants could in most hospitals train a body of advanced students capable of dealing with much of the dental disease which presents itself.

The dental department, like every other department of our general hospitals, is frequented by a large proportion of patients well able to pay for professional services. Would you allow me to add in this connexion a word on behalf of the young struggling dental practitioner, to whom such patients with their small fees would be welcome. The dental schools are now turning out annually numbers of first-rate practitioners, many of whom commence practice in London and other large towns. These, being professional men, are compelled to be modest in their demeanour, and cannot effectually compete in attracting patients with the blatant advertiser who, until the Dentists Act has fully developed its effects, must, it seems, be allowed to prey upon the unwary public. If medical practitioners would but inquire, they might now find in most districts a duly qualified dentist able and willing to undertake many cases which are improperly sent to a hospital, where, for the reasons stated, they often of necessity receive inadequate assistance.

I am, Sir, yours obediently,

Wimpole-street, October 11th, 1884. HENRY SEWILL.

To the Editor of THE LANCET.

SIR,—The question raised by Mr. R. Fitzroy Benham in your issue of October 11th is one of considerable interest, but I think in his enthusiasm he rather oversteps the mark when he implies a ruthless slaughter of teeth (which might be filled) by the dental surgeons of general hospitals. I am happy to inform him that innumerable cases are sent to the dental hospitals in London by such dental surgeons. He is right, however, in saying that the general hospitals as a rule are unable to cope with the question of stopping teeth for the patients at all extensively, and I should like to point out the chief difficulties in the way of such operations. At some of the hospitals tooth-stopping is carried out by the dental surgeons as a means of demonstration, though not as a means of treatment, and for the reason that for a tooth to be "stopped" successfully an outlay of at least half an hour must be devoted to one operation—that is, one tooth; and where, say, ten patients attend each requiring three or four "stoppings," it is obviously quite impossible for the dental surgeon to attempt this himself. Then, as to the question of medical students performing the stoppings themselves, I would say that the time necessarily employed by such a student would be at least an hour under constant supervision; here, again, stopping as a means of treatment is impracticable. But I would further say that we at the Dental Hospital of London

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never allow a new student to touch a patient until he has been two months at the hospital, during which time he attends demonstrations, watches his seniors at work, and practises "filling" holes drilled in ivory or in extracted teeth. He is then only allowed to commence on very simple cases, and his whole training in the various dental subjects taught in the dental hospitals extends over two years out of the four he must spend over his curriculum for the L.D.S., the other two years being employed in his medical studies and in the dental workroom.

It will thus be obvious that very great care is taken to secure efficiency in dental operations, and it will be equally obvious that the very rudimentary dental knowledge of, and the very elementary dental operations performed by, the average medical students would not be likely to be of great value to the patients upon whom he practised. It therefore would seem that while stopping teeth as a means of instruction can fairly be dealt with in a general hospital, yet as a means of treatment it is almost impossible without a great increase in the number of dental surgeons at the general hospitals, for I maintain that the efficient stopping of a tooth (except in the minority of cases) requires as much skill and special knowledge as the more delicate operations in surgery. Mr. Benham will be interested to know that qualified medical men are admitted to the dental hospitals for short periods, and have thus every opportunity given them for gaining a fair amount of dental knowledge and skill. I am at a loss to understand the meaning of the phrase, "Besides, every one cannot go there;" the best answer to it would be for Mr. Benham or any medical man to pay a visit to either of the dental hospitals, when he would have an opportunity of seeing the mode and the manner of treatment of patients.

I have trespassed too much on your space, so I will only add that the attendance at hospitals of patients who are well able to pay a small fee to young and not very busy practitioners is of too large interest and of too general application for me to dilate upon.

I am, Sir, yours truly,

S. J. HUTCHINSON,
Dental Surgeon to University College Hospital.

London, Oct. 11th, 1884.

"A NEW FORM OF SUTURE."

To the Editor of THE LANCET.

SIR,—I enclose you a suture very similar to that described in your issue of September 27th by Dr. James MacMunn, but after many trials I discarded it and returned to the ligature. It appears to me that the old-fashioned needle and thread has so many good qualities to recommend it that it will require all the force of some very startling and efficient novelty to dislodge it from its present position. "The suture is objectionable" in many respects, according to Dr. MacMunn; but, after all, many of the objections mentioned by him may be actually overcome by skilful manipulation. "The approximation of the walls of a wound" can generally be secured by a wide and deep insertion of the threads, assisted if necessary by the introduction of intermediate and superficial stitches. "The circular constrictions of the skin which lead to ulceration and strangulation of the enclosed tissues" surely result from tying the ligatures too tightly, and from straining the parts into contact with each other; therefore all the responsibility of inefficiency must be thrown, not upon the sutures, but rather upon the clumsy fingers by which they were introduced. The skilful closing of a wound, moreover, demands expeditious manipulation on the part of the surgeon, but the new form of suture, from Dr. MacMunn's description of the method of using it, yields very little promise in this direction, if it requires to be held by "a thread or a piece of cork fastened to it." One word in conclusion with reference to the introduction of sutures after operations involving free incision of the skin. It is my practice to use frequently in these cases the continuous suture, and I believe this ancient mode of approximating the edges has been recently revived by many eminent surgeons. For the application of this method I am desirous of suggesting a trial of the "surgical needle and thread" which was introduced to the notice of the profession through the columns of THE LANCET some months since. The continuity of the needle and the ligature much facilitates the introduction of the thread, at the same time it ensures a new and clean needle with a perfect point for every operation. When the thread is in position, by gently drawing apart the ends of the wire the edges of the wound are evenly brought into contact, and if necessary, the apposition can be improved by a touch here and there with the point of the forceps. The continuous suture possesses another advantage as it admits of very easy removal, and surely this is worthy of consideration, for the "taking out" of the thread is often a more painful proceeding than the introduction.

I am, Sir, yours faithfully,

J. WARD COUSINS, M.D. Lond., F.R.C.S.,
Surgeon to the Royal Portsmouth Hospital.

Oct. 6th, 1884.

"THE EXAMINATION OF SURGEONS-MAJOR."

To the Editor of THE LANCET.

SIR,—Will you kindly afford me space in your columns to thank Mr. Wheeler for the amusement he has again afforded an "innocuous imbecile" by his letter. I should be sorry to give him the great trouble to "reduce his phraseology commensurate with my capacity," and have therefore elected to remain an "unknown quantity." If I acted otherwise it seems probable that Mr. Wheeler might subject me to an examination, when I fear that in his present frame of mind even his magnanimity would not save me from being plucked. I desire therefore to retire from this correspondence with as much grace as a bird can do of the genus to which so distinguished an ornithologist has decided that I belong.

I am, Sir, yours obediently,

X. Y. Z.

Oct. 22nd, 1884.

MANCHESTER.

(*From our own Correspondent.*)

OWENS COLLEGE.

THE opening of the session 1884–85 at Owens College was inaugurated on the 8th inst. by an introductory lecture by Professor Wilkins on the "Rise of Latin Literature." For some years past the special "introductory" to the medical department has been discontinued, one lecture only serving for the whole of the departments of the College. The Dean of the Medical School, Dr. Gamgee, presented his report for the past year, and in doing so alluded to the fact of this being his last appearance in his official character as dean, he having resigned that office after a tenure of nine years, being succeeded by Dr. Morrison Watson, professor of anatomy. From his report it appears that the number of medical students attending the College during the past session was 304. Three students have taken at the London University the degree of M.D., six that of M.B., and two that of B.S. Three gold medals have been gained at these examinations. The Victoria University does not at present appear to attract so many of our students as the London, four only having passed the intermediate examination in medicine of the former against eight in that of the latter, and at the preliminary scientific of the Victoria University six passed against fourteen at the London preliminary scientific; but in the course of another year these numbers will in all probability be somewhat different. The total number of entries of medical students at the College for the present session is eighty-one. The chief changes in the medical department are (1) the appointment of a number of clinical lecturers at various hospitals which have hitherto had no official connexion with the College; and (2) the establishment of a dental department, dental students having up to the present been unable to obtain a complete course of instruction in Manchester, such as is required by the licensing authorities.

THE TYPHUS FEVER EPIDEMIC.

The outbreak of typhus reported in your issue of the 4th has not assumed any large proportions, thanks to timely precautions being taken, not more than about twenty cases in all having occurred; but it has led to a little unpleasant friction between the Chorlton guardians, to whose notice the cases appear first to have come, and the health authorities of the corporation; and as a further complication, some difference of opinion arose as to whose duty it was to replace certain infected bedding that had been destroyed by the health authorities, they asserting that the patients were

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paupers, which the guardians denied on the ground that the family was not in receipt of any relief from them until the outbreak of the disease in the house. Peace has, however, been made by the corporation undertaking to replace the destroyed articles.

THE NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

At the last meeting here of this Association a discussion took place on a paper by Mr. Vacher on "Prospective Local Government Legislation, and its Bearing upon the Work of Medical Officers of Health." To those who have paid attention to the sanitary work of this country and the ways and means by which it is carried on, or often not carried on, the conviction must be daily more and more confirmed that before sanitation is placed on a thoroughly satisfactory basis it will have to be made a matter of imperial concern, and not left to the caprice and whims of irresponsible local bodies. But recently here the newspapers have published communications from the city auditor, who, because the Health Department is a necessarily somewhat costly one, accuses it of all sorts of extravagance and mismanagement, styling it the "octopus of the corporation," and asserting that "the institution of this department was the greatest bungle that ever the council was guilty of." Again, at the neighbouring borough of Preston, at the last meeting of the town council one of the aldermen, referring to the monthly report of the energetic medical officer of health, and his inability to understand it, stated as his opinion that "they need not have that sort of nonsense printed month after month." And recently in the same town some two tons of fruit that had been seized and condemned were allowed by the magistrates in greater part to be sold after hearing the evidence of a member of the town council to the effect that "it was not meant for food, but for making pies."

FOUL-SMELLING WATER.

The cause of the bad odour of the water, which gave rise to so much complaint a few weeks since, has been discovered by the city analyst, and is rather an unusual one in potable water. He found that in those reservoirs which supplied the water complained of there was an unusual quantity of the small pond snail (Limnæa), and that to the spawn especially of these snails the fishy smell of the water supplied in the summer months was due. The remedy suggested by him is the introduction to the reservoirs of a sufficient number of fish to act as scavengers, and thus keep down these objectionable denizens of the water. Steps are being taken to carry out his suggestsons.

THE SALFORD ROYAL HOSPITAL.

This hospital is about to be considerably increased in size by the addition of fifty beds to the present building, which will then provide accommodation for upwards of 100 patients. The building committee has selected the plans prepared by Mr. Lord, but their decision has not met with the unanimous approval of the medical staff, some of whom object to the arrangement of the wards, and especially to the position of the operating theatre. Mr. Lord was until recently a member of the hospital committee.

OVER-PRESSURE IN SCHOOLS.

At the meeting of the Lancashire and Cheshire Branch of the British Medical Association, held last week at the Lunatic Asylum, Cheadle, the subject of "over-pressure in schools" was introduced for discussion by Dr. Barron of Southport, and led to a somewhat animated debate. The experience of several members was adduced to show that there were undoubted cases of injury the result of too severe or too prolonged school work, but the general opinion of those who had good opportunities of observation seemed to be that the amount of mischief thus produced had been, especially amongst the general public, considerably exaggerated and overrated.

THE "MEDICAL CHRONICLE."

The first number of the Manchester new medical venture appeared on the 1st inst., under the title of the *Medical Chronicle*. It is published under the authority of a committee consisting of a number of the leading members of the profession in this city and neighbourhood. It aims chiefly at giving a *résumé* of current medical work and literature, a comparatively small proportion of its pages being occupied by original communications.

The University College of North Wales is showing much activity. Nearly £9000 has lately been subscribed in Manchester towards its funds. Between £30,000 and £40,000 is now promised towards the £50,000 required for its endowment.

The degrees of the Victoria University, with the exception of those in medicine, are open to both sexes, and four scholarships to women have just been awarded, such scholarships being held on the condition that the holders pursue their studies at the Owens College with a view to proceeding to graduate in the University.

GLASGOW.

(From our own Correspondent.)

CHANCELLORSHIP OF THE UNIVERSITY.

FOR this office, left vacant by the death of the late Duke of Buccleuch, the names of several candidates are already mentioned. Amongst these are the Earl of Stair (who has accepted nomination) and Lord Rosebery; the Duke of Argyll also was brought forward in a letter published in the *Glasgow Herald* by Dr. George H. B. Macleod, but is disqualified by his holding a similar office in the University of St. Andrews. The Marquis of Bute, a most beneficent supporter of Glasgow University, has been suggested as a possible candidate, but probably religious prejudices are too strong in Scotland to permit of a Roman Catholic candidate being put up with any chance of success.

THE ENTERIC EPIDEMIC.

There is practical agreement among all who are qualified to judge that Dr. Russell, in his report on this outbreak, has traced the disease to its true source—namely, to a contaminated milk-supply. The chairman of the Royal Infirmary House Committee, however, assures us that the suspected milk, that from Kilwinning, can have nothing to do with the occurrence of the disease in his institution, as none of it reaches the infirmary; and he states that there are a great many things to which enteric fever might be attributed, such as "thin clothing and the rapid changes of temperature which they had lately experienced!" Unfortunately this matter has reached the stage of newspaper discussion, which has taken a somewhat offensive form.

Dr. Macewen, of the Royal Infirmary, excised the pyloric end of the stomach a short time ago for malignant disease, but the patient died in a few hours.

The Dunoon Seaside Homes seem to be progressing. At their fifteenth annual meeting it was reported that "up to the present time 26,668 had been received into the Homes, and the largest proportion of them were restored to health and strength." Financially the position of the institution is good.

PARIS.

(From our own Correspondent.)

THE FACULTY OF MEDICINE.

THE winter session of the Faculty of Medicine began on November 3rd, and the professorial staff is composed as follows:—Medical Physics, Prof. Gavarret; Medical Pathology, Prof. Peter; Anatomy, Prof. Sappey; Medical Chemistry, Prof. Gautier; Surgical Pathology, Prof. Lannelongue; Operative Surgery, Prof. Duplay; Histology, Prof. Ranvier; Morbid Anatomy, Prof. Cornil; History of Medicine and of Surgery, Prof. Laboulbène; Medical Jurisprudence, Prof. Brouardel; Clinical Medicine at the Hôtel Dieu, Prof. Germain Sée; Clinical Medicine at La Charité, Prof. Hardy; Clinical Medicine at the Necker Hospital, Prof. Potain; Clinical Medicine at La Pitié, Prof. Jaccoud; Mental Pathology at the Sainte-Anne Asylum, Prof. Ball; Clinical Diseases of Children at the Enfants-Assistés, Prof. Joffroy; Syphilitic and Cutaneous Affections at the Hôpital Saint-Louis, Prof. Fournier; Clinical Diseases of the Nervous System at the Salpêtrière Asylum, Prof. Charcot; Clinical Surgery at the Hôtel Dieu, Prof. Richet; Clinical Surgery at La Pitié, Prof. Verneuil; Clinical Surgery at La Charité, Prof. Trélat; Clinical Surgery at the Necker Hospital, Prof. Le Fort; Ophthalmology at the Hôtel Dieu, Prof. Panas; Clinical Obstetrics at the Clinic of the Faculty, Prof. Pajot.

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THE ADMISSION OF FEMALE STUDENTS AS INTERNES.

The question of admitting female medical students as internes in the hospitals, in common with their male fellow-students, has been submitted to the Minister of Public Instruction, but for obvious reasons the proposition is not looked upon with much favour.

ACCIDENT TO DR. WORMS.

Dr. Worms, Physician to the Prefecture of the Seine and to the Northern Railway Company, lately met with an accident while about to take the train to Versailles. Being attached to the station, he was allowed to go about freely, and in crossing the rail at the time the employés were arranging the carriages he was caught between two of them, and narrowly escaped being crushed. He, however, had his arm broken; but Dr. Labbé, who is attending him, stated in his bulletin that the fracture was not of a serious nature, and, according to the last report, the patient is doing as well as possible.

BLOOD-POISONING FOLLOWING HUMAN BITES.

The following cases illustrate the danger sometimes attending the infliction of human bites. A lad of eighteen, employed as a waiter at a public-house, was guilty of some misdemeanor, and while his employer was remonstrating with him the lad, fearing a thrashing, took hold of the right hand of his master and bit him severely on the thumb. The publican dismissed the lad on the spot, had his thumb dressed, and thought no more about the matter, when a few days ago—that is, about two months after the bite—phlegmonous inflammation set in, and the patient was carried off in a few hours, death, according to the medical attendant, having been caused by blood-poisoning. In a recent quarrel between two newspaper editors in Paris one bit the hand of the other, soon after which lymphangitis set in in the arm of the wounded patient, which was accompanied by symptoms of erysipelas, from which, however, he soon recovered.

Paris, Oct. 21st.

INDIA.

(*From a Correspondent.*)

THE INDIAN CHOLERA COMMISSION.

AT a special meeting of the Grant Medical College, Bombay, on Sept. 20th, the members of the Indian Cholera Commission—Drs. Klein, Gibbes, and Lingard—gave a demonstration of certain micro-organisms found in disease, and exhibited the following microscopical specimens:—(1) The bacillus of malignant anthrax; (2) a specimen from an artificial cultivation of the bacillus anthracis; (3) micrococci found in septicæmia produced in a mouse by inoculating human sputum from a case of croupous pneumonia; (4) the bacilli of swine fever; (5) organisms found in a case of noma in a calf; (6) tubercle bacilli; (7) typhoid bacilli; and (8) specimens of the large varieties of spirilla and vibriones.

CHOLERA EXPERIMENTS IN THE HUMAN SUBJECT.

It appears from the local papers that a suggestion is made in Bombay that the question of the infectiveness of the cholera microbe should be put to practical test in the human subject in the case of convicts sentenced to death. In the event of the result being *nil*, the sentence should be commuted, the subjects for such experiment being given the choice between the risks of taking cholera and the hangman's rope.

HONORARY HOSPITAL SURGEON IN BOMBAY.

The Government of Bombay has, in a resolution, expressed its opinion that the experiment of working a hospital by the gratuitous services of honorary assistant-surgeons has, *de facto*, proved to be a failure. On the recommendation of the Surgeon-General, it seems, the Government proposed to the Municipality that instead of these honorary assistant-surgeons in future a junior commissioned surgeon of the Indian Medical Service should be appointed, at a salary of from five to six hundred rupees per mensem. When this Governmental resolution came before the Town Council, Dr. Blanc, a member, took occasion to point out that the experiment that had been under trial and had not succeeded was far from being really based, as is generally supposed by the laity, upon the system in vogue at home. In England the honorary hospital staff are not paid a salary for hospital services, but they always hold lectureships, which usually carry with them fair remuneration. In the case of Bombay matters differed *toto cœlo*. The men are young, and they have to live; their prime care is not the hospital, but their dispensaries (open surgeries or medicine shops) in private practice which gives them their livelihood. It is to be hoped that the recommendation of the Surgeon-General with the Government of Bombay will be acted upon, and a member of the Indian Medical Service be posted to the Goculdas Tejpál Hospital (which is a native general hospital), as is done in the case of the European General Hospital.

THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

AT a meeting of the Committee of the Association of Fellows of the Royal College of Surgeons of England, held on Thursday, the 23rd inst., the report of the scheme of reform of the College prepared by the sub-committee was discussed, and, with slight modifications, approved and adopted. This report, the chief points of which we hope to publish next week, will be printed and circulated amongst the members of the Association with a view to its discussion at a general meeting, to be held at the Medical Society's rooms on Saturday, November 8th. The committee passed a resolution condemning the action of the Council of the College in entering into a combination with the Royal College of Physicians to hold a joint examination, without the direct knowledge, sanction, and approval of the Fellows and Members of the College.

THE SERVICES.

WAR OFFICE.—The Secretary of State for War has appointed Howard W. Hunt, Esq., M.R.C.S.E., to be Assisting Visiting Surgeon for Shorncliffe, under the Contagious Diseases Acts, 1866 to 1869, vice A. Randall Davis, resigned.

MEDICAL STAFF.—Surgeon-Major Alexander Turner, M.D., is granted retired pay, with honorary rank of Brigade Surgeon.

ADMIRALTY.—Staff Surgeon Thomas D'Arcy Bromlow, M.D., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet. Fleet Surgeon John William Sinclair Meiklejohn, M.D., has been placed on the retired list, with permission to assume the rank and title of Deputy Inspector-General of Hospitals and Fleets. The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet:—William Frederick Spencer, M.D., Robert William Williams, Albert Charles Queely, Otway Peter Browne, B.A., M.D., Francis Reginald Malcolm Loftie, Alfred Hubert Kelly, B.A., M.D.

RIFLE VOLUNTEERS.—1st Cornwall (Duke of Cornwall's): Surgeon Humphry Davy, M.D., resigns his commission, also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the corps on his retirement.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 20th inst.:—

Bidwell, Herbert, L.R.C.P. Lond., Ely.
Blackwood, Frederick Martindale, L.S.A., Sunderland.
Bond, Charles Knox, L.R.C.P. Lond., Lupus-street.
Bristow, William Moss, L.R.C.P. Ed., Liverpool.
Caldecott, Charles, L.S.A., Basingstoke.
Clay, Augustus Frederic, L.S.A., Birmingham.
Davies, Howard, L.S.A., Pontypridd.
Geil, John McHutchin, M.B. Glasgow, Isle of Man.
Hick, Joseph, L.R.C.P. Ed., Leeds.
Paul, Edmund William, L.S.A., Langport.
Pennington, Thomas, Hyde, near Manchester.
Rugg, George Lewis, L.S.A., Clapham-road.
Scattergood, Oliver, M.B. Oxon., Leeds.
Shackleton, Henry, M.B. Dub., Dublin.
Thomas, Benjamin Wilfred, L.R.C.P. Ed., Heathcote-street.

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Admitted Members of the College on the 21st inst.:—

Alcock, Samuel King, L.S.A., Burslem, Staffs.
Barker, William James Townsend, L.S.A., Bristol.
De Montbrun, Domingo Antonio, Trinidad, West Indies.
Dobson, Arthur Edward, L.R.C.P. Ed., Downs-park-road.
Gay, John, Hampstead.
Hale, Charles Henry, L.R.C.P. Lond., Bicton, Salop.
Hartley, Horace, L.R.C.P. Ed., Camberwell.
Jackson, Richard Arthur, Oswestry.
Jordan, Gregory, M.B. Edin., York-road.
Marder, Edward Swan, Lyme Regis.
Paine, George Reuben Robins, L.S.A., Old Woolwich-road.
Piggott, Frederick Cecil Holman, L.S.A., Richmond.
Silverlock, Richard Greenhill, L.S.A., Northwell, Norfolk.
Tyler, Alfred Joseph Reeve, L.S.A., Islington.
Walker, Joseph Eagland, L.S.A., Huddersfield.
Wharry, Henry Gordon Oliphant, L.S.A., Gordon-square.
Youel, Sidney Herbert, L.R.C.P. Ed., St. John's.

Admitted Members of the College on the 22nd inst.:—

Archer, Thomas Launcelot, Clapton.
Barnard, Arthur Joynson, L.R.C.P. Ed., Buxton.
Bluett, George Mallack, Regent's-park-terrace.
Butler, Henry John, Bradford.
Counsell, Herbert Edward, Worcester.
Courteen, Raymond, Monmouth.
Currey, Robert Henry, Edge-lane, Liverpool.
Fitton, Herbert, L.R.C.P. Ed., Dewsbury.
Fox, Herbert, L.R.C.P. Lond., Croydon.
Genge, Richard Edward, L.R.C.P. Ed., Waterston, Dorset.
Greene, Edward Campbell, L.R.C.P. Lond., St. Leonards-terrace.
Jeffree, Frank, L.S.A., Clapham-park.
Kaye, Joe Nicholson, L.R.C.P. Ed., Kirkstall, Leeds.
Page, Alfred Matthew, Belsize-park-gardens.
Patrick, Joseph Henry, Birmingham.
Rhys, Watkin Llewellyn, Treherbert, South Wales.
Smith, Arthur John Nitch, L.R.C.P. Ed., Ely, Cambs.
Stewart, George Eland, Pocklington, Yorks.
St. Romaine, Richmond Edward, Calcutta.
Tanner, Charles Edward, Marlborough.
Trower, Arthur, St. Mary-at-Hill.
Walton, George Augustus Turner, Brook-street.
Weir, Frederick William, Bristol.
Wills, William Alfred, Westminster.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on the 16th, 17th, and 18th inst.:—

Harry Adams, John Jones, and Walter Malden, St. Bartholomew's Hospital; F. F. Foster-Foster, F. Arnott Collington, H. Munyard Brownfield, T. Forster Christal, and Thomas Halliwell, Guy's Hospital; H. Herbert Atter, Joinville T. Blancard, A. Percy Blenkinsop, R. Brooks Popham, and Frank Boxall, University College; Onslow A. Wickham, J. Cavendish Molson, and W. A. J. Nottingham, London Hospital; Henry R. Blee, Archibald B. Brockway, and Aymer d'Estampes de Vallancey, St. Thomas's Hospital; Charles C. Braine, Harold E. Mortis, and W. H. H. C. Davey, Charing-cross Hospital; Joseph Fayrer, St. George's Hospital; Babajt Saroottam Wankar, Bombay; Rhys Powell, King's College.

COLLEGE OF PHYSICIANS IN IRELAND.—At the October examinations the following candidates obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Mary Emily Dowson, Switzer Soutter Harwood.
MIDWIFERY.—Robert Ball, Mary E. Dowson, Nicholas C. Ferguson, Switzer Soutter Harwood, Archibald P. B. Moore, Robert Thomas Alexander O'Callaghan.

The undermentioned have been admitted Members:—

Alexander Fry.
John J. Kenefick.
Edward D. O'Neill.
John P. Ryan.
R. H. Robinson, Sur.-Maj. A.M.D.
Henry Walter Boyd.
John Alfred Freud.
Samuel Keays, Surgeon, R.N.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 16th:—

Bennett, George Herbert, Granville-square.
Bray, Percy Dean, Bognor, Sussex.
Daniel, Ronald Angus, Cornwall-road, Bayswater.
Hood, C. John Jacomb, Broadwater House, Tunbridge Wells.
Jeffree, Frank, Howard Lodge, Atkins-road, Clapham-park.
Laurie, Caspar Robert, The Elms, Buckhurst-hill, Essex.
McCabe, W. Alexander Bowes, St. Helier's, Jersey.
Raywood, John Robert Isaac, Thoone, Doncaster.
Southern, Francis Gerald, Broad-street, Ludlow, Salop.
Voisin, Alexander Bishop, St. Lawrence, Jersey.

MR. T. MOSSE MACDONALD has been appointed Secretary to King's College Hospital.

COLLECTIONS in aid of the Dublin Hospital Sunday Fund will be held this year on November 9th.

BY command of the Queen the General Infirmary of Hull will henceforth bear the name of the Hull Royal Infirmary.

AT the quarterly meeting of the Directors of the Naval Medical Supplemental Fund, held on the 14th inst., Sir W. N. E. Stewart, K.C.B., Q.H.P., Inspector General, in the chair, the sum of £[illegible] was distributed among the several applicants.

MR. VANDERBILT has made a donation of 500,000 dollars to the College of Physicians and Surgeons in New York, to be used as a building fund.

ON Saturday last collections were made in the principal thoroughfares of Eastbourne on behalf of the Princess Alice Hospital.

THE Queen has sent a portrait of herself and one of H.R.H. the late Duchess of Kent to the Royal Hospital for Diseases of the Chest, City-road.

MR. M'DONAGH, who is in his eighty-fourth year, and has been medical officer of the Clapham district of the Wandsworth Union ever since the formation of the board, has been granted a superannuation allowance of £47 10s.

ASSISTANT COMMISSARY GENERAL J. S. YOUNG has been appointed by the National Society for Aid to the Sick and Wounded in War as the Society's agent with the expeditionary force under the command of Lord Wolseley in Egypt.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—At a meeting of the general committee, held on the 16th inst., a letter was read from Mr. Chesshire resigning his appointment as honorary surgeon, and the committee unanimously passed a resolution expressing their regret at losing the services of Mr. Chesshire, and their sense of the value of the work done by him in the hospital for the long period of [illegible] years.

A HANDSOME GIFT.—A patient of Dr. Braxton Hicks having placed a sum of money at his disposal to lay out on any good work he thought fit, Dr. Hicks has just presented his native town, Lymington, Hants, with a complete Ashford litter, with all the requisite extras; and also a quantity of nursing material to form a depôt for lending out. At the presentation a St. John Ambulance centre was formed to take charge of it; and the nursing material was placed under the care of the hon. secretaries of the already existing nursing class of the association.

TESTIMONIAL TO DR. J. NORTHCOTE VINEN.—At the last meeting of the Society of Medical Officers of Health, Dr. J. Northcote Vinen, who has for twenty-one years held the office of honorary secretary to the Society, was presented with a testimonial on his resignation. The testimonial bears witness to "the long and valuable services which Dr. Vinen has devoted for a period of more than twenty years, with manifest advantage to the interests of the Society. But Dr. Vinen's services have not been confined to the Society only. As its honorary secretary, his efforts have not been less beneficial to the community at large, and to which besides its members will join in "sincere good wishes for future welfare and prosperity."

COLLEGE OF PHYSICIANS IN IRELAND.—On St. Luke's Day, the 18th inst., the following office-bearers were elected for the ensuing year:—President: F. R. Cruise. Vice-President: George F. Duffey. Censors: G. F. Duffey, J. M. Purser, F. J. B. Quinlan, J. R. Kirkpatrick. Additional Examiners: J. Magee Finny, A. Foot, A. Nixon, J. M. Purser, F. B. Quinlan, W. G. Smith. Examiners in Midwifery: Stephen McSwiney, W. Smyly. Professor of Medical Jurisprudence: W. Travers. Representative on the General Medical Council: A. Smith. Registrar: J. Wm. Moore. Treasurer: A. Smith. Examiners for the Certificates in Sanitary Science: Drs. Duffey, Smith, and Quinlan, with Messrs. Price and Parry. Librarian: Samuel W. Wilson. At the same meeting John M. Redmond was elected a Fellow of the College.

Medical Appointments.

Intimations for this column must be sent DIRECT to the OFFICE OF THE LANCET before 9 o'clock on Thursday Morning at the latest.

AITCHISON, HENRY HYSLOP, M.B., L.R.C.P. Ed., has been appointed Medical Officer for the Wallsend District of the Tynemouth Union, vice J. Aitchison.

APPLEFORD, S. HERBERT, M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon to the Eastern Dispensary, vice James [illegible] resigned.

BARBER, FREDERIC S., M.R.C.S., has been appointed [illegible] to the Kidderminster Infirmary, vice [illegible] resigned.

BERRIDGE, J. J., F.C.S., has been appointed Public Analyst to the Borough of Falmouth.

CALEB, CLEMENT C., M.B., M.R.C.S., has been appointed [illegible] to the North London Hospital for Consumption and Diseases of the Chest, Hampstead.

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CHILTON, MAURICE ALFRED, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Resident Medical Officer to the Wellington Hospital, New Zealand.

CUTHBERT, WILLIAM THOMAS, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Ravenswood Hospital, Queensland.

EVANS, E., B.A.Cantab., has been appointed Demonstrator of Physiology at St. Mary's Hospital Medical School, Paddington, vice Dr. Nall, resigned.

JAYNES, VICTOR A., M.R.C.S., L.S.A.Lond., has been appointed Public Vaccinator for Bermondsey, vice Cuolahan, deceased.

LAWRIE, MACPHERSON, M.D., has been appointed Physician and Gynecologist to the Sanatorium, Weymouth.

MORRIS, DAVID WILLIAM, L.K.Q.C.P.I., M.R.C.S., has been appointed Medical Officer for the Third District of the Dursley Union, vice Connellan.

SHACKLETON, EDMUND, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the South Norwood District, Croydon Union, vice W. Milligan, M.R.C.S., L.R.C.P.Ed., resigned.

SHAW, H. C. COSTELLO, M.R.C.S., L.R.C.P.Lond., has been appointed Resident Medical Officer to the Richmond Hospital, Surrey, vice A. L. Copner, resigned.

SMAILES, THOMAS, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Honley District of the Huddersfield Union, vice Dyson.

TENNANT, CHARLES, M.R.C.S., has been appointed Medical Officer for the Houghton-le-Spring District of the Houghton-le-Spring Union, vice Lyon.

WEBB, MALCOLM, M.B Lond., M.R.C.S., has been appointed Resident Medical Officer to the Royal Infirmary, Manchester, vice David Grant, M.B.Ed., resigned.

WILSON, JOHN SMITH, L.R.C.P.Ed., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the Walgett District, New South Wales.

Births, Marriages, and Deaths.

BIRTHS.

DUKE.—On the 13th ult., at Quetta, the wife of Surgeon-Major O. T. Duke, Political Agent, Kelat, prematurely, of a son.

HILLIARD — On the 21st inst., at Aylesbury, the wife of R. Harvey Hilliard, M.D., of a daughter.

HOUGH.—On the 18th inst., at Full-street, Derby, the wife of C. H. Hough, of a daughter.

MARSHALL.—On the 17th inst., at Nottingham, the wife of Lewis W. Marshall, M.D., of a daughter.

MARRIAGES.

BALL—COLES.—On the 16th inst., at St. James's, Exeter, William Montague Ball, M.B., of Hounslow, to Marion, daughter of the late Thomas Darnford Coles, of Castle Cary, Somerset.

HACON—CAMPBELL.—On the 1st ult., at St. Paul's Cathedral, Wellington, New Zealand, by the Ven. Archdeacon Thorpe, Walter Edward Hacon, L.R.C.P.Lond., Resident Medical Superintendent of the Hospital for the Insane, Sunnyside, Christchurch, N.Z., to Margaret Jane, daughter of A. de Grand Campbell of Wellington.

HOPE—WEBER.—On the 15th inst., at St. Margaret's Church, Whalley Range, Manchester, William Hope, M.D., of Curzon-street, London, to Adèle, daughter of the late L. F. Weber, Esq., of Timperly, Cheshire.

LAURIE—MACLEOD.—On the 15th inst., at Melville-street, Edinburgh, William L Laurie, M.D., of Drumniel, Appin, Argyleshire, N.B., to Jessie, youngest daughter of the late Rev. Norman Macleod, Free Church Minister, North Uist.

NEALE—CRISP.—On the 21st inst., by the Rev. Canon Duckworth, D.D., William Henry Neale, M.D.Lond., B.S., F.R.G.S., 24, Loudoun-road, N.W., second son of Dr. Richard Neale to Alicia Eyre, fourth daughter of the late Artie Crisp, of 86, Boundary-road, N.W.

PIRRIE—TYTLER.—On the 16th inst., at Victoria-street, Aberdeen, James Miller Gordon Pirrie, M.D., of Aberdeen, to Mary Penelope, youngest daughter of the late R. B. Tytler, Esq., of Ceylon.

DEATHS.

BARHAM.—On the 20th inst., at Truro, Charles Barham, M.D.Cantab., aged 80.

CHAVASSE.—On the 19th inst., at Wylde-green House, Wylde-green, near Birmingham, Thomas Chavasse, F.R.C.S., aged 84.

GEOGHEHAN.—On July 21st, at Sydney Arthur F. Geoghehan, M.B., M.Ch.Dub., aged 23.

MERCER.—On the 15th ult., at Equira, West Coast Africa, Adolphus Richards Mercer, M.R.C.S., youngest son of the late Thomas Mercer, Watton, Herts, aged 38.

PEARCE.—On the 5th inst., at Holsworthy, North Devon, Edward Thomas Pearce, Surgeon, aged 40 years.

RABBETH.—On the 20th inst., at the Royal Free Hospital, Gray's-inn-road, Samuel Rabbeth, M.B.Lond., M.R.C.S., &c. &c., of diphtheria, caught from a child whom he was attending professionally, and whose life he made a noble effort to save by an act that was certain to place his own in extreme danger, aged 26. The funeral will take place at Barnes Cemetery on Monday, at 2 P.M.

SCOTT.—On the 21st inst., at St. Leonards-on-Sea, Andrew James Scott, M.D., late Madras Medical Service, aged 67 years.

WORRALL.—On the 10th inst., after an operation for neuralgia, John Charles Worrall, M.R.C.S., L.S.A., of Overndale House, near Bristol, eldest son of the late Captain Worrall, R.N., of Pownall Hall, Cheshire, aged 79.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 23rd, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Oct. 17	30·36	W.	57	55	..	61	54	..	Overcast
„ 18	30·39	N.W.	57	55	..	60	53	..	Overcast
„ 19	30·48	W.	55	52	..	63	46	..	Bright
„ 20	30·37	N.W.	57	47	..	54	46	..	Hazy
„ 21	30·39	S.W.	50	47	..	53	47	..	Overcast
„ 22	30·23	S.E.	52	49	..	59	48	..	Hazy
„ 23	30·10	S.E.	45	45	..	49	42	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE RELIGIOUS PRESS AND "QUACK" ADVERTISEMENTS.

THE "quack" advertisements which are circulated by professedly Christian journals are among the offences which cause intelligent and reverent men to doubt. A specimen of such advertisements is sent to us (from a religious journal having a very wide circulation), abusing the medical faculty and vaccination, and extolling the "Anti-vaccination Mixture." The whole thing is so absurd that we are almost ashamed to notice it, excepting to regret that a well-meaning contemporary should permit such rubbish to appear even in its advertisement columns.

Mr. J. W. Philip.—The facts are very interesting. But facts are quite thrown away on anti-vaccinationists.

"AN APPEAL TO PUBLIC VACCINATORS."

To the Editor of THE LANCET.

SIR,—I beg to thank those gentlemen who were kind enough to answer my appeal in your journal, some of whose letters give interesting facts relating how the writers commenced their work by making six vesicles, but in self-defence were compelled to reduce the number to four in order to compete with qualified (!) men who advertise to vaccinate only in one or two places, or because of threats held out to them by those who did not approve of their mode. I have heard of men vaccinating children and giving a certificate the same day, without waiting to see whether the operation had proved successful; but I little thought there were any who increased their charges on the sole condition of reducing the number of vesicles. A vaccination officer of a large district tells me that he occasionally finds children of whom he has received successful certificates with such results of the operation that neither he nor the mother can tell on which arm it was performed. Of the twenty-two answers I have received one public vaccinator makes 2 vesicles "of good size," one makes 2 the size of a threepenny-piece, six make 4 and four make 5 the sizes of which are not given, one makes 3 the size of a sixpence, two make 4 the size of a threepenny-piece, one makes 4 of half an inch in diameter, two make 4 of three-eighths of an inch in diameter, one makes 4 or 5 of a quarter of an inch in diameter, one makes 6 of five-sixteenths of an inch in diameter, one makes 3 on each arm, and one considers his scarifications are equal to 6 or 8 vesicles. As the large majority seem only to make four marks, I must conclude that they are right, and that I am over-zealous in producing more than that number, and suppose I must be more moderate in future. With such a range of numbers and sizes it seems to me that some of us must be doing superfluous work, or others are hardly coming up to the mark. Surely, we can decide upon some standard of size and number, and avoid the remarks of mothers about Dr. So-and-so's places being so much smaller or fewer, bearing in mind, however, the result of Dr. Marson's observations—the greater the number of marks, the less the mortality from small-pox.

I am, Sir, yours truly,

Walthamstow, Oct. 20th, 1884. THOS. SCORESBY-JACKSON, M.D.

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AN ASTOUNDING CIRCULAR.

A DISTINGUISHED member of the profession has received the following circular, which we publish in full.

"DEAR SIR,—We enclose card of a wine we are advertising extensively, and shall be glad to know if you would allow us to send you a sample of it for purpose of analysis, and to obtain your certificate. We are willing to pay any reasonable fee for same. Kindly reply early as convenient, and oblige yours truly, "JAMES GREEN AND CO.
"Castle-street, Dublin, and London."

It is to be hoped that all medical men to whom the attractive combination of advertisement, sample, and fees is presented will intimate to the senders their sense of insult and injury.

Dr. F. E. Pearse.—1. A Poor-law medical officer is not bound to attend upon an overseer's order, unless it is marked "urgent," or unless by special contract made with the guardians.—2. A coroner has nothing to do with making orders to Poor-law medical officers. Of course, he can give his own opinion on the matter at the inquest.—3. The overseer ought to have put "urgent" on the order if he considered it urgent, or have sent the messenger to the relieving officer for an order if he did not consider it urgent, unless he felt that an order could not be obtained from the relieving officer on that day or at that time of day.

Malignant Throat.—Our correspondent will find that less caustic remedies suffice—e.g., the diligent application of glycerine of borax, or of a strong solution of carbonate of soda, or the use of spray of lime-water. We have no experience of an application of sublimate and glycerine.

Omega.—For medical anatomy there is no text-book. The viscera, &c., should be read in Gray; therapeutics, Ringer or Mitchell Bruce; insanity, Blandford.

"A MODIFICATION OF DR. JUNKER'S INHALER."

To the Editor of THE LANCET.

SIR,—The makers of Dr. Junker's apparatus have done me the honour of making my paper in your issue of Oct. 4th the text for a eulogy upon their own apparatus. I crave your indulgence for space to set Messrs. Krohne and Sesemann right upon one or two points.

It is admitted that my method of refilling the reservoir is superior to theirs, always provided the stopper fits as it should—viz., firmly enough to maintain the air-tight condition, and yet not so tightly as to offer any obstruction or loss of time in its removal. Now, experience amply proves that this object is attained by my plan. Any competent observer who has used the screw top and then adopted my plan cannot fail to realise the immense superiority of the peg over the screw. I may state there is absolutely no fear of the peg being shot out, as suggested. The objection I urged, that their apparatus makes a natural bimanus into a monomanus, Messrs. Krohne and Sesemann opine, can be obviated by a little skill and practice. Undoubtedly; we are all aware what marvellous dexterity is acquired, by skill and practice for example, by the gentlemen who eke out their income by setting a dozen plates spinning on end. This is wonderful; but is it useful? My contention is that although I presume anyone accustomed to administer anæsthetics with Dr. Junker's apparatus does habitually perform the feat of compressing the bellows, steadying the face-piece, and feeling the maxillary (or, as I should suggest, the facial pulse); yet it is a useless expenditure of energy when so simple a method as mine obviates the necessity. It is, I believe, a wise saying that a man cannot do more than one thing *well* at the same time. When a life hangs in the balance it is certainly right to have at disposal the full complement of hands with which nature has gifted us. Passing to the question of the face-piece, I beg to dissent from the statement that a rigid vulcanite face-piece, even when supplemented by the handkerchief, "does away with the necessity of a series of face-pieces." This is not so in my experience, as the nose-arch is with a thin, emaciated face a source of great trouble, even when held lightly. Patients certainly prefer the soft leather face piece, and I find it quite as easy to allow them to breathe with comfort when using it as when employing the rigid face-piece. "Junker's inhaler appears to be misunderstood by many." The connexion of this statement is hard to find; nor does it appear to me to be strictly accurate. Dr. Junker himself very lucidly described and explained his apparatus, and Messrs. Krohne and Sesemann have more than once been at the pains of further elucidating the matter in the public press. These accounts he who runs may read. I cannot agree to the statement that the face-piece should not fit the face and needs no accurate co-adaptation. A long experience with the mode of applying the face-piece convinces me that when a gentle stream of air is passed through the reservoir it answers far better to have a closely fitting face-piece.

In conclusion, I would beg to state that my motive for giving publicity to my own instrument was simply to give those interested in the matter a chance of employing a method which has in my hands proved more serviceable than Dr. Junker's. Each practitioner will use his own judgment, and that instrument which seems best in his eyes. It matters very little under whose name the apparatus is known. I regard the modifications I suggested as slight enough in themselves; but I must be pardoned for thinking the *tout ensemble* as infinitely more convenient than the arrangement usually sold by Messrs. Krohne and Sesemann. I am, Sir, your obedient servant,

Gower-street, Oct. 20th, 1884. DUDLEY W. BUXTON, M.D.

THE EMPLOYMENT OF CHILDREN IN FRANCE.

IN accordance with the law of 1874 which provides for the inspection of all industrial establishments in France where young children are employed, 47,317 shops and factories were visited during last year, of which 24,756 were in Paris. The total number of children of both sexes who came under the inspectors' notice was 213,101, of which Paris contributed 39,484. The legal age for children to commence work is after the completion of the twelfth year, though in certain industries they are permitted to enter the shops two years earlier. Twelve hours a day is the permissible term of labour, and all night work is forbidden. No child under twelve years of age can be employed without a certificate that he or she is sent to school, public or private. Between twelve and fifteen, unless they have a primary elementary certificate, children can only work six hours a day, and are obliged to go to school during the other half. The average number of children having the school certificate between twelve and fifteen years was 69 per cent. in 1883, and of the Parisian contingent the average is 60 per cent. The number of accidents which happened to children last year was 175, of which Paris was responsible for forty-two.

R. D.—The fee in the case mentioned would be £2, according to Art. 183. Foot-note No. 2 to this article in Lumley's Manual runs thus:—"Where delivery of the child had taken place but the placenta was retained, and the umbilical cord having been ruptured the patient's life was in danger, the case was considered to be within this Art. 183."

REGISTRATION OF BIRTH.

To the Editor of THE LANCET.

SIR,—Will you kindly give me your opinion of the following case your next issue.

A young married woman while on a visit to her parents was prematurely confined. The mother and child both did well, and as soon as possible returned home, to H——, nearly fifty miles, without registering the birth of the child. At H—— the registrar said he was unable to register, saying it must be done where the birth occurred. The mother, accordingly wrote to her parents to that effect, and her father went to the registrar, who, however, refused to register without the presence of one of the parents of the child, and compelled the mother to travel all the way from H—— for that purpose. Was this absolutely necessary? I am, Sir, yours truly,

Oct. 14th, 1884. G. S.

*** It appears from the statement of facts in our correspondent's letter that the local registrars of births and deaths were but imperfectly acquainted with their duties, as it was certainly unnecessary for the mother to travel *fifty* miles to register the birth of her child. The registrar of the place where the child was born should, under the circumstances, have accepted the information of the grandfather and occupier of the house in which the birth took place; or the registrar of the place where the mother resided should have taken the information of the birth from one of the parents, in the manner provided by the Births and Deaths Registration Act of 1874, and forwarded it to the registrar of the place where the birth took place, to be inserted in his birth register. The facts should be reported to the Registrar-General, at Somerset House, London, in order to prevent such blunders in future.—ED. L.

"WIDTH OF STREETS."

To the Editor of THE LANCET.

SIR,—In your last issue appeared a short article under the above heading. I desire to call your attention to the way in which streets are being narrowed in London. Many of our broad thoroughfares, such as Euston-road, Cambridge-road, and Kennington-road, were originally built in long terraces of residential houses, with gardens in front of them, at the bottom of which our fathers planted trees that have now grown up to afford a grateful shade to the passers-by. These gardens are rapidly disappearing. The trees are first cut down, and shops are built out in front of the houses. After a few years the shops are improved (?) and houses of several storeys are erected in their places. The streets are thus narrowed, the traffic is congested, and the air stagnates in the deep and narrow streets. Surely, the local authorities of the Board of Works might make an effort to preserve these fine thoroughfares at their original width. If when shops were necessitated by the spread of the metropolis they could be built on the level of the present houses, the gardens might be paved, and the trees left to form a pleasant shade between the footpath and a roadway that might be widened by the addition of the present foot pavement.

I am, Sir, yours obediently,

Margaret-street, W., Oct. 18th, 1884. HENRY B. COLLINS, Surgeon R.N. (retired).

Bursitis Bursæ Patellæ.—The easiest mode of settling the question would be to translate the terms into English. Bursitis bursæ patellæ: inflammation of a bursa, of the bursa of the patella. The phraseology certainly seems redundant; it means inflammation of the bursa of the patella.

Enquirens asks, What will be the best contrivance to get for a patient whose two arms he has amputated an inch and a half above the elbow-joint.

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M.—We see nothing to object to in the statements conveyed in the circular; and so long as it was addressed only to the class it was intended for, we think the medical officer was justified in issuing it. During periods when epidemics are rife it is only right and proper that those responsible for the health and well-being of large bodies of men should issue plain and comprehensive instructions to those under their own immediate care. The procedure only becomes doubtful when such circulars are addressed to the public at large without the co-operation of the other medical men of the district.

Mr. W. Waterfield.—The melancholy occurrence, which we notice elsewhere, will no doubt give rise to many suggestions with a view to obviate the need of resorting to the procedure which had in the case referred to so lamentable a result. But mechanical means for clearing a tracheotomy tube have hitherto been found to be unavailing, chiefly because the danger to life being sudden and imminent, the instrument is rarely at hand for immediate use.

J. P.—See reply above.

"RIDING v. DRIVING."

To the Editor of THE LANCET.

SIR,—In answer to the correspondent who wrote on the above subject in your last issue I beg to submit my experience.

If expedition is considered, preference must be given to driving. I quite agree with your correspondent that cobs about fourteen hands are more useful than larger animals; they are sufficiently strong for heavy roads in winter. There is no doubt that the legs of Welsh cobs, with quality, suffer less from regular work on hard roads than do those of English horses. If speed is not a first consideration, and if in addition the roads are rough, it seems that considerable advantages are to be derived from riding, foremost among which I would place the exercise riding affords. Speaking generally, it is probably more convenient and less expensive for a man not above middle weight to drive most in summer, when the roads are hard, and ride most in winter. The disadvantages of riding on ordinary visiting rounds consist of mounting and dismounting, compared to stepping in and out of a trap, and the necessity of leaving the horse in charge of a stranger during the visit. For night work I believe riding is safer than driving, as the most common risk, especially during dark nights, arises from coming into collision with vehicles; and as it is probable that a horse can see very much better than his rider in darkness, the risks of collision are lessened by riding, as most horses will not go too close when passing other vehicles. I fail to see any reason why your correspondent should not again get used to the saddle, for many men aged upwards of eighty ride, and even follow the hounds.—Yours faithfully,

Oct. 21st, 1884. A PRACTITIONER OF TEN YEARS' STANDING.

To the Editor of THE LANCET.

SIR,—I feel I have some claim to offer an opinion on the relative merits of riding and driving, seeing that during the last seventeen years I have had an extensive practice in a hilly district, with execrable roads, in Devon, and have given the saddle, as well as two- and four-wheel carriages, a fair trial.

To a good horseman of light weight, who can afford a really well-bred, shapely hack, there is no more agreeable, safe, and speedy mode of accomplishing a long professional round, by night or day, than in the saddle, provided, of course, the animal is sufficiently quiet to be trusted for short periods to the care of a woman, or even child, or fastened to a gate. Although middle-aged, I am quite capable of riding a spirited horse a long journey, and am thankful to say that, so far, I have had no experience of any kind of covered carriage. I vary my rounds by occasionally driving myself in a light dog-cart; but I never use the same horse in saddle and harness. In wet weather a carriage may perhaps be the more comfortable, but in cold weather I much prefer the pig-skin. A four-wheel is safer than a two-wheel carriage, but more costly in itself, as well as in its horsing. When called up at night I disturb no one in my house, but saddle and bridle my horse myself, and am thus to some extent independent of the men who object to live with doctors on account of night work. I am, Sir, yours truly,

Devon, Oct. 20th, 1884. F. M.

SHIP SURGEONS.

To the Editor of THE LANCET.

SIR,—I have been sailing in one of the Transatlantic liners for some time past, and on the last voyage heavy weather was encountered. On my being called to see a lady, a second-cabin passenger, I found her suffering from subacute rheumatism. On putting my hand on the bed I found it as damp as if it had been dipped in the sea, in consequence of a leak in the upper deck. I spoke to the captain about getting the patient removed to the first cabin, the other second cabin berths being occupied. In reply I was told that I might, if I wished, give the patient my own room, to which I rejoined that in the event of her dying, or even being taken worse, the Board of Trade would probably have something to say in the matter. Fortunately, however, the weather moderated, and the patient got well. But, to my surprise, a day or two after landing I received a note from the office informing me that my services would be no longer required. On asking the reason of my dismissal, I was informed that reasons were never given. Surely, it is time the Government took the matter up, for the protection of men who honestly do their duty. I am, Sir, yours truly,

Liverpool, Oct. 20th, 1884. L.R.C.P.

DRINK IN WORKHOUSES.

AN interesting report of the amount of "drink" consumed in the Islington workhouses is published. The average cost per head per annum is, for the workhouse and infirmary combined, 10*s.* The chief items are 231 gallons of brandy and 2752 gallons of porter. The chairman's defence of the large quantity of porter consumed was that it was given to paupers for work done in the house. We think this a bad defence. If paupers do more work than they are paid for in the board and lodging they receive, let them be paid in money, or in some other form of wages than porter. Porter may be defended as medicine, or even as diet in some cases, but as wages it is demoralising and indefensible. The brandy is chiefly consumed in the infirmary. The amount is large, but doubtless commends itself to the judgment of the intelligent medical officer, Dr. Wright.

Hygiene.—Parkes' Hygiene, Ganot's Physics, Baldwin Latham's Sanitary Engineering, and the Public Health Acts. A practical knowledge of chemistry and microscopical analysis of water is required, as well as of the manner in which a sanitary report should be written.

Dr. Harkin (Belfast).—The paper will be published shortly.

"EARTH AS A DRESSING FOR SPRAINS."

To the Editor of THE LANCET.

SIR,—The letter in your issue of Oct. 11th from Dr. Schaeffer of Baltimore, on the above subject, cannot fail to be of interest to the profession—at least, to me in opinion. I would like to know if the application of earth signifies soft clay, which may afterwards become dry, forming a more or less firm support; or dry earth, as is used in foul ulcers as a disinfectant. This dressing commends itself on the ground of being cheap and nearly always available. It would require to be added to the marine medicine chest. An accident producing sprain may occur to anyone, and at any time, and may be of almost any degree of severity. I will, however, confine my attention more particularly to that lesion referred to in the letter alluded to—viz., sprain of the ankle-joint. The most frequent cause is violent twisting, generally accompanied by rupture of some of the ligamentous fibres. The pain is very severe, and difficult to alleviate. The sufferer must, practically speaking, remain in bed, and as the march towards repair is slow, the health and temper in general suffer. My experience has not been large, nor the result satisfactory. In one case (that of a lady) recently treated I used at first a cooling lotion of chloride of ammonium with opium, ice not being available. The pain was very severe. I changed the application to a hot one, with poppy heads, as recommended by Gorham (THE LANCET, July, 1876). This was more grateful. Rest, of course, was as perfect as possible; but an attack of hysterics more or less active, extending over more than a week, exercised the joint more than I deemed beneficial. A flannel bandage could not be borne. I therefore delayed applying a plaster-of-Paris bandage (or splint) until about the end of the third week, when the patient had to leave for the Continent. She bore the journey (about 1000 miles) fairly well. She had all along complained of severe pain in the knee, which was not rheumatic. There was no swelling, and motion was not prevented. I considered this pain to be of nervous origin, in which opinion the patient's continental surgeons concurred; but they considered the pain in the ankle to be nervous also, and, removing the plaster, insisted upon the patient walking. I predict the failure of this treatment, but trust it may prove successful. The general treatment was according as the symptoms required. I regret I could not have access to the valuable works of Erichsen and Bryant, recently published. Some surgeons recommend hot applications, and others cold, while many advise bandaging (which could not be borne in this case), or a plaster splint early applied. I believe this treatment the most valuable—the form called "Bavarian," described by Esmarch, inasmuch as it provides necessary rest and permits the patient to enjoy a certain amount of exercise. It can also be more readily removed and reapplied. I would like to have some opinion on "forced locomotion" after a certain lapse of time. In a former case which I treated several months after a second accident had produced the sprain an abscess formed, but the patient died of acute phthisis. The patient in another case, which I had under observation about two years, was unable to walk. Others I have seen "laid up" for a year or more. This subject, therefore, is an interesting one to me, and I trust this letter may not encroach too freely upon your space. I am, Sir, yours truly,

Oct. 14th, 1884. BEAVER.

Mr. J. Moir.—We thank our correspondent for copies of his letter. Such letters are of great use, and tend to enlighten all who are capable of enlightenment. The immunity of the officials of small-pox hospitals obtained by revaccination might have received more attention from our correspondent. By itself, this fact is an overwhelming demonstration of the virtue of vaccination.

Student should address his queries to the respective authorities.

TRUSS FOR OBLIQUE INGUINAL HERNIA.

To the Editor of THE LANCET.

SIR,—Can any of your readers from personal experience recommend me a good truss for oblique inguinal hernia? I am very actively engaged in a large country practice, and have riding. I have tried many trusses, and all are very uncomfortable; I find the underneath strap so worrying. I am, Sir, yours truly,

Oct. 22nd, 1884. GENERAL PRACTITIONER.

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ERRATA.—In our Paris correspondent's letter of last week, in the paragraph giving an account of Dr. Maurin's lecture on the etiology of cholera, in the twenty-second line from the top of the second column, instead of "$\frac{1}{1000000}$th part of iodine" read $\frac{1}{10^{6}}$th part of iodine. In line six from the end, by a typographical error, "acetious" appears for acetous. "M. Arousshon," in the first line of the last paragraph, should be M. Aronsshon.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. F. J. Gant, London; Dr. Herman, London; Mr. C. T. Ewart, Whitstable; Dr. Thorburn, Manchester; Mr. Waterfield, Stonehouse; Mr. Gell, Birmingham; Brigade Surgeon Hensman, Taunton; Dr. Campbell Pope, London; Messrs. Southall, Birmingham; Dr. Scoresby-Jackson, Walthamstow; Dr. Kane, Guildford; Dr. Fowler, London; Dr. S. Ringer, London; Miss Chreiman, London; Dr. Adam, Hong Kong; Dr. Bramwell, Perth; Dr. Harkin, Belfast; Dr. Wharton Hood, London; Mr. Andrew Clark, London; Mr. Storry, Stroud; Mr. J. W. Philip, London; Dr. Suckling, Birmingham; Mr. E. S. Webber, London; Mr. Towse, London; Mr. Tomkins, Gloucester; Mr. Lovett, London; Dr. Dixon, Preston; Dr. Gordon Holmes, London; Dr. L. Armstrong, Newcastle-on-Tyne; Mr. Halliburton, London; Mr. J. Moir, London; Dr. Pearse, Frome; Mr. Briscoe, London; Dr. G. de C. Morris, Liverpool; Mr. Ram Krishna; Mr. Collins; Mr. Hofler, Bilston; Messrs. Arnold and Son, London; Mr. G. A. Woods, Southport; Mr. F. J. Smith, London; Dr. De H. Hall, London; Mr. Hall; Mr. Mackey, Edinburgh; Mr. Welch, Bury; Dr. Craig; Mr. Millen, Salford; Mr. Geach; Mr. Parrot, Aylesbury; Mr. Forbes, Drumlithie; Mrs. Aitkin; Mr. Parsons, Coventry; Messrs. Sonnechein and Co., London; Messrs. Trübner and Co., London; Messrs. Whitehead and Co., Manchester; Mr. Low; Messrs. Kegan Paul and Co., London; Mr. Percival, Leamington; Mr. Scott, Manchester; Dr. C. Black, Glasgow; Dr. McNaughton Jones, London; Mr. Whittan, Nelson; Mr. Macdonald, Dumfries; Messrs. Read and Co., Bristol; Dr. Halifax, Sunbury; M.B.; Subscriber; Enquirens; Hygiene; Omega; A. B. S.; F. M.; A Practitioner of Ten Years' Standing; A Constant Reader; L.R.C.P.; S.C., Hyde; Sigma; M.R.C.P., Tottenham; M.D., Berkhampstead; Malignant Throat.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Dodd; Mr. Clark, Stamford; Mr. Jones; Mr. Watt, Hovingham; Dr. Pope, Eardesley; Dr. McAdam, Edinburgh; Messrs. Keith and Co., Edinburgh; Mr. Mason, Highbury; Mr. Williams, Oxford; Mrs. Bushey, Birmingham; Miss Meyer, Holloway; Mr. Farringdon, Bradford-on-Avon; Mr. Gold, Kensington; Mr. Pearse, Bromley; Mr. Marsh, Wigan; Messrs. Hobson and Co.; Mr. Maloney; Mr. Armstrong, Rochdale; Mrs. Brace, Barrow-in-Furness; Mr. Wheeler, Sheerness; Miss Gillies, Maidstone; Mrs. Clark, Tunbridge Wells; Miss Hay, Bournemouth; Mr. Ling, Saxmundham; Mr. Walker, Aylesbury; Mr. Walker, Longford; Mr. Morgan, Lichfield; Mr. Wray, Highgate; Mr. Atkins; Mr. Robinson, Huddersfield; Dr. Batterbery, Berkhampstead; Mr. Morris, London; Mr. Horse, Hough; Mr. Mitten, Eastbourne; F. B.; T. B., West Leigh; Medicus, Dromore; R. H., Beeralston; T. G. T., London; K. M. D., Sheffield; A. E. F., Birmingham; X. Y. Z., London; M.R.C.S., Doncaster; A. B. C.; C. H., Stockwell; Amicus, Peterboro'; Medicus, Weston-super-Mare; M.D., Swanage; Attendant, Brixton; X. Y. Z.; Medicus, Manchester; Alpha, Wellington; J. G.; Surgeon, Edinburgh; Surgeon, Bermondsey; Fraser, York.

Western Morning News, Bradford Observer, Bradford Daily Telegraph, Somerset and Wilts Journal, Sheffield Daily Telegraph, &c, received.

Medical Diary for the ensuing Week.

Monday, October 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Spencer Watson: Hypertrophic Rhinitis.—Dr. J. Kingston Fowler: Functional and False Cardiac Murmurs.—Dr. J. Braxton Hicks will show a machine for dry air disinfection.

Tuesday, October 28.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. William Adams: Excision of the Head of the Femur in a case of Unreduced Spontaneous Dorsal Dislocation occurring during Fever.—Mr. Walter Edmunds: A Case of Circoid Aneurysm on the Dorsum of the Foot, with remarks.

Wednesday, October 29.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

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Clinical Lecture
ON
CHRONIC ARTICULAR DISEASE.

By RICHARD BARWELL, F.R.C.S.,
SENIOR SURGEON TO CHARING-CROSS HOSPITAL.

GENTLEMEN,—My last lecture on the subject of chronic articular disease[1] concluded with a promise that I would give you some particulars concerning the management of its two principal forms—viz., that arising in the bone and that commencing in the synovial membrane. For both of these forms I recommended some sort of splint which, while permitting free movement of other parts, should obviate all pressure and motion of the diseased joint; above all other sorts of splint I advocated one which I depicted and described. But it may happen that when the patient first comes to you the disease is already advanced, and may require some further treatment than mere rest; and under such circumstances the value of your having distinguished, by the means already indicated, the bone from the synovial malady becomes manifest.

Let us suppose that a certain portion of bone—for instance, one of the femoral condyles or one side of the tuberosity of the tibia—is enlarged, painful, and particularly sensitive to pressure; that the pain augments at night, and in the more characteristic forms of disease the limb may start violently just as the patient is falling to sleep, and the skin over the tender point of bone may be red—these symptoms indicate that the inner parts of the bone are inflamed, and that the consequent hyperæmia and effusion within the solid case produce very considerable tension; indeed, the last two symptoms show pretty clearly that suppuration is imminent or has already commenced. If this inflammatory tension, with or without suppuration, be allowed to continue, it will relieve itself in some direction, and in the vast majority of cases the inflammatory products tend towards the joint cavity. Now it is not, in my opinion, consistent with the surgeon's duty to stand aside and let such an injurious event occur; he has, indeed, the power to guide the morbid process along a safe course, and the opportunity which such power gives him should not be neglected.

As near as possible to the site of greatest tenderness and swelling he should choose a point whence he can reach the bone without opening the synovial cavity, and here, turning aside a little flap of soft parts, together with the easily detached periosteum, he may, with a small trephine-head, make an opening in the bone; or if the subject be so young that the epiphysis is still cartilaginous, he may, with a gouge rotated in the hand, remove a plug of cartilage down to the osseous nucleus. While this is being done he must observe what sort of fluid flows. If it be not pus, he must examine with a stout needle fixed in a handle or in a needle-holder to find any softened or otherwise diseased bone that may enclose an abscess cavity. Pus, when present, should be detected and eliminated. The treatment, however, is quite successful, even though suppuration have not yet occurred. I have often obtained brilliant results by the mere evacuation of serum and of other inflammatory products; for tension within a rigid cavity, such as is the bone-end, very generally results in a necrosis, or in an abscess tracking towards the joint. When therefore, either by the evacuation of pus or otherwise, you have relieved this tension, pass a drainage-tube into the osseous opening, let the part thoroughly drain, and do not allow external healing to take place until the intraosseous inflammation and discharge has subsided. The cavity must become filled up by granulation from the bottom. By this means you may save many a joint that otherwise would be doomed to destruction. But the chief object of this lecture is to direct your attention to the treatment of that sluggish synovial disease which, as I pointed out a month ago, is not tuberculous, but strumous—that is, it tends to slow, persistent heaping-up of embryonic materials; of granulation which may ultimately undergo suppurative fatty caseous, perhaps tuberculous, degeneration. Now, the problem which in each case you must solve is how to check such accumulation, how to cause the absorption of some of this inflammatory material, and conversion of the rest into fibrous tissue. Let us consider the management of like material in a situation that we can see—as, for instance, lining or filling, perhaps overfilling, an indolent ulcer, which has no tendency to heal. You treat such sluggish and exuberant granulations chiefly by two methods—by pressure and by stimulation—by which means, unless the patient be too aged and debilitated, you may heal the ulcer; in other words, you cause the hitherto intractable granulations to assume formative actions to become a fibrous tissue. Now my practice, which I strongly recommend to you, is to transfer this sort of treatment to joints.

Pressure is a most valuable resource, especially when the tumefaction is neither very large nor very soft it may without stimulation bring about the desired result. It may be applied by means of strapping the joint either with resin-plaster or with one of the many medicated plasters, such as the iodide of lead, ammoniacum and mercury plaster, &c. It may be that these preparations are of some value. But you will observe that to effect any good the pressure must be equable as well as persistent, and it is hardly possible, unless the strapping be changed often, that it should be thus continuous. I therefore prefer as a rule, and especially when the swelling is rather soft, to make pressure with a bandage of elastic webbing, which may be removed and replaced daily if necessary with perfect ease, and which keeps up more even compression. Should the swelling be large and soft, mere pressure is rarely sufficient to produce the required consolidation; the granulations must also be stimulated, and this is effected by injecting among them a solution of some slight irritant. A tubular needle, of calibre a little larger than that used for hypodermic injections, and provided with one or two lateral perforations not too near to the base, is introduced at the softest part of the swelling obliquely to the surface, so that without penetrating what joint cavity may still remain, it may traverse a considerable amount of tissue. When it is thought that sufficient fluid has been injected in one locality, the needle may be partially withdrawn without altogether removing it, and passed, of course without any fresh skin puncture, in another direction, and more may be injected. The fluid which I have found most useful, and which never in my hands has produced any but good results, is tincture of iodine, beginning with half a drachm to the ounce of distilled water, and increasing even up to two fluid drachms. The quantity to be injected must depend on the size of the child and the amount of swelling. From one to two drachms are generally sufficient, and this may be repeated in different parts of the swelling every week, or even twice a week. In the meantime pressure by the means above-indicated must be continued. Under the influence of this treatment the soft tissue soon becomes harder and begins to retract, the swelling diminishes—in fact, the sluggish granulation forms itself into fibre tissue. But you must be aware of what this formation into fibre tissue means—namely, that a certain amount of the normally flexible and mobile textures which enclose the joint cavity become stiffened and thickened, encroaching on or occupying more or less that of space, according to the amount of granulation tissue formed previous to your interference. Thus, if the malady have been treated as above so early in the case that only a thin layer of granulation had formed round and in the synovial membrane, only slight thickening will result—such thickening as is quite compatible with very good mobility—which will so increase that by some care and attention a normal state of the joint may be after a time assured. If, on the other hand, the disease has been allowed to go further—if, for instance, the joint cavity be filled, or nearly filled with granulations, which under treatment solidify into fibrous tissue, much more serious impediment to mobility must result; the bones will be conjoined by a more or less dense ligament-like material; there is false ankylosis, and if during the future course of events this tissue ossify bony union or true ankylosis occurs.

Now you will see the advantage of that which I insisted on in a former lecture—viz., placing each joint in a certain advantageous position; for instance, the elbow bent at a right angle, the knee straight, and so on; because not only are such positions those which most readily conduce to cure, but also they are such as cause the limb to be most useful to the patient should ankylosis ensue or be inevitable. I must, however, remind you that we see in this hospital a great number of cases in which a joint has become ankylosed

[1] THE LANCET, Aug. 2nd, 1884.

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in a faulty position, sometimes the ankylosis is true, sometimes false, but in either case the patient is unnecessarily placed in a condition of great inconvenience, the limb being sometimes nearly useless, sometimes a positive encumbrance. In my next lecture I shall speak of modes whereby these troubles may be remedied.

A Lecture
ON
CEREBRAL HYPERÆMIA IN CONNEXION WITH TERTIARY SYPHILIS.

Delivered at the Lock Hospital, Edinburgh, July 5th, 1884,

BY P. H. MACLAREN, M.D., F.R.C.S.E.,
SURGEON IN CHARGE OF THE WARDS.

GENTLEMEN,—Primary and secondary syphilis may appear to you a somewhat limited subject for study, but within their boundaries lie some problems the solution of which will send a ray of light through all pathological science. What is the *materies morbi?* How does the morbific change become weakened and ultimately effaced by mercury? These and similar points, at all events, redeem the subjects from the charge of triviality. When your attention, however, is directed to tertiary syphilis, you are confronted with a series of phenomena so vast, so varied, and so important, that the highest cultured medical intellect has the fullest scope for the exercise of its powers. The dyscrasia which the disease has then effected produces results which may permanently disfigure, damage, or even destroy the patient. When you remember that every texture and every organ in the body may be attacked through changes taking place in the all-pervading connective tissue and the minute blood-vessels, you cannot be astonished at the fact that many diseases are closely simulated, and that several may coexist at the same time.

It was a discovery of great clinical interest which was made at the beginning of the present century that syphilis belongs to the exanthemata, is caused by the introduction into the blood of a specific poison, has a period of incubation, is followed by eruptions, and may in certain circumstances terminate naturally and favourably without the intervention of medicine. Like them, also, it may be succeeded by sequelæ. I am not prepared to say that every case of syphilis appropriately treated for a sufficient length of time will escape these formidable consequences, but from my own experience in these wards I can most positively assert that every case of tertiary syphilis which I have seen has not had specific treatment, or only for a very short time. After inoculation in a previously healthy person primary and secondary syphilis are certain and inevitable—tertiary syphilis is uncertain and occasional. But the consensus of opinion of the great authorities on this subject bears out the statement that mercurial treatment, wisely administered, minimises the risks of tertiary disease, and, conversely, that over-indulgence in alcohol by a person who has neglected the earlier phases of the disease greatly increases the chances of tertiary symptoms appearing. You are aware that the division of the subject is arbitrary, and adopted chiefly for clinical purposes.

The first two forms begin and end within a circumscribed period, with slight deviations; the last never appears until after an interval during which all secondary symptoms have ceased, usually not before the fifth year after infection. But if this be accepted as the normal period for the accession of tertiary symptoms, you must be prepared to meet with the widest variations. You have seen in these wards examples where tertiary symptoms occurred as early as the end of the second year, apparently following on without the least hiatus, and others where ten, fifteen, twenty, and even thirty years had passed before the disease reappeared in its most troublesome and most malign form. Great changes are noticeable in the quality of syphilis in the later stages. It is now no longer transmissible, its manifestations are non-symmetrical, and, instead of tending to spontaneous cure, become more permanent, and show a decided liability to recur indefinitely. Mercury has little influence over them, while iodine, on the other hand, is all powerful. When it declares itself, it does so either by a hyperæmia which is promptly followed by suppuration and ulceration, or by the deposit of a neoplasm called a gumma, which is endowed with only a moderate amount of vitality.

To-day I wish to call your attention to an example of the first form in a situation of vital importance.

Mabel L——, a girl of twenty-three years of age, contracted syphilis fully four years previous to admission into the venereal wards of the Royal Infirmary. She consulted me in April last regarding a subperiosteal abscess on either side of the lower jaw. These had opened spontaneously into the cellular tissue of the neck, causing an acute and extensive cellulitis. An incision in each submaxillary region, followed by efficient drainage, speedily effected a cure. About the middle of June she was brought to Ward 6, suffering from a severe attack of alcoholism, and when partially recovered was found to be the subject of an ano-rectal syphiloma, and remitted to Ward 20. On admission the patient lay with her back to the light in a restless torpid condition, from which she could be roused when addressed loudly, and would answer questions monosyllabically, but she never slept. She complained of pain over the left skull vertex, which was not, however, increased by tapping. She suffered from constant nausea, sickness, and slight diarrhœa. Her pulse and temperature were normal. Milk diet and an acid stomachic were ordered, and the patient was subjected for two days to the closest possible observation. During that time the symptoms remained pretty much as before, except that the temperature showed extraordinary oscillations, ranging between 101° and 105·4°; pulse 100. Five grains of quinine were administered every four hours, and an icebag applied to her head, from which the hair had been cropped close. The following day (June 20th), after three doses, the temperature became slightly subnormal, and ranged between 96° and 97·4°; pulse 92. Sickness somewhat less. Quinine stopped and icebag removed.—June 21st: Torpor and general condition *in statu quo*. Slight twitchings of both arms were observed. Speech more imperfect and laboured. Pupils widely dilated.—22nd: Twitchings during this and the two following days gradually developed into clonic spasms of both arms, which were almost continuous, and were specially marked upon the right side. The face became somewhat turgid-looking, and twitchings of the masticatory muscles were frequently observed. During this period the pulse and temperature were slightly above normal. Patient was now ordered ten grains of iodide of potash thrice daily.—25th: Throughout the next six days the symptoms modified but slightly. The pulse and temperature although showing a tendency to oscillate became more approximated to the normal. Towards the end of this period the movements of the arms were if anything less marked. Twitchings of both eyelids were however observed, and some nystagmus.—July 1st: Patient now appeared more intelligent. Heard and answered questions in a manner which showed that she was still suffering from ataxic aphasia. She still complained of pain over the left skull vertex. Spasms very marked but absent during sleep. Right arm specially affected. In addition to the clonic spasms of the lower jaw muscles, there were almost continuous shakings of the head, which, however, like the other abnormal movements, were most marked when the patient was excited under examination. Both arms showed slight paresis. Incontinence of urine was present. Ankle clonus was made out by Dr. James's method on both sides, specially the right. Pulse 90 to 100 and irregular. Temperature about 100° generally. Sickness and anorexia troublesome, and patient for some days sustained by nutrient enemata. Since that time up to the present date (July 5th) the patient has improved slightly in general health, the sickness is nearly gone, and she can take milk diet, although with some difficulty. The ankle clonus cannot be made out. The movements of the arms are less pronounced, and those of the jaw muscles and muscles of the eyelids have nearly disappeared. Occasionally, indeed, and especially when the patient is not excited, all the clonic spasms are absent. The turgidity of the face is much less. Temperature and pulse normal, although the latter is somewhat irregular. One symptom which caused her great annoyance in the earlier days of her present attack—viz., insomnia at night—has very much abated, and she now sleeps fairly well.

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Two days ago, at my request, Dr. Argyll Robertson made an examination of her eyes, and reported as follows:—"Disc hyperæmic; outline dim; retinal veins much congested and slightly tortuous; rest of fundus normal. This condition existed in both eyes, but was specially marked in the left."

Such, gentlemen, is a brief clinical summary of the case at present under our observation. Let us endeavour now to classify the various symptoms, to localise the lesion, and indicate its probable nature. The whole train of symptoms point in one direction, and that is the direction of cerebral hyperæmia. It must be remembered that the prodromata were masked in those of alcoholism, otherwise the intense headache, the vomiting, frequent and not associated with the ingestion of food, the intolerance of light, the mental disturbance, as evinced by confused ideation and illusions, the marked somnolism, approaching stupor, the condition of the pupils, the weak and incoördinate motor power, the jactitations of the arms, and trembling of eyelids—these features, taken collectively, furnish us with an almost perfect clinical picture. The sudden and marked oscillations of temperature, the varying intensity of the clonic spasms of the arms, the occasional and slight ankle clonus, and exaggeration of patellar reflex point in the direction of hyperæmia rather than that of actual infiltration. The intense ophthalmic congestion also favours this view.

The next point which must occupy our attention in the consideration of this case is the extent and locality of this congestion. Is this turgidity general, or is it more marked in certain areas? After a careful investigation of the various symptoms it must be admitted that both sides of the brain are congested, but that undoubtedly the left brain is that most affected. It is upon this side that the headache is most marked and the ophthalmic congestion greater. The fact that the clonic spasms of the right arm were more pronounced than those of the left is an additional evidence in support of this diagnosis. It should be particularly noted that the headache is not increased by tapping over the focus of intensity; a conclusive sign that the dura mater is only slightly involved, if at all. The pain is chiefly limited to the postero-frontal and the antero-parietal regions. We have, therefore, evidently a commencing meningitis, or at least congestion specially marked in the pia mater and superficial layers of the cortex cerebri. This as shown above is most pronounced in a limited area upon the left side of the brain. Before indicating the lines on which the treatment of this interesting case is based, let me for a little direct your attention to the condition of the patient's speech. She is suffering from ataxic aphasia—i.e., an aphasia not characterised by amnesia or loss of memory, but by the loss or impairment of coördinating power over the muscles necessary for the production of speech. When she is asked a question you observe that she answers it, but her articulation is confused and indistinct—in fact, incoördinate. The capability of appreciating with gradually increasing accuracy the site of cerebral lesions has been much enhanced of late years by the work of physiologists and pathologists.

With the aid already afforded them, it is now the duty of clinicians to endeavour to increase this knowledge. The almost speculative presumption of Gall, that the nervous centre for speech is situated in that part of the brain resting on the posterior half of the roof of the orbit, was greatly strengthened by the pathological researches of Broca, who in 1861 affirmed that the second and third convolutions of the left frontal lobe of the brain must be perfect for the production of articulate speech. Since then Ferrier and others have shown by experimental evidence that this nervous centre, as well as that for governing the movements of the upper extremity, are to be found in the area supplied by the middle meningeal artery. This condition of ataxic aphasia therefore only tends to confirm our former opinion that the congestion and irritation were most marked in a limited area of the left cortex.

The prognosis of such a pathological condition of the brain must necessarily be at best a guarded one. The gravity of the lesion, however, is much lessened by the nature of its cause. The fact that it is of syphilitic origin allows us to be much more hopeful than we otherwise could be. In any case the general health of the patient will speedily be affected unless efficient treatment be at once resorted to. If delayed, structural changes soon follow, and insanity, paralysis (from cerebral hæmorrhage), and death may quickly result.

With regard to treatment, the first indication is obviously to remove the cause, if that be possible. In the present case the remoter cause is a diathetic one—viz, syphilis,—and the immediate one, excess of alcohol. The latter has been entirely proscribed, and for the constitutional dyscrasia I have ordered ten grains of iodide of potash to be taken thrice daily. The local measures adopted for diminishing the cerebral or meningeal congestion have been limited to causing the hair to be removed from the head, and the application of the icebag for a very brief period at the beginning of the attack; but, as it caused in a few hours a most depressing action on the heart and temperature, it was soon discarded. Bloodletting by cupping or by arteriotomy of the temporal, or leeching behind the ears, and also all purgatives, have been withheld, because of the patient's very prostrate condition.

The barbarous custom of blistering the scalp is now nearly universally condemned as inefficacious in every form of cerebral irritation, and I have not thought it applicable in the present example. For a successful termination I rely upon rest, careful nursing, simple nourishing food, and the largest doses of iodide of potash the patient can bear. Should amendment fail to follow this treatment, and especially if cerebral pain become localised and more severe, and if, moreover, this pain be increased by tapping, I would assume that the congestion had spread to the dura mater, and would consider it expedient to trephine at an early stage before diffuse suppuration or structural changes had imprinted a fatal aspect on the case.

A few days after the above digest of the case was given severe increasing pain was experienced in the left antero-parietal region, accompanied by a puffy swelling of the scalp at the same part. The pain was intensified by pressure, and the aphasia, sleeplessness, nausea, and sickness were considerably accentuated. The pulse was weak and rapid (120); the temperature only reached 99·4°. The localisation of the pain, the remarkable sensitiveness on pressure, and the œdema of the scalp signalised the extension of the vascular disturbance to the dura mater, and at the same time necessitated consideration of the propriety of direct surgical treatment. The dangers ahead were suppuration, compression, and destruction of a vital organ, and the only efficient alternative seemed to be the chances of relief which trephining might afford. Accordingly, on consultation with my colleague, Dr. John Duncan, I determined to trephine at a point two inches and a half above the anterior margin of the ear in the area of the two anterior convolutions of the brain. The patient was accordingly chloroformed, and a circle of dense sclerosed bone removed, disclosing a dark venous congestion of the dura mater, which was firmly adherent to the surrounding bone, and seemed to be separated from the brain by fluid to the extent of one-sixth of an inch. A puncture was accordingly made, but only serous discharge escaped. The wound was dressed with protective and carbolate of glycerine, covered by a flat piece of sponge and absorbent wadding. The immediate results of the operation were pronounced improvement in the power of articulation and, coincidently, complete and permanent relief from pain. Quiet, refreshing sleep was soon obtained; and when the nausea ceased, the patient was able to eat a more mixed dietary than she had been capable of doing throughout the whole previous course of her illness. The clonic spasms were the last symptoms to amend, and did not entirely disappear until Sept. 16th. The wound healed promptly and the bony circle removed was almost entirely regenerated. The patient is now regaining flesh and strength, is out of bed for part of the day, reads almost continuously, and speaks sentences intelligently with a *staccato* pronunciation. With this exception the nervous system is absolutely normal.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—A meeting of this Association was held at Hull on the 24th ult. After visiting several places of interest in the town, and being entertained at luncheon by the Mayor, an address was delivered by Mr. S. W. North, the president of the Association, and a paper read by Dr. Mason on "The Sanitary Condition of Hull," in which the author gave it as his opinion that Hull was never in such a good sanitary condition as at the present time. A discussion followed, in which Dr. Hime (Bradford), Dr. Hardwick (Rotherham), Dr. Wilson (Doncaster), and other gentlemen took part. Subsequently a paper was read by Dr. R. Bruce Low, of Helmsley, on "Rural Sanitation."

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SYPHILITIC AFFECTION OF CEREBRAL NERVES;

WITH OBSERVATIONS.

BY HENRY LEE, F.R.C.S.,
CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

CASE 1.—A gentleman came under my observation on July 17th last, who had had fever in India, followed by loss of power in the right leg, in 1881. From this he completely recovered. In October, 1883, he contracted syphilis, and secondary symptoms appeared in November following. When I first saw him his hearing was impaired, and he had constant singing in the head. The whole of the muscles supplied by the portio dura of the seventh nerve were paralysed on both sides. This had produced a very peculiar expression of countenance: the lower lip had fallen; the food lodged between the cheek and the teeth; he was unable to close his eyes; he never smiled; and when talking he artificially supported his lower lip with his finger, but even then his articulation was very peculiar; sensation of the skin of the face was perfect. He commenced a course of calomel baths on July 17th, and was directed to take a pint of the simple decoction of sarsaparilla (L.P.) daily. On Aug. 12th his hearing had improved, and he could bring his lips together and nearly close his eyes. On the 25th he had regained the motion on the left side of his face, some singing in the ears still remained, and, as he said, "the food still sticks a little in the jaw." During my absence from town this gentleman wrote to me, saying that, at the urgent solicitations of friends, he had been induced to place himself under the care of a "specialist for the nerves," so that he might be treated in the country.

The simultaneous affection of the auditory nerves and nerves of motion clearly point to the origin of the seventh pair as the seat of the diseased action in this case. The pathological condition is as clearly demonstrated as in Sir Charles Bell's experiments. In fact, the conclusions are, if anything, more satisfactory, as the patient could describe his symptoms. In Sir Charles Bell's first experiments he was, no doubt, led to a wrong conclusion. On dividing the branches of the fifth nerve in a donkey he observed that the lower lip dropped, and he then concluded that the fifth nerve was a nerve of motion. This error was subsequently corrected, and it was satisfactorily shown that upon the division of the branches of the fifth nerve in an animal the lower lip fell and the food escaped out of its mouth, because the regulating power, the power of feeling, was gone. In Sir Charles Bell's first essay, published in the Philosophical Transactions for 1821, he represents the seventh nerve as controlling the instinctive actions, but not the voluntary actions, of the face. In support of this theory Sir Charles Bell observed that after dividing the seventh nerve on one side the animal still continued using its lips in taking food. The motor nervous influence was withdrawn from one side only of the orbicularis oris, but not from the other. When the seventh nerve was divided on both sides the muscles of the cheeks, the muscles of the lips, as well as of the nostrils, were completely paralysed.[1]

CASE 2.—A married gentleman had syphilis some years ago, for which he appears to have been imperfectly treated. After the secondary symptoms had subsided, the parietal bone on the left side became enlarged to a considerable extent. There was some loss of power in the right leg; this was occasionally better and occasionally worse. After the lapse of many months he had a fit and became unconscious, and there was some loss of power in the right arm. His memory at the same time suffered. The point of interest in this case was that for many months the power of adjusting the focus of the *left* eye was impaired. This was tested on several occasions and at long intervals, always with the same result. He saw well at a distance with the right eye, but was ordinarily short-sighted with the left. By an effort of the will and after a few seconds he could focus the left eye to the same distance as the right, and see as well with one as with the other. On looking along a narrow ruler with both eyes the extremities of the ruler appeared to diverge, "so as to make a very closely formed X." There was nothing the matter with the eye itself, nor was there the least indication of any branches of the sympathetic being affected. The change of focus was produced entirely by a voluntary effort. The ordinary motions of the eye were perfect.

The very interesting question then arises, Upon what condition did the imperfect adaptation of the eye to vision at different distances in this case depend? Since Sir Wm. Bowman made the discovery of the mode in which the eyes are adapted to vision at different distances by a mechanism within the eye itself, little attention appears to have been given to the influence of the external muscles of the eye in producing the same effect. This subject, however, occupied the attention of former physiologists. The fact that the eye is naturally flaccid, and liable to different degrees of tension, indicates that by slight pressure its diameter may be altered. Extreme tension, which prevents any sense of fluctuation, indicates very serious disease. Short-sighted persons are constantly in the habit of half-closing the eyelids so as to make slight pressure on the anterior surface of the eye in looking at distant objects. The antero-posterior diameter of the eye is thus slightly shortened. The action of the external muscles on the eyeball might be called the coarse adjustment of the eye in contradistinction to the fine adjustment by the mechanism within the eye itself. The antero-posterior diameter of the eye may be lengthened as well as shortened. Dr. Hosack[2] says that external pressure is capable of altering the focal length of the eye. With a speculum he made pressure upon his eye while directing attention to an object twenty yards distant, and saw it distinctly. Endeavouring to look beyond, everything appeared confused. Upon increasing the pressure considerably he was enabled to read a book distinctly held at a distance of two inches from the eye, although in the natural state of the eye he could distinguish neither lines nor letters. This experiment may easily be repeated in a very rough way. If a book be placed before the eyes so close that the type can no longer be distinguished, and pressure be made through the upper eyelid deep into the orbit, the type will become more distinct. In all animals, birds, and fish the muscles which in man are called oblique are really transverse. The superior in all has its special nerve, the fourth; while the external rectus in like manner is supplied almost exclusively by the sixth. Sir Charles Bell has shown that with regard to opposing muscles when one acts the other relaxes, or loses its tone, so that they act in concert although not supplied by the same nerve.

Now, we have in the eye the external and internal rectus, which taken together have a double supply of motive nervous power, the one for the ordinary motions of the eye; the other to regulate the degree of divergence from the usual axis of vision.[3] In like manner the two oblique or transverse muscles taken together having a double nervous motor supply must have a double function. The first, that of rolling the eye so as to enable it to follow a revolving object sufficiently long to produce distinct vision; the other has not been generally acknowledged. Considering the disposition of the oblique or transverse muscles in all classes of animals, the action must be (when they act together) to compress the eye laterally and then slightly to alter its antero-posterior diameter. In dissecting the eyes of animals I have found a thick cushion of fat on the inner side of the eye. This, during the action of the oblique or transverse muscles, would afford a slight resistance and compress the inner surface of the eye.

Irritation of a nerve has a natural tendency to increase the susceptibility, and, if long continued, the development of the muscle which it supplies. A familiar instance of this is shown in the case of children who, from some reflex irritation, begin to squint. If the irritation be long continued, the strabismus becomes permanent. A very remarkable case occurred under my observation some years ago, which illustrates the same point. A young girl had her little finger drawn across the palm of her hand, so as to prevent her closing the other fingers. After a variety of ineffectual treatment, Sir William Fergusson removed the finger,

[1] Vide May's Physiology, p. 174, and Cæsar Hawkins, THE LANCET, March 15th, 1856. A well-marked pathological case such as that above described might have given the same conclusions with regard to the functions of the seventh nerve as those arrived at by so much toil and so many experiments. It is curious that Sir Charles Bell's first experiments illustrate his own words—that we can seldom rely upon the answers that are extorted from living animals by experiments which go counter to the natural feeling of mankind.

[2] Philosophical Transactions, 1794, Part ii., p. 222.

[3] The influence of the sixth pair of nerves must be of very especial service to animals, such as the hare, that look behind them in running.

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Upon dissecting the parts, I found that the adductor minimi digiti was enormously developed. After a time the ring finger was drawn across the hand in the same way.

The conclusions to be drawn from the foregoing observations are—first, that the focal length of the eye may be altered by external pressure; secondly, that the mechanism by which this is usually effected is under the control of the fourth nerve; and, thirdly, that prolonged irritation of that nerve, direct or reflex, and of its corresponding muscle produced the comparatively and permanent short-sighted condition of the left eye in the last recorded case.

Savile-row, W.

ON THE

NERVOUS OR MUSCULAR ORIGIN OF CERTAIN SPASTIC CONDITIONS OF THE VOLUNTARY MUSCLES.

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OF late years the method of pathology has been, and is still, becoming more and more experimental. The like is true of therapeutics, experimental pharmacology becoming daily more recognised as an important means of study. Experimental pharmacology is, however, able to do more than teach us in therapeutics, it is able also to render important services to pathology itself. The following paper is offered as a pharmacological contribution towards experimental pathology.

In experimenting with drugs a striking fact is everywhere apparent—viz., that we may reproduce the facsimiles of disease in the laboratory. We may illustrate this statement sufficiently by examples taken from two important genera of disease—e.g., if from that kind of morbid action which manifests itself in the shape of over-action of the muscular apparatus—i.e., spasm,—if from this we select tetanus as an example, we can at once put against it as pharmacological counterpart the effect on the organism of strychnine in toxic dose. Still better examples do we get from that kind of morbid action which manifests itself in the shape of under-action of the muscular apparatus, to which we apply the name paralysis. Pathology has taught us concerning this form of disease that it may be of cerebral, of spinal, of peripheral origin; and pharmacology enforces this teaching by presenting us, as the result of drug action, with each of the above varieties of palsy. Thus the group of the anæsthetics, including chloroform, ether, nitrous oxide, may probably be considered as of value chiefly in that its members abolish the functions of the cerebral cortex, motor and sensory (the sensory effect is in excess of the needful here). Then to illustrate by drug action the second group, that of the palsies of spinal origin, we may take physostigma, the action of which is paralysant by depressing the functions of the cord; lastly, to illustrate the third group we may take curare, this drug, as is well known, effecting paralysis by abolishing the functions of the motor nerve endings. It may be said that we have not pushed our examination very deeply and have not attempted to decide, in the case of physostigmine action, whether the paralysis is the result of action on the moter or on the sensory areas of the cord; but this was not the problem before us. We had simply to present, as the result of drug action, a paralysis of spinal origin; the further analysis is not called for.

These few examples will suffice to show how much pharmacology may aid us in the study of disease, since, enabling us as it does to actually produce disease, to multiply its causes, it thereby enables us, by a careful comparison of these causes, to separate the essential from the non-essential, and so to arrive more nearly at a just appreciation. This is the object we have in view in the present paper—viz., to compare certain effects, the result of drug action, with certain other effects (symptoms) the result of disease. We shall begin by first describing the real thing and then proceed to its simulacrum.

There has long been known as an occasional symptom in certain nervous disorders a condition of the muscles, marked by rigidity. Thus in cases of cerebral lesion—e.g., apoplexy,—we are familiar with the so-called early rigidity of the paralysed parts, probably an irritative effect, and also with the rigidity which supervenes more remotely, and is hence known as late rigidity; this latter is probably significant of cord implication, the result of a descending degeneration. Then in various primary diseased conditions of the spinal cord we may meet with this rigidity of the muscles; thus in lateral sclerosis of the cord, likewise, and probably in virtue of the same, in disseminated sclerosis. In the so-called spastic paraplegia of infants we again meet with the same symptom; in this case it may be observed that the pathology is still obscure, and that it is uncertain whether a cerebral or a spinal morbid state underlies the symptom.[1] Lastly, we have in what we term cramp, or cramps, tonic spasm of certain portions of the muscular system, the simple forms of which we are in the habit of regarding as local affections.

In all and each of these cases the question arises, What share are we to attribute to the muscles themselves—what to the nervous system? In how far is the pathology myopathic or neuropathic? This question is none the less pertinent that we have just seen the symptom we are considering in association with disease of the cerebrum and of the spinal cord, for there still remains to determine in how far cause, in how far coincidence is before us.[2]

A very valuable aid towards answering the above question on clinical grounds has been gained of late years in the appearance of a disease which has been named Thomsen's disease, though most accurately described before Thomsen by Leyden. The literature on the subject of this disease is chiefly German, though more recently a very valuable article on the same has been contributed by Messrs. Ballet and Marie.[3] Amongst German literature the article by Bernhardt[4] is very complete, and we shall follow chiefly in his lines in our description. To bring out the characteristic features of the affection it will be perhaps best to take an imaginary case and endow it with the several symptoms which have been observed in the cases hitherto recorded.

The patient we will suppose to be a man[5] in early adult years. His complaint is simply and solely of muscular stiffness—nothing else. His appearance is that of health, and it will be found on questioning him on this point that there is nothing manifestly wrong. His past will likewise very possibly show a clean bill of health, with the exception of the affection of which he now complains. As to this his memory will probably carry him back to early childhood. This dating back of the disease to early childhood comes out very abundantly, and is an important feature in the complaint. In one of the three cases published by Seeligmüller this history did not obtain, the patient stating that the affection had appeared suddenly, some four or five years previously, as a stiffness affecting one leg, the left; and that subsequently the other limbs had become implicated. Seeligmüller[6] rises to the occasion, and thinks that the patient had previously suffered from the complaint, but had not noticed it! Be this as it may, the recognition of the disease at a very early date remains a generally observed fact. Hence for most authors the affection is congenital.[7] Passing to the patient's family history, we may very possibly find that the mother or the father has suffered in the same direction, or, in the absence of such, that a brother or sister is similarly troubled. So marked a family history as in the case of Dr. Thomsen, in which in three generations at least we trace the complaint, we shall scarcely look for. The evidence then obtainable from the family history will give prominence to heredity. We have thus traced back the complaint into the life of the patient himself and into that of his family. What, now, is this complaint more definitely? It is that in the performance of certain voluntary movements the patient finds himself hampered. Thus, should the patient flex vigorously his

[1] Leyden, discussing this question of muscular rigidity, states that it occurs not infrequently in cases of spinal cord disease, and, as he believes, "in association with various diffuse processes of the motor areas."—Klinik der Rückenmarkskrankheiten, 1874, Bd. I., pp. 123, 129, *et seq.*

[2] Under the heading "muscular rigidity" we have not mentioned the rigidity met with in the cataleptic state; yet this also must be included in a sufficient pathology.—Op. cit., p. 128.

[3] Archives de Névrologie, No. 13, Jan. 1883.

[4] Virchow's Archiv, Bd. lxxv. (1879), p. 516.

[5] Recorded cases are too few to yield statistics of any value on the subject of sex.

[6] Gerhardt, Handbuch der Kinderkrankheiten, Bd. v., Erste Aufl., 2te Hälfte, p. 175.

[7] Thomsen has observed the affection in his own family, even in the cradle, Archiv. f. Psychiatrie u. Nervenkrankheiten, Bd. vi. (1876), p. 709.

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arm at the elbow he may find for a few seconds that he is unable to extend it again. Should he perform full vigorous flexion of the fingers on the palm, as in grasping the hand, he may find the same difficulty, which trouble is also shared by his friend, who may, as one of the authors tells us, have literally to free his hand as from a vice. Clearly the affection is likely to lead to embarrassing situations, and some of the recorded facts are decidedly comic. We have described the arms as affected. We shall almost certainly learn from the patient that the lower limbs suffer similarly, and, indeed, in a higher degree than the arms, the patient being seized with the stiffness in the act of rising from a sitting posture, in the act of mounting his horse,[8] in the first movements of walking. This leads up to the very important fact we must record—viz., that this peculiar stiffness is especially observed *at the commencement of volitional movements;* indeed, as the movement is repeated the stiffness wears off, and may completely disappear, the patient then being as nimble in his movements as the rest of the world.[9] Along with this stiffness we shall learn from the patient that there is associated a peculiar sensation, very apparent to him, but rarely amounting to pain, and therefore very different from the sensation accompanying cramp proper. This is appreciated best by observing that the patient does not come to you for the pain, but almost solely on account of his unmanageable muscles.

We have mentioned the muscles of the lower and of the upper limbs; may others suffer in this affection? Yes. In our conversation with the patient we may possibly have noticed that an unusual movement of the muscles of expression has been slow to resolve itself; this has become yet more evident on asking the patient to voluntarily contort his face. Of the transitory Medusa effect following such contortion the patient is himself conscious as a stiffness of the face muscles. Another thing may have struck us—viz., a slowness, an awkwardness in the patient's speech which, on the theory of a participation of the tongue muscles in the general muscular affection, is readily accounted for. Finally, we may have observed that the movements of the eyeballs are not quite free, and the patient will tell you as much. Thus he finds himself unable at times to turn his eyes suddenly in a given direction, or if the movement obtains it does so haltingly. Each one of the points just enumerated finds exemplification in Leyden's case;[10] in this, moreover, the affection of the tongue muscles was tested by making the patient protrude his tongue and then telling him to rapidly carry it from one side of the mouth to the other; the result in many cases was temporary fixation in a midway position.

Proceeding in our examination, we shall, on making the patient strip, note unusual muscular development, to the extent even of warranting the term athletic. This muscular development may, as in the case of one of Thomsen's children, be quite out of proportion to the bony framework; yet Thomsen refuses to call the muscles hypertrophic. As Seeligmüller and Bernhardt point out, the question is one of a definition of terms. Of the parts of the body affected, we shall note that the muscular hypertrophy finds accentuation in the lower limbs, and in particular affects the muscles of the thigh and calf—i.e., the hypertrophy is most marked in those muscles which are most liable to the spastic seizures; next, passing to the trunk, we may very likely find the sacro-lumbar muscles on either side of the spine decidedly more massive than is natural; and, associated with this, we may also find present a well-marked lordosis. This was so in Bernhardt's case. Thus far, from inspection, we cannot fail to have been struck by the likeness to pseudo-hypertrophic paralysis; and in Bernhardt's own case this was the *primâ facie* diagnosis. Proceeding upwards, the muscles of the upper extremities will probably be noted to be well-developed, but the term hypertrophy will be less fitting. Visible hypertrophy of the face muscles we shall not observe.

If we now test the muscles we may in the first place discover that even whilst at rest they are of firmer consistence than normal. Thus Seeligmüller describes the muscles in one case as of board-like hardness, in another as stony, in the third as being simply firm. In Bernhardt's own case they are simply described as being firm, and in Ballet and Marie's case the consistence is only doubtfully increased. Increased consistence then will be an occasional but not very characteristic feature of the muscles at rest. When thrown into action, however, the muscles will be observed to harden and to stand out in relief, and to persist in this state during the whole time of the impeded movement.

With this we about conclude the list of positive symptoms, and they may be very quickly summed up as follows. We have an affection of the voluntary muscles marked by the supervention of a spastic state on the act of contraction. This is marked for first volitional acts, but soon wears off with repetition of the act. The muscles generally are affected with this stiffness, though certain ones suffer more than others. The affected muscles are increased in bulk, but doubtfully in consistence.

Further examination reveals a long list of negatives. Thus the muscles tested by the dynamometer reveal nothing in the shape of lack of power, the athletic appearance is not contradicted. The condition of the parts around reveals nothing abnormal, no excess of the panniculus adiposus; the surface of the skin healthy-looking, no marbling; sensation, with one exception (Seeligmüller's), intact; of touch, temperature, pressure, pain, in each case the sense is recorded as normal; in addition the muscular sense is preserved. Electric examination in like manner yields almost negative evidence, for though peculiarities in the mode of reaction are recorded, nothing of the nature of the reaction of degeneration is discoverable. Ballet and Marie's paper is the most detailed on this point. They submitted their patient to a very careful electric examination, the results they summarise thus. *The muscles and nerves are less excitable than normal, but there is no marked deviation from the normal formula.* The slight deviation was that for certain of the muscles the anodic closure contraction was "precocious" as compared with the cathodic; also, another point, that the anodic opening contraction was completely absent. The characteristic effect which, however, comes under the heading of *peculiarities* was the readiness with which the contractions electrically excited became spastic. This of course is simply what we should be prepared for having seen that the same peculiarity marks the effect of stimulation of the muscles through their motor fibres by the will. In the absence of the spastic state Ballet and Marie did not observe anything abnormal in the muscle curve obtained with a Marey's drum. In Leyden's case the electrical reactions are recorded as normal. In Bernhardt's the reaction formula is said to be normal, but we find noted as a peculiarity that short excitation, electric or mechanical, yields a local contraction outlasting considerably the stimulation—i.e., the contraction tends to become tonic. Seeligmüller's experience is of a precisely similar kind. We may take it then that beyond the peculiarity of the persistent contraction nothing noteworthy has been observed electrically.[11] Examination has been pushed yet further. Thus we have two records of microscopical examination of the muscular fibres, one by Ponfick, the patient being one of Thomsen's sons, and the fibres extracted from the biceps muscle. To Ponfick's astonishment nothing faulty was found. The like negative results were obtained by Petrone, an Italian observer.[12]

[8] Ballet and Marie, op. cit.

[9] We shall probably learn from the patient that certain conditions predispose to the development of the spastic state—thus fatigue, prolonged exercise, cold, conditions obviously depressant to the organism.

[10] Op. cit. In Ballet and Marie's case the same trouble wich the movements of the eyeballs was observed, as also with the tongue movements. Likewise in a case recorded by Schönfeld.—Virchow u. Hirsch: Jahresbericht, 1884 (Jahrgang, 1883), p. 77.

[11] Mobius, Virchow u. Hirsch (Jahresbericht, 1884, p. 76), records similar results from electrical examination in a case of Thomsen's disease. Schönfeld (op. cit., p. 77) records "no electrical abnormality."

[12] See Ballet and Marie's paper, loc. cit.

(To be concluded.)

FIRE AT SALFORD UNION HOSPITAL.—On the 24th ult. a fire occurred in the padded room of this hospital, in which a lunatic was confined, and which resulted in the death of the unfortunate man. The fire, which was extinguished without difficulty, is supposed to be due to the destructive tendencies of the occupant of the room. It is surmised that he first succeeded in making a hole in the canvas with his finger-nails, and then ripped the material so that he was able to climb up the wall until, reaching the fan-light over the door, he smashed the glass and applied some of the straw padding to the gas jet which was burning outside. The fan-light is fully ten feet from the floor, and it had been thought impossible for anyone to get to it without something to stand upon. At the inquest on the 27th ult. the jury, after some consultation, returned a verdict that death was caused by burns received in the padded room of the hospital, but that there was no evidence to show by what means the fire originated.

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CHOLERA.[1]

BY MAX VON PETTENKOFER, M.D.,
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CHOLERA is an infectious disease. By infectious diseases are meant those diseases which are caused by the reception from without of specific infective material into healthy bodies, which material acts like a poison. To the list of infectious disorders belong such different maladies as small-pox and intermittent fever. Infective material differs essentially from lifeless chemical poison in being composed of the smallest possible units of living matter which when taken into healthy bodies rapidly increase and multiply under certain conditions and by their life-growth disturb the health of the body. These germs of disease belong to the smallest units of life, to the schizomycetes, which lie on the borderland of the invisible, and which, according to their form, are known as cocci, bacteria, bacilli, vibriones and spirilla, and thirty millions of which, according to Naëgeli, hardly weigh one milligramme. Infective material is derived partly from sick individuals, in which case the disease is termed "contagious" and partly from locality (earth), in which it has developed, in which case the resulting disease is termed "miasmatic." It is obvious that when derived from both sources the resulting affection was, and even now is, designated "contagio-miasmatic." I am of opinion that the terms "contagium" and "miasm," which have given rise to much misunderstanding, would best be dispensed with altogether; and that the designation "infective material" (Infectionstoff), which is common to both contagium and miasm, should be divided into entogen and ectogen, according as the material is obtained from the sick body or the locality (soil). According to many, cholera would belong to the entogenous section, and according to others to the ectogenous division. The supporters of the first view might be termed "contagionists"; the supporters of the second "localists." As is always the case in medicine, the conflict of views is important, inasmuch as the measures to be adopted in the healing and prevention of a disease depend on the theoretical conception of it.

All readers know that cholera originated in the East Indies, and most individuals are also aware that the epidemic spread into Europe in the present century (1830). We shall first speak of its age in India, the home of cholera. There the disease appears to have existed at all times; not only at the time of the discovery of the sea passage to India by the Portuguese, but long before, as the oldest Sanskrit writings show. Many hundreds of years before the birth of Christ the disease was accurately described and its epidemics spoken of as attended with *mahâ mârî* (*magna mors*, great death). In these writings the disease appears under widely different names, which are taken from the chief symptoms:—(1) *Vishâ dschikâ*, vomiting and sweating; (2) *alasikâ*, cramps which bring on exhaustion and stiffness; (3) *rilambikâ*, which is perhaps best translated by the term "collapse." Another word which is often used in India is taken from the Mahratta, *mordeshin* or *mordeshi*, which has been translated into French as *mort de chien*, but which also means "collapse."

In the seventeenth and eighteenth centuries A.D. there are abundant proofs and descriptions of epidemics of this disease. The disease is best known in Europe under the names of cholera, cholera morbus, Asiatic cholera, since the epidemic of 1817 to 1819, in which the English army under the command of the Marquis of Hastings during a war against the natives was rendered unfit for fighting and almost annihilated. But cholera had never visited Europe till the present century, when in 1830 it appeared in Russia and spread to Poland, where war was prevailing. Since that time, sometimes at longer and sometimes at shorter intervals, cholera has appeared in Europe. The question why cholera remained a thousand years in India before it first began to migrate is one of great interest, but one which cannot be satisfactorily answered. The principal consideration appears to me to be that the event happened at the time when intercommunication in all directions, both by water and land, had become more rapid. The first steamship appeared in the Indian waters at the beginning of the second decade of the present century. By land also intercourse was greatly accelerated. The Russians possibly took cholera from India, Arabia, Afghanistan, or Persia, through couriers and stage coaches. It soon became clear that cholera, the specific cholera germ, was in some way or other propagated along the paths of human intercourse, and it also became evident that unless the germs found a suitable soil within a certain time they did not flourish. Observers soon discovered that cholera was more prone to appear in certain regions and to affect certain localities, whilst it shunned other districts; and, again, that other regions were only visited at intervals of many years. It is also a fact that Asiatic cholera never yet appeared at a place which had not previously been in communication with a region where cholera prevailed; and, further, that the disease from an infected locality never yet passed on to another place if the journey lasted a certain time without interruption. The large intercourse between India and Europe, more particularly England, by means of ships which sailed round the Cape of Good Hope, had never succeeded in carrying cholera from India to England; it was only by the overland route that cholera reached England. Neither had the Cape or Australia ever been visited by cholera. It is possible that in the future the communication may be so much accelerated that cholera may get to these countries. In much the same way South America escaped during the epidemic (1830–1840) in Europe and North America. It was supposed that in South America yellow fever was enough to prevent cholera, or that this disease kept out cholera, until suddenly, in 1854, after a service of fast sailing vessels between Philadelphia and Rio de Janeiro had been established, the chief town in the Brazils experienced a terrible epidemic of cholera. When cholera passes overland it dies out unless it find a suitable soil within a certain time. Rainless deserts are unfavourable to cholera. Caravans which pass from infected localities through deserts have never spread the disease, provided the journey in the desert lasted at least twenty days.

Cholera always requires for its propagation favourable stations on land, and as a rule, if the course of epidemics be traced, a gradual extension in successive years is found to take place in fixed directions. In the east and south-east of Russia, for example, cholera prevailed after it had raged in Persia in 1868; in 1869 eleven, and in 1870 thirty-seven, provinces were affected, and amongst them five districts in Poland. In the year 1871 the epidemic spread into the west, east, and north of Russia, and succeeded in reaching East Prussia, when Königsberg was severely visited, so that from July 24th to November 8th 2012 individuals died there of cholera; whilst in Berlin only 52 and in Potsdam only 71 succumbed. In 1872 the epidemic reached Eastern Hungary, and in the following years reaped rich harvests in Germany. It has rightly been said, therefore, that cholera does not travel quicker than man. Nevertheless, the spring-like mode of progression of cholera is noteworthy: for example, it regularly jumps from Marseilles to Paris, or *vice versâ*, passing over Lyons, the second largest town of France. Or, watching the passage over smaller distances, in 1854 it went from Munich to Augsburg by railway, leaving intact the ten intermediate stations, although several patients alighted and some even died, and, notwithstanding that cholera raged at Augsburg and Lech, it never once sprang over the valley of Lech to the town of Friedberg, which is but a league distant. Or to take a still narrower circle, cholera thrice (1836, 1854, and 1873) invaded Munich, and every time halted in those houses situated on the clay soil in the suburbs.

The capriciousness of cholera may be observed in its relations not only to space but also to time; at one time it infected Prussia and shunned Saxony, while at another it did exactly the reverse. In the year 1849 Berlin experienced its worst epidemic, an epidemic in which Saxony was but slightly affected (488 cases), and Bavaria not more so. In the year 1850, when the cholera in Berlin and its environs had almost subsided, the epidemic raged in Saxony until 1551 deaths occurred, though Bavaria was not involved. In 1854 the matter was altogether different; then Munich and Bavaria had its worst epidemic, at which time the Industrial Exhibition was held at Munich, and the intercourse between Munich and Saxony and the whole of Germany was very active. The cholera did not, however, spread to Saxony. All the fatal cases of cholera in Saxony had taken the disease from Munich. The epidemic did not spread further north; yet the inhabitants

[1] Specially translated for THE LANCET from early proof-sheets furnished by the author.—ED. L.

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of Saxony and Prussia had sufficient susceptibility for the disease, as was proved when they went to Munich. It was in the year 1855 that a change occurred; then Bavaria was exempt, and the epidemic devastated Saxony and North Germany. What relation the extension from India by the agency of man may have to conditions of time and space, to local and periodical disposition, has yet to be worked out; but the fact of the existence of relations in time and space is as undeniable as that of cholera itself. The cholera germ alone will not explain everything. We must now inquire into the differences between places which are and those which are not susceptible, and endeavour also to trace out the relations in time which obtain in susceptible places.

No doubt can be entertained that the configuration of the earth has a certain influence. Relatively low-lying sites are very favourable to cholera. Where the surface of the earth has an undulating outline it will be found that districts and individual houses which are situate on the summit of the undulation very frequently have no, or only a very small, disposition to the development of an epidemic of cholera, whilst in the hollow of the undulation under like conditions the opposite holds good. The truth of this statement is seen in single districts where parts or single houses exist on the summit and others lie low.

Another feature which is found in every epidemic is the falling off of the disease in the neighbourhood of and on mountain ranges. The Himalayan mountains, those of Lebanon and the Alps, have always formed the places of refuge for fugitives from cholera. Now and then an epidemic occurs in the mountains; these exceptions will be dealt with later. The immunity, or the slight susceptibility, of mountain ranges for cholera is witnessed in India as plainly as it is in Europe. A familiar example is the complete freedom from cholera of the hill stations along the Himalayas, in which, through frequent changes of troops, the cholera has every chance of being taken up from the plains. In the severe epidemic of 1869 there were only two cases of cholera in nineteen hill stations. A similar experience is met with in narrower areas. For instance, in Munich, 1873-74, the frequency of cholera was widely different in the seven barracks of the garrison. In the low-lying Isar Kaserne (occupied by cuirassiers, heavy cavalry regiment), out of 1000 men there were 40 cases of cholera; in the high-lying Max II. Kaserne (with two field artillery regiments) only 3 cases, and this without there being any difference in the construction of the caserns, the occupation or the diet of the men or the drinking water. Another local factor, which is also very evident, is the nature of the soil. Where the soil is compact, and not, or very slightly, permeable for water and air, the development of cholera is much hindered. Some time ago Jameson, in his description of the epidemics of 1817 and 1819 in India, said, "Cholera does not appear to like a rocky soil." French epidemiologists (Boudée and others) have said the same thing. I studied this point in Bavaria in 1854, and then collected so many facts that I came to the conclusion that cholera requires for its epidemic development a porous soil through which air and water easily percolate, and that a compact soil was decidedly inimical. It will be sufficient to give a couple of illustrations. When the cholera broke out in Munich the inhabitants scattered themselves on the mountains. Many settled in the valleys, where several fell ill and died. The greater part of the town in which the better hotels were situate lies upon compact chalky soil, and the smaller part was built upon alluvial soil. In this part the cholera assumed an epidemic character. In the higher lying districts (Schrödelgasse) the epidemic began in the beginning of August, and in the lower lying areas towards the end of September, whilst the greater part situate on chalk was not affected. Amongst the Jura mountains to the left of the Donau lies a village called Kienberg, which is built on rock. In this village the cholera broke out so fiercely that within a month 30 per cent. of the inhabitants died. When I went there I found many houses emptied, whilst other houses had not had a single case of illness. I then thought that the drinking water was at fault. But the whole village drew water from a single spring at the foot of the slope on which the village was situate. From a study of the soil I found that all the houses built upon porous and rather loamy sand had been attacked, whilst those which lay upon the compact soil of the Jura rocks had escaped. The greater part of Kienberg stands upon a cleft of the mountain which had been filled up by fine soil which had resulted from the wasting down of the higher parts of the mountain (alluvial soil). That some doubt should be thrown on the decision of the commission which had adopted my views on the influence of the natural state of the soil on cholera was not to be wondered at. I spared no pains, however, in going to the Krain and Karst mountains, where cholera apparently was raging on a bare rocky soil, and instead of contradiction I found a further corroboration of my views. The towns lying amongst these mountains were found to suffer from an affection which unquestionably proceeds from the soil—namely, ague. The mountains are freely cleft, and the clefts are filled with porous soil, allowing of the free percolation of water and air, so as to be nothing more than an alluvial soil. Here streams rush down the mountain side, turn off at its base, and run on richer still in water. You may often find there a cleft having the shape of a funnel, filled with porous earth; the nature of the cleft and its contained earth may be determined by sinking a so-called Dolione, when the bottom will be found to be solid stone. Through the Adelsberger growth the rapid Poik flows; and on the other side of the mountain in which the grotto is situate the waters of the Poik roll off under the name of the Unze; the Unze again flows off at the base of a mountain, as a navigable river, on the other side of Laibach. As I proceeded from Laibach to Novomsto (Neustadtl), I saw shining in the distance before me and far below the mountain a village which turned out to be Rasderto, where, as I learned from my companion, a schoolmaster, that ague prevailed, and, indeed, I found many sufferers confined to bed from this complaint. Rasderto lies below the sites which the cholera infested. At the base of the rocky hills on which Rasderto is situate there flows a stream which is so powerful that it turns a mill.

In order to study the cholera at Malta I proceeded thither in 1868 at my own expense. Mr. John Simon procured me the necessary introductions. On arriving in the harbour of Valetta I was forcibly struck with the rocky nature of the soil. The rocky hills rose high above the water, and on alighting on shore my feet encountered the resistance of bare rock. I ascended the steps hewn out of the solid rock, by which means I reached the plateau, on which the greater part of the town is built. A promenade, which was also shaped out of the natural rock, led me to my hotel. I now became very desirous for a further study of the place. Mr. Inglott, at that time the chief medical officer of the hospitals in Malta, and Dr. Pisani, a distinguished Maltese physician, rendered me very efficient aid in my researches. They often wondered why I had determined to visit Malta. How often did they say to me when I questioned them on the nature of the soil of this rocky island, "Our rock is not rock in your sense of the term, but it is a sponge which sucks up everything which falls upon it"? Investigation proved that the Maltese rock was as porous as Berlin gravel, and that more than a third of its volume consisted of air-containing pores. It is so soft that it can be cut and sawn like wood. As visitors may purchase wood carvings from Oberammergau and Berchtesgaden, so one can obtain carved work of Maltese stone. Tiles cut from Maltese stone find a ready sale in Italy, where they serve to decorate the floors of rooms, where, owing to their porous nature, they are not so cold to the feet as stone tiles. Maltese tiles are as good as wood without being so inflammable. Moreover, of the same stone vessels are made which English sailors use to filter their drinking water. Turbid water when poured into such vessels filters off as a transparent fluid. It will be readily understood that I now no longer concerned myself as to an explanation when I heard that an epidemic of cholera had broken out at a place which apparently had a compact soil.

Not only does the physical nature, but also the chemical constitution, of the soil have an influence on the occurrence of cholera—to wit, the presence of organic matter and water. The influence of the soil on the development of infectious diseases can only be understood by a study of the organic processes which take place in it. The processes are eventually dependent on the action of the lowest organisms, which require for their growth a certain temperature, so much water, air, and food stuffs. In order to explain the occurrence of cholera on such varied soils as those composed of granite, sand chalk, and shell chalk, we must suppose that the soil contains in its interstices much organic matter and water. Farmers know how useless pure soil is, whereas the luxuriant growth of plants when the ground is manured is well known to all. These observations are applicable to the lowest plants, the bacteria, no less than to grain and vegetables.

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The germs of putrefaction and fermentation abound in the free atmosphere, but they only grow and multiply where they find suitable food. The hygienic uses of cleanliness here find their explanation and scientific foundation. The refuse from houses, dissolved or suspended in water, forms an excellent nutritive material for the lowest organisms which are so harmful to us. Emmerich has shown that the purest water after being used to clean the floor of a room contains in a very short space of time abundant germs of disease, so much so that a drop of it injected under the skin of a rabbit or guinea-pig is followed by a fatal result. With this dangerous slop-water it is the custom to charge the earth in and about our dwellings. Since man began to live in towns where drainage was in vogue, diseases dependent on conditions of soil (cholera and typhoid fever) have undergone a striking decrease. Just as a field, when excessively manured, does not always remain good for vegetation unless remanured, so is it also with the uncleanliness of the soil in the neighbourhood of our houses. As soon as we cease to make unclean—to manure—so soon do our towns begin to purify themselves, just as a churchyard after a time becomes purified. In a similar fashion does good drainage act in cleansing our towns, and the necessity of a pure water-supply is thus vindicated. It is in this way that, according to my views, cleanliness acts as a deterrent to cholera. Cholera germs may come, but they cannot fructify under such circumstances. That sites naturally exist which, without human interference, are unfavourable to cholera has already been shown.

Where water entirely fails the organic processes soon come to an end; this is true of the soil of the earth. In rainless deserts the soil is dry except the most superficial layer during the night. In such desert places no organic processes can go on; this is shown not only in the absence of vegetation, but may be proved by an investigation of the nature of the air of the soil ("Grundlutt"); this air under ordinary circumstances contains much carbonic acid, which proceeds from the processes of organic life; but where the soil is free from water the air of the soil much more closely resembles that of the atmosphere above it. This fact has been experimentally proved by Prof. von Zittel by a comparison of the free atmosphere with the air of the soil of the Libyan desert. These observations are believed to explain how it is that cholera does not appear on a very dry soil. Just as too much water is bad for certain plants, so is it also for some members of the lowest class of the vegetable kingdom. It is likewise conceivable that the organic processes in the soil on which epidemics of cholera depend may be effectually checked by an excess of subsoil water or by a want of material. Micro-organisms have been divided into two classes: anaerobe and aerobe. If now we have to deal with an organism which requires oxygen for its existence (aerobe), it is not difficult to understand how the excess of water might deprive the soil of the necessary proportion of air. The more the pores were filled with water the less air would be contained in the soil. In heavy clay soils the water drives the air completely out, and thorough desiccation would be required to replace all the air. Klebs and Tommasi-Crudeli have already discovered a micro-organism which flourishes only in a moist soil containing air—the bacillus malariæ.

(*To be continued.*)

ON THE PATHOLOGICAL IMPORTANCE OF FLEXIONS OF THE UTERUS.

BY G. ERNEST HERMAN, M.B. LOND.,
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(*Concluded from p. 730.*)

LASTLY, there are some clinical points mentioned by Dr. Hewitt as to which I can only say that my experience is not like his; and leave it to those interested in the subject to observe for themselves and form their own opinions. Dr. Hewitt has no recollection of seeing any case of severe dysmenorrhœa in which the uterus was "in anything approaching a straight condition." Among the 100 nulliparous women whose cases are tabulated in my first paper, I found five whose menstrual pain was so severe as to lay them up, and whose uteri presented no appreciable curve. Vedeler, out of 100 patients who suffered great pain at the menstrual period, found eight in whom the uterus was quite straight. In the twenty-third volume of the Obstetrical Transactions, which contains my paper already referred to, will be found a paper by Godson, describing four cases of severe dysmenorrhœa, with sterility; in one of these it is stated that there was no anteflexion, and in another that there was anteversion. It is not necessary to multiply illustrative quotations, for I have no doubt that anyone who has the opportunity of seeing many cases of dysmenorrhœa, and will pay attention to the shape of the uterus, will soon come to the conclusion that Dr. Hewitt's experience is in this respect quite exceptional.

Dr. Hewitt also regards as erroneous my statement that the cradle pessary will not straighten the uterus. But the only positive assertion that he makes is that the instrument is "of very great assistance in straightening the uterus and relieving dysmenorrhœa." I would ask those interested in the subject to examine carefully either by vaginal and hypogastric or by rectal and hypogastric palpation the shape of the uterus before and after the insertion of a cradle pessary. In the majority of cases they will find no appreciable difference. The position of the organ will be changed, its cervix being pulled forwards, and its body tilted a little back, but its shape will not be altered to any definite extent. A comparison of the measurements of the uterus and those of the cradle pessary will show that it is impossible for the cradle pessary to straighten the uterus by direct upward pressure on the body of the organ.

Another point as to which all that I can say is that my experience and that of others is different from Dr. Hewitt's, is this—that he has never seen retroflexion without symptoms, and only exceptionally without dysmenorrhœa. I submit that this may possibly be because he has only examined patients who came to him for uterine troubles. In my second paper I have mentioned that out of eighty-five cases of retroflexion, the notes of which I examined for the purpose of that paper, I found menstruation painless in twenty-one. There was painful menstruation not relieved by straightening the uterus in fourteen, and relieved without straightening the uterus in eleven—that is, twenty-five cases in which the dysmenorrhœa was proved not to depend upon the retroflexion. In all, forty-six cases out of eighty-five in which retroflexion did not cause dysmenorrhœa.[1] I do not think it needful (although there are many whom I might cite) to quote the statements of others on this subject, because retroflexion is a common condition, and anyone with a sufficiently large clinique can ascertain for himself whether Dr. Hewitt's experience holds good of all cases.

4. *The Effect of Treatment.*—I agree with Dr. Hewitt in thinking that the application in practice of the mechanical theory of uterine pathology is the great test by which it must be judged. We may rely upon it that if it be constantly found that straightening the uterus cures cases which cannot be cured in any other way, then treatment having for its object the straightening of the uterus will continue to be practised, no matter how faulty the explanation of the production and cure of symptoms may seem to be. That a line of treatment of which straightening of the uterus forms a part proves successful in the hands of Dr. Hewitt and others, I do not for a moment question; but it has yet, in my opinion (and I am not alone in thinking so), to be demonstrated that the straightening of the uterus is the essential part of the treatment, the *sine quâ non* of benefit. The cases which give the most striking presumptive evidence in favour of the theory are those of retroflexion with congestion. It is a frequent experience that in such cases the introduction of a pessary which raises the uterus into the axis of the pelvic inlet, and thereby necessarily removes the flexion, is followed by rapid disappearance of all the symptoms. Dr. Hewitt alludes to these cases, and to his mind the good that is done comes simply from the unbending of the uterus. The explanation of these cases that appears to me to be the correct one is that the congestion depends upon pressure of the veins in the broad ligament against the utero-sacral ligaments. As this paper is quite long enough already, and as I have elsewhere discussed the matter, I shall not here state the reasons in favour

[1] Dr. Hewitt quotes me incorrectly, as saying that of 138 cases of backward displacement under my care there was dysmenorrhœa more or less severe. I expressly stated that in forty-four of these menstruation was painless. Besides this, Dr. Hewitt has taken no account of the number of cases in which dysmenorrhœa was *not* relieved by straightening the uterus, and *was* relieved although the flexion persisted.

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of my own view, but merely set forth the reasons which make me think that the unbending of the uterus is not the *sine qua non* of success in treatment. First, there are cases in which the same symptoms are present, and these symptoms are relieved by the same treatment—(i.e., the raising of the uterus so that it lies in the axis of the pelvic brim), but there is no flexion, the uterus being retroverted not retroflexed. Secondly, there are cases of retroflexion in which all the symptoms are removed by a pessary which simply pushes up the uterus but does not straighten it. These are cases in which congestion is absent (because when the uterus is congested, it is generally tender, and the presence of a pessary directly upon it cannot be borne), but the flexion in many such is acute. Thirdly, there are cases in which, after cure in the manner described, as Dr. Hewitt would put it, by unbending the uterus, the flexion returns as soon as the pessary is left off, but not the symptoms. These cases are not found unless they are looked for. It has been my custom when I removed a pessary from a patient whom I had treated by causing her to wear it to ask her to come in three months and tell me how she was. Many patients who feel well and think themselves well do not do this; but a few have done so, and in some of these I have found what I have mentioned; the flexion is as acute as ever, but the patient is quite well. On account of his quaint way of putting it, I may quote Fritsch.[2] "One not seldom sees patients who come back months or years after the removal of the pessary, full of gratitude for their cure. We congratulate ourselves on having definitely cured retroflexion, but on examination again we meet the old retroflexion!" In these cases it is clear that the bending of the uterus cannot have been the cause of the symptoms. There are thus a large number of cases of retroflexion in which the success of treatment is not consistent with the view that the flexion is the essential cause of the symptoms; and the cases which are consistent with this view can be otherwise explained.

Dr. Hewitt has written a good deal on the relation of malnutrition to flexion of the uterus. His argument, as I understand it, is this: he sees many patients who are badly nourished, and whose uteri are soft and bent. By diet, regimen, and medicinal treatment he builds up the general health, and at the same time, by positional treatment or by pessaries, he corrects the assumed malposition of the uterus. The result is that the patient gets well, and Dr. Hewitt attributes this benefit to the straightening of the uterus. But it is such a common thing for patients who are badly nourished to recover when they are well-fed and kept under a sanatory regimen, that unless we can separate the effect of the local treatment from that of the general treatment, such cases to my mind prove nothing. Dr. Hewitt says that I repudiate the treatment of dysmenorrhœa by bougies. On the contrary, I think it most efficacious, and frequently use it. But my experience is different from that of Dr. Hewitt, in that I do not find it produce any appreciable permanent alteration in the shape of the uterus. Dr. Hewitt says, "That the bougie treatment does straighten the uterus, and that the straightening is one which lasts for a certain time, is incontestable. How long its effect remains will no doubt vary in different cases." In this I quite agree; but its bearing on the question whether flexion is the cause of pain depends on what the "certain time" is during which the bougie removes flexion. I think it is a few minutes at longest. Even were it indisputable that dilatation with bougies always and permanently diminished the amount of bending, I do not think it would from that alone follow that the flexion was the cause of the menstrual pain. For dilatation will also cure menstrual pain in patients whose uteri are perfectly straight. In cases cured by the same remedy the presumption is, until the contrary has been shown, that the condition removed by the remedy is the same in them all; and the flexion is not a condition present in all.

Dr. Hewitt thinks it unreasonable to deny that the vessels in the uterine wall undergo compression when the uterus is bent. It is possible that there may be compression to a slight degree, but the numerous cases that are met by all who look for them of acute flexion without any symptoms whatever prove that the very slight compression on the one side and tension on the other that uterine flexion may produce does not, when the uterus is otherwise healthy, exert any influence on the circulation through the organ. The proposition that it does so is, so far as I can see, pure theory, put forward to account for certain clinical phenomena which can be otherwise explained.

If it were possible to base any argument on the results of treatment by stem pessaries, such an argument, I think, would be most cogent. There can be no question that while a patient is wearing a rigid intra-uterine stem the uterus must be straight. Stem pessaries have been familiar to the profession for half a century, and still they have not come to be widely used. In alluding to this in my former paper I said that if these instruments did good they must before this have been generally recognised as instruments of undoubted efficiency. Dr. Hewitt thinks "the stem treatment would be largely employed but for the known liability to danger." He must be aware that whenever this subject comes under discussion at the Obstetrical Society those gentlemen whose names are identified with special forms of this instrument get up and say that they *never* see any bad results. It is idle to argue on this question. What is wanted, is for those who have used this instrument largely to publish *the whole* of their cases so treated, and to publish the result *in every case*, giving the symptoms for the removal of which the treatment was undertaken, the condition during the wearing of the stem, and the state of the patient as to symptoms and shape of uterus some months after leaving off the stem. When we can refer to an exact statement like this instead of to the vague assertions that are now made *pro* and *contra* this instrument, much light will be thrown not only on the effects of stem pessaries, but on the question of flexions generally. Till this has been done, all that can be said is that we have no scientific evidence to show either that the intra-uterine stem does good, or what is the amount of risk that attends its use.

I would now, to prevent misconception, state briefly my opinions on the subject.

Anteflexion is one of the natural shapes which the uterus may have. It is present in the majority of nulliparous women. It is present most often in early life, but tends to disappear as the uterus takes on functional activity. For this reason, in cases in which deficient development is associated with imperfect performance of function, anteflexion is especially often found. There is no evidence that the anteflexed condition in itself causes any hindrance to the performance of function. It is possible that anteflexion may produce symptoms, but it has never been proved, and if it be so, it is certain that such cases are exceedingly rare, and we have at present no means of identifying them. In a healthy state of the pelvic organs it is rare for the uterus to be retroflexed, but this occasionally happens, and causes no symptoms. When the supports of the uterus become weakened and prolapse begins, it is common for the uterus, as it sinks, to become retroflexed. Retroflexion is in such cases found accompanied with the usual symptoms of slight prolapsus, which are not modified by it. These cases form the majority of those in which retroflexion, because it is removed by the treatment—viz., the giving of the needed support—which removes the flexion, appears to be the cause of symptoms. But the relief to symptoms follows equally from the treatment whether the flexion is removed or not. The disposition of the musculo-peritoneal bands behind the uterus (utero-sacral ligaments — sometimes called the musculi retractores uteri) is in a few cases such that when the body of the uterus sinks between them, the veins which return the blood from the uterus are pressed upon, the return of blood obstructed, and congestion of the uterus is the result. In such cases striking relief quickly follows the raising of the uterus, so that its veins are no longer pressed on; and this relief is most striking when the uterus is so much raised that it falls into a position of so-called anteversion. It is probable that many symptoms have been attributed to flexions which depend simply on the general health of the patient, and would have been cured by the treatment adopted if the shape of the uterus had been quite ignored.

West-street, Finsbury-circus, E.C.

[2] Die Lageveränderungen der Gebärmutter, S. 123.

THE POLLUTION OF THE THAMES.—At a meeting held at Woolwich on the 22nd ult., for the purpose of condemning the state of the river Thames, and suggesting remedies for its improvement, the Right Hon. Lord Forbes, who presided, stated that the A B C system of purification seemed to him to be a perfect solution of the difficulty of dealing with the sewage of large towns, and that there was no reason why the system in operation at Aylesbury should not be applied to London.

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TWENTY-FIVE CASES OF ABDOMINAL SECTION.

(SECOND SERIES.)

BY EDWARD MALINS, M.D.,
OBSTETRIC PHYSICIAN TO THE GENERAL HOSPITAL, BIRMINGHAM.

IN this list the following conditions are represented :—

Removal of uterus with ovaries for fibroid	1
Removal of ovaries and tubes for fibroid	1
Ovarian cystoma	7
Chronic ovaritis	6
Chronic pelvic peritonitis	4
Dermoid cyst of ovary	1
Pelvic abscess	2
Pyosalpinx	1
Double cyst of broad ligament	1
Exploratory	1

In this series there has been one death only. In a girl, aged seventeen, with chronic pelvic peritonitis, there had been persistent hæmorrhage for seven months. The left ovary and tube were found adherent to the side of the uterus, and the opposite ovary adherent to its tube. Both ovaries and tubes were removed, and the pelvis drained. She did remarkably well until the eleventh day, when she was bright and cheerful. Having eaten a good tea, and while reading, she suddenly screamed and died in a few minutes. At the post-mortem, carefully made by the pathologist, there was no marked structural change, and the conclusion was drawn that death was due to fatty embolism.

The ovarian cystomata varied from thirty-three to eleven pounds in weight. All the patients recovered satisfactorily. One case was complicated with a large fibroid of the uterus. Two cases of pelvic abscess were opened, the pelvis washed out with warm water and drained. One contained sixteen pints of fetid pus. Both did well.

In the six cases of chronic ovaritis the ovaries and tubes were in each instance more or less adherent, and the ovaries generally enlarged—the average weight being 140 grains. In the four cases of chronic pelvic peritonitis the ovaries and tubes were also removed, adhesions broken down, and the pelvis washed and drained with success, except in the case above-mentioned.

In the removal of the uterus with ovaries there was a large fibroid which had been the source of much pain and metrorrhagia for eight or nine years; the stump was secured by a serre-nœud and treated with iodoform. The patient made an excellent recovery, and has since reported herself as being in good health. The pyosalpinx had the ovary and tube of the left side intimately adherent, the tube dilated and tortuous, containing two drachms of thick pus; it was separated without bursting and not drained; the opposite ovary and tube were enlarged, thickened, and adherent, and were also removed.

A case of double cyst of the broad ligaments was exceptional in character, being filled with about ten and twelve ounces respectively of dark tar-like fluid; these were shown at a meeting of the Obstetrical Society on October 1st. One explanatory examination is instructive and interesting. A girl, aged nineteen, attended the out-patient department for several months, complaining of severe abdominal pain, worse at the menstrual epochs, and causing pain in micturition and defecation. Nothing abnormal could be found in the rectum or bladder; the uterus and ovarian regions were very sensitive. She became an in-patient for five weeks, and was subjected to a variety of treatment and discharged. Several weeks later her mother came and begged for something more to be done for her as the pain was intense at times. She was readmitted, and the abdomen opened. I examined the ovaries, which were intact, and therefore not removed. Nothing wrong could be found elsewhere in the pelvis; it was washed out and the wound closed. The pain never recurred and the patient got quite well. Some weeks later she returned to say that her health was better than it had ever been, and to express her thanks for the operation.

The majority of the cases were done in the General Hospital under the conditions expressed in the record of the previous series. The amount of success justifies the conclusions then drawn that abdominal sections may be successfully performed in any institution with proper precaution and care.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN.

CASES OF MALFORMATION OF THE EXTERNAL ORGANS OF GENERATION.

(Under the care of Mr. JOHN H. MORGAN.)

CASE 1. *Hypospadias; Left Scrotal Hernia; Absence of Right Testicle.*—C. B—— was the twelfth child of parents whose other children were healthy and well-formed. About ten weeks before his birth the mother had a severe fall. The penis was short, and was bound down on each side and below by short bands of skin. The glans was exposed and the prepuce was normal. There was a depression for the meatus at the end of the glans which was not patent, the opening of the urethra being situated at the base of the penis. The skin of the scrotum was natural, and a testis, followed by a hernia, had descended on the left side. There was no testis in the right half of the scrotum, which consequently appeared smaller than the other. The condition gave the parts a great resemblance to those of a female.

CASE 2. *Deficient Development; Non-descent of Testes.*—A. F——, aged four years. Three elder children, all naturally formed, have died of various complaints. This child appears idiotic, cannot talk, and understands very little. The penis is very small and attenuated. It is placed higher than usual, as if there were some deficiency of the pubic symphysis. The prepuce is long, the scrotum very slightly indicated, the testis on each side having descended into the lower part of the inguinal ring, but not into the scrotum.

CASE 3. *Hypospadias; Hydrocele on Left Side; Non-descent of Right Testicle.*—F. M——, aged one year. No family history of hereditary deformity. The penis is very short, and exhibits the usual condition of hypospadias, the urethral orifice being situate at the base of the frænum. The left testis descends into the scrotum, accompanied by a large hydrocele; the right cannot be felt in the scrotum or inguinal canal.

CASE 4. *Congenital Penile Fistula.*—W. S——, aged three years and a half. No family history of deformity. The boy is healthy and well-made. The meatus is natural, the prepuce long. A probe passed through the meatus issues at an orifice midway along the under surface of the penis, the edges of which are thin, and resemble those of a meatus. From the orifice in the external skin, which corresponds to this opening, a probe will also pass along beneath the skin of the prepuce, so that there is a double deformity, and micturition is performed through both openings.

CASE 5. *Hypospadias; Displacement of Urethral Orifice to Left Side.*—F. P——, aged seven months. This child has an ordinary condition of hypospadias as regards the depression for the meatus, but instead of being situated below, the opening of the urethra is situated at the left side of the penis. The median raphe of the scrotum is continued up into the outer skin of the penis along its lower surface, and the urethral opening is placed on the left side of the corona.

CASE 6. *Absence of Right Scrotum.*—F. C——. This boy has an elder brother who is normally formed. He was born with the following condition of parts. The left half of the scrotum is natural, and the testis is of proper size and in the usual position. There is no sign of any scrotum on the right side, nor is there any evidence of a median raphe. The right testis can be felt beneath the skin which is between the scrotum and the thigh. It is of normal size and movable. There is no hernia.

CASE 7. *Congenital Cyst in Prepuce.*—T. W——, aged two years. When three weeks old, a small spot was noticed on the under surface of the prepuce. It was at first the size of a pin's head, but has continued to grow larger. When seen at the hospital, a small transparent cyst the size of a cherrystone, and containing clear fluid, was found upon the under surface of the prepuce, which

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was slightly adherent to the glans. The walls of the cyst were thin, and the margins not hard or sharply defined. It was removed with scissors, and did not recur.

ST. LEONARDS HOSPITAL, SUDBURY, SUFFOLK.

THREE CASES OF FRACTURED PATELLA; ONE TREATED BY BACK SPLINT, THE OTHERS BY WIRE SUTURE; REMARKS.

CASE 1. *Transverse Fracture; Back-splint with Traction; Recovery, with good Movement.* (Under the care of Mr. Lynch.)—J. T——, an engineer, aged forty-four, a temperate man. On December 26th, 1881, in getting over a stile he slipped, reached the ground with his right toe, tried ineffectually to save himself, and struck the ground with his right knee. As he did so the knee "went off like a gun," and the leg became powerless. He was admitted on the 31st, when a transverse fracture was found running through the middle of the patella. The effusion was not excessive, but the separation was very great.

The treatment was by a back-splint, figure-of-eight bandage and pads, and elastic springs on either side. These springs were attached by extension plaster to the thigh, and by their other ends to tapes which buckled under the sole of the foot. They were powerfully stretched before buckling—the patient estimated their pull at about thirty pounds,—and they acted very efficiently in bringing the fragments of the patella nearly into apposition. This treatment was continued for six weeks, after which the limb was cased in a plaster-of-Paris bandage, and the patient was allowed to get about with crutches. He was then discharged from the hospital. At the end of nineteen weeks the bandage was removed, and he returned to work, able to earn his full wages. The stiffness of the limb gradually wore off, but three or four months elapsed before he was able to kneel.

CASE 2. *Transverse Fracture; Fragments United by Wire Suture; Recovery, with good Movement.* (Under the care of Mr. Lynch.)—W. S——, a carter, aged thirty-three, of stout build, and a free liver, jumped off the shaft of a cart on April 25th, 1884. He reached the ground with the left foot first, slipped on a loose stone, and in falling struck the ground with his left knee, which, on rising, he found to be useless. He was admitted in the hospital on April 28th. The left knee then measured two inches in circumference more than the right, and a transverse fracture ran through the centre of the patella, the fragments being one inch apart. It was thought advisable to allow time for the effusion to subside.

On May 5th, eleven days after the accident, there was only half an inch of difference between the size of the knee-joints, and the operation for uniting the fragments was performed according to Professor Lister's instructions. The spray was used, and the wound dressed with gauze and mackintosh in the usual way.

The patient was very sick after the operation; evening temperature 100°, and on the 6th 100·2°. On the 7th, 8th, and 9th it was 99°, both morning and evening; then fell to normal, and so remained. The limb lay in a MacIntyre's splint, and was dressed under spray on the second, fifth, and ninth days after the operation, on the fourteenth day with red lotion. The drainage-tube was withdrawn at the second dressing. On the 26th passive motion was made, and no pain was experienced on bending the knee. On June 2nd, exactly four weeks from the date of the operation, the patient got up and moved about with crutches, but he was not allowed at first to put the foot to the ground. Crutches or sticks were used for two weeks; and in a fortnight afterwards he was discharged, after a residence in the hospital of two months. He began light work six weeks later, and a week afterwards was in full work at harvest. He could kneel in about fourteen days after he left the hospital. The wire uniting the bone causes some pricking sensation when he kneels or walks down an incline. This probably arises from insufficient hammering of the wire to the bone.

CASE 3. *Transverse Fracture; Union of Fragments; Suture; Rapid Recovery.* (Under the care of Mr. Ogier Ward.)—C. H. C——, a labourer, aged sixty, a temperate man, in 1879 was thrown from a horse and broke his left thigh near the knee. In 1881 the same bone was broken in the upper third through a fall from a cart. He quite recovered the use of the limb but there is some shortening. On Aug. 7th, 1884, he fell from a ladder on to his left knee, and found he could not walk. He was admitted into hospital on Aug. 8th.

On Aug. 10th, with the permission of the medical officers, Mr. Ogier Ward performed the operation for bringing the fragments of the patella together. The separation of the fragments, which had previously been about half an inch, became very marked under chloroform. There was much swelling and extravasation of blood, but it had not been thought necessary to wait till the effusion into the knee-joint had subsided spontaneously, for Prof. Lister has pointed out that delay in operating, on account of effusion, is productive of no good result, and the after-progress was certainly greater in this case than in the second of the above cases. On incision a quantity of dark blood escaped, and the broken surfaces were found thickly covered with coagulum. The fracture was transverse at the junction of the upper and middle thirds. The capsular tissues had been torn off the lower fragment, but remained attached above, and hung like a flap between the fractured surfaces, effectually preventing their apposition. There was also an oblique displacement of the upper fragment, which, when the muscles were lax, partly overlapped the lower. This obliquity appeared to be due to the unequal contraction of the extensor muscles, probably in some way connected with the old fractures of the femur. The spray was employed, and after wiring the fragments, the joint was syringed full of carbolic glycerine (1 to 12), and the patella and parts near were freely powdered with iodoform. The dressing consisted of protective, covered by one piece of damped carbolic gauze, with a plentiful supply of salicylic wool outside. The limb was placed on a MacIntyre's splint. Evening temperature 100·2°; pulse 80; no pain or sickness. On the next day the temperature was 99·2°, and the pulse 78. The dressings were changed, and the anterior drainage-tube removed. On the sixth day after the operation the dressings were renewed and the posterior tube discontinued. Two days later red lotion was used. The temperature fell to normal on the fourth day.

On Sept. 1st, twenty-two days after operation, passive motion was begun, and the patient was allowed to get up and use crutches, keeping his foot off the ground at first. On Sept. 18th, six weeks from the date of admission to the hospital, he was discharged, sufficiently cured to walk without a stick, and able to kneel. He was able to resume work on Oct. 6th.

Note.—On Oct. 3rd all three men were present for examination. Case 1. Three years since his accident. The union is remarkably good; there is not more than three-eighths of an inch separation. Except that he cannot flex the knee beyond a right angle, the patient has the perfect use of his limb. Case 2. Five months since the fracture was sustained. Union is of course perfect, as are also all movements of the joint. Case 3. Barely two months have elapsed since the injury; there is a little stiffness in kneeling and in flexing the limb: this is rapidly wearing off. The points of contrast are pretty effectively brought out in the following table:—

—	Confined to bed.	Crutches or sticks.	Further delay in resuming work.	Total time lost.	Could kneel after the accident.
Case 1	6 weeks	19 weeks	2 weeks	27 weeks	9 months
Case 2	4 weeks	2 weeks	7 weeks	13 weeks	6 weeks
Case 3	3 weeks	2 weeks	3 weeks	8 weeks	5 weeks

Remarks by MR. OGIER WARD.—There are several points of note. 1. The treatment of fractured patella by mechanical methods is tedious and difficult, not only in respect to the time required for success, but in the constant attention which the appliances require, and in the very considerable annoyance which they cause to the patient. By operating with strict antiseptic precautions the patient suffers no pain, he is confined for too short a time to bed to allow of injury to his health, while the labours of the medical man and nurse are very considerably lightened. It is also allowable to feel a well-grounded confidence as to the result, very different from the anxiety experienced from first to last in a case treated by mechanical means. 2. Such union as was obtained in Case 1 is by no means universally found persisting three years after the accident, as by this time a gradual stretching of the fibrous bond of union has very frequently occurred; but no doubt the early treatment in this case was

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particularly thorough. I question whether in Case 3 the mechanical mode of treatment would have been successful, considering how the capsule and other tissues were squeezed between the fragments, and I venture to suggest that some such complication may in many cases of ununited fracture of patella cause the fragments to gradually fall apart as time goes on. 3. If we consider the serious loss to a working man and his family represented by twenty-seven weeks of enforced idleness, I think we are fully justified in reducing that time by quite one-half, by undertaking an operation where the results are so satisfactory, provided always we have a just confidence in our mode of treatment. It is so common nowadays to read of cases which become septic "in spite of strict Listerian precautions," that it is no wonder surgeons are not all disciples of Lister. I am sure those who have seen antiseptic surgery as practised in Germany will admit that we in England are, as a rule, very far behind. I can only say that were my own patella fractured I know more German than English surgeons whom I would trust to operate upon me. There is one important detail in the operation which in the above cases gave rise to considerable difficulty. It is not alluded to by Professor Lister, to whom, perhaps, his adroitness renders the matter a trifle. To pass the wire from the external to the fractured surface of the patella is easy enough, but the second threading, from the fractured to the external surface, is difficult, for, on withdrawing, the point of the bradawl the hole is instantly obliterated, and the point of the wire searches blindly for it in the interstices of the broken bone. In addition, unless the separation be great, or the limb be flexed, which is scarcely advisable, there is only a trench about half an inch wide in which to manipulate. I have, therefore, had a trocar and canula made, the former fitted with a bradawl point, on withdrawing which, the cannula will be left projecting upon the fractured surface, and be easily found by the point of the wire. It seems advisable, as a rule, to wire the more difficult fragment first.

COLONIAL HOSPITAL, SAN FERNANDO, TRINIDAD.

IMPERFORATE RECTUM; CURE.

(Under the care of Mr. R. H. E. KNAGGS.)

A MALE infant, five days old, the child of healthy negro parents, was admitted on Sept. 6th, having never passed an evacuation and suffering acutely from abdominal distension. The little finger introduced per anum was arrested about half an inch in by a firm and complete occlusion. Nothing definite could be distinguished beyond, and palpation gave no fluctuation. A fine aspirator needle was passed through the centre of the cul-de-sac in the rectal axis, and on withdrawal was found to contain meconium. A large trocar was now introduced, and a copious flow of offensive meconium followed its removal. The cannula was left *in situ* and retained with a large pad of carbolised tow and a T-bandage. All urgent symptoms were immediately relieved. The tube was removed twenty-four hours after introduction, and the motions soon became more natural. The case proceeded with uninterrupted success, and the little patient was discharged cured six days after admission. The little finger could be passed through the obstruction fairly easily.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Treatment of Unreduced Spontaneous Dorsal Dislocation of the Hip.—Cirsoid Aneurysm of Foot.

THE first ordinary meeting of this Society was held on the 28th ult., Dr. George Johnson, F.R.S., President, in the chair. The President referred to the improvements which had been effected, at considerable cost, in the drainage of the house in which the Society met; also the better lighting, increased space, and the new lavatory, which had been provided.

Mr. WILLIAM ADAMS read a paper on Excision of the Head of the Femur in a case of Unreduced Spontaneous Dorsal Dislocation occurring during Fever. The case was an example of spontaneous dislocation of the head of the femur on the dorsum ilii, occurring during the progress of rheumatic fever in a boy eleven years of age, and as the limb remained in a contracted and useless condition, the head of the femur was excised on March 29 h, 1882. This operation had been first performed in a similar case by Dr. H. G. Rawdon, of Liverpool, on July 16th, 1881, and published in the *Liverpool Medico-Chirurgical Journal*, January 2nd, 1882. In Mr. Adams's case the patient was admitted into the Great Northern Hospital on March 4th, 1882. After two unsuccessful attempts at reduction, having previously divided the adductor longus tendon, Mr. Adams excised the head of the femur by making a T-shaped incision with the long arm two inches and a half in length directly over the head and neck of the bone, and the small arm one inch in length, transversely over the head of the bone, which was at once exposed. The head of the femur was uncovered by capsular ligament, and the articular cartilage was in a healthy condition. It was found that the capsular ligament had been ruptured, and the torn margins of the rent passed on either side of, and closely embraced, the neck of the bone. After dividing the margins of the capsular ligament the operator passed his small subcutaneous saw to the neck of the bone, and cut through it a little below the margin of the articular cartilage. The detached head of the femur was then drawn out of its position after some slight adhesions had been cut through. The round ligament preserved its normal connexion with the head of the bone, and was adherent to the articular cartilage, having been divided with the saw a little below the head. The wound progressed favourably without much suppuration, and on June 1st was completely closed. On June 14th the patient was allowed to walk on crutches, and on October 1st without crutches. The limb was perfectly straight, and the movement at the hip-joint was free in all directions. The author observed that in all the cases of spontaneous dislocation which had fallen under his observation the head of the femur had been dislocated on to the dorsum ilii. The cases were arranged in three classes:—1. Dislocation occurring during the progress of fever. 2. Dislocation occurring in cases of paralysis, generally infantile, but occasionally in the adult. 3. Dislocation occurring in the first stage of hip-joint disease without suppuration. Excision of the head of the femur in its simplified form, as above described, the author believed would be found applicable to all these cases unless sufficient freedom of motion be obtained by tenotomy and passive movements. He also thought it might be applicable to some cases of fibrous ankylosis of the hip after disease where the limb remained contracted, as free motion is seldom obtained by simply dividing the neck of the bone. The cases of dislocation of the hip brought before the Society by Mr. Morris were alluded to, and also the case published in St. Thomas's Hospital Reports, by Sir Wm. Mac Cormac, in which the head, neck, and great trochanter were excised in a case of unreduced traumatic dislocation of the hip into the thyroid foramen. The firm adhesions, and in some cases the new bone thrown out in cases of traumatic origin as the result of the inflammation following the injury, distinguished these cases from those of spontaneous dislocation occurring during the progress of fever, or in cases of paralysis which had chiefly fallen under his observation. In reply to Mr. Hulke, Mr. Adams justified the removal of the head of the bone by the results he had obtained; moreover, every other means had failed, and the leg was contracted and perfectly useless.—Mr. HENRY MORRIS also exhibited to the Society the case of the man with unreduced dislocation which had been referred to in the paper read by Mr. Adams.—Mr. ARTHUR E. BARKER referred to a case which was admitted into University College Hospital. The boy had sustained spontaneous dislocation in the third week of typhoid fever, when Mr. Barker first saw him; the hip was very much deformed, and there was a moderate degree of pain. The marked deformity presented all the appearance of a dorsal dislocation. On examination the head was found to be one inch and three-quarters above Nélaton's line. The boy was put under the influence of chloroform, when the ligaments as well as the muscles were found to be greatly contracted. By Bigelow's method the head was got into the acetabulum. After this had been done the limb could not be fully extended, but by diligently persevering in passive movements the powers of progression gradually became almost natural. He thought that in all cases of acute synovitis serosa the manipulative movements of strong flexion with eversion and circumduction would be able to reduce the dislocа-

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tion. He questioned whether it was necessary to resort to so severe a procedure as excision in any case. In the majority of instances it was fair to assume that the acetabulum was intact. If reduction could not be effected by Bigelow's method, it would probably be sufficient to incise the capsule, and then reduce the dislocation. It would probably never be necessary to divide the whole of the capsule, and even if this had to be done, the ultimate result could hardly fail to be better than in cases where the head of the bone was excised.—Mr. W. HULKE agreed with the views expressed by Mr. Barker. It should be remembered that the accident was a relatively recent one in Mr. Adams's case. The boy, no doubt, ran a certain amount of risk, and as it was an abscess had formed. He had had several instances of spontaneous dislocation under his care. In one the right hip-joint was affected in the course of rheumatic fever, in this instance he had no difficulty whatever in reducing the dislocation. He admitted that a recurrence of the dislocation might take place. It might be doubted whether the result in Mr. Adams's case was better than if an excision had not been done.—Mr. RICHARD BARWELL had seen several instances of so-called spontaneous dislocation. Reference was made to two cases. One was that of a young lady who had a severe attack of typhoid fever, after recovery from which it was found that the left hip was dislocated. Mr. Barwell saw her first fifteen months after the fever. The method of extension by weight and pulley, and Bigelow's method, did not succeed in reducing the dislocation. Passive movement was persisted in, and three years later the walking powers were good, and there was but half an inch of shortening. A second case, in which considerable movement was obtained, with rather more shortening, was briefly narrated. He agreed with the opinion of Messrs. Hulke and Barker.—Sir WILLIAM MAC CORMAC thought that all surgeons would first attempt to reduce the dislocation in the cases under consideration. His case, mentioned by Mr. Adams, was one which owned a rheumatic origin. The patient was a sailor who had sustained a thyroid dislocation of the hip-joint twenty months before he was first seen. Tenotomy and other means had failed to reduce the dislocation. When the operation of excision was in process of performance the acetabulum was found to be very shallow, and thus the impossibility of reduction was accounted for.—Mr. R. W. PARKER considered the operation performed by Mr. Adams as not altogether justifiable. He related briefly a case of acute necrosis of the tuber ischii in which the inflammation spread to the hip-joint; there was spontaneous dislocation of the head of the femur on to the dorsum ilii. In this instance a good result was obtained by the formation of a false joint. He had seen no case of dislocation associated with infantile palsy, and he could not conceive how the paralysis alone would account for dislocation. In some cases of infantile palsy the capsule becomes stretched and loose, and an apparent dislocation might result. Further, he had never seen an instance of Mr. Adams's class of spontaneous luxation.—Mr. SPENCER WATSON spoke of the severity of the case on which Mr. Adams had operated. He regarded both Dr. Rawdon's and Mr. Adams's cases as of an altogether exceptional nature.—Mr. BOWLBY said that the paper had made no mention of pyæmia as a cause of spontaneous dislocation. In one case of this sort the acetabular cartilage was found to be normal after death. A lad, aged nine years, had been under Mr. Langton's care for spontaneous dislocation. The dislocation was reduced and the limb extended on a long splint, but what the ultimate state would be could not yet be determined.—Mr. HENRY MORRIS said no one could fail to congratulate Mr. Adams on the result which had been obtained. Granted that reduction was impossible, the question arose whether any operation was advisable. He could not help believing that by dint of time and perseverance good results might be obtained. An unreduced dorsal dislocation which resisted all other measures of relief might be treated by subcutaneous osteotomy; by this neat and simple operation we might alter the deformity and correct the angle at which the limb was placed. The surgeon endeavoured to get bony union of the section only at a different angle, so that parallelism of the limb and fair powers of movement should result. Reference was made at some length to a paper published by him in the forty-fifth volume of the Society's Transactions. In cases of paralysis in the adult operation would be out of the question; for such cases might be examples of Charcot's disease. Mr. Stanley had written a paper in the twenty-fourth volume of the Society's Transactions where there was double dislocation of the hip-joint, which was probably a case of Charcot's disease. In instances of traumatic disease, where a considerable degree of fibrous ankylosis obtained, he believed that subcutaneous osteotomy would also prove of value. A case of long-standing disease with very great flexion was related, in which he had excised the head and neck of the bone. It was found that a small sequestrum existed in the head of the bone, which was surrounded by some rarefied osseous tissue. Here the limb was made sufficiently straight to allow of good movements of progression; the man, it must be remembered, was fifty-five years of age, and bore the operation remarkably well.—Dr. RAWDON said it was now three years since the operation was done in his case, and the limping had come on within the last year.—Mr. ADAMS, in reply, agreed that the operation was not one that should be too lightly undertaken. He would not recommend the operation until all manipulative and other measures had failed. The operation was by no means a severe one. A case illustrating dislocation of the joint in the first stage of morbus coxæ was related where treatment by Thomas's splint had been adopted. The paper published in 1841 in the Transactions of the Medical and Chirurgical Society by Mr. Stanley showed that there were three cases in adults; one of these might have been an example of Charcot's disease. Mr. Adams advised not too much delay, because tilting of the pelvis and spinal deformity prevented good results. In the traumatic class of cases the first operation was performed by Mr. Sydney Jones. Excision of the head of the femur was resorted to after failure to reduce the dislocation by other means. The boy afterwards walked, jumped, and joined in all athletic games.

Mr. WALTER EDMUNDS read a paper on a case of Cirsoid Aneurysm on the Dorsum of the Foot, with remarks. The patient was a man aged twenty-nine, who had an aneurysm on the dorsum of the left foot. Pulsation could not be completely arrested by compression of the anterior tibial artery. Esmarch's bandage was applied, but without benefit. The aneurysm was dissected out, seven communicating vessels requiring ligature. The patient recovered. The various methods of treatment were discussed, and digital compression having failed, or being unsuitable, excision was recommended. An abstract of previously published cases of the disease was added.—Mr. W. HULKE had seen the case, and referred to the tortuous condition of the arteries. Pressure on the anterior tibial artery failed to stop the pulsation, but when proximal as well as distal pressure was resorted to pulsation ceased. In a case of aneurysm of the supraorbital branch of the ophthalmic artery he had found that galvano-puncture was very efficacious. He could not but believe that galvano-puncture was a less severe measure than dissecting out the sac in such cases.—Mr. RICHARD BARWELL inquired whether the case were one of true cirsoid aneurysm or one of sacculated aneurysm, with which a good many dilated arteries communicated. Aneurysms on the dorsum of the foot were very difficult to treat, and statistics as collected by him showed how fatal a disease it was.—Mr. EDMUNDS replied that the disease was not true cirsoid aneurysm.

CLINICAL SOCIETY OF LONDON.

Myxœdema.—Dislocation of Patella.—Bromide Eruption.—Nephrectomy for Sarcoma.

AN ordinary meeting of this Society was held on Oct. 24th, Sir Andrew Clark, Bart., President, in the chair. An interesting case recorded by Professor Bruns of Tübingen, bearing on the pathology of myxœdema and cretinism, was related by Dr. Felix Semon.

Dr. JAMES ANDERSON gave a short account of the clinical history of a case of Myxœdema. The patient was an unmarried woman, aged forty. She complained of swelling of the eyelids, which she had noticed to be gradually increasing for the past nine years. The patient was one of a family of nine, none of whom had shown any symptoms resembling hers. The patient's father died in old age; her mother died at fifty-seven, with hæmorrhage from the mouth and vomiting coffee-ground material. There was no history of gout or hæmophilia in the family. Up to the age of twenty the patient lived at home in Liverpool. Thereafter she was for twelve years nurse and maid in a family in Liverpool, and for the last eight years she had held a similar position in a family living in Kendal. She had always had a good home,

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with plenty of fresh air and exercise, and freedom from anxiety or exposure. For the first twenty-three years of her life she enjoyed excellent health, when, seventeen years ago, she had two teeth extracted, the bleeding from which lasted twenty-four hours, and was very copious. She said she has never been well since. No marked symptoms, however, were noticed by those around her till twelve years ago. The patient presented the characteristic phases of myxœdema as described by Dr. Ord. The loose, baggy, almost translucent lids, the dry brawny cheeks and thick blue lips, with the swollen, red, expressionless hands, and deliberate speech and volition, make a group of symptoms which only the comparative rarity of the disease can have prevented from earlier recognition, and which, once seen, cannot be forgotten. The heart and lungs are sound, and the digestive system is somewhat defective. The molar teeth have crumbled away bit by bit; the gums are vascular and hypertrophied and bleed freely. The extremities are always cold, and the axillary temperature subnormal. The urine varies much in quantity; the total amount of urea is invariably deficient, only rising to half the normal amount, and frequently being as low as one-fourth; it contains neither sugar nor albumen. She has menstruated regularly from the age of fourteen. The amount has always been copious, but sometimes after the discharge has ceased it commences again, and may last for three weeks, leaving her very exhausted. With the exception of the deliberate speech, thought, and volition, there are only two points to be noted as to her nervous system: the first is the constant recurrence of a nervous restlessness, which she terms "fidgets"; the second is her ocular condition. She is slightly hypermetropic, but with the correcting lenses has perfect vision. Under atropine there is seen to be slight peripheral opacity of the left lens, otherwise the media are normal. In neither eye, however, is the retina normally transparent; a haze exists surrounding the vessels, especially in the neighbourhood of the disc. The appearances differ entirely from those of a past neuritis or retinitis, and, as has been said, do not interfere with perfect vision. Dr. Stephen Mackenzie kindly admitted her under his care at the London Hospital, and to him Dr. Anderson was indebted for detailed observation during her stay there. As regards treatment, the usual tonics seemed to have no effect whatever, either before or after admission. A fortnight after admission she was put upon half-drachm doses of tincture of jaborandi, which she continued till she left the hospital, three weeks later. Of objective improvement there was none, or almost none, but she expressed herself as feeling much better within a few days after commencing the jaborandi, and this subjective improvement was accompanied by a steady increase in the amount of urea excreted, which doubled itself during the period, and was at its maximum on her discharge from the hospital. Dr. Symington of Wolverton has since had her under his care for severe menorrhagia, and he states that she seems in very much the same condition as when she was last seen. The points of interest in the case seem to be (1) the history of commencement from a severe hæmorrhage, combined with the present hæmorrhagic tendency of the patient; (2) the occasional state of nervous restlessness, so apparently incompatible with the general character of the disease; (3) the retinal condition, which was peculiar, whether characteristic of the disease or not; and, lastly (4) the effect of jaborandi on the subjective condition of the patient, and on the amount of urea excreted by her.—Sir ANDREW CLARK inquired as to the state of the vascular system. He had never seen a normal circulation in cases of myxœdema.—Dr. ANDERSON replied that the heart yielded no signs of valvular disease, but its action was weak and the pulse was at times impercceptible at the wrist. In reply to Sir Andrew, he also stated that in his opinion the increase in the daily discharge of urea, which accompanied the administration of jaborandi was directly due to that drug and not to an alteration in diet.—Dr. FELIX SEMON referred to an account, which he had given before the Society last session, of the results obtained by Kocher from the removal of the thyroid gland in growing persons. The group of symptoms were stated not to appear when a part of the thyroid gland was left behind or an accessory thyroid gland existed. The fact that the cachexia strumipriva appeared in young individuals of incomplete development required to be supplemented by other facts before the full alliances with myxœdema and cretinism could be made out. Removal of the whole of the gland leads to arrest of the development of the length of the body, whilst the head continues to grow. It was hoped that the investigations of Kocher would throw light on the nature of cretinism and myxœdema, in both of which states the thyroid gland was involved; it was now probable that there were merely changes in degree between these three affections, and that the difference between them depended on the time of life at which the symptoms set in. Atrophy or degeneration of the thyroid gland was probably the cause of all the symptoms of myxœdema. What might be called the missing link in the proof of the causation of myxœdema and its allies had recently been supplied by Herr P. Bruns, Professor of Surgery in Tübingen, and which is published in the *Sammlung Klinischer Vortrage* of Professor Volkmann under the title of "Ueber den gegenwärtigen Stand der Kropfbehandlung." The case was that of a man still living, aged twenty-eight years, who had the thyroid gland completely extirpated eighteen years ago. A record of the operation was published at the time by Dr. Sick of Stuttgart, in the *Württemb. Med. Correspondenzblatt*, 1867, No. 25. Prior to and shortly after the operation the boy was bright and lively, but later on he changed in a remarkable manner. And although he retained the power of mental application and willingness for work, yet he had altered notably also in intellectuality. The man, now aged twenty-eight, has many of the characters of a dwarf and cretin; the conformation of the body is that of a boy, the greatest length being 127 centimetres. Nevertheless, the head is in every respect the size of that of an ordinary man; the facial expression is idiotic, and the features are much swollen, especially about the lips and lower eyelids. The hair of the head is scarce and thin, and there are but few hairs on the pubes, though the genitals are normally developed. Swelling of the tongue, palate, and tonsils exists to some extent. The breath sounds are normal, and the action of the heart is feeble; no enlargement of the spleen could be made out. The faculties of sensation and muscular power are preserved almost intact. Although until recently he was industrious, especially at knitting, yet now even this proof of a limited preservation of intelligence has passed away. The mental disturbances are confined to the exhibition of apathy. The visual and auditory powers are sensibly decreased in acuity. Commenting on this case and the results obtained by Kocher, and also by Schiff on a young cat, Dr. Semon thought there was sufficient evidence to prove the near relation of cachexia strumipriva to myxœdema and cretinism. The question of the exact connexion between absence of the thyroid gland and the groups of symptons which characterised myxœdema, &c., was also discussed. Dr. Semon believes that atrophy of the thyroid body is at the root of the whole mischief and is the *fons et origo mali*. He thought that there was no evidence to support the view that damage of the branches of the sympathetic in the neck played any considerable part in the causation.—Sir ANDREW CLARK said that it was yet open to discussion whether mere absence of the thyroid gland was the cause of the disease or whether it was the removal of the gland which set up the peculiar group of symptoms.—Dr. HALE WHITE referred to a case, recorded by Dr. Mahomed, of myxœdema which had improved under the use of nitro-glycerine. The patient, however, succumbed later on. In that case the thyroid gland was completely atrophied and none of its proper structure remained; the fibrous tissue was much increased in amount. A nuclear proliferation was detected in the liver, but all the other organs presented no special characters. The cervical sympathetic system was altered, but not more diseased than might be accounted for by the mere presence of infiltration as occurred in the rest of the body. He did not think that the disease was brought about by any direct lesion of the sympathetic system. The nerve cells were blurred and the connective tissue was swollen, did not stain well, and had a sort of sodden appearance.—Dr. W. B. HADDEN said that the presence of hæmorrhage in the history and the occurrence of cataract had been noted in other cases. Dr. Goodhart and he had observed changes in the cervical sympathetic like those described by Dr. Hale White. He could not altogether agree that the changes were purely secondary. The granular appearance of the nerve fibres was noteworthy.—The PRESIDENT said that in not one of the cases which he had seen was menorrhagia absent.—Dr. ANDERSON, in reply, said that after bleeding from the gums many years ago the patient said that her neck became swollen and the speech thick, though these symptoms disappeared a week later. Nevertheless, the same

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symptoms set in again nine years later, when the myxœdema definitely began. She had received no benefit from nitroglycerine, and, although jaborandi improved the subjective symptoms, there was no change for the better in the physical state. The modified connective tissue of the retina might be involved like the connective tissue elsewhere, and the slight changes observed might be accounted for by the smallness in amount of the connective tissue.

Dr. C. H. GOLDING BIRD read notes of a case of Congenital Dislocation of the Patella in a girl, aged eleven, who for six months had been troubled with displacement of the patella on to, and afterwards quite outside, the external femoral condyle. On bending the knee or straightening it the patella resumed its normal position with an audible click. There was some pain, but the affection was more disagreeable than painful. She walked well, but with stiffened knee. The displacement was first observed after a fall. The author believed the cause of the displacement to be due to structural shortening of the quadriceps extensor following paralysis of the muscle—probably infantile—and had tried as a rational mode of treatment tenotomy of the ligamentum patellæ; but the only gain was the disappearance of the click, the dislocation occurring as before. He thought the name paralytic dislocation preferable to congenital. His case agreed with the description given by Hueter. The case had been exhibited at the Society early in the year.—Mr. RICKMAN GODLEE referred to a similar case in a girl, aged six years, which he had shown at the Society. The view that the shortening of the extensor muscles was the cause of the dislocation was not concurred in. Mr. Godlee said that his patient complained of no discomfort, although the affected limb was much shortened and wasted.

Dr. CARRINGTON showed a drawing of a case of Skin Eruption due to the administration of Bromide of Potassium. There was no history or appearance of syphilis in either of the parents. An elder child three months old had suffered from impetigo capitis. The patient was born quite healthy, and with trivial exceptions remained so up to about ten months. At that time he began to suffer from convulsions and symptoms which seemed to point to meningitis, and he was treated with an ounce and a half mixture containing one scruple of bromide of potassium, of which one drachm was given every four hours; this was for a time administered every three hours, and the ammonium was for a time substituted for the potassium salt. This treatment was persisted in for about seven weeks. The eruption appeared in the form of minute red papules, which in the course of three or four days attained the size of a penny-piece. The parts affected were the buttocks, legs, thigh, and, to a smaller extent, the scalp and face. When first seen the spots were of variable size, from a pin's head to a penny-piece. The smaller ones were of a bright-crimson colour, and smooth, the largest ones of a dark-brownish hue, circular or elliptical in form, with a sharply defined edge of at least one eighth of an inch in thickness. They were of a spongy texture, without the least trace of fluid contents. The treatment adopted by the practitioner under whose care the child came was half a grain of potassium iodide and one minim of liquor arsenicalis three times a day. In a fortnight there was very great improvement. Some of the spots had disappeared, and were represented only by pinkish discolouration, and the others were much shrunken and nearly level with the skin. No new ones had appeared. The child made an uninterrupted recovery; and when seen two months after all the lesions had disappeared with the exception of two or three on the scalp and face, which took the form of dried up scabs. The eruption was never moist from beginning to end. It was worthy of note that an eruption due to the bromide should disappear under the administration of the iodide of potassium.—Dr. DYCE DUCKWORTH said that the case was somewhat peculiar in that the sebaceous glands were said not to be specially involved. The bromide eruption was a confluent [illegible] whereas the iodide eruption was a dermatitis in which the sebaceous glands were not specially affected.—Dr. STEPHEN MACKENZIE spoke of a case of bromide eruption in which he had made a microscopical examination of a large number of sections (*vide* THE LANCET, vol. i., 1884, p. 997). The inflammatory changes which existed were shown to be most marked in the vicinity of the hairs and embryonic sebaceous glands. In Dr. Chelmsley's case and in the new Sydenham Society's Atlas the tubercular pustular eruption was well depicted. The eruption always occurred in children. As regards the diagnosis, it was important to know that the eruption might come out some time after the administration of the drug was begun, and to remember that the disease lasts a much longer time after the disuse of the medicine; the disease may be thus prolonged two or three weeks. The appearance of a large flat-topped corrugated eruption was amply sufficient for diagnosis.—Dr. BARLOW corroborated the statements of the previous speaker as to the prolongation of the disease after the removal of the bromide. It was necessary to insist on this point, for some eminent dermatologists had said that the rash stopped when the offending cause was removed. It was extremely likely that there was an idiosyncrasy with respect to the elimination of iodide and bromide salts from the system. In Dr. Lees' case Dr. Stevenson found bromine in the urine three weeks after the cessation of the administration of the medicine. These salts were, as a rule, rapidly eliminated. Moreover, the skin eruption may be set up by so small a dose as a grain and a half of bromide of ammonium.—Mr. MORRANT BAKER said that the excretion of iodide was generally retarded by advanced disease of the kidneys, as he had witnessed in a remarkable case of iodide eruption.—Dr. DYCE DUCKWORTH corroborated this testimony.—Dr. STEPHEN MACKENZIE thought there might be a tendency to too wide a generalisation. He watched for two or three years a case of Bright's disease in which drugs caused no peculiar manifestation.

Mr. GODLEE read a paper on a case of Nephrectomy in an Infant. The child, a boy aged one year and ten months, was admitted under his care at the North-Eastern Hospital for Children in August, 1883. The tumour was first noticed in June, 1883, and was growing rapidly. It was on the right side, and measured four inches in the long diameter and about two in the short. It was freely movable, and manipulation caused no pain. There were no urinary symptoms. The kidney was removed by the lateral abdominal (Langenbuch's) incision, and the removal was readily accomplished, as there were no adhesions to surrounding structures. The cæcum and the duodenum were the only pieces of bowel exposed. One large vein which ran over the tumour alone required ligature. There was no hæmorrhage of consequence, and the whole operation was concluded in half an hour. The child had no symptoms of any kind after the operation. It ate and slept as well the next day as before, and the temperature rose to 99° only once, the day after the operation. It left the hospital well six days later. It continued well till February, 1884, when recurrence took place in the right iliac fossa, and the tumour rapidly increased in size, passing down into the scrotum, and the child died soon after. Mr. Godlee mentioned eight other cases which have been recorded, showing that of them five had died of the immediate result of the operation, two had recovered well but died afterwards of a recurrence, and one was well when last heard of. Notwithstanding the unsatisfactory nature of the results he argued that, seeing how hopeless the condition is if this alone, we should endeavour to remove these tumours in a still earlier stage, at all events until it is proved that even this proceeding is invariably followed by a fatal result. He particularly, however, pleaded against attempting the removal of the very large growths which are not unfrequently met with, showing that they will almost certainly have involved surrounding structures, and that then while no good can follow the operation an immediately fatal result is probable. The tumour weighed about one pound, and was in structure a mixed sarcoma, most of the cells being roundish or oval, but some spindle-shaped. This is probably the usual composition of these growths, but another class was mentioned in which striped muscular fibres exist. The latter are probably congenital, and often affect both kidneys, and are thus not favourable for surgical interference.—Mr. BARWELL doubted whether the operation for removal of sarcoma of the kidney would ever be justified by the results. Incision on the outer side of the rectus abdominis was probably far better than the lumbar incision, as Langenbuch had said; for there was much less chance of bleeding.—Mr. MEREDITH related the case of a little girl, aged four years, in which a renal sarcoma of rapid growth had taken place. On examination a "bossy" irregularly shaped tumour was situate in the right side of the abdomen, having all the characters of a renal tumour. After consultation with Sir Spencer Wells extirpation was decided upon. During the operation the capsule gave way; the pedicle was then found and tied in two halves; the ureter was secured. There was but little hæmorrhage. Collapse soon [illegible] death followed on the third day.—Mr. [illegible]

found that both the lungs were studded throughout with new growths, which had yielded no sign of existence during life; the extreme rapidity with which apparently secondary infection might occur was remarked upon. The vena cava was found to be completely occluded by the ligature, but, probably owing to the collateral circulation having been opened up before the operation, this occlusion had given rise to no signs. The ureter was found to be distended with urine to the size of the little finger, and the theory of regurgitation might account for this distension. He thought it would be better to bring the divided end of the ureter out into the abdominal wound in future operations. The tumour turned out to be a round-celled sarcoma; the urine was perfectly normal throughout the course of the case.—Mr. KNOWSLEY THORNTON thought that such cases as Mr. Godlee's ought not to be operated upon, because the fatal results added to the statistical mortality of the operation known as abdominal section. He was firmly convinced that if we could eliminate such unsuitable operations abdominal section might become the most successful operation for nephrectomy. He had performed this operation ten times with uniformly good results.—Mr. A. E. BARKER could not concur with the remarks of Mr. Barwell that the anterior layer of the mesocolon would most likely present itself in the operation for nephrectomy by abdominal section. He referred to a case in which he had used the median incision, and then he came down on the growth with the greatest ease; the external layer of the mesocolon was almost necessarily incised in Langenbuch's operation, but the anterior might possibly present if the median incision were adopted.—Mr. RICKMAN GODLEE, in reply, said that it was not easy to determine the position of the colon; where the tumour was large the bowel was emptied of air, and so palpation only was of service. He thought that Mr. Meredith's case should not have been operated on. In his own case a little clot projected into the vena cava. Mr. Thornton considered that he took a too sanguine view of these cases, but such was not the case. In three cases which he had recently observed it did not seem advisable to interfere surgically. The abdominal section had the advantage in that secondary deposits in the viscera could be felt for during the operation. In his case he allowed the ureter to take care of itself, and this without evil consequences; it was the outer side of the colon that he passed through in getting at the tumour.

Dr. KINGSTON FOWLER exhibited a living specimen of Pigmentation of the Tongue in a man, aged forty, suffering from phthisis.

MEDICAL SOCIETY OF LONDON.

AN ordinary meeting of this Society was held on Monday last, Mr. Arthur E. Durham, F.R.C.S., President, in the chair.

Mr. SPENCER WATSON read a paper on a case of Chronic Hypertrophic Rhinitis. The case was unusual in many respects. A nurse girl, aged twenty-one, had been suffering from nasal discharge, occasionally offensive, for a period of eighteen months before she was first seen. There was obstruction of both nostrils, with all the symptoms of chronic inflammatory disease of the nasal passages. The obstruction was due to excessive hypertrophy of the turbinate bones and their overlying mucous membranes. Several portions of the hypertrophied bone and mucous membrane were removed by operation, and the channels dilated by ivory plugs. At the same time sprays of various kinds were used, and a course of arsenic given internally. The result was very satisfactory; the senses of smell and taste were restored, and the free respiration through the nostrils re-established. The instruments employed and the portions of tissue removed were exhibited, and the patient was present for inspection. The nostrils were seen to be nearly normal in appearance and the passage quite free for respiration.—The PRESIDENT spoke of the importance of the subject, and of the frequent association of chronic hypertrophic rhinitis with mucous polypi, together with the liability of confusing between them.—Dr. GIDEON GARDINER referred to the presence of a discharge having an offensive odour passing down the œsophagus into the stomach. He had employed glycerine of carbolic acid and a powder of starch and iodoform in equal parts as an insufflation.—Mr. WALSHAM thought it was difficult to decide whether the catarrh was caused by the stenosis or *vice versâ*. But he was sure that the hypertrophy kept up the catarrh when the stenosis reached a certain degree. He had removed a part of the inferior turbinate bone with considerable benefit, though the relief was not always permanent. In displacement of the septum nasi which sometimes accompanied the disease the rectification of the septum had done much good. Nitrate of silver on a probe could be employed with much benefit; he had also used chromic acid and iodoform.—Mr. WATSON, in reply, was convinced of the value of chromic acid, which he thought was the best caustic.

Dr. BRAXTON HICKS exhibited an apparatus for Dry-air Disinfection, which is described in another column.—Dr. ROBERT BARNES thought the employment of this apparatus was of immense importance in the lying-in chamber, and for deodorising linen and clothes. He considered that no articles should come back from the laundry without being subjected to the influence of a dry-air disinfector.

Dr. KINGSTON FOWLER read a paper on False or Functional Cardiac Murmurs, which will be published in a future number of THE LANCET.—Dr. SAMUEL WEST noticed that a very large number of the murmurs were exocardial; some of these murmurs were due to movements of the air in the lung, but these were probably rarer than those due to conditions of the blood. Mental excitement might cause a murmur in the second right intercostal space, and the presence of such a murmur might lead to the "refusal of a life" at an insurance office. He spoke of the blowing systolic murmur at the left apex in cases of chlorosis. Reference was also made to functional murmurs in the course of rheumatic fever. Dilatation of the axillary artery might accompany the signs of dilatation of the left ventricle. The intraventricular origin of murmurs was defended.—Dr. SANSOM said he estimated Dr. Fowler's paper as a most practical one. It was most important not to give offhand answers in regard to the nature of any murmur. He agreed with the views of Ludwig and Hesse, which referred regurgitation to temporary feebleness of the muscles which close the auriculo-ventricular orifices. He could not believe that the murmur heard at the second left intercostal space was due to mitral regurgitation, as held by Balfour and Naunyn. The excessive vibration of the septal segment of the mitral valve was the probable cause of the murmur heard at the left base in cases of anæmia.—Dr. ANGEL MONEY referred to the frequency with which the sounds over the right ventricle and pulmonary artery were altered and rendered louder in conditions of obstruction of the pulmonary circulation.—Dr. KINGSTON FOWLER briefly replied.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of the above Society was held on Wednesday, October 8th, Henry Gervis, M.D., President, in the chair.

The following were the specimens shown:—1. Two Cysts of the Broad Ligament filled with Tarry Fluid, removed by Abdominal Section, by Dr. Malins. 2. The Ovaries and Tubes, removed from a case of Pyosalpinx by Operation, by Dr. Malins. 3. Tumour of the Upper Part of the Vulva, removed by écraseur, by Dr. Potter. 4. Pelvis from a case of Mollities Ossium, by Mr. Griffith. 5. Cyst of the Uterus, by Mr. Griffith. 6. Ovarian Tumour, by Dr. W. Duncan. 7. Neugebauer's Intra-uterine Glass Tube, by Dr. Barnes. 8. Glass Female Catheter, by Dr. Barnes.

Mr. J. HOPKINS WALTERS read a paper on Post-partum Avulsion of the Uterus, with a case followed by recovery. In April, 1882, Mr. Walters was called by Mr. Cockran of Caversham to a patient aged twenty-two, in her third confinement. She had been attended by a midwife, who, after the birth of the child, finding the placenta did not come away, pulled at the cord, which broke at its attachment. She then introduced her hand and tore away the whole of the uterus with the right ovary and Fallopian tube, portions of the round ligaments, left Fallopian tube, and ligament of the left ovary attached to it. Mr. Walters saw the patient twenty-one hours after the accident, and found her under the influence of opium, and somewhat recovered from severe collapse. A large quantity of omentum protruded from the vulva, and in the upper part of the vagina was an enormous rent. Mr. Walters ligatured and cut away the omentum, which was cold and badly bruised, at the level of the vulva; the parts were washed with solution of permanganate of potash, and a pad of salicylated wool applied. The opiate was continued; cathe-

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terisation ordered every eight hours, and the diet limited to milk and beef-tea. The patient did well until the fifth day, when she was seized with shivering; her temperature fell to 97·4°, and the pulse rose to 170. Mr. Walters irrigated the vagina with solution of permanganate of potash, and, finding that the vaginal fundus had well closed round the omental stump, afterwards used a solution of carbolic acid; quinine, in large and frequent doses, was combined with the opiates, and the vagina syringed every eight hours. On the twenty-eighth day the patient was able to drive five miles to the Royal Berkshire Hospital, where she remained under Mr. Walters's care until the beginning of July, when the omental stump had frittered away, and the vaginal wound was perfectly cicatrised. At the present time, two years and a half after the mutilation, the patient is in perfect health and attending as usual to her ordinary occupations. After a diligent search Mr. Walters has found reports of thirty-six cases of accidental removal of the puerperal uterus, of which fourteen recovered. Of all these, only three were, without doubt, unattended by previous inversion of the uterus. Having regard to the medico-legal aspect of these cases, Mr. Walters draws an important distinction between the accidental removal of the previously inverted uterus and of the uterus that has not undergone inversion, on account of the possibility of uterine separation through spontaneous rupture. According to present experience, inversion of the uterus is not found to coexist with rupture either of that organ or of the vagina; and where it is shown that the uterus was inverted before being torn away, it becomes tolerably easy to estimate the degree of criminal responsibility attaching to the attendant. On the other hand, where it can be proved that the uterus was never inverted, it is impossible to assert that the separation of the uterus was wholly due to violence, and not contributed to by a spontaneous rupture through the uterine or vaginal walls. Mr. Walters quotes cases and authorities to prove the occasional insidious occurrence of uterine rupture, the suspension of symptoms, and the completion of childbirth in spite of it, in some cases independently of manual interference, and without any disproportion between the maternal passages and the child; and concludes that in giving evidence in such cases, these facts should be most carefully remembered.

Dr. P. HORROCKS read a paper on a case of Rupture of the Uterus. M. B——, aged thirty-four years, was in her ninth pregnancy; in the eighth one, twins were born fifteen months ago. In her ninth pregnancy labour came on at full term, and nothing abnormal was noticed when she was first examined; the os was dilated and the membranes bulged through it; presentation vertex. Two or three severe pains came on, following one another very quickly, and the vertex appeared at the vulva covered by the unruptured membranes. These were immediately ruptured and the child (alive) was driven entirely outside the vulva by the powerful parturient action, which had at the same time caused a rupture of the uterus running nearly longitudinally but inclining obliquely downwards to the left, and involving part of the body, the whole of the cervix, and a portion of the upper part of the vagina. There was not any external hæmorrhage, and the patient seemed all right for about ten minutes, when she became faint and collapsed, vomiting some dark brownish fluid. The placenta was expelled by the uterus after injecting hot water into the vagina. The author arrived soon after this, and found the rent already described. The patient died from shock before anything could be done. There were only a few clots in the pelvis.

The PRESIDENT remarked on the value of Mr. Walters's paper, both from the forensic and obstetric point of view. He did not quite gather in what way the projecting omentum had disappeared, and he would like to ask whether examination had detected undue softening of the uterine tissues.—Dr. AVELING asked if any penal action had been taken against the midwife. He thought the case another strong proof of the necessity of passing a Bill to ameliorate the present ignorant and dangerous class of midwives.—Dr. BRAXTON HICKS thought that in Mr. Walters's case there was already a rent of the junction of the uterus and vagina, and that the midwife had passed her hand through the rent in mistake for the flabby os uteri, had pulled down the omentum in mistake for the placenta (an error he had seen before), and then the uterus. Rupture of the uterus and vagina is produced by the essential contractions of the uterus, and bearing down pains are not necessary. When an obstacle occurs to the head of the fœtus after its escape from the os, the uterine force is expended on the uterus and upper part of the vagina as a kind of recoil. When a laceration has once begun, but little force is needed to extend it, and when the fœtus is placed nearly symmetrically, the vagina may be torn all round. The broad ligaments are not capable of resisting much force, nor are the round ligaments. A very slight force will free the uterus after the severance of the vagina. In the case of Popplewell's, alluded to in the paper, he was assured privately that no force had been used. He did not think that in simple removal of the placenta from a sound uterus and vagina it would be possible to tear the uterus away. After the uterus has been torn away from the vagina and most of its attachment, bearing down might conceivably complete its detachment and expulsion. — Dr. CHAMPNEYS said that the uninverted uterus might conceivably be torn away by inserting one or more fingers through the cervix, retroverting the fundus, hooking the fingers backwards and pulling.—Dr. BARNES confirmed the view taken by Dr. Hicks that the uterus had the power by virtue of its *vis insita* of contracting and pulling on the vagina and broad ligaments even apart from any central nervous supply, for a short time at least. Expression of the placenta (practised by the midwife in Mr. Walters's case) requires caution, and may produce inversion. The proper way is to use both hands, and press the anterior wall against the posterior.—Dr. HERMAN said that in any future case of the kind in which evidence on the subject might be required in a law-court, all available facts would be found in Mr. Walters' paper, which had shown that in certain conditions avulsion of the uterus is effected with great ease, and had been frequently effected by qualified medical men. Remembering the rarity of these cases, and the sudden emergency which arises, a medical man should not be hastily condemned as a criminal, and still less a midwife.—The PRESIDENT said that while avoiding hasty condemnation in any individual case, in the absence of a knowledge of all the facts, he could not but regard the avulsion of a whole uterus, inverted or not, as a very grave and responsible proceeding.—Dr. GRIFFITH referred to a case in which a fibroid had been mistaken for the placenta. Post-partum hæmorrhage had induced the practitioner to use some force, which might have inverted the uterus.—Dr. BRUNTON thought the removal of an inverted uterus a sign of incompetence, or even criminality, seeing that the absence of inversion can be easily proved by abdominal palpation of the puerperal uterus.—Dr. BARNES replied that the uterus might be by natural efforts or aided by slight and not culpable manipulations, entirely detached. Casper mentions a case in which the broad ligaments even were torn through by spontaneous force. When the uterus was lying loose the hand introduced to remove the placenta might easily bring it away, and the practitioner be blameless. Those of largest experience would judge most mercifully.—Mr. WALTERS, in reply, said that the omentum, after becoming highly vascular, slowly disintegrated by molecular death and disappeared. He did not receive the uterus until many days had elapsed, and consequently no microscopical examination of its fibres was made. It looked, however, perfectly healthy and of quite average thickness throughout its walls. No penal action was taken against the midwife, and he was thankful this was so, as, although he still believed great violence was used, he should have given much stronger and more positive evidence against the woman than subsequent study of the histories of these cases would have justified. Comment had been made on the various ways in which, during operative procedures, the uterus might be detached from its connexions, but one mode had not been mentioned—viz., that in the attempted introduction of the hand within the uterus, either for turning or to remove retained secundines, the organ might be forced up and the tissues of the cervix or vagina, if friable, torn through. He would feel greatly obliged if Fellows would bring to his notice any account of similar cases not included in his paper.

MEDICAL OFFICERS OF HEALTH SOCIETY.

Metropolitan Sanitary Administration.

THE first meeting of the session was held on Oct. 17th, when the President, Dr. ORME DUDFIELD, delivered an inaugural address. After congratulating the Society on the complete success of the conference at the International Health Exhibition, managed by the Society conjointly with

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the Sanitary Institute and Parkes Museum, and referring to the services of Dr. Northcote Vinen, who had resigned the post of hon. secretary after more than twenty years' service, he proceeded to deal with the subject of Metropolitan Sanitary Administration. First of all he sketched his idea of what a London Government Bill should be, in an abstract of the address deliver by him in the previous session, and then compared the sketch with the scheme of the Home Secretary. There was so much of similarity in the two that he could not consistently enlist himself in the ranks of the opponents of the Bill. After referring to the grounds of opposition raised by the Corporation and local boards, and taking into consideration the probability of the Bill not meeting with acceptance in Parliament, he proceeded, in the second place, to suggest an alternative scheme. The Corporation might be left alone, or, under a reformed constitution, allowed to rule over the City; the Metropolitan Board of Works being placed, in regard to the rest of London, in the position assigned in the Bill to the new Common Council. The vestries would be maintained in their present position as local executive bodies, subject to efficient control by the Board, so as to secure the desired unity and uniformity. Reference was made to the mode of election of members of the Board and vestrymen, and to plans by which this might be amended. Whatever scheme might be adopted—that of the Government or such a one as he suggested—the Central Board, as the chief sanitary authority, should be endowed with the powers and duties with respect to infectious diseases, provision of hospitals and ambulances, &c., at present exercised and performed by the Asylums Board. It was possible, of course, that no Bill might get adopted. The Bill of the Government might be rejected and they might refuse to bring in another. He proceeded to ask therefore, in the third place, whether it was inevitable, in either contingency, that London should wait indefinitely for an instalment of reform in its sanitary administration? Reciting the powers already existing which, *inter alia*, enabled the Metropolitan Board to make bye-laws in regard to a variety of matters, he contended that if such powers were exercised, covering as they did pretty well the whole field of sanitary administration, London government might be conducted in a fairly satisfactory manner by the existing authorities. He stated his reasons for believing that the framers of the Metropolis Management Act must have contemplated a close union between the board and the vestries, such as he advocated, and cited several sections of the Act which enable the Board to make bye-laws for regulating the drainage of houses, disposing of refuse, &c., and to make orders for the guidance, direction, and control of the vestries in regard to sewerage. Theoretically, nothing more, nothing better, could be desired, provided only that the vestries carried out their part in the matter by loyally enforcing the bye-laws. But no such bye-laws for regulating drainage and disposing of refuse were in existence; while, with regard to sewerage, no definite principles had been laid down, each local board having its own views on the proper size and material of sewers, the differing plans being equally approved by the Board. Having in view the probability that no opportunity of dealing with Metropolitan government would be forthcoming next session, a time of grace was afforded which, if wisely used in efforts to put existing powers into force, might avert the necessity for any material change. But if the vestries, for instance, desired to prolong their rule, they must prove their utility; and more than one opportunity of doing this was offered. For example, they must deal with the dwellings of the poor, in regard to the state of which the public conscience had been greatly stirred; as witness the formation of the Mansion House Council and the appointment of a Royal Commission. The power to make regulations for houses let in lodgings or occupied by members of more than one family must be exercised. The Society had framed standard regulations for their guidance in 1879. Few of them had exercised the powers, but if they had sinned by their neglect it was in good company, as the Local Government Board had failed until within the last few months to exercise its power, conferred in 1874, of declaring the enactment of Section 35, Sanitary Act, 1866, to be in force in all parts of the metropolis. The Society had framed useful regulations for the guidance of sanitary authorities in supervising bakehouses. Illustrations of the value of bye-laws were cited, special reference being made to those framed by the Metropolitan Board with regard to foundations and sites of buildings, under the Building Act, 1878; to offensive trades, under the Slaughter-houses (Metropolis) Act, 1874; and to dairies, cowsheds, and milkshops, under the Dairies, &c., Order of 1879. Incidentally the Slaughter-houses Act had led to a great reduction in the number of private slaughter-houses, while the offensive businesses regulated had been conducted subject to definite regulations, enforced by an irreducible penalty for any breach, in a satisfactory manner, quite impossible when they were subject to the general law of nuisance only. The Society had taken a leading part in promoting sanitary reform in connexion with offensive trades, dairies, and cowsheds. The legal status of the local authorities and of their medical officers in relation to the regulated businesses was unsatisfactory. They should have statutory powers to carry out the bye-laws under the general supervision of the Metropolitan Board. Regulations made by the vestries providing for the periodical removal of manure were rendered nugatory by the reluctance of magistrates to inflict adequate penalties for breaches. Some limits should be set to the power of magistrates to reduce and remit penalties for offences against sanitary laws. Good work might be done under the water regulations if the sanitary authority had concurrent power with the water companies to enforce them. The Local Government Board had urged the vestries to bring about "severance of all connexions of waste-pipes of cisterns with drains," but this, as it had been pointed out to the Board, could be done universally by the companies only—viz., by the exercise of their power under Regulation 14. The companies had responded in some measure to the representations of the Board by issuing a notice to their customers, calling attention to the advice with regard to waste-pipes, cleansing of cisterns, &c., given by Sir Francis Bolton, the water examiner, in his monthly and annual reports. The power of water companies to cut off water for non-payment of rates should be totally abolished. When all existing powers had been exhausted Parliament would confer whatever additional powers were proved necessary. Among others the Metropolitan Board should have that of fixing upon sites for mortuaries and disinfecting chambers, and for baths and washhouses upon a plan so arranged as to provide for the needs of the population irrespective of local boundaries. Having so far dealt with "sanitary powers," the address next dealt with "sanitary difficulties," which were partly inherent in the law itself, and partly incident to the method of its administration after this had passed from the sanitary to the judicial authority. There was no power to punish the person who created a nuisance, however grave or long-continued it might be, and it took an inordinate time to get a nuisance abated, when the author of it proved recalcitrant. The public, naturally supposing sanitary law to be the embodiment of common sense as applied to matters of public health, were too apt to regard the sanitary authorities as all-powerful but apathetic, and to lavish blame upon them for not abating nuisances immediately upon discovery or report. But the law was too considerate of the rights of property, and too leisurely in its movements to allow of this being done. Months even might elapse before a nuisance could be abated. Aggrieved tenants were liable, moreover, to be made to pay compensation to the landlord, in the shape of increased rent, for the trouble and expense to which he had been put. The remedy for the state of things described was twofold. The magistrates should have power (as outside London they have, under Section 96 of the Public Health Act, 1875) to inflict, by their order, a substantial penalty on the author of the nuisance, and the vestry should have power to enter upon the premises to abate the nuisance when it was certified by the medical officer to be dangerous to health, and the time allowed in the vestry's notice for its abatement had expired. Reference was made, in conclusion, to cases that had come before the courts, in which tenants had proceeded against their landlords to recover damages for injury to health, resulting from drainage and other structural defects. Decisions had been given in their favour and were of importance as precedents. There should be an implied warranty when a house was let that it was fit for human habitation.

On the motion of Dr. Bristowe the thanks of the Society were given to the President for his address; and on the motion of Mr. Shirley Murphy, seconded by Mr. F. M. Corner, it was resolved to print the address and forward it to the Local Government Board, the Metropolitan Board of Works, the vestries and district Board, and other parties interested in the question of London government.

The proceedings of the meeting were brought to a close by

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the presentation of a testimonial to the retiring hon. secretary, Dr. Vinen, in the shape of a handsomely engrossed and framed copy of a resolution passed at the annual meeting held at the International Health Exhibition in June.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

THE first meeting of the Society for this session was held on Oct. 10th, the President, Dr. Bell, in the chair.

The PRESIDENT delivered an introductory address, in which he contrasted the practitioners of fifty years ago with those of modern times as regards education, general and professional, social status, work, and physique. The latter he maintained to be better in the older practitioners, who had to face all weathers without the luxurious carriages in present use, while the rare use of old midwifery instruments caused the hours of work to be longer. The practitioners of to-day shrank from many duties which formed part of the routine of past times and midwifery tended more and more to fall into the hands of women.

Dr. MYRTLE read a paper entitled "Sweating to Death." The patient, a healthy active man, after suffering for three weeks from pains of a rheumatic character relieved by sodium salicylate, was seized with profuse sweats, which were frequently of a most offensive character, lasting at times for ten hours. Atropine and ergotine both caused sudden symptoms of collapse. He improved for a time on arsenic, and the perspiration lost its fetidness. He died from exhaustion 121 days after he first felt the flying pains. No post-mortem could be obtained. Dr. Myrtle regarded the case as one of paresis of nerves supplying the sweat-ducts, caused by frequent exposure to cold during his employment.

Dr. BRAITHWAITE, Dr. HUTCHINSON, and Mr. WHEELHOUSE related cases of Excessive Sweating, which in one instance was relieved by the external application of belladonna liniment, and in another by taking copper sulphite.—Dr. JACOB thought the intermittency of the attacks precluded a peripheral paresis, and pointed rather to the sweat centres being affected.

Dr. SOLOMON SMITH read a paper on Visceral Neurosis, urging the view that these were often reflex, and not due to nervous defect. One might conceive that through the nervous system a continuity was maintained between all the cells of the organism, and that the activity of any organ was not due to a stimulating force originating in any so-called "centre," but to stimuli resulting from the sum total of the impressions received by the nervous system from every part of the frame. A neurosis, then, might either arise in consequence of morbid centripetal impulses from other organs, or from primary defect of the nervous system. More good could therefore be done in many cases by relieving peripheral irritation than by nerve medication.—Dr. CLIFFORD ALLBUTT also urged the importance of investigating peripheral causes in nervous gastric disorder. He denied that a non-neurotic subject could be rendered neurotic by overwork or exhaustion.

Mr. MCGILL read a paper on two cases of Charbon. In the first the patient was inoculated while skinning a beast known to be diseased. He was admitted to the infirmary with cellulitis of the arm, and died collapsed in a very rapid manner. The second case presented a well-marked pustule on the arm, which was excised, and the patient recovered. In the first case no bacilli were found in the blood during life, but many immediately after death.

Dr. JACOB showed the Malignant Pustule from the above case mounted in glycerine jelly. He also showed microscopic specimens of Bacilli Anthracis from the two cases above, and from two recent cases of woolsorters' disease which had occurred in Bradford, together with diagrams showing this structure of the pustule and the forms of the bacilli.—In the discussion which followed Dr. BELL gave an account of similar cases, pointing out the want of correspondence between the constitutional and local signs in many of these cases. It was also mentioned that some fifteen of the beasts known to be diseased had been recently sent to the Leeds market; and we must therefore presume, as no ill-effects had followed, that the spores of the organisms could be destroyed by the heat used for cooking.—Drs. BRITTON, RABAGLIATI, and S. SMITH joined in the discussion.

Mr. A. W. MAYO ROBSON showed a patient on whom he had operated in March, 1884, for Ununited Fracture of the Spine of the Scapula, which had been produced by a fall of earth fifteen months previously. He had been treated at first by his own doctor, and afterwards as an out-patient at the Leeds Infirmary, but when he was admitted for operation a gap of an inch could be felt between the fragments, and the arm was useless. The refreshed ends were united by two silver sutures, which were pressed down flat and left in. The operation was done antiseptically. The result was most satisfactory, the patient having a useful and powerful arm, with all its movements perfect.

Reviews and Notices of Books.

Diseases of the Heart and Thoracic Aorta. By BYROM BRAMWELL, M.D., F.R.C.P.E. Edinburgh: Young J. Pentland. 1884.

IN this elegant and profusely illustrated volume Dr. Bramwell has entered a field which has hitherto been so worthily occupied by British authors—Hope, Hayden, Walshe, and others; and we cannot but admire the industry and care which he has bestowed upon the work. As it stands, it may fairly be taken as representing the standpoint at which we have arrived in cardiac physiology and pathology. For the book opens with an extended account of physiological facts, and especially the advances made of late years in the neuro-muscular mechanism of the heart and bloodvessels. Although in this respect physiological research has outstripped clinical and pathological observation, Dr. Bramwell has, we think, done wisely in so introducing his treatise, and has thereby greatly added to its value. Following this chapter there is one on the general pathology of cardiac lesions, which in the main consists in a systematic and orderly classification of the various functional and organic derangements. Then comes a lengthy exposition of the methods of clinical investigation, including an analysis of the various symptoms of heart disease. Amongst these latter we find an elaborate discussion of the phenomenon of Cheyne-Stokes' respiration, in which the various theories advanced by Filehne and Traube are dealt with, and a view of the mechanism of the symptoms, illustrated by a series of diagrams, stated. It must be confessed that the author is right in his assertion that we have still much to learn concerning this curious phenomenon, and we trust that many will be prevailed upon to employ the form of inquiry he publishes in the observation and record of cases that may come under their notice. The physical examination of the heart is treated at great length, and, particularly as regards cardiac murmurs, it may fairly be said to be exhaustive. It could hardly be expected that the author would fail to notice the views advanced by Balfour and others respecting the nature of functional murmurs, for he has already entered the lists against Dr. Balfour's hypothesis. At the same time it must strike the reader that perhaps too much space has been devoted to this single but highly interesting point, and the impression left after the perusal of these pages is that the question is one almost insoluble. It affords, however, an opportunity to the author of showing his skill in argument and critical analysis, with the result that he falls back upon the long-accepted doctrine that chlorotic murmurs have their origin mainly in the pulmonary artery, at least in the early stage. Remarks on the use and teachings of the sphygmograph conclude this chapter.

The chapter on pericarditis does not call for much by way of comment. It is abundantly supplied with tables intended to contrast the points of differential diagnosis between the conditions of pericardial effusion, cardiac hypertrophy or dilatation, hydropericardium, exocardial and endocardial bruits, &c. The signs of adherent pericardium are discussed, their enumeration being given as follows:—1. Systolic depression, instead of systolic protrusion, of the

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apex beat; and in many cases a systolic depression of the lower end of the sternum and adjacent costal cartilages. 2. Permanent depression of the præcordial region. 3. A diastolic rebound of the chest wall. 4. Absence of the apex beat. 5. Fixation of the apex beat. 6. When the lungs are at the same time retracted and fixed by adhesions, the area of pericardial dulness is not only enlarged, but remains of the same size during inspiration and expiration. 7. Distension of the veins of the neck during the systolic depression of the chest wall—i.e., during the systole of the ventricles—followed by their rapid collapse and disappearance during the diastolic rebound—i.e., during the diastole of the heart. Under Endocarditis, the author discusses, first the "simple," and then the "ulcerative" form, giving a very clear account of the latter, which so often complicates chronic valvular disease, but the etiology of which is still so obscure. We note that Dr. Bramwell is strongly persuaded that acute endocarditis is sometimes transient, adducing in support of this view the fact that the preponderance of fatal cases of chorea present valvular vegetations, the inference being that such have also been present in non-fatal chorea with fugitive murmurs. He is also inclined to believe that the early murmurs in rheumatic fever are organic and not anæmic, even though they may disappear; but he suggests that some of these bruits may be due to myocarditis without any valve inflammation. As to treatment, he is a staunch upholder of the free administration of salicin as early as possible in a case of acute rheumatism; and thinks that it is possible to anticipate and prevent endocardial inflammation by such treatment. He agrees with Dr. Maclagan in discarding salicylate of soda from its alleged depressant action on the heart, but we must confess that the evidence of this is not very convincing. The subject of valvular disease is next dealt with fully, and forms indeed one of the most attractive sections of the volume. The sixth chapter is devoted to diseases of the myocardium, and the seventh to neuroses—viz., palpitation and angina pectoris. A chapter upon thoracic aneurysm terminates a work which from the scientific manner in which the subject is treated, from the care and discrimination exhibited, and the copious elaborate illustrations with which it is adorned, is one which will advance the author's reputation as a most industrious and painstaking clinical observer.

OUR LIBRARY TABLE.

Madère étudiée comme Station d'Hiver et d'Eté. Par le Docteur JULIUS GOLDSCHMIDT. Pp. 36. Paris: Delahaye et Legrosnier. 1884.—This work gives a short account of Madeira and its climate, illustrated by thermometric, hygrometric, and barometric tables. The author, after a brief notice of the prevailing diseases to which residents may be exposed, has given in detail the cases which, in his opinion, are likely to derive benefit from a residence there. His advice and cautions to invalids are judicious. Full information is afforded as to the various routes by which the island may be reached and the accommodation provided for visitors. The book is evidently intended chiefly for the use of French invalids; and the author states, as one of the drawbacks of the island, that, while in the hotels and boarding-houses there is every comfort to be found, there is also English cookery. It seems well adapted to afford information to the class for whom it appears to have been written.

Aix-les-Bains (in Savoy). The Medical Treatment and General Indications. By Dr. BRACHET. Pp. 174. London: Renshaw. 1884.—This work has been written with the purpose of showing the value and influence of the medical treatment of Aix-les-Bains and Marlioz. An analysis of the waters by M. Wilm is given, and a detailed account of the mode of using them, but there is no information afforded respecting the climate. The greater part of the book is taken up with an account of the diseases to the treatment of which Dr. Brachet considers the waters to be applicable, illustrated with notes of cases. The author, in our opinion, has fallen into the very common error of including far too many diseases in this category. As far as we can gather the diseases in which the waters of Aix should be avoided are very few, and may be grouped as "congestive phthisis, complicated by intense febrile symptoms and repeated hæmoptysis," cancerous diseases, atrophy or hypertrophy of the heart, dilatation, or aneurysm of the heart and of the large vessels, angina pectoris, and nervous irritability or congestion of the brain. An analysis is given also of the sulphurous waters of Marlioz and Challes. The last forty pages of the book are devoted to an account of Aix-les-Bains, its accommodation and amusements, and of the places of interest which may be visited from it.

The Journal of Physiology. By MICHAEL FOSTER. Vol. V., No. 3 and Supplement to Vol. V.—The present parts contain the following memoirs and a bibliography of the physiological papers published in 1883:—1. Schäfer: A Method of Recording Changes of Volume by Means of Photography and its application to the Plethysmographic Record of the Normal Frog Heart, with a Plate. 2. By the same author: A Description of the Piston Recorder, an apparatus for Recording and Measuring the Changes of Volume of the Contracting Frog Heart, with a Plate. 3. H. Sewell: On the Physiological Effects of Light which enters the Eye through the Sclerotic Coat. 4. H. C. Wood: Note upon Antipyretic Salines. 5. S. Politzer: On the Temperature Sense; a Contribution to the Physiology of the Skin as an Organ of Sense, with a Plate. 5. W. D. Halliburton: The Proteids of Serum, with a Plate.

The Quarterly Journal of Microscopical Science. Edited by Professors LANKESTER, DYER, KLEIN, MOSELEY, and ADAM SEDGWICK. No. XCVI. October, 1884.—This part contains a memoir by William Patten of Boston, U.S.A., on the Development of Phryganids, with a preliminary note on the Development of Blatta Germanica. Mr. Patten found in the earliest stages of the yelks examined by him numerous germ-cells, together with an irregular network of protoplasm. All the nuclei and the protoplasmic network migrate to the surface and become converted into blastoderm, which becoming thickened at one point forms the ventral plate. From this plate cells arise by budding and migrate into the yelk and ultimately form true entoderm cells. All the mesoderm arises from an invagination which takes place along the median line of the ventral plate. The further stages of the development of these insects are carefully followed. 2. A memoir on the Development of Halisarca lobularis, a species of sponge, by W. J. Sollas. 3. A contribution to the knowledge of Rhabdopleura, by Ray Lankester. 4. A description of Caldwell's Automatic Microtome. 5. H. Caldwell, on the arrangement of the Embryonic Membranes in Marsupial Animals. 6. Alice Johnson, on the fate of the Blastopore and the presence of a primitive Streak in the Newt (Triton cristatus). Justus Carrière, on the Eyes of some Invertebrata. Lastly, a note on Protoplasmic Movement. This part closes Vol. XXIV. It contains 23 plates.

The Medical Chronicle. A Monthly Record of the Progress of the Medical Sciences. Vol. I. No. 1. Manchester: J. E. Cornish. This new periodical has started well, and we wish it every success. The original contributions, five in number, are of excellent character. Dr. Roberts of Manchester writes on Tests for Albumen; new and old. It is needless to say that this contribution is a masterpiece of clinical chemistry. Dr. George Johnson, however, takes exception to certain statements concerning the picric acid test. The article by Dr. Dreschfeld on the Pathology of the Lung Complications in Diabetes is a careful study of the

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subject, and is sure to be widely read. Of the department headed "Chronicle" we shall say but little, but we must remark that the abstracts are well done, and will serve the purposes to which they will be put. Medicine, Therapeutics, Surgery, Midwifery, Diseases of Women, Diseases of Children, Physiology, Diseases of the Eye, of the Skin, of the Ear, of the Throat, Forensic Medicine, and Toxicology are the subtitles of the Chronicle. We have said sufficient to show that *The Medical Chronicle* is a careful and thorough attempt to place before its readers a record of the progress of medicine.

The Social Code, 1884. Compiled by GEORGE AGER, LL.D. pp. 224. London: Effingham Wilson. 1884.—This code, enabling the senders of telegrams to express themselves in few words, is specially adapted for the everyday requirements of social life. The advantages of secrecy and economy are attained, and by limiting the number of words the chances of error in the transmission of messages are reduced to a minimum. Those who are in the habit of extensively using the telegraph, especially in connexion with foreign countries, will find this code extremely serviceable.

New Inventions.

APPARATUS FOR DRY-AIR DISINFECTION.

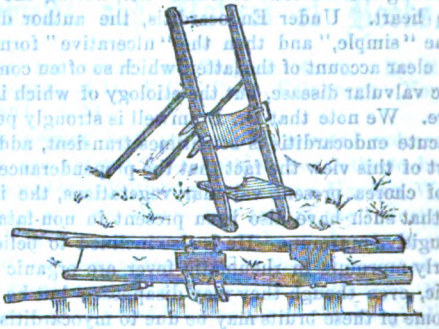
DR. BRAXTON HICKS showed at the Medical Society of London, on October 27th, an economical apparatus for antiseptic treatment by medicated air, simple and cheaper than others, but on the same principle. It was made for him by Mr. James Allen (21, Marylebone-lane), and is worked by foot bellows manufactured by Griffiths (Garrick-street). It consists of a pewter cylindrical vessel, having a screw lid, this having itself a smaller opening with a screw lid (A in figure). There are two openings (C and D) with tubes, one



opposite the other; that in connexion with the bellows (C) dips down to the bottom inside. The interior of the vessel is filled with sponge clippings, saturated with carbolic acid, eucalyptol, thymol, pine oil, or any other volatile substance, single or in combination. The large lid enables one to fill or remove the sponge; through the smaller lid the sponge can be charged or moved about. Rubber tubing connects the one side with the bellows, and the other with a tube to direct the air-current. To warm this current, and to increase the percentage of volatile material, the apparatus can be placed in hot water. The size of the apparatus exhibited was ten inches high and four inches in diameter. It was pointed out that it afforded a ready means of disinfection and of deodorising the air of a chamber.

A NEW BED-LIFT.

THE accompanying engraving represents a new bed-lift and chair combined, shown by Mr. Newham at the rooms of the Medical Society of London on the 20th ult. The seat is placed under the knees of the patient. The levers, one on each side, are hooked to the seat, which is then



drawn close to the body of the patient; the band is then passed under his back, and buckled to the opposite side. The patient can now, by raising the levers, be lifted without any effort on his part into a sitting position. The manufacturers are Messrs. Viney and Co., 181, Great Portland-street, W.

SINGULAR CAUSE OF DEATH.

To the Editor of THE LANCET.

SIR,—I beg to call your attention to the facts sworn to at an inquest, held by me at the Surrey County Lunatic Asylum, on October 3rd, 1884, on the body of J. S——, aged thirty-one years, an inmate.

The deceased was admitted into the institution about a week before her death, suffering from delusions, amongst others, that she had imps in her stomach, who were constantly coming into her mouth, and that smoke was coming out from the walls in order to smother her. The evidence of the medical officers was to the effect that they had never noticed that she evinced any suicidal tendencies, but that she was extremely careful of herself and dreaded any harm coming to her. She was at times refractory and excitable, and on the night of September 29th, being in that state, she was sent to bed in a room by herself at an early hour; no one but the attendants having access to her room. At 10.20 P.M. she was visited by an attendant, and was then seen to be quietly sleeping in her bed. On being visited about two hours and a half afterwards, she was found lying dead on her face, with a large quantity of her night dress crammed into her mouth. The attendant endeavoured to pull it out, but so firmly was it fixed in that the medical officer was sent for, and after some difficulty he removed it, and immediately marked in pencil the part that was wet, in order to ascertain how much she had swallowed. It was then found that about *one half a square yard of thick coarse calico* had been thrust down her mouth and throat.

The jury came to the conclusion that the deceased had thrust the calico down her throat in order to stifle the imps in her stomach, and without any thought that in doing so she would deprive herself of life, in which conclusion both the medical officers concurred, and they therefore returned a verdict of death from misadventure.

The case seems interesting from the fact that so much of the calico could have been forced by the deceased down her mouth and throat before all muscular power was lost.

There are cases somewhat similar mentioned in the works of medical jurisprudence; but none that seem to approach the facts of this case in regard to the quantity of material swallowed by the deceased or in the evident absence of suicidal intention.

I remain Sir, yours faithfully,

A. BRAXTON HICKS,
Elm-court, Temple, E.C., Oct. 1884. Deputy Coroner for Surrey.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 1, 1884.

A CRISIS in the history of medical education in this country seems to be rapidly approaching, and unless action of a vigorous and thorough kind be taken, a few years may witness a remarkable and indeed a deplorable state of things. There is no need to disguise the fact—it is patent to all who have taken any part in medical teaching—that the large share which the metropolis has hitherto enjoyed in this work is being seriously threatened. It hardly seems credible that this great city, the home of upwards of 4000 medical practitioners, a number exceeding one-fourth of the total number in England and Wales, with its abundant material for medical study, its numerous schools, and vast army of hard-working, earnest, and able teachers, a place which has no equal in the world as regards the resources for such education, should be in danger of losing the favour it has so long enjoyed. Yet from all sides—from the teachers who see their most promising pupils pass from their view before their course is completed; from the students themselves, who find out that the advantages of study in London are more than counterbalanced by the exceptional difficulties in the way of their attaining adequate acknowledgment of their labour; from the practitioners, who deplore the fact that a university degree was denied to them because they had been brought up in London and not in Edinburgh—the same cry comes. Nor does the general impression lack the support of statistics. One of our contemporaries published last week some figures contrasting the entries of medical students in the London and in the Scottish schools for the past few years, which show a steady decline in the former and an increase in the latter. Again, it is a notorious fact that a large proportion of the graduates of the Scottish Universities are Englishmen, which is clearly shown from figures supplied from another source; that amongst all the medical practitioners of England, 61·2 per cent. hold Scottish degrees, and only 20·3 per cent. are graduates of one or other of the English Universities. Couple with this the fact that 98 per cent. of the medical practitioners in Scotland hold a degree from a Scottish University, and the reason for the declining popularity of the London schools is manifest. There is a growing desire to be possessed of a qualification which shall carry with it the title of "Doctor," and the student or his advisers perceive that no more learning is needed, no greater effort demanded, to obtain such a diploma in other places than is required in London to obtain a mere licence to practise. Nor is it by any means unusual for students to abandon their London career at a time when they would be most able to profit by its continuance, in order to complete their education and to fulfil the necessary conditions of residence at the University. They may have to go over the same ground, but they find that the attainment of a degree is not more difficult than would have been the labour for the diploma or licence of an English College.

To all this it may be replied that London does possess a University, and that London students can pass through its portals if they choose. Those who argue thus little know the irony contained within such counsel. The University of London demands a curriculum of more than ordinary extent, and it does undoubtedly place its standard very high. The rejections of candidates for medical degrees are numerous, especially at the Preliminary Scientific M.B. and the Intermediate M.B. examinations; but this would not of itself deter candidates provided that the regulations of the University were made more elastic, and these primary examinations held with greater frequency. Were it otherwise a far larger number of those who, by competing for the Scientific Examination, show their desire to obtain the degree would eventually attain their object. On the present system the loss of time which one rejection entails, added to the "glorious uncertainty" of passing, diminishes the roll, and eventually out of every 100 medical undergraduates but ten complete their full course. It is conceivable that a remedy may be found by the University itself undertaking the gigantic task of reorganisation of metropolitan medical education, and becoming something more than a mere degree-granting body. It might do this successfully without changing its scheme of education, which, after all, does not notably differ from that of other universities, and, by placing itself more *en rapport* with the teaching centres, so remodel its examination system that every London medical student should pass through its hands. It is idle, however, to speculate upon possibilities which will never be realised. That the University of London will ever depart so far from the spirit of its foundation is not to be dreamt of. Its Senate conceives that the mission of the University is of a different kind; and well-meant suggestions for facilitating the graduate's career without diminishing the severity of the tests to which he is subjected have either been misunderstood or deliberately disregarded.

A fundamental obstacle to the University assuming such functions as would place it on a similar footing to that of other universities is that it would practically disestablish the ancient Colleges which for generations before the University was founded did the work of licensing the English practitioner. This work they are still pursuing, and, by a device which unhappily contains within it a blemish likely to defeat its object, they have just mutually agreed to combine for the purposes of examination. This scheme will require modification, notably in the matter of fees, or else it will only quicken the tendency of medical students to forsake the London Schools. But, as we all know, the cause of such an exodus is not solely one of outlay; that is one factor, but the essential thing is, as we have already pointed out, that for the same expenditure of time, thought, and money the student can elsewhere obtain the much-coveted titles of M.B. and C.M., which bear an intrinsic value higher than any membership or licentiateship of any college, however respected and illustrious. Why, then, should not the union of the Colleges be made still closer, and the wedge driven further home? With all the influence they possess, is it difficult to believe that they could fail to establish a University of Physicians and Surgeons, which should not merely examine, but actually control, the resources of medical education in the metropolis? We live in an age of progress and of centralisation. And with regard to our ancient Royal Colleges, the time is coming when their

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independent existence will be threatened, unless they submit to the force of events, and merge their individuality in an institution which will enable them to retain the control they have so long held over medical education. It is futile to dream of establishing another brand-new university when the materials lie ready at hand for the evolution of an institution which would knit together the centres of medical learning scattered throughout the metropolis, and comprise them all under one compact and well-ordered organisation. Nothing short of this will avert the fate that seems to be impending over the London medical schools.

THE views held with regard to the perineum and its functions vary much; not less so do those regarding the evils resulting from simple laceration of this structure. Some authorities hold it to be one of the main supports of the pelvic viscera. This view of the perineum is by no means uncommon, but no one has enunciated it in so definite and distinct a manner as Dr. GAILLARD THOMAS. He maintains that this body sustains and prevents prolapse of the anterior wall of the rectum and of the anterior wall of the vagina; he, moreover, states that "upon the posterior vaginal wall rests the anterior, upon this the bladder, and against the bladder the uterus, all of which depend in great degree for support upon the perineal body." Further, the perineal body, according to Dr. THOMAS, "preserves a proper line of projection of the contents of the bladder and rectum, and this prevents tenesmus, a frequent cause of pelvic displacements." These functions are performed by what Dr. THOMAS calls the keystone action of the perineum. This account of the perineum is the most boldly original conception of this body and its functions ever given to the profession. A keystone composed of soft and yielding tissues is not only a novel but an unintelligible idea; but Dr. THOMAS is not satisfied with this, for he observes that the keystone is inverted, its apex is directed upwards, and it is attached to the very structures it supports. This extraordinary conception deserves to be kept in remembrance, for if it be true, Nature, in the formation of the female perineum, has accomplished not the improbable, but the impossible.

Others, again, maintain that to support the uterus and to keep it in the pelvis is not one of the functions of the perineum. The pelvic organs are maintained in position by other structures and other means. Dr. MATTHEWS DUNCAN has taught this for many years; and Dr. EMMETT, in a paper read before the American Gynæcological Association, has recently maintained the same view. Dr. EMMETT says: "My belief is that a simple laceration of the perineum, even to the fibres of the sphincter ani, produces no inconvenience after the parts have healed, and only occasionally do we find disturbance of a reflex character due to the presence of cicatricial tissue." This statement appears to be based upon another, the accuracy of which the experience of everyone who has seen much of the diseases of women will confirm. "We can all recall," states Dr. EMMETT, "instances illustrating the condition where the perineum, even in the case of labouring women, had been lacerated for years, with no discomfort, notwithstanding that the vaginal outlet had remained so open that it was a matter of surprise to find the pelvic organs in place." He holds that "the pelvic fascia, forming a sulcus along the side of the vagina, is reflected over the muscles in an attachment around the junction of the vagina with the external soft parts, so that with the subpubic ligament above, the connexion with the coccyx behind, and the tuber ischii on each side, a firm support is given to the outlet."

The old operation of BAKER BROWN, with its various modifications, however small it may have left the vaginal outlet, fails ultimately to check the evils which have been generally attributed to laceration of the perineum. If for a time it prevents the uterus from appearing outside the vulva, this respite is but brief; the tissues united soon yield to the superincumbent weight, and the womb becomes again procident, while in many cases it is maintained in the pelvis from the first by the aid of a pessary only. This operation is effectual only when a portion of the posterior wall of the vagina has been included in the new union.

Upon the view of the pelvic fascia above given Dr. EMMETT has based a new operation for laceration of the perineum. This consists in uniting the posterior wall of the vagina to the posterior part of the vaginal outlet. The denuded parts consist of two transverse crescents, one at the vaginal orifice, and the other on the posterior wall a little above the orifice. To discover the surfaces to be united, the patient should be placed in the lithotomy position, and the lower portions of the caruncule on either side are to be seized with tenacula, together with the corresponding surface on the posterior wall of the vagina, and the three points are to be brought together. The apparently deep tear of the perineum appears then as a comparatively superficial sulcus. After denudation the transverse crescents should be united first, and then the perineal sulcus. Dr. EMMETT has found this operation to restore the parts to their primitive state before laceration, the repair thus far being permanent.

THE "cycling" community, to judge from its defence to the vigorous attacks recently delivered against it, has been aroused to a sense of the responsibility incurred by advocating the general adoption of a method of travelling at once economical and graceful.

It is not our purpose to enter minutely into the *pros* and *cons* of the arguments adopted by contending sides, but rather to strike a balance on broader grounds between conflicting opinions. Violent exercise—or strain—is undesirable, whatever form it may assume, but in no other case is it of such moment as when it threatens the integrity of structure and the regularity of function of organs necessary to the maintenance of life. It can scarcely be doubted that many a youth has had a career of brilliant promise cut short by the acquired incompetency of his aortic valves, consequent on indiscretion in rowing. In cycling the tension on the circulatory system is decidedly less, but still sufficient to constitute an element of danger, especially when an effort is made to set an example or "beat a record." With regard to the injurious effects of cycling upon the genito-urinary organs, much may be said on both sides. It seems reasonable to suppose that long-continued pressure or frequent impact of the perineum against the pommel or horn of the saddle might end in local thickening, and even stricture of the urethra, to say nothing of ulterior evils; but our investigations

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lead us to conclude that, to say the least, such results are exceedingly rare. We very much doubt if it can be shown that irritation of the genito-urinary apparatus by similar means conduces to the acquirement of evil habits in youth, inclining as we do to the belief that there is no greater safeguard against such practices than physical exercise, which strengthens the body and invigorates the mind. But, be this as it may, there should be no difficulty in entirely removing the disputed cause. If the saddle is made of sufficient width to receive the weight of the body fully through the ischial tuberosities, it would be next to impossible for the urethra to be compressed, or the perineal muscles to be thrown into a state of spasm. Excessive use of the lower limbs, incidental to cycling, has a decided tendency to cause prolonged overfilling of the superficial veins, and to the development of permanent dilatation and varicosity. We know of one case in which, from this very defect, a member of our own profession barely satisfied the requirements of the "physical examination" prior to admission to the naval service.

Considering the strain thrown upon the thighs and adjacent parts of the abdomen, it would not be surprising if now and again cases were recorded in which hernia had been acquired by "wheelers" possessing original weakness of the structures bounding the inguinal canal and its apertures, but such a mishap seems to be of very rare occurrence. With a machine made in accordance with the principles inculcated by experience as to what is safest and best to protect from injury, we doubt if any valid argument can be raised against its moderate use. The state of irritability of the spinal cord, known in America as "railway spine," on account of its supposed dependence on repeated concussions from the jolting experienced in long journeys by rail, can scarcely be a frequent consequence of cycling. The natural provisions for the protection of the cord, coupled with the resiliency of a bicycle or tricycle spring as now employed, are competent safeguards against any serious lesion of the nerve centre, either functional or organic, provided the employment of the machine is not pushed beyond reasonable limits.

A VERY important resolution affecting the sanitary administration of the metropolis was arrived at on the occasion of the last meeting of the Metropolitan Asylums Board. For many years past the failure of the metropolitan vestries and district boards to provide adequate means for the isolation of the infectious sick of their respective districts has been matter of great public concern, and the legal proceedings which have for some time past followed on almost every attempt to erect a new infectious hospital, whether permanent or temporary, have evidently put it almost altogether out of the power of such bodies to meet the increasing demand for proper means of isolation. This was fully recognised by the Legislature when, in 1883, owing to the prevalence of cholera in Egypt, the Diseases Prevention (Metropolis) Act was passed; for under this statute it was definitely enacted that the admission of a person suffering from any infectious disease into a hospital belonging to the Asylums Board should not be considered as parochial or charitable relief. In the first instance the Act was only put in force for one year; it was, however, renewed during the past session, and in view of what are apparently the intentions of the Government as regards the future, the Metropolitan Asylums Board have had the whole subject under consideration. The report of the special committee dealing with the matter has been before the managers, who have expressed concurrence with it, and the result is that they have come to the conclusion that the time has arrived when patients suffering from infectious disorders should be admitted to the managers' hospitals upon the orders of medical officers of health, as well as upon those of district medical officers and relieving officers, whose orders alone have hitherto been received. Nearly all the sanitary bodies of London have expressed their concurrence in the views taken by the managers, and since it is now quite evident that this is the only way out of a great and pressing difficulty, it is to be hoped that the application which is about to be made to the Local Government Board to give effect to it will meet with the approval which the importance of the subject demands.

On one point alone we hesitate to agree with the opinions which were expressed at the meeting. Several of the managers wished a representation to be made to the sanitary authorities urging them to obtain repayment of the expenses of isolation from the friends of the patients who might be sent into the hospitals, and pressed that instructions might be given to the officers of the authorities to secure such payment. We cannot but think that experience has proved that this recommendation was not a wise one. Patients are removed to infectious hospitals not so much in their own interests as in the interests of the public, and it is the community that should pay for the safety which they thus secure, much in the same way as vaccination and systems of house scavenging are paid for out of the public funds, either of the country or the district concerned. Besides which, infectious hospitals are constructed and maintained at the cost of the public rates, and this element should certainly be taken into consideration when it becomes a question of admitting into such a hospital any person from a ratepayer's household. Sanitary authorities are not so much given to recovering the cost of isolation as they formerly were, and we think it very unlikely that individual inhabitants of London will often be called upon to pay for removal to an institution which is maintained for the protection of the public generally.

Annotations.

"Ne quid nimis."

EXAMINATION FOR PROMOTION IN THE ARMY MEDICAL SERVICE.

WE have received a revised copy of the regulations in regard to the examination of surgeons and surgeons-major of the army. The most important alteration in them is the abolition of the examination of surgeons-major in operative surgery and practical medicine, to the objections to which we last week called attention. This will now be required only of those officers who have not previously been examined for promotion to the rank of surgeon-major. The revised circular also removes a doubt which had been expressed as to the exemption from this portion of the examination, accorded to Fellows of any Royal College of Physicians or Surgeons of Great Britain or Ireland, being applicable to

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surgeons-major, and it omits the qualifying clause that the fellowship must have been obtained five years subsequent to the officer's entry into the service. An exemption from all further examination is also granted to medical officers of any grade promoted for distinguished professional service. We hope that this may be taken as an intimation that promotion on this ground is not to be in future, as it has hitherto been, a nullity. We are glad to find that the Director-General has so promptly taken steps to remove what were, in our opinion, valid objections to the new regulations, and trust they will now be found to act beneficially for the soldier and the profession, without inflicting any injustice or being supposed to cast a slight upon the medical officers.

LAYING DOWN A "RULE OF LIFE."

THE *St. James's Gazette* observes, "It really seems sometimes as if hygienic science were all wrong, and as if late hours, much hard work done under the gaslight, and the smallest possible amount of fresh air were the way to be healthy, if not wealthy and wise. Who lives under more (theoretically) unhealthy conditions than the members of Parliament or the leading counsel learned in the law? But our statesmen are in a green old age at seventy-five, and barristers are quite boyish at sixty; so, too, are actors and actresses." Our contemporary then exclaims, "Sanitary guides should tell us the meaning of these things." So far as we may presume to respond to this appeal, we must be allowed to point out first that there is a fallacy in the inference that because Members of Parliament, busy counsel, and perhaps actors and actresses, live on in spite of the adverse influences of surroundings which are held to be injurious to health, therefore the surroundings of their lives cannot be as injurious as they are supposed to be. One of the earliest exploits in the applied science of statistics as brought to bear upon sanitary questions was the drawing of an inference that because the London night-men, who slept as they might by day, and spent the hours of darkness in emptying cesspools, were able, as a class, to claim a very low rate of mortality, their mode of life and the work in which they were engaged could not be unhealthy. A good deal of excitement, we remember, was produced by this delivery some forty years ago. It was forgotten that another point of view was possible, and that, in truth, none but the inured could live at all under such conditions! That since excogitated law, the "survival of the fittest," explains the result. So it is with members of parliament, busy counsel, and actors and actresses. The weakly and sensitive retire or die, or have the wit not to enter into a way of life which must obviously prove unsuitable. At the same time, we are quite prepared to meet our contemporary half way in his argument, though the inference with which he opens the debate is obviously faulty. We *do* think that a great deal of unpractical nonsense is talked and written on the conditions of health, and we are quite sensible of the fact that regimen and dieting may be pushed too far. It is true that "what is one man's meat is another man's poison." Practitioners and those who set themselves up as apostles of sanitary science are too prone to measure other people's corn by their own bushel. For example, a physician or surgeon may himself have been a too free liver—it is easier to preach than to practise,—and he may have become a total abstainer just in the nick of time, or with great advantage to his health; but this is certainly no reason why he should spend the remainder of his life in trying to persuade others that total abstinence is good or necessary for *them* also. Again, a medical man may have a miserably weak digestive faculty, and need to avoid certain dishes which other folk can take, not only with impunity, but with benefit; but that is no reason why he should go about abusing and interdicting the things that disagree with him, while they agree perfectly well with the majority of mankind. By pushing dieting to the verge of starvation, we are simply pretending to cure, not curing; we impose on ourselves and those who confide in our practice. In principle, the same is true of artificial modes of life. The matter is one which deserves professional attention.

THE LONDON SCHOOL BOARD AND "OVER-PRESSURE."

As a matter of course, School Boards will not take kindly to the discovery and exposure of the fact that a deadly wrong has been doing and is still done under their patronage. As well ask a criminal to form an impartial judgment of his own crime and to award a suitable sentence, as look to a School Board for a satisfactory vindication of the rights of common sense in education. There is a perfectly natural ring about the objection urged the other day at a meeting of the London School Board: "To appoint a special committee simply to satisfy one medical man was a thing that he (Sir Edmund Currie) could not conceive as coming within the province of the Board. If they agreed to the inquiry at all, he hoped it would be entrusted to persons who understood something about the matter—the School Management Committee." This is admirable; precisely what must have been expected. Meanwhile, may we not ask whether it is not just possible that some day—we know not when or how—a grain of intelligence may be discovered secreted in a stray official mind, and that the outrageous stupidity of talking like this may then become apparent? If some mal-practice were detected in the culinary department of Sir Edmund Currie's domestic establishment, would he refer the duty of "inquiring" to a committee of his kitchen maids, because they "understood something about the matter"? Why, that is the very reason of all others why the question should not be so referred. Not one medical person—though Dr. Crichton Browne is accepted as spokesman—but the whole profession demands inquiry and reform, and "the School Management Committee," which has so long failed to recognise the evil, is certainly not the body to which the duty of scrutiny or revision should be entrusted.

SUCCESSFUL EVACUATION OF THE FEMUR.

DR. TASSI presented a patient to the Academy of Medicine of Rome on May 25th last, on whom he had successfully operated for persistent osteomyelitis of the femur. The operative procedure was so formidable, and the result so satisfactory, that we translate Dr. Tassi's communication to his colleagues, with only a few immaterial omissions. The patient, a youth aged fourteen, from Aquila, of good constitution and parentage, first suffered two years previously from commencing osteitis of the internal femoral condyle. In the course of a few months the pathological process invaded the whole epiphysis, and an abscess formed at the lower opening of the Hunterian canal. On the patient's admission into the Ospedale S. Giacomo, on Jan. 8th, 1884, with acutely urgent symptoms of purulent osteomyelitis, free exit was given to a subperiosteal abscess, and two large drainage-tubes were introduced. The inflammatory symptoms having subsided, the patient was placed under chloroform on Feb. 4th, and the soft structures freely divided between the vastus internus and the ring in the adductors. A large chasm was then made in the internal condyle, and with the operator's spoon the interior of both condyles and of the whole epiphysis was evacuated as far as the peri-articular shell. It then became easy to evacuate the marrow and to scrape out the bone affected with osteomyelitis, purulent in some parts, fungous in others. The breach in the bone exceeded five inches in length. The cavity was washed out

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immediately after the operation, and then filled with very fine iodoform. A plaster-of-Paris apparatus was then applied to the whole limb, leg and thigh included, and only removed once in the course of three months. When the lad was presented to the Academy the bone was wholly reproduced, there was no ankylosis, and he was in excellent health. Dr. Tassi added that he had at that time three similar cases in process of recovery in his wards in the Ospedale S. Giacomo.

SIR MOSES MONTEFIORE.

WELL done, Sir Moses Montefiore! It may now be hoped that we have heard the last of the opinion that in modern times no human life has been proved to reach 100 years. With the extending term of human life and the steady improvement in human habits, life has often seemed to reach 100 years and more. But this has not frequently been the case in persons whose history was so well known as that of Sir Moses Montefiore. He was born at Leghorn on Oct. 24th, 1784, whither his parents had gone on a business journey. His birth was duly entered in the books of the Spanish and Portuguese synagogues in Bevis Marks. It is a grand thing to live to 100 years and to be still cheerful and thankful. It is so, in the first place, for the pleasure of rebuking such sceptics as Sir George Cornewall Lewis, and in the second for the pleasure of giving all men proof that there is nothing in physiology to make it impossible for them to achieve a century of honourable and agreeable existence. We do not wish to magnify mere longevity, or to make every man believe that by any amount of thought he can necessarily attain to it. Our study of longevity leads us to think that it is generally a constitutional, and often a hereditary, matter. It is more important to live well than to live long.

> "Nor love thy life, nor hate; but what thou livest
> Live well; how long or short permit to Heaven."

It is in this spirit, and doubtless largely because of this spirit, that Sir Moses has attained to his 101st year. It should not be forgotten that in the last decade of it he accomplished no less a feat than a journey—the third he had made—to Palestine. And it is only by so "living well" that anyone is likely to attain to an enjoyable and unselfish old age. Living well in the vulgar sense of the word is one of the surest ways of failing of this achievement. There are a few men whose powers of vitality and whose integrity of tissue are so exceptional as to enable them to almost disregard the laws of health; and their survival to a high age often leads careless observers to wrong conclusions; but there is nothing more certain than that for Jew or Christian—and Sir Moses shows how much there may be in common between a good Jew and a good Christian—the great secret of longevity is to "live soberly, righteously, and godly."

SANITARY ARRANGEMENTS AT CAMBRIDGE.

WE publish elsewhere a letter from an undergraduate of Cambridge describing the accommodation afforded at a class of lodgings by no means unfrequently licensed for use by the junior members of the University. Within the last few years the numbers that annually enter at the University have increased out of all proportion to the residential capabilities of the colleges, in spite of the new buildings that many of them have recently erected. The demand for lodging-house accommodation has therefore considerably increased, and many small tenements that a few years ago would have been considered altogether unfitted for the purpose are now eagerly sought in order to lodge the surplus undergraduates. To this there would be no objection if these buildings were kept under strict sanitary supervision, which we regret to say is not the case. Our Commissioners, who have visited the town, can bear out the statement made in the present letter with regard to the position of many of the waterclosets in relation to the kitchens, living rooms, and bedrooms. Many of these closets are utterly without provision for ventilation, and often with a very inadequate water-supply. And the danger from this source is aggravated at Cambridge by the fact that the town drainage is in an unsatisfactory condition, and that dangerous pressure of sewer gas, and sometimes actual outburst of sewage, occur at weak points in the system. Of course, so long as the inspection of these lodging-houses is entrusted to a clergyman, we cannot expect it to be efficient from a sanitary point of view. It is quite right that a clergyman should be appointed to inquire into the moral atmosphere of undergraduates' lodgings, but there ought to be associated with him an efficient sanitary inspector to attend to more practical matters. No licence should be granted to any house for the reception of students unless it can be shown that it is protected from the town sewers by an efficient trap, that every closet in it is ventilated and abundantly supplied with water, and that all waste-pipes &c. are disconnected from the house-drains; whilst the licence should be countersigned at least twice every term to show that all the arrangements have been kept in working order, and that no overcrowding has been permitted. Such an arrangement as that described by our correspondent might have been possible at Cambridge during the Middle Ages; indeed it reads like one of Chaucer's tales, but is revolting in the extreme to our modern notions of propriety. We sincerely hope the University authorities will earnestly bestir themselves in this matter. It is not the first time that complaints have been forwarded to us by undergraduates of the insanitary conditions in which they are forced to live. There is no reason why the University of Cambridge should lag behind the University of Oxford in the excellent supervision of lodging-houses by a skilled sanitary inspector, aided by a staff of efficient assistants, like that in force at the latter place. The cost of such a system, which might be met by a small increase in the rent of each house, would, we are sure, be gladly paid by the parents of the undergraduates whose health and comfort would be thus largely promoted.

GAME FOR HOSPITALS AND INFIRMARIES.

SUCCESS in the treatment of disease, as every physician knows, depends greatly on efficient feeding. At times the maintenance of strength may even become the first consideration, until, it may be, some uncertain crisis has been passed and time is gained to secure the action of needful remedies. An important object in hospital dietetics, and one often difficult to attain, is variety. Without it, the most nutritious fare may fail to realise its purpose because it does not tempt the palate of the invalid or does not sufficiently stimulate his weak digestive function. Much can be done, no doubt, to obviate this defect by skill in choosing and preparing foods in common use; but nature has other resources which a little thought can render still more highly serviceable. Game supplies the want almost without contrivance. It is agreeable, unusual, delicate, and digestible. With its many forms, its native flavour, and its different possibilities of preparation, it provides a relief from the daily routine of bedside cookery which is for many as wholesome as it is certain of appreciation. We are convinced that most of those who as sportsmen are now using the gun and rifle for seasonable diversion require no further hint to remind them of the claims of the sick in hospitals and infirmaries, who have not their advantages of recreation, but whose indigent ill-health entitles them in all true charity to a share in its results.

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THE COMBINATION OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THERE are 200 candidates for the first examination of the College of Physicians at this moment, while over fifty passed the third or final examination a few days ago. We do not know what proportion of these fifty took the surgical examination at the College of Physicians; but there is no doubt that students and teachers are at last recognising the fact that the licence of the Royal College of Physicians of London is a *complete* qualification in medicine, midwifery, and *surgery*. This being so, it is surely most unjust to compel the student of the future to pay thirty-five guineas for a complete London qualification when one can now be obtained for fifteen. Had the College of Physicians kept in mind the proverb "Tout vient à qui sait attendre," there would have been no inducement—not even a pecuniary one—to tempt them into the unwise scheme of combining with the College of Surgeons to hold a complete examination.

TOXIC ALKALOIDS IN THE URINE.

THE presence of toxic alkaloids in the urine, and in certain pathological liquids, has been studied by MM. Pouchet, Selmi, Bouchard, and more recently by MM. Lepine and Guérin. Alkaloids were discovered and separated from the urine in two cases of typhoid fever. When the alkaloids were injected into the lymphatic sac of frogs death followed, and the heart was observed to beat slowly before, and to be large after, death. When the alkaloids derived from the urine of pneumonic patients were injected into the lymph sac of a frog, the heart ceased to act in the systolic period, but without previous slowing of its rhythm. It appeared to be true that the urine of patients suffering severely from typhoid fever contained more alkaloid than a similar quantity of urine from a patient suffering from a slighter attack. In one of the cases of pneumonia it was discovered that the urine on the day after defervescence contained but little alkaloid, and this was not of toxic nature, whereas two days before the urine contained much poisonous alkaloid. These recent researches confirm the statement of M. Bouchard that the urinary alkaloids undergo augmentation in certain acute diseases. It was also proved that liquid extracts from the cadaver do not necessarily hold toxic alkaloids in solution.

SUSPICIOUS CASE OF DEATH FROM DROWNING.

ON the 16th ult. the Liverpool borough coroner resumed and concluded a twice adjourned inquest on the body of a girl aged thirteen, which had been taken out of the Leeds and Liverpool canal on Sept. 17th last. The following facts were disclosed at the several adjournments:—The deceased was last seen alive at 7 P.M. on Sept. 16th near a canal barge on which she had been working, and also near the spot where her body was found. It was proved that about a fortnight before her death she had made indecent overtures to a passing "flatman," though beyond this no evidence of immorality was forthcoming. As she did not return home that night, inquiry was made for her on board the flat where she had been employed, but the flatman denied her presence on board. On the next day (the 17th) her body was found floating in the canal just outside some lock gates. The body was perfectly naked, and both legs were severely injured, being smashed through the middle third of each, the wound involving the whole circumference of each, except a small posterior portion, and both bones being fractured. A post-mortem examination was made on the following day by Mr. R. W. Lowndes, surgeon to the police, who found that the cause of death was asphyxia from drowning. From the appearance of the legs, and the congested state of the internal organs, he concluded that the injuries had been caused after death. He also found the vagina so much dilated as to suggest that some violence had been done, though the immersion would tend to remove any blood stains or seminal fluid. A week after the discovery of the body some of her clothes were found in a basin fifteen yards from where the body was found. They consisted of a jacket and the skirt of a dress, but there was no under-clothing, though the mother deposed to her daughter having some on the day she was missed. The jury returned an open verdict. The clothes were carefully examined by Mr. Edward Davies, analyst of the Liverpool Royal Institution, but nothing was found tending to throw any light on the case, which remains shrouded in mystery.

CLEARING A TRACHEOTOMY TUBE.

THE sad death of Dr. Rabbeth has led to numerous suggestions of mechanical contrivances for clearing tracheotomy tubes of obstructing fluids and membranes. It is sufficiently evident to the practical surgeon and physician that most of the inventors have no idea of the calibre of a child's trachea, of the form of the tracheotomy tube that is usually inserted, or of the nature of a diphtheritic membrane. Suggestions of a pipette through which to draw the membrane, or of a kitchen bellows as a suction machine (as described in a letter from a correspondent), show a complete ignorance of the problem to be solved. A child is in danger of immediate suffocation, the membrane is thick and adhesive, and generally extends into the large bronchi, if not into the smaller divisions of those tubes. Any instrument which will obviate the necessity of sucking out the tube must be always at hand; readily applied to the tracheotomy tube, whatever differences there may be in the bore of various specimens; it must be of sufficient suction power and easily worked; and, lastly, of such a form as can be used whilst the tracheotomy tube is *in situ*. None of the suggestions recently made meet these essentials, and many are simply ridiculous. In our opinion there must be some change in the shape of the ordinary tracheotomy tube before any contrivance can be adopted which, in an emergency, would so effectually dislodge its contents, or the obstruction in the air-passages beyond it, as the ready but dangerous means resorted to by Dr. Rabbeth.

CERTIFYING INSANITY.

THE whole process of certifying insanity is so needless and mischievous in its effects and consequences, and the law controlling the practice is so defective, that complications from perverseness, blundering, or neglect are purely wanton. At Birmingham they seem to have a free and easy way in certifying the insane. Magistrates do as they please about calling to their assistance a medical man. Doubtless they feel fully competent to manage the business themselves, and being possessed with this idea, they either omit the part to be played by "the doctor" in the little drama, or they leave him to come on the scene how and when he can. A coroner has just rebuked the local justices for their irregularities in this respect, and they most richly deserve the censure passed upon them. It is intolerable that poor folk should be hurried into asylums on a mere perfunctory examination made by medical men who act together, if not technically in "collusion"; but it is much worse if a totally unskilled official, such as a magistrate, is to call to see an alleged lunatic, ask two or three common-place questions, and of his own untrained and unguided judgment certify the subject of this brief ineffectual scrutiny insane. If magistrates who are to keep the medical men in order themselves do such things, *quis custodiet ipsos custodes?*

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PARLIAMENTARY REPRESENTATION OF THE UNIVERSITIES OF EDINBURGH AND ST. ANDREWS.

WE have received the report of a meeting of electors who had signed a requisition to J. H. A. Macdonald, Esq., Q.C., LL.D., Dean of Faculty, to allow himself to be nominated as a candidate to represent the Universities in Parliament. The meeting was held on the 22nd ult. The chairman, Dr. John Duncan, spoke apologetically of the fact that the Conservatives had not brought forward a medical candidate for a constituency so largely medical. His reasons were that no medical man financially sufficiently prosperous, and professionally sufficiently unsuccessful, could be found to take the post. This explanation is very unsatisfactory. For ourselves we cannot pretend to any enthusiasm in connexion with the candidature of Mr. Macdonald. One great objection to his election is that he is a lawyer, and there are already far too many men of that profession in Parliament. Their number is a misfortune for the country and for the legal profession itself. Another objection is his laudation of the medical examining system in Scotland, even that of the Corporations. He cannot have read the report of the Royal Commissioners or the evidence accompanying it, or he would not have spoken so complacently of the perfection of the work of these bodies. But what will not men say for a seat in Parliament? It is no slight satire on the choice of a lawyer for this office, who has his own views in going into Parliament, to notice that half his speech was taken up with medical questions and medical politics, on which it is evident he is just as ready to mislead the House as Sir Lyon Playfair, whom he seeks to displace. We cannot pretend, after the wreck of medical legislation brought about by Sir Lyon, to weep over any prospect of his displacement. We can only lament that the Scotch universities have no better or wiser friends than those who dare not speak of them but in terms of flattery, and who think so slightingly of their graduation system as to show a dread of public and independent tests. Time will show who are the best friends of the Scotch universities, and whether their recent action is wise.

THE SOCIAL LIFE OF THE MEDICAL STUDENT IN LONDON.

A LETTER in a daily contemporary has drawn attention to the absence of many social advantages in the life of the medical student who is compelled to live in London and other large cities. The crude idea is brought forward that, in the absence of attention being paid to the necessity of providing social comforts and proper amusements for the future doctor, Mr. Mundella and the State should step in and interfere. We think that Mr. Mundella has had such sufficient experience in legislating for the fully-fledged doctor that he is not likely to rashly interfere with the everyday life of the student. If life in a large city like London is, as we contend, the best provision, if not a necessity, for the after-practice of his profession, the medical student must perforce reside in close proximity to his daily work; and sighs after proctors, academic life, and collegiate discipline are in vain and out of place. Of what real use to discipline and morals are proctors' visits in our university cities? and the idea of such futile and antiquated methods for regulating a student's life in London is too ridiculous to be seriously argued. In some schools—King's College and St. Bartholomew's—rooms under the supervision of the authorities are provided for a certain number of medical students, and it would be well if the other medical schools also adopted this arrangement. Parents would then have room for choice in regard to a residence for their sons; but beyond this, in a city like London, it is questionable whether any other social surroundings could be secured, and even whether they would be advisable. However much it may be regretted, the hard lesson must be learnt by the parents of every medical student, that in leaving home for the metropolis social comforts must be exchanged for hard work, and self-reliance must take the place of parental or academic supervision. The study of practical medicine and surgery cannot be pursued except in great cities, and the pupil should have been prepared in early life to withstand their special temptations. The idea of a centralised block of buildings for medical students is a very old one, and has frequently been brought to our notice, but there are numerous objections, financial and otherwise, to such a scheme.

PEPTONURIA.

AMONG those observers who have closely studied the subject of peptonuria M. Grocco Pietro stands conspicuous. The conclusions at which this physician has arrived deserve considerable attention. Peptonuria is said to be a sign of disease, and to have no clinical relationship with albuminuria. It may be a symptom of general or local, infective or non-infective, disease. Malarial fevers, typhoid fever, scurvy, purpura hæmorrhagica, septicæmia, and acute phosphorus poisoning may be attended with peptonuria. Local morbid processes which produce this sign are nearly always inflammatory affections tending to the formation of pus. Some cases of rapidly increasing morbid growths are accompanied by this symptom. When a local disease is associated with peptonuria it is considered likely that the peptones are formed at the seat of mischief, and that they appear in the urine after absorption into the blood. In general diseases the genesis of peptonuria is still unknown. It is possible that peptonuria may decide between the presence of a simple and purulent inflammation. Peptonuria is frequent at the period of resolution of cases of lobar pneumonia; it may be observed during the period of grey hepatisation.

EXTRACTS OF MEAT.

A CARD and handbill concerning a certain extract of meat have been forwarded to us by a gentleman to whom they were given at the Health Exhibition by the agent connected with the business. The statements contained in both are open to objection. The card tells us that "1 lb. of the extract contains as much nourishment as 40 lb. of fresh beef." Now this is a statement likely to mislead the public, to cause much mischief, and even in some cases to lead to fatal results. As is well known, the various extracts of meat do not represent beef-tea as made from fresh beef at all; that is to say, the extract does not possess the natural fatty matters of the flesh, nor any of the proteid elements, albumen, myosin, gelatine, and the like; which latter fact is shown by their not being converted into peptones when digested with artificial gastric juice, and by their solutions not gelatinising when cold, as good home-made beef-tea should do. Extract of meat, as its name implies, consists almost entirely of the extractive matters of the flesh—matters yielded by the changes taking place in the tissue itself. The only advantage of these extracts is that, being taken in a concentrated form, these extractive matters, which are extremely soluble, pass readily into the blood, and by undergoing a further downward change, as from kreatine, uric acid, &c., into urea, and from inosite into grape sugar, furnish a certain degree of force, and so act as an immediate stimulant. But they must not be regarded in the light of food; indeed, it has been shown experimentally that dogs fed entirely on extract of meat die sooner than dogs which are kept without food altogether! This is accounted for chiefly by the excess of potash salts these extracts contain. It is therefore very wrong so to advertise these extracts to the uninstructed

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public as to mislead them into thinking that they "contain as much nourishment as fresh beef." The well-known Liebig Extract of Meat Company are very clear in their statement that 1 lb. of their extract requires for its production 34 lb. of lean meat, a very different thing from saying that 1 lb. of the extract "contains as much nourishment as so many pounds of beef." Moreover, they are particular to state that their extract does not contain either fat, albumen, or gelatin. We are surprised that the authorities should have allowed such a card and handbill as that complained of to be distributed at the Health Exhibition, and thus acquire in the eyes of the public a certain degree of authorisation; whilst, in the interests of the public, we hope that in any future similar Exhibition steps will be taken to prevent traders from misleading purchasers as to the nutritive value of extract of meat.

HOSPITAL SATURDAY FUND.

UP to the present time the Board of the Hospital Saturday Fund do not see their way clear to distribute more than £9000—that is, £750 over the amount collected last year. They expect, however, £1000 more to come in. The street collection of the central districts alone amounted to £1900. The day, it will be remembered, was unfortunately wet. So this result may be considered as not unsatisfactory. But the workshop collection must still be regarded as entirely disproportionate to the means, and even the duty, of the working classes of London. And it ought to be the chief care of the Committee between now and next year's collection to develop a system of regular contributions to the Fund in every establishment. The managers of the Fund have come into collision with the Charity Organisation Society. This Society is nothing if it is not critical. It has been exercising its critical faculty on cases recommended by the collectors to the Fund. The managers resent this, and deny the right of the Society to inquire into cases recommended by them. They moreover deny the right of any Charity receiving its awards to refer cases to be investigated by the Charity Organisation Society. And they aver that their collectors, either as employers, foremen, or fellow-workmen, are more familiar with the needs and fitness of applicants than the agents of the Society can be. We have always admired the somewhat bellicose and ambitious attitude of the Fund, notwithstanding the modest dimensions of its contributions. We trust that while declining the critical services of the Society, it will not fail to use its letters with discrimination.

CASE OF THE DARENTH SMALL-POX CAMP.

THE owner of an estate in the vicinity of the Darenth small-pox camp and the Metropolitan Asylums Board have been preparing for many months for a trial which bids fair to take high rank amongst cases of a similar sort which have come before our legal tribunals. The plaintiff will contend that the camp is a source of nuisance and danger to him, and the Asylums Board will argue to the contrary. Both sides will provide abundant, and so-called skilled, evidence, and it is to be hoped that in some way or other a decision will be arrived at which will form a basis for the future action of those whose duty it is to provide for the isolation of small-pox cases. The subject is by no means a new one; but the circumstances which are now involved are exceptional. Mr. Power's now famous report went to show that whilst the aggregation of a certain number of acute small-pox cases led to a diffusion of the disease to the surrounding community, no such result followed on a much larger aggregation of convalescents. Now, Darenth camp has been essentially established for convalescents, and though at the first onset, and before the *Castalia* was ready, its use was by no means limited to such cases, yet it is the fixed intention of the Asylums Board only to send to it such cases as are either convalescent or not severe. If the cases were to be limited to convalescents the case might be less involved than it bids fair to be; but the mingling with the convalescents of cases which, though mild at the date of their removal, are in reality acute ones, introduces an entirely new element into the case. It has never yet been shown whether any distinction can be drawn, in so far as diffusion of infection is concerned, between severely acute and mildly acute cases of small-pox; neither is there any evidence procurable to show whether such huge aggregations of convalescents as are contemplated at Darenth would lead to a different result from that which was found to follow on the comparatively limited aggregation of such cases which took place at Fulham. The whole subject is a very obscure one; large interests are involved; and it is to be hoped that, when the case for injunction comes before the Court of Chancery, the medical evidence to be brought forward will be such as the importance of the case demands.

"A GREAT MEDICAL REFORMER."

IN the *Asclepiad* for October appears an article by Dr. B. W. Richardson which possesses exceptional interest for us—and we venture to hope for all readers of this journal—its subject being the founder and original Editor of THE LANCET. Under the heading "A Great Medical Reformer Thomas Wakley, M.P.: a Personal Recollection and Tribute,' Dr. Richardson gives an appreciative, kindly, and pleasantly chatty account of his acquaintance with and personal recollection of the late Mr. Wakley, and subscribes a tribute to his more public and better known acts in his capacity as a Member of Parliament, as coroner for Middlesex, and as Editor of this journal. The article is accompanied by a plate taken from a bust of Mr. Wakley.

AFTER-CARE FOR THE INSANE.

THE need of special homes for the convalescent patients discharged from public asylums, where they can be prepared for their return to the world, has been long felt. Sir William Ellis first pointed it out nearly fifty years ago; and yet nothing has been done to satisfy the admitted necessity. The After-Care Association has now been formed for the inauguration of this good work on a satisfactory basis. We heartily wish the enterprise success. It is one in which the profession must be interested, and which deserves its confidence and help. We only wish the idea could be so expanded that homes of refuge for those who, there is too much reason to fear, are on their way *into* asylums, as well as those who are on their way out, could be comprised in the scheme. The provision of such homes is, we are convinced, the one, and only, permanent solution of the problem how to arrest the development of mental disease, by establishing places of rest and treatment for those who are crossing the borderland, whether to or from the territory of mind darkness and despair.

THE SUNDERLAND MISERY.

THE distress in Sunderland is lamentable, and needs much more than the off-hand subscription of a £5 note by true friends of the poor. It is real and widespread, and must be relieved. But it will be a further misfortune if some light is not thrown on its cause. Sunderland up to a very recent period was one of the most thriving and prosperous towns in England. The disastrous inflation of the steamship-building business, which has brought such bad times to sailors and shipowners, brought high wages and plenty of work to Sunderland workmen. Yet, on the very morrow of a reverse, the well-to-do and prosperous workmen

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appear before the country *in formâ pauperis*, without savings, and even without food. It is really time that this oft-repeated phenomenon should be thoroughly investigated and explained. We commend the subject to the Lord Mayor's attention. If he will deal faithfully with it, he will not only do good to the men of Sunderland, but to the country at large. These violent oscillations of the social pendulum are truly discreditable, not only to workmen, but to those who give a false impetus to industry, only eventually to leave all affected impoverished or ruined. The blame ought to be fairly distributed. Drink and improvidence will need to be fearlessly and faithfully exposed, if they are the real or chief factors in this Sunderland misery. But commercial gambling and mad haste to be rich ought not to escape. It will be well for the country when it wakes from the dreams of political excitement and learns the value of steady work, thrift, temperance, and commercial sobriety and integrity. Statesmen are not without their responsibilities for these crises of misfortune, though Mr. Gladstone is not without some justification in his remarkable answer to Mr. Gourley's question on this subject.

PERIODICITY IN ANIMAL LIFE ASSOCIATED WITH LUNAR PHASES.

THE annual report of the Board of Regents of the Smithsonian Institution for the present year gives an account of a remarkable worm known to the natives of the Fiji Islands by the name of Mbalolo, but to naturalists under the name of Salolo viridis. It is an annelid related to the Nereids, scientifically described by Dr. J. D. Macdonald in 1857. It is found in certain of the coral archipelagos of the Pacific, Samoa, Viti, and the Gilbert group. The Fijian name has reference to the coincidence of its movements with the moon; and when the worm makes its appearance it does so in such vast numbers that it is collected by the natives as a dainty article of food, and is so much prized that formal presents of it are often sent considerable distances to chiefs of other districts which are not favoured by the worm. The worms only make their appearance to spawn, and the time of their appearance is the day of the last quartering of the moon in October, unless that falls at the beginning of the month, in which case there will intervene another lunar month. According to Mr. Powell, there is a second appearance of Salolo each year, occurring a month after the first, consisting of such worms, probably, as were not sufficiently mature to spawn in October, or it may be of another species.

MILK AS A VEHICLE OF DISEASE.

IN his recently published annual report Mr. Shirley Murphy recalls the incidence of the serious prevalence of enteric fever which, in 1883, so widely affected the district of St. Pancras, and he points out how necessary it is, in the interests both of milk vendors and milk consumers, that the former should be required so to keep their books that it would be possible at a glance to tell whether infectious illness occurring in any special neighbourhood were related to milk received from one farm or another. We believe that something of this sort could, without much difficulty, be enforced under a revised Dairies, Cowsheds, and Milkshops Order, and as to the need of it we have no doubt whatever. There are large dairies that now supply London in such a way that the milk-supply to any one district is intentionally brought on one day from one farm, on the next from another; and this system of "sandwiching" the districts, whatever its real object may be, is certainly such as almost absolutely to defeat any attempt to discover the actual source of an infection the incubation period of which is apt to vary somewhat. The matter is well worth the attention of those who are responsible for the preparation of dairy orders.

"DEATH FROM INANITION."

WE have been favoured with some correspondence that has passed between the Registrar-General and Mr. W. G. Groves, of Woodford, Essex, concerning the use of indefinite terms in the filling-up of death certificates. The Registrar-General, whilst expressing regret that such words as atrophy and debility, &c., should be generally employed by medical men, does not see his way to interfere with the registration of certificates in which those words occur. With regard to the term "inanition," it would appear that Mr. Groves takes too exclusive a view of its application when he supposes that it is synonymous with "starvation," which to our mind carries a much stronger meaning. But even the latter term is often read in its physiological sense as signifying deprivation of nutritive matter, be it by illegal practices or through the medium of "natural causes." The fact of a practitioner delivering a certificate of "death from inanition" to the friends of a deceased person implies that he has no suspicion of foul play, because otherwise, as Mr. Groves contended, he would be offering an inducement and a cloak to crime. If all such certificates were referred by the district registrar or the Registrar-General to the coroner for investigation, we fear unnecessary trouble and expense would be incurred. Nevertheless, we entirely agree with our correspondent that it is the duty of medical men to express their opinions in unambiguous language in all cases where they have no doubt as to the grounds of their belief, and we trust that ere long unscientific phrases like "general marasmus" and "death from the visitation of God" will have vanished from the nomenclature of mortality.

ITALIAN NOTES.

A CREMATION SOCIETY has just been established at Perugia, under the presidency of Dr. Gaetano Tancetti.

Splenectomy was performed, on the 14th ult., in the hospital at Padua, by Dr. Alessio Giovanni. The patient, a woman aged forty, was affected with extreme anæmia and chronic hypertrophy of the spleen. According to the *Gazzetta degli Ospitali*, the operation was unattended with complications, and was well borne by the patient, who continued in a satisfactory state seventy-two hours afterwards.

With becoming irony, a triumph of quarantine and red tape is recorded by the *International Review of Medicine and Surgery*, published at Naples under the editorship of Professor Antonio Raffaele. Two waggons laden with chloride of lime and carbolic acid, in their passage from Switzerland into Italy, were stopped at Chiasso, a station of the sanitary cordon. Peremptory orders had been issued that all imports should be disinfected, and the officials could make no exceptions. It is not stated whether they carried out their instructions by mixing the two loads.

WATER FAMINES.

THE long-continued drought has seriously affected the water-supply in many parts of the kingdom. It is not long since Northampton was announced as being in great straits. In numberless places the supply is short, and where surface wells are relied on people have to travel long distances in order to secure enough water for the most pressing domestic purposes. Manchester and Bradford have been threatened with a water famine. The case of Bradford seemed until within the last few days especially urgent. As regards Manchester, the beautiful series of storage lakes in the Longdendale valley had received no fresh supplies from the hill-sides for some months past before the descent of the recent showers. The amount of "compensation water," which usually has to be given before the city can be supplied, runs away with a large portion of the limited supply that is available.

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When the amount of compensation water was originally decided on, one of the principal objects to be attained was the maintenance of such a supply in the local streams as would secure to manufacturers using water as a motive power all the rights they had hitherto possessed. Although there are, doubtless, other points to be considered in this connexion, yet it is notorious that steam has in many places taken the place of water for the purposes of manufactures, and it would seem right that in so far as compensation water was only required for the purposes of machinery, some deduction in the amount demanded should follow on the use of steam.

MEDICAL REPRESENTATION IN PARLIAMENT.

A COMMITTEE of the Association of Members of the Royal College of Surgeons has resolved to request the Prime Minister to include in his new Franchise Bill a scheme for giving two Parliamentary Representatives to the registered medical practitioners of Great Britain and Ireland. We heartily wish success to this petition. But we are scarcely sanguine about it. The present humour of Parliament is for the rough addition of millions to the representation, not the addition of the representatives of classes. We cannot expect that this rough process will produce the most satisfactory results without some complementary franchises, amongst which such a proposal as that of the Association would deserve favourable consideration.

THE ISLINGTON MEDICAL SOCIETY.

ON Tuesday evening the session of the Islington Medical Society was opened auspiciously at the house of Mr. Wm. Cattlin, Highbury-place, with the reading of a paper on the Scientific Basis of Therapeutics, by Dr. Mitchell Bruce. The author was very happy in his exposition of the natural efforts of the body towards the throwing off and counteraction of disease, and in showing the action of remedies which have been indicated by a consideration of these efforts and a desire to imitate them. In the discussion which followed, Dr. Stokes expressed the gratification he experienced in seeing a modern physician devoting his mind to therapeutics, which he thought was too often neglected in favour of mere morbid anatomy. After a vote of sympathy with Mr. Cattlin, sen., and an expression of satisfaction at his improved health, the meeting separated.

INFECTIVE OSTEOMYELITIS.

La France Médicale says: "Les microbes continuent à pulluler. C'est le tour aujourd'hui du microbe spécifique de l'ostéomyelite infectieuse." M. Rodet has found that when the micrococci of the pus in cases of osteomyelitis are injected into the venous system of rabbits, and therefore free to choose their seat, they show a marked preference for the bones, and more especially for those parts which are in process of active growth, where they set up a severe suppurative or necrotic form of osteitis analogous to osteomyelitis in man.

THE DEFENCE OF THE DEFENCELESS.

ON Monday afternoon last the Lord Mayor opened a shelter for children at 7, Harpur-street, Theobald's-road, Holborn, belonging to the recently formed London Society for the Prevention of Cruelty to Children. We are by no means advocates of the indiscriminate formation of "Societies," and earnestly deprecate any undue interference between parents and their children. None the less heartily do we congratulate London on following the admirable example of Liverpool, Manchester, and Glasgow. The statement of one of the hon. secretaries—that since the formation of the Society in July last its attention had been called to 36 cases of starvation, resulting in fearful suffering and emaciation, and in eight cases resulting in death; to 51 cases of desertion; to 14 cases of infliction of wanton pain; and to 51 others the character of some of which could not be described—sufficiently demonstrates the *raison d'être* of such a Society. Such names as those of the Baroness Burdett-Coutts, the Earl of Shaftesbury, and Cardinal Manning afford ample guarantee of honest intention and strenuous endeavour on behalf of the defenceless.

CURABILITY OF SYPHILITIC ARTERITIS.

M. LEUDET has recently related the case of a man, the subject of syphilitic infection, who was noticed to have undergone a decided alteration in mental behaviour, to have lost memory, and to have suffered from frontal headache. Whilst these symptoms prevailed the superficial branch of the left temporal artery was seen to have become much thickened, so as to feel like a hard cord, and twice its normal diameter. Seven months later the corresponding vessel on the right side became affected in the same way, and coincidently the cerebral symptoms increased in intensity. The administration of antisyphilitic treatment was followed by the return of the affected arteries to their natural state, and by the recovery of the patient.

OXFORD GRADUATES' MEDICAL CLUB.

THIS club, which was so successfully launched during the summer of the present year, has announced the intention of holding its second gathering on Thursday, November 20th, when a dinner will take place at Limmer's Hotel. Each member is to be allowed to bring one guest, who must be a member of one of the Universities of Oxford or Cambridge. It is to be hoped that this movement will receive cordial support from all members of the profession who have an Oxford degree. The secretaries are Dr. Samuel West and Mr. John H. Morgan.

SMALL-POX IN DURHAM.

THE remarks of our Newcastle-on-Tyne correspondent in our annotation last week had reference to the prevalence of small-pox in the city of Durham, and not in Newcastle, as might have been supposed from the omission of the heading Durham. Our correspondent informs us at the same time that the disease continues to spread in the city of Durham and the neighbouring villages.

HYGIENE IN PARIS.

THE meeting of the Académie des Sciences, held on October 14th, was chiefly occupied with the reading of papers by MM. Gautier and Marey. The first related to a report on a further supply of pure water and on the sewerage of Paris. The second was concerned with the question of the propagation of cholera by means of drinking water.

BIRMINGHAM HOSPITAL SUNDAY.

OUR Birmingham correspondent telegraphs that the collections on Hospital Sunday in the town have this year amounted to £4262 *5s.*, a sum decidedly less than that collected last year.

TWENTY medical practitioners have died in Naples, out of 139 engaged in attending cholera patients, under the White Cross Society, during the recent epidemic.

DR. P. GRAWITZ, Chief Assistant at the Pathological Institute of Berlin, has been invited to act for Professor Grohe of Greifswald, who is seriously ill.

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THE resignation by Dr. Herbert C. Major of the post of Director of the West Riding Asylum cannot fail to be a grave loss to that institution. During his many years' tenure of office, in which he was preceded by Dr. Crichton Browne, Dr. Major has persistently and successfully endeavoured to further the humane and intelligent treatment of the insane, and, by his individual efforts in varied histological research, has contributed much to the advancement of neurological science. We trust that his retirement from official cares may afford him leisure for further work in this ever widening field.

AT a special meeting of the Alnwick Local Board on the 16th ult., held to consider and discuss the medical officer's report, a member moved that the report be sent back to be condensed, and that the medical officer state what he had to state in as simple a manner as possible, refraining from filling his reports with voluminous grandmotherly advice. In place, however, of this motion being carried, another, to the effect that Dr. Davidson be granted a vote of thanks for the excellence of his report, was carried *nem. con.*

AT the fifteenth annual conference of the Poor-law authorities of the South-Eastern district of England on the 27th ult., a discussion was held on "the administration of the laws relating to public health and the management of highways by rural sanitary authorities." At the conclusion a resolution was adopted to the effect that the management of highways by rural sanitary authorities works well, and and might with advantage be extended.

THE following appointments at the University of Cambridge are announced:—Dr. Donald MacAlister, to be the University Lecturer in Medicine; Dr. Robert Nicholls Ingle, to be the University Lecturer in Midwifery; Dr. Bushell Anningson, to be the University Lecturer in Medical Jurisprudence.

THE University of Kiew (Russia) celebrated the fiftieth year of its foundation on Sept. 20th and 21st. Many foreign *savants* received honorary degrees; and MM. Charcot and Pasteur were present as representatives of France.

AT Lésignan (Aude) some families showed symptoms of poisoning, which were proved to have been caused by eating salads grown in vineyards treated with chemical products, which had been employed against the phylloxera.

ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE recommendations explain themselves. They are evidently designed by those who have drawn them up to make the Council more representative of the Fellows and Members, and more accountable to them; to increase the dignity of the office of President; to quicken the interest of the Fellows and Members in the affairs and administration of the College, and, at the same time, to augment the control of the members of the body corporate over the conduct and destiny of the College. It is to be earnestly hoped that the Fellows generally will give a hearty and liberal support to the proposals of the Association, for time and circumstance call for prompt and vigorous action.

RECOMMENDATIONS AND ALTERATIONS PROPOSED TO BE INCLUDED IN A NEW CHARTER OF THE COLLEGE.

The following recommendations have been drawn up by a subcommittee of the Association, and having received the approval of the General Committee will be submitted to a general meeting of the Association of Fellows, to be held on Saturday, Nov. 8th, at 4 P.M., at the Medical Society's rooms, Chandos-street, Cavendish-square, W.

I. *Respecting the Conditions of Eligibility of Fellows to be Members of Council.*—Recommended: (*a*) That subject to such limitations of standing as Fellow or Member as defined in Section 7 of the Charter, Vict. 15, any Fellow of the College shall be eligible to be a Member of Council. (*b*) Should any Member of Council other than the President be absent from more than two successive quarterly meetings, or from more than four successive ordinary meetings, he shall thereupon cease to be a Member of the Council, unless a reason for such absence satisfactory to the Council be assigned. (*c*) That not more than one-half of the Members of the Court of Examiners, and not more than two Members of the Board of Examiners in Anatomy and Physiology, shall have seats in the Council. (*d*) If any Fellow who is also a Member of the Court or of the Board of Examiners shall be elected into the Council, he shall, within a period of two months of such election, vacate his office as a Member of the Court or of the Board.

II. *Respecting the Conditions of Candidature of Fellows for the Council.*—Recommended: That Section 9 of Charter 15 Vict. do read as follows:—That every Fellow who shall intend to offer himself as a candidate for a seat on the Council of the said College shall, within such time as the Council shall from time to time direct from the publication of the *London Gazette*, in which the day of election shall be announced, transmit or deliver to the Secretary of the same College a notice signed by himself of such his intention.

III. *Respecting the Condition and Term of Tenure of the same Office.*—Recommended: (*a*) That the six Members of the Council, who shall have served longest on the Council without re-election, shall vacate their office every year instead of three, as provided for by Section 12 of Charter 7th Vict.

IV. *Respecting Substitute Members.*—Recommended: (*b*) That "Substitute Members," as defined by Section 14, Charter 7th Vict., be abolished.

V. *Respecting the Mode of Voting.*—Approved: The proposed alteration in the Section 15 of 7th Vict., abolishing compulsory personal voting, and permitting the alternative of voting by voting paper.

VI. *Respecting Payment of Fees by Members of Council.*—Recommended: The payment of a fee by a Member of the Council be no longer required.

VII. *Respecting the Election and Tenure of Office of President.*—Recommended: That the President of the College be elected annually by the Fellows from among the existing or past Members of the Council at the time, in the manner and under the conditions hereinafter described:—(*a*) That he be elected at the time and in the manner that Members of the Council are elected, on the nomination of the Council. (*b*) That the Council shall submit at least three names to the Fellows, one of which shall be that of the retiring President, provided he be eligible and does not decline to serve. (*c*) That no one shall hold the office of President for a longer period than five consecutive years. (*d*) If the President be elected from amongst the past Members of the Council, he shall become *ex-officio* a Member of the Council during his tenure of office as President.

VIII. *Respecting the Office of Treasurer.*—Recommended: (*a*) That a Treasurer be appointed from amongst the Members of the Council, and that his accounts be audited by a professional auditor, whose report shall be submitted to the annual meeting of Fellows and Members. (*b*) That the Treasurer's balance-sheet, duly audited, shall be submitted to the annual general meeting of Fellows and Members, and that such balance-sheet shall be published with the advertisements convening such meeting.

IX. *Respecting the Constitution of the Court of Examiners.*—Recommended: (*a*) That Members of the Court of Examiners shall be elected annually, and that no Member of the Court of Examiners shall hold office for more than five consecutive years. At the expiration of this time he shall not be again eligible until after a period of two years has elapsed. (*b*) That all vacancies in the Court of Examiners shall be advertised in at least two of the weekly medical journals of the United Kingdom, with an announcement of the names of those members of the Court who are eligible for re-election, and inviting Fellows desirous of being considered candidates to send in their names to the President. (*c*) That Section VIII. (3) of the Bye-laws requiring the

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payment of a fee of twenty guineas by a person elected a member of the Court of Examiners be omitted.

X. *Respecting the Board of Examiners in Anatomy and Physiology.*—Recommended: That Members of the Board of Examiners shall be elected annually from amongst the Fellows and Members of the College, and that no Member of the Board shall hold office for more than five consecutive years, and at the expiration of this, his term, he shall not be again eligible until after after a period of two years has elapsed.

XI. *Respecting the Election of Fellows without Examination and of Honorary Fellows.*—Recommended: (*a*) That the alteration proposed by the Council in Section 5, Charter 15 Vict., be not adopted, and that the words "any two persons," read "not more than five." (*b*) That the Council may nominate distinguished members of the medical profession, whether Members of the College or not, as Honorary Fellows, to be elected by the Fellows and Members at the Annual General Meeting.

XII. *Respecting Meetings of Fellows and Members, separately and collectively.*—Recommended: (*a*) That there shall be an Annual General Meeting of the Fellows and Members at which the Annual Report of the Council, including the Treasurer's Statement of Accounts, duly audited, shall be presented, discussed, and if approved, adopted. (*b*) That no alteration in the constitution or in the relations of the College shall be effected without the consent of the Fellows and Members, convened specially to discuss such alterations. (*c*) That on receipt of a requisition signed by thirty Fellows or Members the President shall convene a meeting within twenty-one days of the Fellows and Members collectively (or, if demanded in the requisition, separately). At this special meeting or meetings the question or questions of which notice shall have been given in the requisition shall alone be discussed. (*d*) That such meetings shall be duly advertised in the weekly journals.

XIII. Recommended as a Bye-Law: That the Minutes of each Meeting of the Council shall be suspended for the inspection of Fellows and Members in the College Hall, or other convenient place, within twenty-four hours of the holding of such meeting, and that they remain suspended for a period of at least seven days.

THE CHOLERA EPIDEMIC.

WERE it not for the occurrences at Yport, in Normandy, and at Orancié, Algiers, the history of cholera in Europe and on the Mediterranean for the past week would have been one of steadily maintained abatement. Cholera news from the south of France has almost ceased. In Italy about twenty deaths still occur daily, but the diminution in mortality, both as regards the country generally and such cities as Naples and Genoa, is most satisfactory. So, also, the number of attacks in Spain has become so small that most of the inland quarantine restrictions have been removed, and even those at the ports have been so modified as to allow of a renewal of foreign trade transactions. But on October 21st news came of cholera at Yport, a fishing village between Fécamp and Etretat on the Normandy coast, and it appears that at least fifteen cases have occurred there, eight of the attacks being fatal. The first news pointed clearly to importation of the infection from the south of France, and it was explained that part of the crew of a Newfoundland fishing vessel having arrived at Yport from Cette, the disease began in a woman who washed one of the sailor's clothes, and then spread in a manner favourable to the theory that personal infection was in operation. Some doubt has, however, since been thrown upon the accuracy of the diagnosis in the first case, and there is an absence of any evidence to show that there had been any cholera at Cette, or that the crew in question had touched at any infected place, whether on the coast or inland; or again, that either of these had suffered from any choleraic symptoms. Still, the mere absence of news concerning these points is by no means conclusive against the disease being actually imported cholera, and the fact that no denial as to its alleged character comes in, even after the inquiry held by Dr. Gibert of Havre, must be regarded as showing that the first view expressed has been accepted in France. So abominable are the sanitary arrangements of Yport, the place being described as either a manure heap or a cesspool, according to the weather, and so filthy and drunken are the habits of the people, that either cholera itself would find in it ample means to favour its spread, or, on the other hand, any fatal form of specific diarrhœa might manifest itself there apart from the importation of the cholera contagium. An effort is being made to improve the more dangerous conditions under which the people are living, and it is to be hoped that these may successfully stay the outbreak.

As regards Algiers, it now transpires that cholera cases have occurred there for about a month past, and it is quite evident that, notwithstanding the stringency of the quarantine arrangements which have been maintained, the disease has found its way across the Mediterranean, and this, in all probability, in connexion with the shipment of troops from France. Oran, which is now reported to be infected, is in regular sea communication with Marseilles. The area of the 1884 epidemic has thus been again widened, and the transmission of the infection to a more southern climate may make the final eradication of the epidemic this autumn more difficult of accomplishment.

DR. TOMMASI CRUDELI ON MALARIOUS COUNTRIES, AND THEIR RECLAMATION.

THE last number of the *Nuova Antologia* contains an article on "Il Bonificamento dei Paesi di Malaria," by Dr. Tommasi Crudeli, well worth the attention of the practical hygienist.

Dismissing from scientific terminology the words "marsh miasm" and "marsh soil," and replacing them by "malaria" and "malarious soil," the author traces the fever poison thus indicated to "an agent which can infect the soil of any country, however that soil may differ from other soils in hydrographical and topographical conditions and geological composition."

This agent is a living organism inferred to exist long before microscopy. That its character should remain uniform in soils the most diverse proves that it cannot result from the chemical reaction of these soils. This persistent uniformity is easily understood on the admission that malaria is due to a fermentative organism which finds conditions favourable to its life and its multiplication in soils the most various, as is the case with thousands of other organisms much higher than the rudimentary vegetations which constitute living ferments.

The increasing intensity of the poison in malarious soils abandoned to themselves is especially demonstrable in Italy. Etruscan and Latin cities—Rome herself—arose in malarious regions, and they flourished mainly on account of the soil reclamation, which in the course of centuries diminished the production of the poison, without, however, succeeding in wholly suppressing it. The abandonment of the reclaiming processes led to the redevelopment of the poison—first during the Roman domination in the conquered and devastated Etruria, afterwards in Rome herself on the fall of the empire, and finally in Southern Italy. This redevelopment of malaria in the Roman Campagna has been witnessed in times not very remote from ours, localities where it was possible to enjoy summer residence (*villeggiatura*) having at that season become uninhabitable. In these localities the physical conditions of the soil have not varied for centuries; how, then, can the enormous increase of malaria be due to progressive alteration in the chemical constitution of the soil itself? Admit that malaria consists in a living organism whose successive generations infect to an ever-increasing extent the soil which contains it, and the explanation is easy.

Again, in regard to the malarious contents of the atmosphere. If the malarious ferment (*fermento malarico*) were composed of gaseous emanations from the soil, or of a chemical ferment formed in the soil and raised into the air together with watery vapour, the malarious contents of the atmosphere ought to reach their maximum in those hours when the soil is most warmed by the sun's rays and in which the evaporation of the water it contains and the chemical processes occurring within it are at their greatest intensity. But it is not so. The malarious contents of the local atmosphere are less in the noonday hours than at the

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beginning and close of the day—that is, after sunrise and, above all, after sunset. Now, it is exactly at these two periods of the day that the difference between the temperature of the lower strata of the atmosphere and the temperature of the surface of the soil is greatest, and that the currents of air which ascend vertically from the soil into the upper atmosphere are at their strongest. Admitting that the malaria is formed of solid particles of low specific gravity (such as are the germs of the inferior vegetations), we see at once how it ought to accumulate in the lower strata of the atmosphere, especially in those two periods of the day.

The tendency among investigators has always been to attribute this specific poisoning of the air to a living organism which multiplies in the soil; but, unfortunately, the "palustral prejudice," as Dr. Tommasi Crudeli calls it, has led them to examine only the lower organisms which haunt marshes. In 1879 the author, in conjunction with Dr. Klebs, discovered the cause of malaria in a "schizomyces bacillaris," and recently Drs. Marchiafava and Celli have demonstrated that this parasite attacks directly the globules of the blood and destroys them after having determined in them a series of characteristic alterations, which indicate quite certainly the existence of a malarious infection. "Many observations," says the author, "just completed in Rome would tend to demonstrate that this parasite does not invariably assume the bacillary form described by Klebs and myself; but this purely morphological question need not concern the practical hygienist. For him it is essential to know that he has to deal with a living ferment which can flourish in soils the most diverse in composition, and without the presence of which neither marshes nor pools of putrescent water are capable of producing malaria."

Having incidentally shown that soils may contain this parasite in an inert state and not produce malaria till the circumstances favourable to its activity have arisen, Dr. Tommasi Crudeli proceeds to demonstrate that among the conditions which assist the development of the malarious ferment contained in the soil and the excessive air accumulation of that ferment in the air there are three of primary importance, as their concurrence is indispensable to the production of malaria. These are, 1st, a temperature not lower than 20°C.; 2nd, a moderate degree of permanent humidity in the malarious soil; and, 3rd, the direct action of the oxygen of the air on the strata of the soil which contains the ferment. If one only of these three conditions be wanting, the development of malaria becomes impossible. Now this is an important point in the natural history of malaria, as giving us the key to the chief part of the soil reclamation attempted by man.

First, let us take nature's amelioration of the malarious countries, suspending as she does for a longer or shorter time the production of malaria. Winter, for example, causes in all these countries a purely thermic amelioration—that is, it suspends the production of malaria simply by making the temperature fall below the minimum required for the development of the poison. In fact, there are often, even in winter, sudden outbreaks of malaria when a scirocco wind raises the temperature above this minimum. Again, during a very warm and dry summer malaria is not developed, because the sun's rays have exhausted the humidity of the soil, so producing a purely hydraulic amelioration, which, as in the Roman Campagna in 1881 and 1882, may last for a considerable time; easily to be dissipated, however, by one steady shower. Finally, there may occur in nature purely atmospheric ameliorations, when the surface of the malarious soil is withdrawn from the direct action of the oxygen of the air by means of natural earth-coverings formed by alluvial deposits of healthy soil, or by means of the "earth-felt" wrought up from the soil by the roots of herbage in a natural meadow.

In their various attempts to suspend the development of malaria from the soil men have tried to imitate nature—to eliminate, that is to say, one of the three conditions indispensable to the multiplication of the specific ferment contained in that soil. Naturally enough, they have never attempted thermic ameliorations, such as nature effects in winter, because it is not in their power to control the sun's rays. They have had to restrict their efforts to either hydraulic or atmospheric ameliorations; but sometimes they have succeeded in happily combining the one and the other—that is, in eliminating at once the humidity of the soil and the direct action of the oxygen of the air upon it.

Hydraulic amelioration has assumed many forms, according to the nature and site of the malarious soil. Drainage, in which the ancient Romans excelled us, has been practised in Italy both in deep and friable soils and in subsoils compact and almost impermeable, in which latter the "cunicular" drains of the Etruscans, Latins, Volscians, and Romans might even nowadays be studied with advantage.

Sometimes a twofold drainage of the upper, as well as the under, aspect of the soil may be practised—that is, draining the subsoil and increasing the evaporation of the surface water. The cutting down of forests in malarious countries has often proved an excellent means of amelioration; because by removing every obstacle to the direct action of the sun's rays on the surface of the soil, its humidity during the warm season is sometimes entirely exhausted. In spite of universal experience of this fact, a school originating with the great Roman physician, Lancisi, has sustained the contrary, counselling the maintenance and even the extension of forests in malarious countries. Lancisi was completely possessed with the "palustral prejudice," and believed that the malaria generated in the Pomptine Marshes, and attacking such townships as Cisterna, was intercepted, if only partially, by the forests between, and he therefore opposed the cutting down of the trees and recommended increased planting. He did not know that the malaria was already in the soil and covered by the forest in question. Some thirty years ago the Caetani family, to whom Cisterna belongs, cut down the forest, and twenty years thereafter Dr. Tommasi Crudeli was able to show that the health of the neighbourhood had greatly improved in consequence. A commission appointed by the Minister of Agriculture investigated the whole subject of the coexistence of woods with malaria, and in its report issued in 1884 completely disproved the theory of Lancisi and confirmed that of Dr. Tommasi Crudeli.

Absorbent plants have been suggested and used as a means of drawing humidity from the soil, not without success in certain countries really malarious. The prejudice that the malaria is due to the putrescent decompositions of the soil has, in Italy, led to the choice of the eucalyptus globulus as the tree best adapted to combat the poison, the idea being that the eucalyptus, which grows very rapidly, dries the humid earth, and at the same time by the aroma of its leaves destroys the so-called miasmata. No genuine instance of the eucalyptus having succeeded in its allotted task is yet known to Dr. Tommasi Crudeli, though he does not say that its success is impossible. Had its Italian patrons studied its action in its native Australia where it flourishes much better than in Italy, they would have known that there are eucalyptus forests in those latitudes where malaria is very prevalent, as has been shown by Professor Liversidge of the University of Sydney. The cultivation of the tree at the Tre Fontane, near Rome, which it was thought would prove entirely successful in combating the local malaria, disappointed expectations, for in 1882 that hamlet was the scene of a severe outbreak of the fever, while the rest of the Campagna was unusually exempt from it. The eucalyptus, in fact, is a capricious tree in European soil; while in full leaf, during the winter, it is often killed by nocturnal frost, and even by the late frosts of spring, to say nothing of humid cold and other adverse influences not yet formulated by the botanist; again, when the winters are mild and the soil deep, it often shoots up rapidly, only to be snapped asunder by winds of moderate strength. Eucalyptus plantations, moreover, are very costly. If the ground is watery, it has to be drained, otherwise the roots rot; if the ground is heavy, trenches must be dug in it to make room for the long roots of the trees, and often these trenches have to be drained, as is done in the case of olives, in order to prevent the filtration water from stagnating and the roots from rotting. Hydraulic amelioration must have recourse to means less uncertain; and should the conditions of any locality counsel a trial of an absorbent plantation, it should be done with trees of our own hemisphere. The expense is smaller, and the trees are sure not to die.

At best, hydraulic amelioration is never certain, because the slight humidity of the soil necessary to develop malaria may easily be restored to it, even during the warm season. Combination of atmospheric with hydraulic amelioration has therefore been tried: to withdraw, that is to say, the humidity from the soil, while at the same time preventing the direct contact of the air with its malarious strata. Leaving the soil with layers of sound earth spread over it either alluvially or by the hand of man, and also draining the soil itself, was last year, at the instance of Dr. Tommasi Crudeli, practised on the grounds of the Janiculan Hill, near the Palazzo Salviati, in the Lungara. The entire area,

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having been thoroughly well drained and then covered with a dense coating of meadow soil in all those places which could not be paved with street rubble, has since remained without a single case of fever in the numerous *personnel* of the Military College occupying the Palazzo Salviati, while in the Palazzo Corsini, on the same side of the Lungara, but looking on the grounds of the Janiculan which are still exposed to the air and sun, there have within the same period been not a few cases of fever, some of them fatal.

THE WOUNDED AT FOOCHOW.

DR. T. B. ADAM, Surgeon to the Foochow Native Hospital and Dispensary, has favoured us with the following interesting description of some of the cases which came under his care or observation as the result of the recent engagement at that port:—

As over fifty men, wounded in the late so-called naval engagement at Pagoda Anchorage, Foochow, came under charge of Dr. Rennie and myself as patients in the Foochow Native Hospital, it struck me that a brief notice of the most important of our cases might interest your readers. The engagement took place on Saturday, Aug. 23rd. A goodly number of wounded, carried down the river by the strong current and ebb tide, were rescued by the boats' crews from H.M.S. *Vigilant*, *Sapphire*, and *Champion*. Those who managed to reach the shore dragged themselves to deserted Chinese houses, and lay there utterly untended and uncared for, as far as the Chinese Government was concerned. On Monday a party of us from Foochow picked up eleven of these poor wretches, all very seriously wounded and in a most miserable condition. These, along with the cases rescued by Her Majesty's ships, were placed in the Native Hospital. Every flood tide thereafter brought, through native sources, fresh additions to the number, till our list rose to over fifty. The great majority of our cases presented wounds inflicted by Hotchkis's shells. The severe nature of such wounds, together with the terrible after-neglect, made our death list heavy. Six cases succumbed within a fortnight. They were as follows:—

1. Right leg shattered by a shell; total neglect for forty-eight hours. Amputation through knee-joint. Died two days after operation from sheer prostration.

2. Knee-joint traversed by fragment of shell; total neglect for forty-eight hours. Dressed antiseptically and wound tolerably healthy; but death from prostration ensued six days after admission.

3. Extensive burn of face and body from gunpowder explosion on board a war junk. Death from collapse.

4. Forearm shattered by a shell; total neglect for six days. Hand and forearm black on admission; amputation performed in lower third of arm. Recovered well from shock, but one flap showed signs of sloughing. Eight days after operation secondary hæmorrhage occurred. Patient was dozing at the time and much blood was lost before he called his attendant's attention to the accident. Before an assistant could be obtained and a tourniquet applied, patient was in a fatal swoon. Such an occurrence would be rare in a home hospital, but we have to make the best of the native material afforded us for nurses and assistants.

5. Patella shattered by fragment of shell, and knee-joint laid open. Broken fragments of bone were removed and wound dressed antiseptically. Locally all seemed to go well, but a low form of surgical fever exhausted patient's feeble reserve of strength, and he succumbed nine days after admission.

6. Compound comminuted fracture of both bones of leg with much destruction of soft parts; total neglect for four days. Patient would not permit amputation, but gangrene setting in a day or two after admission the limb was removed through the middle of the thigh. Skin of flaps looked perfectly healthy, but a portion of the cellular tissue was observed to be ominously dark-coloured. For four days the patient did well, acute gangrene then suddenly set in, followed by death from exhaustion within twelve hours.

Among cases of severe wounds progressing favourably the following may be noticed:—

1. Shattered leg; amputated just below knee very shortly after receipt of injury, by Dr. Biddulph of H.M.S. *Vigilant*. Patient had by no means a vigorous constitution, but shock rapidly passed off, and wound healed almost by first intention.

2. Compound comminuted fracture of humerus with great destruction of soft parts. Amputation performed in upper third; dressed antiseptically and doing well.

3. Knee-joint traversed by fragment of shell. Acute pain occurred for a few days in joint, but this subsided and the case is now doing well; dressed antiseptically.

4. Compound comminuted fracture of humerus in middle third. Dressed antiseptically and doing very well.

5. Elbow-joint traversed by fragment of shell and lower end of humerus splintered. Resection of ends of humerus and ulna performed. Dressed antiseptically and doing well.

6. Compound comminuted fracture of left humerus, and right elbow-joint penetrated by fragment of shell. This man was shot while in the water, with his arms extended over a floating spar. As the French were accused of cruelly firing upon disabled Chinese in the water I made careful inquiries among our patients, and think the following statement the correct one. After the first broadside delivered by the French a large number of many of the Chinese gunboats' crews leaped overboard and struck out lustily for the shore. These men were fired on from the "tops" of the French vessels, but these alone. The French themselves, I was informed, rescued some twenty wounded Chinese and treated them on board.

7. Hand split in two by bursting of gun. The forefinger with metacarpal bone was carried away, the first carpo-metacarpal joint laid open, and fully one-third of soft parts of back of hand destroyed. Sloughing tissue was pared away and wound dressed antiseptically. Healing is rapid, and patient will retain a useful hand.

8. A bugler, twenty years old, was struck while in the water by the cup of a Hotchkis's shell. The brass-headed fragment entered at the lower part of the hip, passed round the inner side of the femur, splintering but not fracturing it, and lodged in the groin, just inside of the femoral vessel. The lad was eleven hours in the water before he was rescued. He is but slowly recovering from the shock. A large perforated drainage-tube has been inserted through the wound from the groin to the hip, and gives free exit to discharge from sloughing tissue in the track of the fragments of the shell.

9. Splinter of shell entered left eye. Immediate enucleation saved the right eye from sympathetic inflammation.

10. A poor salt junk sailor, who did not want to fight, but was impressed into the service, received, as his only reward, a fragment of shell in his back. Glancing off the middle dorsal spines, the fragment buried itself laterally in the long muscles of the back. A few days after extraction an abscess formed over the hip, and this, on being opened, was found to communicate freely with the wound. Doing well.

11. A chair coolie ashore received a shot from some careless soldier. The bullet entered the great sacro-sciatic foramen and disappeared in the pelvis. A probe can be passed into the wound for about ten inches upwards in front of the sacrum towards the abdominal cavity, but no bullet can be found. A large drainage-tube has been inserted, and the wound dressed antiseptically. The abdomen has become somewhat swollen, but is not painful on pressure. The future of this case will be an interesting study.

12. Compound transverse fracture of head of tibia with open knee-joint. Dressed antiseptically, the case did well, but after a week's residence in the hospital the patient went off to headquarters to bespeak his pay. Warning of loss of limb or life could not deter him. Such cases are no unusual feature of Chinese practice.

Five cases of traversing wounds of the thigh all progress favourably. In one case a fragment of shell sliced off a portion of the anterior surface of the thigh, leaving an excavated saucer-like wound. Our remaining cases include traversing wounds of shoulder, forearm, calf, ankle-joint, &c.; burns from explosions of gunpowder; compound fractures of bones of the leg, &c., with details of which I must not trespass further upon your space.

Foochow, Sept. 5th, 1884.

A MEDICAL PRESIDENT.—Dr. Don Rafael Zaldivar, President of the Republic of San Salvador, is reported, says the *New York Medical Record* of October 18th, to be a very accomplished physician. He has just been chosen for a third term, and is now travelling in Europe.

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WILLS OF MEDICAL MEN.

THE will of Cæsar Henry Hawkins, F.R.C.S., F.R.S., serjeant-surgeon to the Queen, late of 26, Grosvenor-street, who died on July 20th last, was proved on the 23rd ult. by Mrs. Ellen Hawkins, the widow, the sole executrix, the value of the personal estate exceeding £45,000. The testator bequeaths the bust of himself by Mr. Richard Halse, presented to him by his former pupils, to his wife for life, and then to the governors of St. George's Hospital, to which he had been so long officially attached; the portrait of his late uncle, Mr. Pennell Hawkins, by Loffany, to his wife for life, and then to the Royal College of Surgeons, to be placed near the picture of his brother, Sir Cæsar Hawkins, by Hogarth; and his medical books (except such as may be selected by his wife) to the Students' Library of St. George's Hospital. He also bequeaths his stocks and shares in the Great Northern Railway upon trust for his wife for life; at her death numerous legacies are to be paid thereout, and out of certain moneys in settlement to his brothers, sister, nephews, nieces, and others, and the remainder of the same funds is to be divided between his nephew and niece, Cæsar Richard Hawkins and Mary Frances Hawkins. There are legacies to his trustees, and the residue of his property he gives to his wife absolutely.

The will of John Carnegie, M.D., late of Chesterfield, Derbyshire, who died on May 4th last, was proved on the 29th ult. by Mrs. Agnes Diana Knight Carnegie, the widow, Mr. Andrew William Manson, and Mr. James Bruce, the executors, the value of the personal estate amounting to over £11,000. The testator leaves his plate, books, pictures, furniture and effects, and £100 to his wife; and the residue of his real and personal estate upon trust for her for life or widowhood. If his wife marries again, one-third of the income is to be paid to her; subject thereto the residue is to be equally divided among his children.

The will of Thomas Bishop, M.D., F.R.C.P., late of 16, Rue Pierre Charron, Champ Elysées, Paris, and of Hayne Croft-road, Torquay, who died on June 23rd last, was proved on the 16th ult. by Mrs. Cecilia Agnes Bishop, the widow, and Miss Effie Rose Bishop, the daughter, the executresses, the value of the personal estate amounting to over £8000. The testator leaves £100 to Mrs. Mary Peel, free of duty; £200 per annum to his said daughter during the life of his wife; and the remainder of the income of his property to his wife for life. At her death he gives the residue of his property to his daughter.

The will of Hugh Cuolahan, M.D., late of 9, Grange-road, Bermondsey, who died on August 20th last, was proved on the 12th ult. by Mrs. Maria Carolina Cuolahan, the widow and sole executrix, the value of the personal estate amounting to over £4000. The testator gives, devises, and bequeaths all the real and personal estate which he shall be possessed of or entitled to at the time of his decease to his wife.

The following legacies have recently been left to hospitals and other medical institutions:—Mr. William Robert Mitchell, late of the Stock Exchange, and of 14, North-terrace, Camberwell, £1000 to the Middlesex Hospital.—Mr. Thomas Browning, formerly of Hatton-court, Threadneedle-street, and of 6, Whitehall, but late of Queen Victoria-street, fifty guineas each to Charing-cross Hospital, the Hospital for Consumption and Diseases of the Chest, Brompton, and the Cancer Hospital, Brompton.—Mr. Edward Samuel Dowling, late of 14, Holland-villas-road, Kensington, £500 to the North London or University College Hospital on the death of his wife.

THE WATER-SUPPLY OF DUMFRIES.—On the 10th inst., Dr. J. M. M'Culloch delivered the first of a second course of health lectures which it is proposed to hold during the present winter in Dumfries. The subject of the lecture was "Water: use in the body; water suitable for domestic use, with special reference to Dumfries water-supply; effects of impure water," &c. In the course of his address Dr. M'Culloch recommended that the future water-supply of the town should be derived from loch Grennoch, a source which he described as eminently suitable for such a purpose.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Prevalence of "Fever" in Burnley, by Dr. AIRY.—For some years past the general death-rate of Burnley has been high, the mean for the past thirteen years being 24·4 per 1000. During the same period the "fever" death-rate has also been excessive. In the four years 1870–73 it was especially high, then came a marked diminution, but from 1881 onwards it increased again. At first there appeared grounds for fearing that the fever in question was typhus, but apart from cases which seem to have been incorrectly certified, the prevalent disease has clearly been enteric fever. The most recent epidemic of this disease commenced in October, 1882, during which month nine deaths were registered as due to it, and from that time forth until February of this year fatal cases followed each other with very little abatement. Dr. Airy found it impossible at the date of his recent inquiry to trace the commencement of the epidemic to its proper source, although this should have been possible when the outbreak commenced, especially in the face of the sudden character of its onset. But speaking generally, both as regards the early and later history of the prevalence, the evidence went strongly to connect it with the presence of excremental nuisances and defective drainage. Burnley has done good sanitary work since 1870; it has a wholesome water service, and a new system of sewers. But the house connexions with the new sewers are in some cases faulty, and in their effort to do away with the old and offensive midden-privy the Corporation have fallen into error. It is to this that Dr. Airy principally draws attention, and it is evident that with this he mainly connects the outbreak under discussion. Between seven and eight thousand tank privies have been provided in the borough. The tank is an earthenware one containing either nine or sixteen cubic feet of contents. It is sunk in the ground at the back or the side of the privy with an earthenware cone placed under the seat, fitting into a bay in the rim of the tank, and about six inches below the rim on one side there is an overflow pipe, communicating with the inside of the tank by a cluster of eight holes to convey the top fluid to the sewer. Now, like nearly all such overflows, this grating is apt to get stopped, as, for example, by means of floating pieces of paper; but apart from this, the existence of an overflow is in itself absolutely wrong in principle. If drains and sewers are available and fit for the removal of the offensive overflow liquid from a privy pit, there can be no justification whatever for retaining nine and sixteen cubic feet of excreta close to dwellings. The whole contents of the closet should, in short, go to the sewers, and not the surface fluid only. But, as has often been pointed out, the passage into the sewers of privy pit liquid which has been retained long enough to decompose and become offensive, causes nuisance and a foul state of drains and sewers, and it is because this is so well known that modern bye-laws nearly all prohibit any connexion between a privy and a drain. There are other points about the Burnley privy which, though arranged with the best intention, have not turned out satisfactorily, and it is to be hoped that in a borough of 64,000 people the Town Council will now discountenance the storage under any circumstances of from nine to sixteen cubic feet of excremental filth at some 7000 points in the district. Dr. Airy advocates the trough closet system, and that form of closet is found to work well when provided with the automatic system of flushing, such as is now being exhibited at South Kensington by Messrs. Bowes, Scott, and Read; the plan is not only admirably adapted to the dwellings of the lower classes, but it is economical in its working. One other fault in the sanitary administration of Burnley lies in the fact that the medical officer of health is not provided with an immediate notice when a death from infectious disease occurs. This is the more strange when coupled with the fact that although under the Burnley Improvement Act, 1883, a system of compulsory notification was provided, yet when Dr. Airy made his report in July last, no steps whatever had been taken to carry it into effect. Much work has been done in

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Burnley, and it is to be hoped that the future action taken will be in such directions as to reduce the excessive mortality from enteric fever which has so long prevailed there.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Pancras.—Estimating the population of this metropolitan parish at 239,174 for 1883, Mr. Shirley Murphy reports an exceptionally low birth-rate of 32·2 and a death-rate of 20·7 per 1000 living. Only thirteen cases of small-pox were heard of, and vaccination is carried out with great efficiency. Indeed, there is not a single birth remaining quite unaccounted for during the latter half of 1882, and there are only three outstanding cases amongst the children born in the first half of 1883. Speaking of scarlet fever, Mr. Murphy points out some of the conditions under which it was found to spread, and he records a case in which a family of four were occupying the single room they possessed together with a scarlet fever corpse. Such conditions as these, he urges, show strongly the need for proper mortuary accommodation, and it is certain that so long as the only mortuary is at the workhouse, where it is surrounded with all the degrading associations of pauperism, the population cannot be educated to understand the value which attaches to the early removal of the dead from amongst the living. Enteric fever caused 132 deaths in 1883, this being nearly 78 more than the average number for the preceding ten years. The cause of the large outbreak which attacked 431 persons will be remembered in connexion with Mr. Murphy's inquiry in the autumn of last year into the circumstances of a dairy farm near St. Albans, the milk from which was unquestionably shown to have been the vehicle of infection. In connexion with the infant mortality, Mr. Murphy presses the vestry to make regulations as to tenement houses, and he urges that until they have done so they will not have exercised to their full extent the powers they possess for improving the condition of their poorer parishioners. We note with much regret that this important matter receives but tardy attention at the hands of some metropolitan authorities. Mr. Murphy would gladly see fresh legislation on this subject, and he points out that if, in default of the immediate owners of tenemented property maintaining their houses in proper condition, as by neglecting to carry out the repairing clauses of leases, they could be made to forfeit their leases, houses that are occupied by the very poor would not continue to be owned by those who are unwilling or unable to maintain them in a proper habitable condition.

Limehouse.—In the Limehouse district the birth and death-rates for 1883 were 25 and 38 per 1000 respectively. The sewer ventilators in several parts of the district have been a constant source of complaint, and a new system is now being attempted at some of the principal points. Some measures are also being taken to do away with some of those conditions of housing which are a disgrace to the metropolis. After several efforts at improvement, Elizabeth-court has been closed under a magistrate's order. An area in Shadwell, too, has been reported to the Metropolitan Board of Works under the Artisans and Labourers Dwellings Act, 1875. Many of the houses are built back-to-back, most of them are in a very bad structural state, and the death-rate for the last three years has averaged 44 per 1000. In other localities either works of alteration and improvement or actual closure of houses is going on; but it is evident from the description given by Mr. Rogers that much more is needed in this direction than he is at present able to effect.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 25th ult., 5986 births and 3517 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which in the two preceding weeks had been 19·8 and 21·1 per 1000, declined last week to 20·9. During the past four weeks of the current quarter the death-rate in these towns averaged 20·5 per 1000, against 20·9 and 19·6 in the corresponding periods of 1882 and 1883. The lowest rates last week in these towns were 16·1 in Portsmouth, 16·5 in Sunderland, 18·4 in Birkenhead, and 18·7 in Plymouth. In the other towns the rates ranged upwards to 25·4 in Bolton, 26·1 in Manchester, 28·4 in Liverpool, and 31·5 in Preston. The 390 deaths referred to the principal zymotic diseases in the twenty-eight towns included 105, which resulted from diarrhœa, 66 from scarlet fever, 66 from "fever" (principally enteric), 55 from measles, 46 from whooping-cough, 32 from diphtheria, and 19 from small-pox. These diseases caused the lowest death-rates in Norwich and Plymouth, and the highest in Cardiff, Preston, and Derby. The highest rates of mortality from scarlet fever were recorded in Newcastle-upon-Tyne and Halifax, from measles in Cardiff, from whooping-cough in Bradford and Salford, and from "fever" in Preston, Leeds, and Derby. The 32 fatal cases of diphtheria in the twenty-eight towns included 22 in London, 2 in Brighton, 2 in Liverpool, and 2 in Birmingham. Small-pox caused 15 deaths in London (exclusive of 6 London cases registered outside Registration London), 1 in Wolverhampton, 1 in Birmingham, and 1 in Hull. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 504 and 558 at the end of the two preceding weeks, further rose to 596 on Saturday last; the cases admitted were 173, against 68 and 144 in the two previous weeks. The Highgate Small-pox Hospital contained 20 patients on Saturday last, 6 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which in the five previous weeks had increased from 159 to 286, declined to 274 last week, and were 92 below the average. The causes of 75, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of deaths were duly certified in Portsmouth, Leicester, Plymouth, and in three smaller towns. The largest proportions of uncertified deaths were recorded in Bristol, Oldham, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·8 and 21·3 per 1000 in the two preceding weeks, was 21·4 last week, and exceeded by 0·5 per 1000 the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 14·8 and 17·1 in Leith and Greenock, to 24·9 in Paisley and 25·0 in Glasgow. The 317 deaths in the Scotch towns included 22 which were referred to measles, 21 to diarrhœal diseases, 19 to scarlet fever, 17 to diphtheria, 15 to whooping-cough, 15 to "fever," and 1 to small-pox; in all, 110 deaths resulted from the principal zymotic diseases, against numbers declining from 137 to 101 in the three preceding weeks. These 110 deaths were equal to an annual rate of 4·6 per 1000, which was double the average rate from the same diseases in the twenty-eight English towns. The 22 fatal cases of measles exceeded by 4 the number in the previous week, and included 12 in Glasgow. The 21 deaths from diarrhœal diseases showed a further decline from recent weekly numbers. Of the 19 fatal cases of scarlet fever, 13 were returned in Glasgow. The deaths referred to whooping-cough, which had been 20 and 18 in the two preceding weeks, further fell to 15, of which 8 occurred in Glasgow and 3 in Edinburgh. The deaths from "fever" showed a slight increase; 8 were returned in Glasgow and 3 in Paisley. A fatal case of chicken-pox (which in Scotland is classed as small-pox) was recorded in Glasgow. The 85 deaths referred to acute diseases of the respiratory organs in the eight Scotch towns showed a decline, and were 16 below those returned in the corresponding period of last year. The causes of 82, or nearly 16 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which in the three preceding weeks had increased from 26·3 to 30·2 per 1000, declined to 26·8 during the week ending the 25th ult. During the first four weeks of the current quarter the death-rate in the city averaged 28·0 per 1000, the rate for the same period not exceeding 16·4 in London and 17·6 in Edinburgh. The 180 deaths in Dublin last week showed a decline of 23 from the number in the previous week, and included 29 which resulted from the principal zymotic diseases, against 49, 32, and 25 in the three preceding weeks; of these, 12 were referred to scarlet fever, 7 to diarrhœa, 6 to "fever," 3 to whooping-cough, 1 to diphtheria, and not one either to measles or small-pox. These 29 deaths were equal to an annual rate of 4·3 per 1000, the rate from the same diseases being 1·7 in London and 2·5 in Edinburgh. The fatal cases

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of scarlet fever, which in the two previous weeks had been 11 and 5, rose to 12 last week. The 7 deaths from diarrhœal diseases showed a further decline from recent weekly numbers, and the fatal cases of "fever" were 4 less than those recorded in the previous week. Five inquest cases and 6 deaths from violence were registered during the week, and 56 deaths occurred in public institutions. The deaths both of infants and of elderly persons showed a decline from the numbers in the previous week. The causes of 18, or 10 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

THE LATE DR. RABBETH.

To the Editor of THE LANCET.

SIR,—The exemplary, generous, and fatal devotion of Dr. Samuel Rabbeth to the duties of his profession has added his name to the list of our medical heroes. We should all be losers if his example were forgotten. It suggests itself therefore to me that a gold medal, bearing Dr. Rabbeth's name, and to be annually awarded to a Bachelor of Medicine of the University of London, on terms to be hereafter considered, might be a suitable memento of his heroism, as of that of many others. I cannot doubt that the Senate would gladly become trustees of any fund for such a purpose, and charge themselves with the duty of awarding the medal. I shall gladly contribute to any such fund.

I am, Sir, your obedient servant,

WILLIAM W. GULL.

Brook-street, Grosvenor-square, W., Oct. 27th, 1884.

P.S.—The question whether such risk need have been incurred is quite another matter, and upon which I will write later.

CORROSIVE SUBLIMATE AS A SURGICAL DRESSING.

To the Editor of THE LANCET.

SIR,—In his address on this subject Sir Joseph Lister called attention to the irritating properties of the sublimate solution in a case of amputation of the mamma. He says, "On the day after the operation, when we changed the dressing, I found that under the oiled silk, exactly corresponding to its extent, the skin was highly irritated, and was covered with small vesicles. I also found that the inner side of the arm, where there was no wound, was in the same state of intense irritation." The explanation of the latter he gives as follows:—"In the case of the arm what occurred was, free perspiration had taken place, and the perspiration forming with the corrosive sublimate in the gauze, a watery solution had produced irritation where the perspiration was, on the same principle as the watery solution had caused irritation under the protective." Whatever may have been the cause of the eruption under the protective, it appears to me that the cause of the irritation in the arm is to be found in the irritating properties of the eucalyptol, and the following case seems to confirm this view.

On April 28th last I removed the mamma of a woman aged thirty-four, and cleared out the axilla. According to my usual practice, the operation was performed without any antiseptic. The wound was immediately covered with thymol gauze, which I prefer on account of its absorbent property; over this was placed a thick pad of absorbent wool (Von Bruns' Red Cross), and these dressings were kept in place by a many-tailed bandage of eucalyptol gauze—a method which I would commend to the notice of surgeons instead of the old-fashioned plaster and roller bandage. The left bare arm lay on the chest in contact with the gauze. On the following day, corresponding exactly with Sir Joseph Lister's case, the arm was intensely irritated, and the limits were those of direct and close contact with the gauze. So great was the irritation that near the wrist the vesicles coalesced, and in the course of another day alone formed a blister as large as a half-crown piece. After the second day, of course, the skin was protected from the gauze. On the skin of the body there was very little effect produced, probably on account of its greater power of resistance. The wound, which, with one-half of the chest, was protected by the thymol gauze and wool, healed by first intention and without a blush, as I am accustomed to see it; the tube, on its removal on the fifth day for the purpose of clearing and shortening, contained a beautiful specimen of organised blood-clot, which is now before me, and the patient went home quite well on the fifteenth day.

Here, then, there could be no doubt as to the cause of the irritation, and I would suggest that the same cause operated in the case in question, rather than that the sublimate should have passed through the "abundant eucalyptus dressing," which was put on outside the sublimate gauze.

I am, Sir, yours faithfully,

GEO. GRANVILLE BANTOCK.

Granville-place, W., Oct. 28th, 1884.

THE COLLEGE OF SURGEONS EXAMINATIONS.

To the Editor of THE LANCET.

SIR,—At a time when there is a probability of the coalition of the Colleges of Physicians and Surgeons it may be opportune to express the views of a teacher on what he considers the unsatisfactory results of the College of Surgeons examination. It has become a trite saying amongst students "that there is no disgrace attending a rejection by the College of Surgeons, since the examination is of such a fluky character." I put this in the words of one who had recently obtained his membership, and I believe it echoes the sentiments of a considerable number of teachers as well as students. I speak as a teacher when I say that I think the College of Surgeons examination is a most unfair one, for I am perfectly certain that it often rejects very good men, whilst inferior ones are occasionally allowed to pass. At present it is impossible for any teacher to send up his pupils with confidence; for he feels that it is almost as likely that the better men will be referred and the worse accepted, as that the weak student will be rejected and the good one pass. To the London student this may perhaps be no very great hardship, for if there be no great loss of prestige he has not been put to much expense, and possibly no one knows that he has been in for an examination; but to the provincial student no little inconvenience ensues, for the necessity of a several days' absence in London compels him to acquaint his friends and puts him to a considerable amount of expense; thus to the financial loss is added the multiplication of friendly condolence. If the rejections were just I should be the last to protest against them, but I am convinced that many referred candidates are extremely well up in their work, and have been rejected from simple nervousness, the time allowed being too short and the examiners too hasty to elicit the knowledge, which though present is incapable of being roughly extracted. To mention a few examples:—

Of two students, one, rejected several times for his primary, and again for his final, advised by his teachers not to go for examination, proceeds to London with a gentleman who had passed his primary creditably, had done well at the school, had acted as resident assistant house-surgeon for a year, where he was highly appreciated for his good work and was advised by his teachers to enter his name for the final. Result: the former passed, the latter was referred, and, strange to say, only in the subject which it was well-known he knew best—viz., surgery. A medalist in all the subjects of examination was referred for six months. The medalist of the year in anatomy and physiology, but a reticent, somewhat shy man, was rejected; whereas several, whom he was head and shoulders above in knowledge of the subjects, passed. A qualified practitioner, well acquainted with his work and known by his teachers to be extremely well up, was rejected because he could not recognise a pathological specimen, and so by losing the greater part of the ten minutes allotted for this section, getting a bad mark and spoiling an otherwise good examination. An excellent student, as proved by school and clinical examinations, was rejected, and yet very shortly afterwards was able to obtain his final M.B. at one of the universities. Were it necessary, the above list could be increased, but I think these cases are sufficient to show that there is some ground for complaint. Where does the fault lie 1. With the hurried character of the examination—e.g., ten minutes for pathology, which time is utterly inade-

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quate for the examiner to elicit more than one or two points of such an extensive subject; and which ten minutes may be entirely wasted by trying to make a student recognise something which the examiner has himself had to ask the curator the nature of before he began the examination. This is a fact which, to my knowledge, occurred some time ago. The time for the *viva voce* should be considerably increased, so as to give a nervous student the chance of collecting his thoughts; it is manifestly unjust that any man who knows his subject should be rejected simply because he is rather slow in answering under excitement; but at present an examiner cannot give him the time, since only a few minutes elapse before he has to take another student, and if the unfortunate candidate happens to bungle a little over his first specimen or case, there is no possibility of making up for lost time. 2. The system of marking is essentially a bad one, and might be easily remedied. 3. Those who have gone through the portals of the two Colleges in London cannot fail to contrast the courteous and gentlemanly treatment they receive at the College of Physicians as compared with the hurried rush through customary at Lincoln's-inn-fields. I am, Sir, yours truly,

A. W. MAYO ROBSON, F.R.C.S. Eng.,
Oct. 1884. Hon. Surgeon, Leeds General Infirmary, &c.

"THE SINS OF THE SOUTH-WESTERN."

To the Editor of THE LANCET.

SIR,—The shortcomings of the London and South-Western Railway Company have recently been the subject of some censorious comments in *The Times*. Permit me to point to a medical aspect of its shortcomings.

A large area of the south coast, embracing many of our most famous seaside resorts, especially winter health resorts, is more or less completely under the sway of this railway company. I should have liked to have written "served" by it, but "commanded" is the most appropriate term. A very large section of its best-paying patrons are invalids and persons suffering under bodily infirmities—persons indeed in every sense worthy of consideration. Yet what does this line do for the comfort or convenience of these travellers?

At no station is a space of time greater than three minutes allowed to the passengers. Other lines have certain places where the stay is five or even ten minutes, whether the train be late or punctual. What these three minutes may mean at times is an indefinite space, and after having bustled the passengers into the train a space of time is wasted before starting, which, if allowed to the passengers, would have made all comfortable. This line has a slow rate of speed, and studies but little the comfort of its patrons, yet it is notoriously unpunctual. Where is the time lost? The answer is, On the runs betwixt station and station. Its rate of speed is not so great but that it might "make up" time on this run, instead of "losing" more. Its unpunctuality is not due to the study of the convenience of its patrons, but to bad working arrangements. It is not good for invalids, in my opinion, to be kept unduly in railway carriages, either as to mind or body. This is one sin.

Let me furnish another instance of its care (?) of its passengers. Having a lady in delicate health in charge, it was thought desirable to reach Waterloo in good time in order to get comfortably seated for the journey. What was the result? We had to wait amidst an increasing crowd till five minutes from the time to start, when the train was backed in, and the crowd on the platform rushed to their seats—the weakest getting the worst places. Surely the rules of other companies might be followed on a line so very largely—if unavoidably—used by invalids. Yet another instance of their study (?) of the comfort of their passengers. A medical *confrère* assures me that it is not two years since a lady in infirm health had to be moved from the south coast to London. The South-Western had no invalid carriages, and one had to be procured from the Great Northern Railway Company. Yet this line and the seaside resorts long its route are largely maintained by invalid visitors, whose comfort ought to deserve some study. Many others are deterred by "the journey." Nature has done much for the south coast, but it cannot be said that the London and South-Western Railway Company does much to second her efforts. It is cruel to treat the weakly as it habitually does.

I remain, Sir, yours faithfully,
October 28th, 1884. J. MILNER FOTHERGILL.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

PRESENTATION TO THE MAYOR OF NEWCASTLE.

A LARGE number of leading citizens, including several prominent members of our profession, assembled in the council chamber of our City Hall last week to witness the presentation to our mayor, Mr. H. W. Newton, surgeon, in recognition of his valuable services on the late visit of the Prince and Princess of Wales. The testimonial, which was subscribed to by all classes in the city and its vicinity, took the form of a massive and very handsome candelabrum, forming an epergne for flowers, &c. beautifully designed in the Renaissance style, the base being surmounted by four finely modelled figures, emblematical of the seasons, with side pieces for fruit in the same style of ornamentation, and decorated with figures symbolical of fishing, shooting, &c. There was also presented to the mayoress—who, as the deputy mayor, Mr. T. L. Gregson, surgeon, who presided, said, "had so ably seconded the mayor in every effort in his public capacity"—a very handsome case of brilliants and earrings, with a large diamond brooch, "which he hoped she would long have strength and happiness to wear." The deputy mayor remarked that he felt proud that a colleague of his own profession had held the office of mayor on the Royal visit, and still more proud of his success; indeed, the Royal visit would appear to have produced the happiest effects here in the way of binding all classes together to make the occasion worthy of the North.

DARLINGTON HOSPITAL DISPENSARY.

A bazaar and fair in aid of the new hospital building fund was opened at Darlington a few days since by the Duchess of Cleveland. It is estimated that the new hospital will, with all necessary appliances, cost at least £10,000. Beyond this it is desirable to provide at least £5000 for an endowment fund. Towards this sum of £15,000, £9500 has already been promised. The present annual expenses amount to about £1250, and the income, which is always liable to great fluctuations, does not exceed £1100. In the new hospital the expenses will necessarily be increased by £300 or £400 per annum. A good deal of interest has been taken by the public press in this effort, and I hope to be able to report to you some very satisfactory results from the bazaar.

ALNWICK INFIRMARY.

At the annual meeting, just held, Earl Percy presiding, an increase was reported in the number of patients admitted, but it was mentioned as a hardship on the subscribers that eleven of the in-patients were connected with the construction of the Alnwick and Cornhill Railway, and that their share of the expenditure amounted to about £40, while the only additional subscription received from the contractors was £5 5s. It appeared clear to the committee that the institution could not continue to admit such patients unless a much larger sum was paid on their account. The committee also expressed their pleasure with the way in which Dr. Davidson had performed the duties of house-surgeon during the year.

Newcastle-on-Tyne, Oct. 27th.

EDINBURGH.

(From our own Correspondent.)

THE WINTER SESSION.

THE winter session opened on Tuesday both in the University and Extra-Academical Schools, and, so far as can be at present judged, the number of students will be fully up to, if not beyond, the average of the past few years. Reviving what used formerly to be an annual custom in connexion with the opening of the winter session in the University, the Principal, Sir Alexander Grant, delivered an address to the students. Referring to the recent Tercentenary festival, he said that the lesson of the celebration should remind students and office-bearers alike of their responsibilities, and stimulate them to maintain and carry on the

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work of their predecessors. He referred with great satisfaction to the part which the students had taken in the festival, and congratulated them on the step which had been taken towards the organisation of student life by the establishment of the Students' Representative Council. "What I want," he said, "to bring out and emphasise is that the general body of students of this University appeared at the festival and on other occasions during the year no longer as a fortuitous concurrence of atoms, but in some respects as an organic body, self-organised; no longer inarticulate, but provided with the means of constitutionally expressing its ideas and wants, and exhibiting considerable *savoir faire*." He next alluded in some detail to the Bill which had last session been introduced for the Better Endowment and Improvement of the Scotch Universities. Ultimately, he said, this or a similar Bill will become law, and it will afford scope for improvement in the University, and its results will stamp the character of our fourth centenary. The Universities (Scotland) Bill of last session was, taken all in all, a very good Bill, but not a perfect Bill—and for this reason, that it was not, so to speak, a holograph; it was not of one authorship, but a composite production, made up of separate contributions from distinct sources—namely, from the Lord Advocate's office and from Her Majesty's Treasury. And he compared these two threads in the Bill to the Rhone and the Arne, running together distinct in one bed—"a clear stream flowing by a muddy one." Almost all the provisions in the Bill devised by the Lord Advocate were admirable, but they were marred by clauses which came in from the Treasury. What he complained of was the principle which the Treasury attempted to introduce into the Bill. This principle was, that from henceforth University education is to be cut off from any additional State support; that, whatever may be the unforeseen developments of science, while other nations go on richly endowing its prosecution, not a penny more than a sum now fixed is to be voted for its encouragement in Scotland, and that the sum fixed for all University purposes in this country is to be about 1 per cent. of the present educational vote for the United Kingdom. He also considered it a serious *lapsus* in the Lord Advocate's measure that he consented to provide that no part of the additional grant from the State should be allowed to go to augment the endowment of any of the Theological chairs. Some of the problems which the Executive Commission appointed under this Bill would have to deal with were very complex and difficult, such for example as—1. How to rearrange the rules of graduation in arts and in science, so as to give a wide choice of subjects to the candidate, and to open a number of alternative avenues to a degree, and yet to preserve a perfect equality as to ease and difficulty of access, and prevent some subjects from being duly favoured and others doomed to comparative neglect. 2. How to adjust into perfect equity a fee fund, so that the interests of individual professors should no longer, as hitherto, be isolated, but should be more bound up in the corporate prosperity of the University. These were problems worthy of the strongest and wisest heads, but they could hardly be dealt with prudently unless there be in the Commission a strong infusion of actual knowledge and experience of the working of the Scottish Universities. After referring to the way in which university work was to be tested, Sir Alexander concluded by touching upon what might be the philosophical attitude of the University in the future; he saw no reason to expect that it would accept the mechanical cosmism of Darwinism in its extreme developments, or its clumsy and infelicitous attempts to evolve reason out of matter.

NEW LECTURE ROOMS AT SURGEONS' HALL.

A very great and much needed improvement has been effected at Surgeons' Hall. The dissecting-room has been enlarged to twice its former size, a bone-room has been added, while ample accommodation has been provided for the practical teaching of physiology and pathology. The chemical and other departments have also been much improved, and spacious staircases added. Dr. Macdonald Brown has succeeded Dr. Cathcart in the anatomical department of Surgeons' Hall. Dr. Cathcart has commenced to lecture on surgery at Nicholson-square.

MR. JOHN WINNALL GEORGE, M.R.C.S., public vaccinator for the Malvern and Leigh districts, Worcestershire, has received for the second time the Government grant for efficient vaccination.

IRELAND.

(From our own Correspondent.)

ROYAL UNIVERSITY OF IRELAND.

THE meeting of Convocation which was held last week fell through in consequence of a sufficient quorum not having been present. The circumstance is to be regretted, as Mr. Maguire's motion in reference to the statement that the examination papers of the University are known before to certain candidates was expected to be fully discussed. Dr. C. F. Knight also intended to move a resolution to the effect that the Senate should consider the advisability of holding the medical examinations in the months of May and November in each year, and should admit undergraduates of the University and of the late Queen's University in the faculty of medicine to two examinations in the year. The apathy and indifference shown by members of Convocation, particularly those resident in Dublin, are extremely to be regretted, and their absence at such an important meeting appears incomprehensible.

The Senate have arranged that the course for the examination for the Stewart Scholarship for proficiency in mental diseases shall include diseases of the brain and spinal cord, and diseases of the nervous system, practical examination of patients labouring under such diseases, and written reports of the same. Candidates will also be examined with the microscope on various pathological specimens and preparations illustrative of those diseases. The examination for the scholarship will occupy not less than three days.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The College of Physicians in Ireland for a considerable time past has granted its diplomas to female candidates, and it is probable that before long the Royal College of Surgeons will follow in the steps of its sister corporation. The matter was recently brought before a committee of the Council, when, on the motion of Dr. Cameron, Vice-President of the College, seconded by Dr. Kidd, the proposal to admit women to the examinations of the College, should the Council think fit, was carried on a division by nine to four. It is expected that steps will shortly be taken to have an alteration made in the Charters of the College, so that voting for Council by means of balloting papers sent by post as well as by personal attendance may come into operation.

ACADEMY OF MEDICINE IN IRELAND.

The second annual general meeting will take place this week, when the reports from the General Council and the general treasurer will be submitted, and the election of office-bearers take place. Among the notices of motion to be considered at the meeting are two of importance—viz., one by Mr. Swanzy, and the other by Dr. Duffey. Mr. Swanzy suggests that it be referred to the General Council to consider whether it be desirable that the Academy should encourage original research by grants or otherwise, and Dr. Duffey will move that no officer of the Academy shall receive any emolument from its funds. As far as finance is concerned, the Academy is flourishing, commencing, as it does, its second session with a balance in hand of £305.

PROPOSED HOSPITAL FOR CONSUMPTION, BELFAST.

Last week Mr. Forster Green, a well-known citizen of Belfast, handed to the chairman of the managing committee of the Belfast Royal Hospital a cheque for £5000, the interest of which is intended to be used for the treatment of patients suffering from consumption in a portion of the Convalescent Home on the Throne Lands. It is satisfactory to find that this sum has been supplemented by donations for the same purpose from several others, so that up to the present £887 8s. 1d. has been obtained in addition to the munificent subscription of Mr. Green.

Professor Rawdon Macnamara will deliver the inaugural address at the Meath Hospital on Monday next, Nov. 3rd.

Dr. Edmund Coates of Portumna was accidentally killed by a fall from his horse on Oct. 18th at the early age of thirty-six.

Dr. Nunan has been elected, for the sixth time in succession, chairman of the Kinsale Town Commissioners for the ensuing year.

Dr. Auterson of Magherafelt has been appointed to the Commission of the Peace for the county of Londonderry.

Dublin, Oct. 28th.

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PARIS.

(From our own Correspondent.)

CHOLERA AT YPORT.

YOU will have heard of the outbreak of cholera on the 23rd Oct. at Yport, a small fishing village on the coast of Normandy, between Etretat and Tréport, the origin of which was clearly traced to the importation of the germs of the disease under the following circumstances:—On September 25th some of the crew of a French fishing boat that had come from Newfoundland, and was anchored at Cette, one of the cholera-stricken towns in the south of France, arrived at Fécamp, a small seaport town in Normandy, not far from those above-named. These men travelled by rail from Cette, and on their arrival at Fécamp, which is near to their home, they had to take a sulphur bath, and fresh clothes were issued to them before they were allowed to go any further. Unfortunately, however, their own clothes, which were supposed to have been thoroughly disinfected (having gone through the form), were given back to them. On October 4th some of the disinfected clothes were washed in the sea by a female peasant, who fell suddenly ill, and died in a few hours; the physician who attended her at once recognised the malady as being Asiatic cholera. The victim was sister-in-law to one of the sailors, who was not affected by the disease, nor, indeed, were any of the others who accompanied him from Cette. The disease spread rapidly, and in the next day or two ten persons were attacked, of whom seven died, and the other three recovered. Measures were immediately taken to prevent the spread of the disease. Six more cases, however, subsequently occurred, making in all sixteen up to yesterday, of which there were nine deaths, three cured, and four under treatment. Dr. Gibert, sanitary medical officer at Havre, who was ordered to proceed to Yport and report on the character of the epidemic, concurred with the local medical men as to the malady being Asiatic cholera; but, thanks to the energetic measures that have been taken to ensure salubrity in the dwellings and in the streets, which were in a deplorably filthy condition, the epidemic has been brought under, and appears to have no tendency to spread. Dr. Gibert, moreover, observed that the persons affected were nearly all given to intemperance. Dr. Proust, principal sanitary officer of Paris, was also sent to Yport, but his report has not yet been published.

HORSE-POX.

Dr. Blachez brought to the notice of the Academy of Medicine last week an epidemic of horse-pox which lately took place at the Hospice des Enfants-Assistés. The malady was first observed in the nursery into which none but syphilitic infants, or those suspected to be such, are received. One of the infants had an ulcer on the lower lip with enlargement of the neighbouring glands, and the ass that suckled it had a deep excoriation on the teat which was noticed two days before the ulcer in the child. The animal so infected had for fifteen days suckled another infant that had an ulcer on the tongue, which naturally gave rise to suspicions of syphilis. The epidemic went on extending, when MM. Fournier and Bouley were consulted as to the nature of the prevalent malady. M. Fournier was doubtful as to its nature, but M. Bouley, the well-known veterinarian, at once pronounced it to be horse-pox, the origin of which had to be sought for. It was noticed that another infant, who had been admitted twelve days previously, had both its arms covered with vaccine pustules which were dressed by the "infirmier," who, having his fingers thus affected, inoculated the teats of the suckling asses. Other asses were also similarly affected, which was sufficient to account for the origin of this strange epidemic among the infants.

Paris, Oct. 29th.

THE SERVICES.

Deputy Surgeon General Herbert Taylor Reade, of the Medical Staff (late Army Medical Department), who was commended in despatches for his services in the Indian Mutiny Campaign, has been appointed on the Staff of Major-General R. White, commanding the Eastern District, as Principal Medical Officer, vice Surgeon-General T. Murphy, retired.

WAR OFFICE.—Medical Staff: Surgeon-Major William Edmondson Dudley is granted retired pay, with the honorary rank of Brigade-Surgeon; Surgeon-Major Humphrey Carden Gillespie, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon.

MILITIA MEDICAL DEPARTMENT.—Surgeon-Major Wavll Arundel Dene, 3rd Battalion, the Prince Albert's (Somersetshire Light Infantry), resigns his commission; also is permitted to retain his rank and to wear the prescribed uniform on his retirement.

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon William Connolly, M.D., to the *Duke of Wellington;* Fleet Surgeon Gerald Molloy, to the *Dædalus;* Fleet Surgeon Edward J. Butler, B.A., M.D., to Malta Dockyard; Fleet Surgeon Mark A. Harte, to the *Achilles;* Surgeon G. A. Dreaper, Surgeon William H. O'Meara, Surgeon William W. Jacobs, Surgeon Alexander F. Harper, Surgeon Herbert W. A. Burke, Surgeon Edward R. D. Fasken, Surgeon James C. F. Whicher, Surgeon Alexander G. Andrews, Surgeon Arthur S. Nance, and Surgeon Evan St. M. Nepean to the *Duke of Wellington,* additional; Surgeon John S. Lambert, to the *Hibernia;* Surgeon Frederick J. Lilly, to the *Northumberland;* Surgeon Edward J. Morley, to the *Excellent;* Surgeon Joseph R. M'Donnelly, to the *Hercules;* Surgeon George L. Baker, to the *Lark;* Surgeon Henry Canton, to the *Royal Adelaide;* Surgeon Thomas C. Rowland, to the *Undine.*

Obituary.

MR. THOMAS CHAVASSE, F.R.C.S.

WE announced last week the decease, on the 19th ult., of Mr. Thomas Chavasse, one of the few remaining members of a school nearly extinct. Originally of French extraction, Mr. Chavasse was descended from a race of surgeons that had practised at Burford, in Oxfordshire, for many generations. His father, being qualified to practise before there was a vacancy in the family practice, settled at Walsall, where the deceased was born in May, 1800. His early education was received at the Kensington Gravelpits School, and at the age of sixteen he was apprenticed as resident pupil for five years to the General Hospital, Birmingham. At the expiration of his term of apprenticeship he became a student of St. Bartholomew's Hospital, and was a diligent follower of Mr. Abernethy, whose work and teaching made an impression on his after-life that was never effaced. Having obtained the Membership of the College of Surgeons and the Licence of the Apothecaries' Society, Mr. Chavasse returned to Birmingham in 1822, and in a few years acquired what is generally believed to have been the largest general practice ever attained in the provinces. At this he worked incessantly until 1850, when, his health failing, he retired to Leamington. In 1844 he received the Honorary Fellowship of the College of Surgeons. A rest of three years having sufficed for restoration to health, Mr. Chavasse settled at Wylde-green, and recommenced professional practice. At the same time two days in the week were devoted to consultation work in Birmingham. This course was actively followed until he had reached his eightieth year, when the infirmities of age first really became marked.

For many years Mr. Chavasse was a member of the Sutton Coldfield Corporation, and for three successive years he was warden or mayor of that Royal town. At the expiration of the term of office he was appointed "capital burgess;" but, magisterial work being distasteful to him, after occupying the position for some time, he resigned his seat on the bench. Until the last few years he also acted as one of the trustees of the Medical Benevolent Society, and ever showed great personal interest in the work of that Society. He was amongst the first who enrolled themselves as members of the Provincial Medical and Surgical Association, his name appearing in the list in the first volume of the Transactions of the Society. To the fourth volume of the Transactions he contributed a paper on "Secale Cornutum," and to our own pages one on "Uterine Hæmorrhage: the Injection of Cold Water as a Remedy."

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ROYAL COLLEGE OF PHYSICIANS.

THE ordinary Comitia of the Royal College of Physicians was held on Thursday last, Oct. 30th, Sir W. Jenner, Bart., President, in the chair. A considerable amount of routine business was transacted. The President nominated Dr. R. Quain to be Harveian Orator for next year, and Dr. Mahomed as Bradshawe Lecturer.

Dr. Mahomed moved, and Dr. F. T. Roberts seconded, the following resolution :—"That a Committee be appointed to consider whether any means might be advantageously adopted byt he Government or other public body, to ascertain and certify the composition and quality of patent and manufactured medicines, of unofficinal and also officinal drugs, and of all drugs dispensed under the prescriptions of registered medical practitioners. That the Committee report to the College at an early date."

The resolution was opposed by Dr. Bristowe and Dr. W. Farre, and negatived.

MEDICAL NOTES IN PARLIAMENT.

Over-pressure in Schools.

IN the House of Commons on Tuesday, in reply to a question by Mr. S. Leighton, of which notice had been given on the previous evening, Mr. Mundella stated that immediately on receipt of Dr. Crichton Browne's report it was sent to Mr. Fitch, who, after perusal, expressed dissent from and dissatisfaction with the document. Previously to Dr. Crichton Browne's report being made public, Mr. Fitch was not requested to make any official report. In reply to a further question, Mr. Mundella stated that Mr. Fitch was a member of the committee which was employed in drafting the New Code.

The Outbreak of Cholera in Normandy.

In reply to a question by Sir W. Barttelot, Sir C. Dilke stated that information respecting the nature of the outbreak at Yport had been asked for and partially obtained. A most complete examination of ports has been made in advance for four months with a view to prevent cholera spreading to this country, and all regulations in force during the last epidemic to check the importation of disease are in force at the present time.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON. — The following gentlemen passed the Second Examination in Anatomy and Physiology on Oct. 23rd :—

Betts, Robert Sidney.
Daly, Stephen Joseph.
Green, Alfred.
Hewan, John.
Lewis, Benjamin Morgan.
Norris, Herbert Murray.
Phipps, Henry Hostache.
Smith, Newman.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on Oct. 23rd :—

Bell, Charles W. Josceline, L.R.C.P.Ed., Dulwich Wood Park.
Bell, George Craigie, Blackheath.
Bury, Herbert Taylor, Hampstead.
Byrne, George, L.R.C.P.L., Manchester.
Clayton, Geoffrey Sherborne, L.S.A., Hampstead.
Fisher, Henry Oldrich, Sittingbourne.
Hewish, Edgar Milne, M.D.Toronto, Toronto.
Hillstead, Herbert John, L.S.A., St. John's.
Jacomb-Hood, Charles John, L.S.A., Tunbridge Wells.
Jessop, Edward, Nottingham.
Kerby, Robert John, L.R.C.P.L., Crouch Hill.
Lloyd, Henry, L.S.A., Denbigh.
Noad, Ernest, L.R.C.P.Ed., Christ's Hospital.
Penfold, Frederick William H., Rainham.
Shaw, Hugh Grosvenor, L.R.C.P.Ed., Stratford-on-Avon.
Weakley, Alfred James, L.R.C.P.L., Leytonstone.

Admitted Members of the College on Oct. 24th :—

Averill, Charles, L.S.A., Stafford.
Best, William James, L.S.A., Queensdown-road.
Blair, Charles Samuel, M.B Durh., Newcastle-on-Tyne.
Cusse, Ernest, L.S.A., Great Ormond-street.
Cann, Ralph Thomas, L.R.C.P.Lond., Lambeth-palace-road.
Carr, John Walter, L.S.A., Bloomsbury-square.
Gubb, Alfred Samuel, L.S.A., Southampton.
Santi, Philip Robert W., L.S.A., Doughty-street.
Tuck, Harry, L.S.A., Surbiton.
Tytheridge, Walter Robert, L.R.C.P.Ed., St. James's-square.
Williams, Reginald Muzio, L.S.A., Beaumaris.

Thirty-two candidates passed the examination in Surgery, and will be admitted Members of the College on obtaining a Medical diploma.

The following gentlemen, having passed the necessary examination, were admitted Licentiates in Dental Surgery and received their diploma at a meeting of the Board of Examiners in that subject on Oct. 29th :—

Ackland, W. Robert, Southernhay, Exeter.
Crocker, James Charles Vipond, Penzance.
Levason, Peyton Grenville, Bridge-street, Hereford.
Parkinson, Herbert Stephen, Sackville-street.
Roberts, Charles Alfred, Weymouth-street.

Three candidates were referred.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on October 24th the following degrees were conferred :—

BACHELOR OF MEDICINE.—Robert Whinery Leeming, Christ's; Arthur William Chalmers Peskett, Downing.
BACHELOR OF SURGERY.—Arthur W. Chalmers Peskett, Downing.

On the same day the following were appointed Examiners :—First Examination for M.B. Degree : Professor A. Schuster, Owens College, Manchester; Mr. W. N. Shaw, Emmanuel; Mr. A. Scott, Trinity; Mr. M. M. Pattison Muir, Gonville and Caius; Mr. F. Darwin, Trinity; Mr. H. M. Ward, Christ's; Dr. A. M. Marshall, St. John's; Mr. A. Sedgwick, Trinity. Second Examination for M.B. Degree : Professor Macalister; Mr. Alexander Hill, Downing; Professor Michael Foster; Mr. J. N. Langley, Trinity; Professor Latham.

ROYAL UNIVERSITY OF IRELAND. — The following degrees were conferred last week by his Grace the Duke of Abercorn, Chancellor of the University :—

BACHELOR IN MEDICINE.—Honours : First Class—R. J. Macnamara. Second Class—William White, John Kearney, Thomas Grainger, Joseph Daly, James Morwood,—Upper Pass Division : W. Battley, Robert Carter, Maurice Connery, Charles Cooke, Charles Elliott, Thomas Frizell, Benjamin Hosford, Philip Macarthy, Dennis Sheahan.—Lower Pass Division : William Bailey, Patrick Blackhall, Arthur Blackwood, Frederic Burns, George Clarke, John Corbett, Patrick Cotter, Warren Crooke, James Ferguson, Joseph Guisani, Charles Graves, Edward Greene, Charles Hayden, Peter Horkan, Samuel Hunter, Hugh Lewers, Marcus London, James McEvoy, Nicholas McDonnell, Joseph McKay, Morgan McSwiney, Edward Magennis, James Magner Donald Martin, John Moore, Hugh Morrison, Cornelius O'Doherty, Michael O'Halloran, Patrick O'Hara, J. Prendergast, Frederic Sinclair, Alfred J. Smith, Patrick Soraghan, Alfred Starling, George Tate, Wm. Wadsworth, George Waters, George Nesbitt Wynne.

MASTER OF SURGERY.—William Bailey, W. Bartley, P. Blackhall, Arthur Blackwood, Robert Carter, George Clarke, Maurice Connery, Charles Cooke, John Corbett, Patrick Cotter, Warren Crooke, Joseph Daly, Charles Elliott, Jacob Fairbrother, James Ferguson, Thomas Frizell, Joseph Guisani, Thomas Grainger, Charles Graves, Edward Greene, Charles Hayden, Peter Horkan, Benjamin Hosford, James Hunter, Samuel R. Hunter, John Kearney, John Keany, Hugh Lewers, Marcus London, James Macaulay, Matthew McAuley, James McAvoy, Philip McCarthy, Nicholas McDonnell, Joseph B. McKay, Robert Macnamara, William McWilliam, James F. Magner, W. Martin, James Morwood, James O'Connell, Cornelius O'Dogherty, Michael O'Halloran, Patrick O'Hara, Denis Sheahan, Alfred Smith, P. Soraghan, Alfred Starling, George Tate, George Waters, William White, George N. Wynne.

DIPLOMA IN OBSTETRICS.—Patrick Blackall, Arthur Blackwood, J. W. Bullen, Patrick Cotter, Charles Elliott, James C. Ferguson, Joseph Guisani, Thomas Grainger, Samuel Hamilton, Benjamin Hosford, John Kearney, Hugh Lewers, James McAvoy, Philip McCarthy, Nicholas McDonnell, James Magner, James Morwood, Cornelius O'Dogherty, Michael O'Halloran, Denis Sheahan, Alfred J. Smith, Alfred Starling, William White.

DIPLOMA IN SANITARY SCIENCE.—John Roche.

EXHIBITIONS.—First Class (£50): Robert J. Macnamara. Second Class (£25 each): *William White, John Kearney, Thomas Grainger, Joseph T. Daly.

*Disqualified by University or Collegiate standing.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 23rd :—

Best, W. Jas., Richmond House, Queenstown-road, Clapton.
Jones, J. Arnallt, Abergwesyn Vicarage, Llanwrtyd, Brecon.
Lloyd, Henry, Llahrhaiadr, Denbigh
M'Donnell, Alexander, Kingsland-road.
Tronson, W. Francis, Oxford-gardens.
Williams, Reginald Muzio, Tre Castell, Beaumaris, Anglesea.

The following medals have been awarded by the Society of Apothecaries during the past year :—Materia Medica and Therapeutical Chemistry : Gold medal, John Henry Garrett, University College; silver medal and books, Henry Hamilton, Bristol Medical School. Botany : Gold medal, Ernest H. Starling, Guy's Hospital; silver medal and books, William Beecroft Bottomley, St. Mary's Hospital. A gold medal has also been awarded to Bertha Whitehead, and a silver medal

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to Sarah Elizabeth Wright.——The Society's gardens at Chelsea have been visited during the year by 3248 students, three-fifths of whom were males.

THERE appears to be a paucity of subjects for anatomical purposes in Edinburgh.

THE late Countess Bose of Cassel has bequeathed to the University of Berlin the sum of 780,000 marks (£39,000) for the benefit of poor students of medicine.

A SAILING-VESSEL, the "F. I. Merryman," has arrived in New York, the whole of the crew with the exception of two having been removed by fever during the voyage from Bathurst on the west coast of Africa.

THE offices of Medical Officer of Health and that of Public Analyst in St. Luke's parish, which have heretofore been held conjointly by Dr. Pavy, have, on his resignation, been made separate appointments.

VACCINATION PROSECUTIONS.—It appears that out of 1595 convictions for neglecting to comply with the Vaccination Act for the year ending Sept. 29th, 1883, no fewer than 422 took place in the town of Leicester. In the West Riding of York there were 140 convictions; in Halifax, 104; in Oldham 91; in Lincoln, 87; and in Derby and Nottingham, 58 each. During the year fines were imposed in 1190 cases.

THE METROPOLITAN ASYLUMS BOARD.—At the meeting of the managers of the Metropolitan Asylums Board on the 25th ult., it was announced that the Local Government Board had authorised the expenditure of £2425 in connexion with the hospital-ship *Castalia*, and the borrowing of £1630 of this amount. Relative to the question of the removal of non-pauper cases of infectious disease to the managers' hospitals, a recommendation made by the General Purposes Committee was adopted, to the effect that the Local Government Board be requested to place themselves in communication with the several local authorities of the metropolis, with the view to issuing an order which shall empower the managers (in accordance with the terms of Clause 15 of the Poor Law Act of 1879) to contract with such authorities for the reception into the managers' hospitals of cases of dangerous infectious disorders other than those chargeable to the various parishes and unions.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

Dental Caries. By Henry Sewill, M.R.C.S. L.D.S.E. pp. 66.

BERMINGHAM & Co., New York and London.

The Lockjaw of Infants. By J. F. Hartigan, M.D. pp. 123.

CASSELL & Co., London.

Humphry Sandwith: a Memoir. By his Nephew, Thomas Humphry Ward. pp. 261.

CHURCHILL, J. & A., London.

Manual of the Dissection of the Human Body. By Luther Holden, F.R.C.S. Fifth Edition, Edited by John Langton, F.R.C.S. pp. 878, with Illustrations.

On Diseases of the Rectum and Anus. By Harrison Cripps, F.R.C.S. pp. 429, with 12 Plates.

Handbook of Midwifery for Midwives. By J. E. Burton, M.R.C.S., L.R.C.P.L. Second Edition. pp. 303.

A Descriptive Catalogue of the Pathological Museum of the Middlesex Hospital. By J. Kingston Fowler, M.D., and J. B. Sutton, F.R.C.S. pp. 308.

COLLINS, SONS, & Co., London and Glasgow.

Hygiene: its Principles as applied to Public Health. By E. F. Willoughby, M.B.Lond. pp. 305, with 30 Illustrations.

EGLETON, T. H. V., London.

An Intrigue at Bagnères. pp. 377.

FANNIN & Co., Dublin; BAILLIÈRE, TINDALL, & COX, London; MACLACHLAN & STEWART, Edinburgh.

Transactions of the Academy of Medicine in Ireland. Vol. II. Edited by William Thomson, M.A., F.R.C.S. pp. 504, Illustrated.

GEORGE & Co., Lancing, Michigan.

Eleventh Annual Report of the Board of Health of the State of Michigan, 1883. pp. 262.

HARRISON & SON, London.

A Statistical Chronology of Plagues and Pestilences as affecting Human Life, with an Inquiry into their Causes. By Cornelius Walford, F.I.A., F.S.S., F.R. Hist. Soc. pp. 151.

HODDER & STOUGHTON, London.

The Spitalfields Genius: the Story of Wm. Allen, F.R.S., &c. Re-told by J. Fayle, B.A. Lond. & Camb. pp. 199, with 3 Illustrations.

LEA'S SON & Co., Philadelphia; H. KIMPTON, London.

A System of Human Anatomy, including its Medical and Surgical Relations. By Harrison Allen, M.D. Sect. VI.: Organs of Sense, of Digestion, and Genito-urinary Organs.

LEBÈGUE ET CIE, Bruxelles; SAMPSON LOW & Co., London.

De la Répartition du Sang Circulant dans l'Economie. Par le Dr. Emile Spehl. pp. 230.

LEWIS, H. K., London.

A Handbook of Diseases of the Eye and their Treatment. By H. R. Swanzy, A.M., M.B., F.R.C.S.I. pp. 437, with Illustrations.

Notes on Materia Medica and Pharmacy. By Frederick J. Roberts, M.D. &c. pp. 380.

A Practical Treatise on the Medical and Surgical Uses of Electricity. By G. M. Beard, A.M., M.D., and A. D. Rockwell, A.M., M.D. Fourth Edition, Revised. pp. 758, Illustrated.

LIPPINCOTT & Co., London & Philadelphia.

Elements of Modern Chemistry. By Adolphe Wurtz. Translated and Edited by W. H. Greene, M.D. Second American Edition. pp. 770, with 132 Illustrations.

Fat and Blood: an Essay on the Treatment of certain Forms of Neurasthenia and Hysteria. By S. Weir Mitchell, M.D. Third Edition, Revised, with Additions. pp. 164.

LONGMANS, GREEN, & Co., London.

Transactions of the Clinical Society of London. Vol. XVII. pp. 256, with Illustrations.

MACMILLAN & Co., London.

The Modern Operations for Cataract. Lettsomian Lectures, 1884. By R. Brudenell Carter, F.R.C.S. pp. 83.

PUTNAM'S SONS, New York & London.

Myths in Medicine and Old-time Doctors. By Alfred C. Garratt, M.D. pp. 242, with Illustrations.

RELIGIOUS TRACT SOCIETY, London.

Mahomet and Islam. By Sir William Muir, K.C.S.I., LL.D. pp. 256, Illustrated.

Egyptian Life and History according to the Monuments. By M. E. Harkness. pp. 160, Illustrated.

The Honey Bee, its Nature, Homes, and Products. By W. H. Harris, B.A., B.Sc. pp. 272, with Illustrations.

The Girl's Own Annual. pp. 832, Illustrated.

The Sweet Story of Old. By Hesba Stretton. pp. 103, with 12 Coloured Illustrations.

SMITH, ELDER, & Co., London.

A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M.D., F.R.C.P. Fifth Edition. In 2 volumes. pp. 408-411, with Illustrations.

SWAN, SONNENSCHEIN, & Co., London.

Elementary Text-book of Zoology: Protozoa to Insecta. By Dr. C. Claus. Translated and Edited by Adam Sedgwick, M.A., with the assistance of F. G. Heathcote, B.A. pp. 615, with 706 Woodcuts.

TRÜBNER & Co., London.

B. Bradshaw's Dictionary of Mineral Waters, Health Resorts, &c. pp. 390.

Reports of the Medical, Surgical, and Pathological Registrars of the Middlesex Hospital for 1882. (Smith, Long-acre.)—Man not a Machine, but a Responsible Free Agent; by the Rev. Prebendary Row.—Seventh Annual Report of the Health Commissioner of the City of St. Louis.—On the Communicability of Cholera by Human Intercourse.—The Medicine Stamp Act; by C. E. Meetkerke. (Wyman & Sons.)—The Mouth and Teeth in Health and Disease; by J. M. Dennis, F.L.S. (Simpkin & Marshall.)—Cases of Interest; by Prof. W. H. Carmault, M.D., New Haven.—Archivio di Ortopedia, Set. 1884.—Das Chlorsaure Kali; von Dr. J. v. Mering. (Hirschwald, Berlin.)—A Consideration of the Causes of Insanity; by Walter Channing, M.D.—The Condition of Gaols, Hospitals, and other Institutions as described by John Howard; by J. B. Bailey. (Lewis.)—Transactions of the Medical and Chirurgical Faculty of the State of Maryland.—Uber Schul-hygiene in England; von Dr. Herman Weber.—Corpulence and its Treatment; by Dr. W. Ebstein. (Bergmann, Wiesbaden.)—Jahresbericht ü. d. Leistungen u. Fortschritte auf dem Gebiete des Militär-Sanitätswesens; bearbeitet von Dr. W. Roth; ix. Jahrgang.—Eyesight in Civilisation; by R. B. Carter, F.R.C.S. (Macmillan.)—Transactions of the American Otological Society, Vol. III., Part 3.—Disorders mistaken for Hydrophobia; by C. W. Dulles, M.D.—How to Live on a Shilling a Day. (Maxwell, London.)—Gynäkologischer Specialismus; von Dr. Leopold Landau.—Recherches Expérimentales sur l'Excitabilité électrique des Circonvolutions Cérébrales et sur la Période d'Excitation latente du Cerveau; par Dr. H. C. de Varigny. (Baillière, Paris.)—Cholera and Yellow Fever; by J. W. Williams.—Index Medicus, Vol. VI., No. 9.—Good Words, Sunday Magazine, Nov. (Isbister.)—Longman's Magazine, Nov.—Leisure Hour, Sunday at Home, Boy's Own Paper, Girl's Own Paper, for Nov. (Religious Tract Society.)—On Branchial Cysts of the Neck; by Dr. N. Senn.—Force v. Work; by William Pepper, M.D. Baltimore.—Observations on China; by Fortescue Fox, M.B. Lond. (Stanford.)—Lehrbuch der Physiologie; neu Herausgegeben von Dr. A. Graenhagen; dritte Lieferung.—La Hijiene de la Escuela; por Ricardo Davila Boza.—Ueber Ptomaine; von Prof. L. Brieger. (Hirschwald, Berlin).

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Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ADDENBROOKE, E. H., M.R.C.S., L.S.A.Lond., has been appointed Certifying Surgeon, under the Factory Act, for the District of Kidderminster, vice Wm. Roden, M.D., deceased.

ARMITAGE, E. H., M.R.C.S., L.R.C.P.Lond., has been appointed Resident Medical Officer to the Hulme Dispensary, vice J. B. Dreaper, M.R.C.S., resigned.

BARBOUR, J. M., M.B., has been elected Honorary Surgeon to the Royal Alfred Sailors' Home, Bombay, vice Cassum, deceased.

BURRY, HENRY B. PULLEN, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Milland District of the Midhurst Union, vice Pearse, whose term of office has expired.

BUSH, JAMES PAUL, M.R.C.S., L.S.A.Lond., has been appointed Surgeon to the Bristol Police Force, vice Cross, resigned.

CHAMBERS, H. W., L.R.C.P., M.R.C.S., has been appointed Senior Assistant House-Surgeon to the Hull General Infirmary, vice Jackson, resigned.

DAVIES, J. T., L.R.C.P.Ed., M.R.C.S., has been appointed House-Surgeon to the Denbighshire Infirmary, vice Lloyd, resigned.

DREAPER, J. B., M.R.C.S., has been appointed Honorary Surgeon to the Hulme Dispensary, vice A. J. Neale, M.B., C.M.Ed., resigned.

ELPHINSTONE, ROBERT, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Silverstone District of the Towcester Union, vice Weir, deceased.

FULLER, ARTHUR, M.B., C.M.Ed., M.R.C.S., has been appointed Assistant Medical Officer to the Hackney Union Infirmary, vice Dr. Gordon, promoted.

HARRIS, THOS., M.D.Lond., M.R.C.S., has been appointed House-Physician to the Radcliffe Infirmary, Oxford.

HARVEY, WILLIAM, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Maytown Hospital, Queensland.

HOZIER, C. H. SMITH, F.R.C.S., L.K.Q.C.P.I., has been appointed Government Medical Officer and Vaccinator for the District of Gundagai, New South Wales; also Surgeon to the Hospital.

PASH, WILSON, M.A. & M.B.Cantab., of Laurie-park, Sydenham, has been appointed House-Physician to the London Hospital.

THOMSON, JOHN, M.D., Ch.M.Aber., has been appointed Government Medical Officer and Public Vaccinator for the District of Silverton, New South Wales.

WADE, CHARLES, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Hatfield District of the Dunmow Union, vice Firman, resigned.

WILSON, G. J., M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the Radcliffe Infirmary, Oxford.

WILSON, JAMES SCOTT, M.B., C.M.Glas., has been appointed Medical Officer for the Borough District of the Walsall Union, vice Hubbard, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BARLOW.—On the 23rd ult., at Montague-street, Russell-square, the wife of Thomas Barlow, M.D., F.R.C.P., of a son.

BURRY.—On the 18th ult., at Liphook, Hants, the wife of H. B. Pullen Burry, L.R.C.P., M.R.C.S., &c., of a son.

CARR.—On the 20th ult., at Long-street, Devizes, Wilts, the wife of Alfred Carr, M.R.C.S., of a son.

FENNELL.—On the 24th ult., at Knutsford, Cheshire, the wife of Theodore Fennell, M.R.C.S.E., L.S.A.Lond., of a daughter.

LANCASTER.—On the 21st ult., at Neston Lodge, Lewisham High-road, S.E., the wife of Henry F. Lancaster, M.D., of a son.

WISE.—On the 23rd ult., at Walthamstow, the wife of C. H. Wise, M.D., of a daughter.

MARRIAGES.

ATKINS—HUNT.—On the 25th ult., at Kilrosanty Church, Ringrose Atkins, M.A., M.D., Resident Medical Superintendent, District Lunatic Asylum, Waterford, to Mary Ellen, second daughter of the late Thomas Hunt, Esq., of Rockmount, co. Waterford.

HODGES—VIDLER.—On the 22nd ult., at St. Nicholas' Church, Remenham, James Hodges, M.R.C.S., L.S.A.Lond., of Bury St. Edmunds, eldest son of the late Rev. James Hodges, of Shippon, Berks, and of St. Helier's, Jersey, to Alice Maria, youngest daughter of William Vidler, of Remenham, Berks.

HUMPHREYS—HARRATT.—On the 22nd ult., at the Parish Church, Wallington, Surrey, John Henry Humphreys, M.D.Lond., youngest son of the late Charles Humphreys, Esq., of Oswestry, Salop, to Helena Joaquina, eldest daughter of the late Charles Harratt, Esq., of Liverpool and Buenos Ayres.

DEATHS.

BROWN.—On the 22nd ult., after a short illness, Charles Blakely Brown, M.D.Oxon., of Hill-street, Berkeley-square, W.

GIBSON.—On the 19th ult., at Prospect-street, Hull, Henry Gibson, M.R.C.S., aged 71.

LUKE.—On the 22nd ult., at the residence of his sister, Beulah-villas, Clive-vale, Hastings, Joseph Luke, M.D., of Oak Lodge, Green-lanes, Finsbury-park, N., aged 66.

SHEEHY.—On the 24th ult., at his residence, Great Percy-street, W.C., William Henry Sheehy, L.R.C.P.Edin., late of Claremont-square, in his 65th year.

ST. CLAIR.—On the 21st ult., at Cain House, Wigtown, Scotland (formerly of Blackpool), James Aitken St. Clair, B.M., C.M., in his 38th year.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 30th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 24	29·94	..	47	46	..	55	43	..	Foggy
,, 25	30·12	..	39	39	..	50	37	..	Foggy
,, 26	29·60	..	45	43	..	57	39	..	Cloudy
,, 27	29·87	..	45	41	..	52	41	·02	Cloudy
,, 28	29·53	..	60	56	..	63	44	..	Cloudy
,, 29	30·09	..	41	39	..	53	36	·15	Foggy
,, 30	30·26	..	47	45	..	56	39	..	Foggy

Medical Diary for the ensuing Week.

Monday, November 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—8 P.M. Casual Communications by Messrs. Ackery, A. S. Underwood, Storer Bennett, and Morton Smale.—Mr. F. Newland Pedley: Some Points in connection with Fracture of the Lower Maxilla.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. General meeting.—Mr. Edmund Owen: Lancing the Gums.—Dr. de Havilland Hall: A Case of Surgical Scarlet Fever.

Tuesday, November 4.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Hale White: Coarctation of the Aorta.—Drs. Hobson and Lanchester: Caseous Pneumonia simulating Empyema.—Mr. Barker: Removal of Upper Jaw for Epithelioma.—Dr. Percy Kidd: Cardiac Aneurysms.—Dr. Howard Tooth: Lympho-sarcoma of the Liver in a Child.—Dr. Carrington: Cancer of the Liver and Adrenals, with Melanæmia, &c.—Dr. Acland: Two Cases of Ulceration of the Intestines in Paraplegia.

Wednesday, November 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—3.30 P.M. Council Meeting.—4 P.M. Dr. A. H. Newth: The Value of Electricity in the Treatment of Insanity.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Mr. Lawson Tait and others.—Dr. Grailly Hewitt: The Severe, or so-called "Uncontrollable," Vomiting of Pregnancy.—Dr. Potter: Retained product of Conception.

Thursday, November 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

HARVEIAN SOCIETY.—8.30 P.M. Dr. Stephen Mackenzie: Two Cases of Lichen Planus of Nervous Distribution.—Mr. J. H. Morgan: Cases of Painful Mamma in Young Girls.—Dr. Amand Routh: Cases of Retroversion of the Gravid Uterus.—Mr. R. F. Benham will exhibit a New Antiseptic Vaporiser and Improvements in Syringes.

Friday, November 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Mr. Bernard Pitts: Foreign Body in the Air-passage; Abscess of the Lung; recovery.—Mr. Maitland Thompson: Case of Retention (twenty-four hours); Catheter Fever; death.—Mr. Noble Smith: The Objects of the Medical Sickness Annuity and Life Assurance Society.—Dr. Chas. Good: Gastric Ulcer Rupture; sudden death.

Saturday, November 8.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

IN MEMORIAM.—SAMUEL RABBETH.

Sad is each heart, and dimmed with tears each sight.
A nother from our midst has passed away,
M anhood scarce reached! And yet before him lay
U nrolled a future, glorious and bright.
E ver his duty to perform aright
L ived he and died. What more of man to say?

R ead, all, a lesson in his life now past;
A nd in his death read we no lesson too?
B right as our sky of life is now to view,
B lack with death's clouds soon it may be o'ercast.
E ach day we live may be, like his, the last.
T hen let this thought be ever with each one:
H ere for to-day—perchance to-morrow gone.

King's College Hospital, Oct. 29th, 1884.

Enquirer.—The certificate testifies to the efficiency of the holder to compound and dispense medicines.

Mr. Nixon.—A short notice of the portable hospital was given in our last issue.

DISINFECTION.

To the Editor of THE LANCET.

SIR,—Will you kindly give me, through the medium of THE LANCET, the benefit of your opinion on the following question of practical disinfection? Is it safe, after thorough fumigation by sulphur, to allow the paperhangings to remain on the walls of bedrooms which have been occupied by cases of (1) measles and (2) enteric fever? I require its removal after cases of small-pox, scarlet fever, and diphtheria, and have generally found no difficulty in getting it done; but there is a decided opposition, even among the "better classes," to removing it after measles and enteric fever, on the ground that it is not necessary, and this idea is often shared by the medical attendant. As medical officer of health for a popupar health-resort, I should feel obliged by the support of your opinion. I am, Sir, yours faithfully,

Oct. 15th, 1884. M. O. H.

*** Much depends on the efficacy of the fumigation. Assuming this to to be efficient, it is a good rule to suggest removal of wall-paper and white-liming of ceilings in all cases of infectious fever; but as regards enteric fever, it would be difficult to bring forward proof of its necessity. It is rather the mystery that attaches to certain recurrences of typhoid fever that makes it desirable to recommend it. The recommendation once made, it would probably be unwise to attempt to enforce it. In the case of measles, the need for stripping the walls is much greater; but the poison of measles, although very intense while it lasts, is probably one of the easiest to get rid of by proper disinfection, cleansing, and ventilation of apartments; and the after-history of attacks shows that success has attended these measures alone. The process of stripping, &c., should, however, always be recommended, and the responsibility of refusal should be thrown upon those who neglect the advice, or who advise to the contrary.—ED. L.

Subscriber.—1. Yes, so long as it does not interfere with the efficient discharge of their duties.—2. We cannot think that the practice of which our correspondent complains prevails to any extent.

Mr. J. Poland.—Yes.

QUERY.

To the Editor of THE LANCET.

SIR,—In proceeding to the Gold Coast as colonial surgeon for three years or longer, could any of your readers give me an idea of the nature, material, and amount of outfit I shall require, and what books of reference would be a *sine qua non*. I should value also some hints as to the climate, customs, &c. I am, Sir, yours truly,

Oct. 22nd, 1884. M.D.

THE VALUE OF SEWAGE.

AN intelligent correspondent has misunderstood our recent remarks in regard to the value of town sewage, and it is therefore probable that others have done the same. It is well known that at the present time it is impossible to make any profit, or, indeed, to avoid a great loss, in the disposal of town sewage under the water-carriage system. The ammonia of the sewage is by far the most valuable of its constituents, and would be worth millions a year if it could be recovered. But no method for this recovery is known, and the other constituents of sewage are so much diluted with water at all times, and so enormously diluted during wet weather, that sewage must remain, for the present, a source of loss, instead of gain, to the community. But none the less is it the duty of every country and of every age to save as much as possible of the constituents of food from the all-devouring sea. Now, every precipitation process for the disposal of sewage preserves for ultimate food supply some portion, at any rate, of the phosphates so essential to animal life, and so sparingly distributed on the earth's crust. Fishes, indeed, restore to the earth some portion of the phosphates wrenched from it by the sea; but there is a miserable disproportion between the gains and the losses. As regards phosphates, the balance of trade, so to speak, is entirely against the earth.

EMIGRATION OF LEUCOCYTES THROUGH THE WALLS OF CAPILLARIES.

To the Editor of THE LANCET.

SIR,—Though still only a student, I have regularly for some time read THE LANCET with great interest. Since reading the number for October 11th I have been much exercised in my mind by an article written by Mr. T. Wharton Jones. He there takes away from us students our old ground of belief in the extravasation of leucocytes in inflammation, and gives us nothing in its place. May I through your columns ask him in what way he explains the presence in an inflamed area of the very numerous cells which in all essential particulars exactly resemble leucocytes? In Ziegler's Pathology I am constantly meeting with such phrases as "the infiltrated area" (referring to inflammation), "the extravasated cells," &c. In what way are we to translate such sentences in the face of Mr. Jones's "Remonstrance?"

I am, Sir, yours truly,

London Hospital, Oct. 29th, 1884. F. J. SMITH, B.A.

*** We forwarded a copy of the above letter to Mr. Wharton Jones and have received from that gentleman the following reply:—

I am pleased beyond measure with Mr. F. J. Smith's inquiry, and fully sympathise with him in his perplexity. Mr. Smith's communication suggests to me that besides my remonstrance to authors, professors, and occasional orators against teaching that white blood-corpuscles escape from small vessels by boring through their walls without leaving any breach, I ought to have addressed one also to students, not to believe what their manuals and professors tell them on the subject until they have had demonstrated to them as a fact in nature what is merely asserted. Mr. Smith will remember that I am myself an inquirer merely, as well as an investigator; but in my experimental researches I have always been careful to suspend my belief in such matters until I could observe the facts; for seeing is believing. There are leucocytes and leucocytes; but, though resembling each other in external appearance, it does not follow that they have all emigrated from the blood. Surely, it could not be said that a crowd of people in the street must have issued from the houses, unless we saw them in the act. The white cells in the mesentery of the frog, which I refer to in my article as having been shown to me as white blood-corpuscles which had escaped from capillaries and venous radicles, were not white blood-corpuscles at all, and could not have escaped from non-existent vessels. If Ziegler (Pathology) did not see the cells actually boring themselves out through the walls of vessels, he has no right to say that he did. Extravasated blood-cells are not cells which have bored through the walls of vessels without leaving any breach. As a fact in nature, I refer Mr. Smith to the passage in my essay in the Guy's Hospital Reports for October, 1850, p. 51, quoted in my article. Professor Virchow's proliferation of cells is a fact in nature if we admit, as I contend we should do, that a condition for proliferation is a supply of lymph exuded from the blood by osmose, there being congestion in or adjacent to the part where the proliferation takes place. I shall always be happy to answer the inquiries of any perplexed student so far as my impaired strength may enable me to do so. Might I, in conclusion, suggest to the students of the different medical schools in London and elsewhere to require being shown as a fact in nature what their professors assert merely. A single glance at a crucial fact will teach a student more than all the talk of a lecture or the meaningless statements in a compiled book. T. WHARTON JONES.

ARTIFICIAL ARMS.

To the Editor of THE LANCET.

SIR,—If "Enquirer" will communicate with me, I will be pleased to give him some useful information of the new "Beaufort" arms, which will, I am sure, prove useful to his patient. I can give him details of several similar cases in which they have been used with success.

I am, Sir, yours truly,

JAMES THOMPSON, M.D.

1, Matheson-road, West Kensington, Oct. 28th, 1884.

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Dr. G. de C. Morris.—1. The view that cholera is merely an aggravated form of ague has a few supporters.—2. Neither the Privy Council nor the Local Government Board has adopted the pamphlet referred to.—3. The Local Government Board makes no recommendation as to treatment.

Mr. W. Guthwaite.—We are not aware that Fellows of the Royal College of Surgeons do enjoy any special privilege or immunity in the respect mentioned—not even in barbers' shops.

EXAMINATIONS FOR OFFICERS OF THE MEDICAL STAFF.

To the Editor of THE LANCET.

SIR,—I wish I could say the revised scheme for examining medical officers of the army is free from blots and errors; but a careful perusal of it will show many weak points, which, with your permission, and in the interests of those concerned, I shall proceed to point out, in the hope that steps may be taken to remedy the defects.

First, in the examination for surgeons it is laid down that the candidate will be required to answer on "Medicine and Pathology, including modes of prescribing and administering remedial measures, food, drink, &c." Now, surely this is hardly necessary. These officers possess double qualifications, and, moreover, passed into the service through a severe competitive examination. They must have passed at least five years in the army, and to suppose it necessary to examine them in such elementary subjects seems a mere waste of time and trouble.

The next, and probably one of the most important mistakes in the circular, is that which requires a surgeon to present a certificate of operative surgery from "a recognised teacher of surgery in any medical school at home or abroad in which operative surgery is taught," and this certificate must be taken out "during the period within which the examination must be taken"—i.e., between the fifth and tenth years of service. It will be observed that this rule is absolutely imperative. No relaxation whatever is hinted at. I would ask, How is a surgeon of, say, seven or eight years' service, who may now be ordered to the Cape, China, Malta, Gibraltar, West Indies, &c., where there are no medical schools, to comply with this regulation? Clearly, either the rule must be relaxed, or the surgeon will, through no fault of his, be deprived of his promotion.

The next point I would notice is, that while the possession of the Fellowship of a College of Surgeons or Physicians exempts a surgeon from the examination in medicine and surgery, the degree of M.D. of a university, or M.Ch., confers no such immunity; and this is the more remarkable as the latter degrees are only conferred after examination, while the Fellowship of the College of Physicians is given by election. Again, the possession of a degree or diploma in hygiene from a university exempts the surgeon from that portion of the examination; but if he obtains this diploma from the College of Physicians it is not recognised. These are blunders of the most obvious kind, and call for immediate rectification.

In the revised circular—what I may call the second edition—the final clause lays down that an officer promoted for distinguished professional service will not be called on to pass any further examination. The result of this will be that a surgeon of, say, eight or ten years' service, and who may be fortunate enough to be promoted for, say, cutting a bullet out of a general's leg, is at once declared qualified for promotion to the rank of Surgeon-General without any further test or examination. I think I have said enough to point out, without any desire whatever to cavil at the authorities, that this circular has indeed been "crude in conception," though, as it is the second edition, we cannot say it "has been promulgated in haste." There is an old saying to the effect that "the third time is the charm"; and I hope the united talent of Whitehall-yard may be able, with the assistance of these humble remarks, to produce a third edition that will, at all events, be practicable and free from errors.

I am, Sir, yours faithfully,

CENSOR.

*** We have omitted parts of "Censor's" letter, as they, for the most part, refer to points in the examinations which have been modified in the revised regulations.—ED. L.

Dr. J. H. Warren (Boston, Mass.).—We regret we are unable to assist our correspondent. We cannot extend our exchange list.

M.—Training College, 11, Fitzroy-square, W.

"TRUSS FOR OBLIQUE INGUINAL HERNIA."

To the Editor of THE LANCET.

SIR,—In answer to "General Practitioner," on the subject of the best form of truss for oblique inguinal hernia, he will, I think, find that one with a spring making the complete circuit of the pelvis is always the best. The shape of the head, or, rather, the prominence of the padding of the head, must vary with the case, simple cases merely requiring a flat head, while more severe ones require a more prominent one. The use of the understrap is to prevent the head slipping up from its position over the external abdominal ring; but if the spring is sloped sufficiently down along Poupart's ligament, there ought to be no need for an understrap, except perhaps in the case of very thin subjects. In a few cases a "long head," in which the padding is continuous into an understrap, is absolutely needed; but such cases are rare. If "General Practitioner" would wish any other information, I will with pleasure render it.

I am, Sir, yours faithfully,

Oct. 27th, 1884. HEATHER BIGG, L.R.C.P., L.R.C.S.

MEDICAL ETHICS.

A CORRESPONDENCE between Dr. Charles White of Snodlands and Dr. Pope of Town Malling has been referred to us by Dr. White for our opinion thereon. Dr. White had been called to an accident at Snodlands, the injured persons being patients of Dr. Pope. This was not very explicitly stated to Dr. White, who regarded them as visitors and continued his attendance. On hearing this Dr. Pope felt aggrieved, and wrote a letter. What a pity it is that medical men, when they think themselves ill-treated by a medical brother, should so often write! *Litera scripta manet.* The chances are ten to one that some expression will escape the best man who feels himself injured, which, uttered in conversation, would be comparatively harmless and soon forgotten, but which in writing stays, and revives, and stings, and has to be vindicated, and gathers force in every fresh letter. This is the case here. Dr. Pope had really a right to complain. Enough, we think, was said to Dr. White at first to have led him to at least suspect that the patients were patients of Dr. Pope; but we cannot approve the style of his letters to Dr. White.

Z.—The revised circular obviates some of the objections raised in our correspondent's letter; and we therefore do not think it necessary to publish it.

CLEARING TRACHEOTOMY TUBES.

To the Editor of THE LANCET.

SIR,—The lamentable death of Dr. Rabbeth, and other unfortunate occurrences still fresh in the public mind, suggest the query, Is there no means of obviating such disasters? and induce me to claim attention to a very simple contrivance for clearing the tracheotomy tube. The apparatus comprises (*a*) an ordinary kitchen bellows in good condition, and (*b*) a flexible rubber tube of three-eighths of an inch in diameter, and convenient length (say four feet), one end having a vulcanite nozzle which will accurately fit the silver tube, and with a lumen sufficient to permit the free escape of mucus, &c., and the other end having a contracted lip, so as to be air-tight when slipped over the bellows nozzle. The valve of the bellows can easily be fastened down, by screwing into it a small gimlet and tying the latter securely to the lower handle. Explanation of the *modus operandi* is needless.

I am, Sir, yours obediently,

Oct. 23th, 1884. W. L. MORGAN.

To the Editor of THE LANCET.

SIR,—Reading last week the account of the deplorable death of one of our profession, and referring to the cleansing of the cannula from the obstruction of clot or mucus during the operation of tracheotomy, suction being what is required, I suggest, instead of applying the lips, let us have a syringe, the point of metal, the cylinder of glass, that we may see what enters the moment obstruction takes place. Fix the syringe instantly to the end of the tube, either by screw or slot, pull up the piston in the usual way; a vacuum is formed, and the obstruction at once drawn into the cylinder of the syringe.

We have so many clever instrument-makers that I have no doubt the instrument could be made effectively; and I should be glad to correspond with anyone for the carrying out of so desirable an object. In the large hospitals, where, I am told, the operation is often done, one of the surgeons might easily take the matter up and test it.

I am, Sir, yours truly,

Oct. 27th, 1884. W. HUTCHISON.

Mr. Richard Kershaw will see, from a letter in our present number, that the subject is already being taken up by the profession.

Mr. A. Fuller.—No.

A CIRCULAR.

To the Editor of THE LANCET.

SIR,—May I call your attention to this circular; and will you oblige by telling me what is the "usual honorarium" (Dr. Belcher's own phrase) for recommending invalids to the charge of a medical man? Is this a generally recognised transaction? and, if so, why is such a circular sent to

Yours faithfully,

Oct. 28th, 1884. F.R.C.P.

"Belgrave House, Berkhampstead, Herts, Oct. 24th, 1884.

"Dear Sir,—May I ask the favour of your recommendation, should you know of an invalid or anyone requiring a temporary or permanent home in the house of a married medical man. I am in practice at the above address, one hour by rail from London; locality healthy and picturesque. I should esteem your introduction a kindness. Ladies, gentlemen, or children received. Terms moderate. The usual honorarium.—I am, dear Sir, yours faithfully, J. S. BELCHER, M.D."

*** We have received from correspondents several copies of the same circular, and await Dr. Belcher's explanation.—ED. L.

KYESTINE IN EXTRA-UTERINE PREGNANCY.

To the Editor of THE LANCET.

SIR,—I would be glad if any of your correspondents could inform me about any observations on the presence or absence of kyestine in extra-uterine pregnancy. Parry and other most careful observers omit all notice of the symptoms. Doubtful as may be its bearing on the diagnosis of ordinary pregnancy, it would surely be of some use here.

I am, Sir, yours truly,

King-street, Manchester, Oct. 21st, 1884. J. THORBURN.

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T. G. L.—The Secretary of the Brussels Medical Graduates' Association, Dr. Pocock, The Limes, St. Mark's-road, North Kensington, will no doubt give the information.

M.R.C.S.—See THE LANCET of Feb. 16th, 1878, and Sept. 3rd and 17th, 1881, for information on nervous affections of the hand.

M.D.—Most unsafe.

SANITARY ARRANGEMENTS AT CAMBRIDGE.

To the Editor of THE LANCET.

SIR,—As an undergraduate of Cambridge living in lodgings I have suffered considerably both from defective drainage and overcrowding. The rooms I first occupied on coming up are situated in a long street at the station end of the town, the houses (chiefly one storeyed) being generally inhabited by two undergraduates. The closet is in a small back yard, and is about four feet square, without any water-supply whatever. It is built on to, and forms a part of, the back kitchen, where the cooking is chiefly done. By the side of the closet is the coal cellar, about the same size, and next the pantry, which is about three feet three inches square. The pantry has one tiny opening, covered with perforated zinc, immediately underneath which, in the yard, is an open drain, down which all sorts of liquid matter are poured. I presume the noxious gases from this drain and from the closet adjoining must affect the food, which frequently was most unpalatable. The house contains three bedrooms proper, and during part of the time I resided there seven people slept in it. The two undergraduates each occupied their own rooms; the father and two sons, aged about seventeen and thirteen, occupied the remaining bedroom, whilst the mother and her daughter, aged eighteen, slept in the room in which the family lived. Need I say that when the house was shut up at night, and six of the seven had gone to rest, the odour was at times almost unbearable. In the house from which I am now writing the watercloset has no water-supply. The apparatus has been broken for many months past, and as the landlord declines to spend any money at all on the house there does not seem much prospect of matters improving. My experience of sanitary arrangements at Cambridge is unfortunate, to say the least; but it is not, unhappily, a solitary one. The arrangements at most of the houses in the street already referred to are similar. Numbers of the undergraduates complain and suffer, but nothing is done. I dare not enter into the subject of the river; it is beyond me. Barnwell Pool must be seen and smelt in order to be properly appreciated.

I am, Sir, yours faithfully,

Union Society, Cambridge, Oct. 14th, 1884. AN UNDERGRADUATE.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir W. Gull, London; Col. Chesney; Dr. Ewart, London; Dr. W. H. Morrison, Holmesbury; Mr. Outhwaite, London; Dr. McKeown, Manchester; Mr. C. Percival; Deputy Inspector-General Winchester; Mr. R. F. Benham, London; Mr. Heather Bigg, London; Messrs. Hildesheimer and Faulkner, London; Dr. Fenwick, London; Prof. Wharton Jones Ventnor; Dr. Pelletan, Paris; Dr. Greenwood, London; Mr. A. G. Francis, London; Mr. F. Treves, London; Messrs. Newill, London; Dr. Clark Bell, New York; Dr. Ward Cousins, Southsea; Mr. Nixon, London; Mr. A. Braxton Hicks, London; Mr. W. L. Morgan, St. Leonards; Mr. G. H. Willey, Sheffield; Messrs. Squire and Sons, London; Messrs. J. Allen and Son, London; Mr. Chauncy Puzey, Liverpool; Mrs. K. E. Cameron; Dr. Schnitzler, Vienna; Mr. Crouch, London; Dr. J. H. Warren, Boston, U.S.A.; Mr. Cassan, Gainsborough; Mr. Barwell, London; Mr. Sydney Jones, London; Mr. J. Poland, London; Mr. J. H. Morgan, London; Dr. Milner Fothergill, London; Mr. Henry Lee, London; Dr. Malins, Birmingham; Mr. R. Kershaw, Southgate; Mr. Gerrard, London; Dr. Maclaren, Edinburgh; Mr. S. Ray, London; Dr. Herman, London; Dr. Kingston Fowler, London; Mr. W. H. Axford, Southsea; Dr. Strahan, Berry Wood; Dr. Lees, London; Surgeon-Major Knox, Bareilly; Mr. J. Startin, London; Mr. Lauder, Manchester; Dr. P. W. MacDonald, Dorset; Dr. Bevan Lewis; Dr. Granville Bantock, London; Dr. S. Snell, Sheffield; Mr. J. M. Walker, Birmingham; Messrs. Jeffrey and Co., London; Messrs. J. and E. Stone, Kidderminster; Mr. R. Harrison, Liverpool; Mr. A. W. M. Robson, Leeds; Dr. Howden, Montrose; Mr. W. T. Blakeney, Brisbane; Dr. Beaney, Melbourne; Mr. Davidge, London; Dr. Collum, London; Messrs. Woolley and Sons, Manchester; Dr. Savage, London; Dr. Longley, London; Mr. Haywood, Manchester; Mr. W. Squire; Mr. Jordon, Newcastle-on-Tyne; Mrs. Rahn, Ipswich; Mr. P. Ness, London; Mr. Tremeery, Bristol; Mr. Cornish, Manchester; Messrs. Bowes and Co., Dinapore; Mr. Gillespie; Mr. Maythorne, Biggleswade; Mr. Dunne, Cradley Heath; Mr. Sowter; Dr. Mason, Sheffield; Mr. Whitton, Towcester; Mr. Morton; Mr. Stilliard, Birmingham; Messrs. Read and Co., Bristol; Messrs. Wood and Co., New York; Dr. Bower, Bedford; Mr. Skrimshire, Blaenavon; Messrs. Maclehose and Son, Glasgow; Mr. Scott, Berwick-on-Tweed; Dr. Crowdy, Luddenfute; Mr. Peacock; Messrs. Macmillan and Co., Cambridge; Mr. Smith, London; Messrs. Merton and Co., London; Messrs. Wright, Layman, and Co., London; Messrs. Ordish and Co.; Mr. Hansel, Teignmouth; Mr. Browne, London; Mr. Julier, London; Miss Hart, Dartford; Messrs. Woollams and Co., London; Mr. Rose, Stockaway; Mr. Lisle, Nantwich; Mr. J. Lucas, London; Dr. James Thompson, London; Dr. MacMunn, London; Mr. Merbay, Reading; Dr. Bond, Gloucester; Dr. Hassall, San Remo; Mr. R. Dennis, London.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Warde, London; Mr. Griffith, Zanzibar; Dr. Liveing, London; Dr. March, Rochdale; Mr. Hall, Lockwood; Mr. Twyford, Hanley; Mr. Ramsdale, Patricroft; Mr. Johnson, Shrewsbury; Mr. Howard, Oldham; Mr. Brockelbank, Islington; Mr. Glissan, Wellington; Mr. Brown, Westgate; Mr. Baines, Birkdale; Messrs. Keith and Co., Edinburgh; Mr. Geach, St. Agnes; Mr. Birchall, Liverpool; Mr. Ewins, Newport; Dr. Needham, Barnwood; Mr. Lewis, Birmingham; Mr. Moss, London; Miss Hankey, Hayward's-heath; Messrs. Richards and Co., London; Mr. George, Liverpool; Mr. Hopkins, Bath; Mr. Douglas, Banbury; Messrs. Kilner and Co., London; Mr. Forbes, Drumlithie; Mr. Irvine; Mr. Wheeler, Manchester; Mr. Sleeman; Mr. Fennell, Knutsford; Messrs. Oliver and Boyd, Edinburgh; Messrs. Redfern and Co., Leicester; Mr. Pritchard, Bristol; Mr. McDonald, New Abbey; Mr. Taylor, Buxton; Mr. Terry, Winchester; Mr. Toogood, London; Mr. E. N. Smith, London; Dr. Wise, Walthamstow; Dr. H. Smith, Margate; Dr. Leckie, Pontypridd; Mr. Allsop, Saltaire; Mr. Saunder, Manchester; Mr. Hemming; Messrs. Brainsby and Son, Peterboro'; Messrs. Mackay and Co., Edinburgh; Dr. Fisher, Newport; Mr. Gabe, Morriston; Mr. Mason, Highbary; Mr. George, Donington; Mr. Newham, London; Mr. Byas; Mrs. Mackey, St. Albans; Mrs. Robinson, Bury St. Edmunds; Mr. Knaggs, Huddersfield; Mr. Woodward, Birmingham; Mr. Pollard, Edinburgh; Mr. Kershaw, Middleton; Dr. Richardson; Dr. Steven, Stoke Newington; Mr. Jones, Abergele; Dr. Walker, Hanley; Mr. May, Tunstall; Dr. Seaton; Mr. Whitford; Mr. Eberle, Thirsk; Mr. King, Manchester; Mr. Busby, Birmingham; M.R.C.S., Borough; M., Catford; Y. Z.; Branch; Physician; Medicus, Maidstone; Treasurer, Royal College of Physicians; P. M. S., Bow; H. P. Edinburgh; H. P., Wellington; H. W., Southport; Donaldson, Turnham-green; A. R., Manchester; Alpha, West Mersea; Medicus, Chelsea; H. L. S., Aldershot; X. A.; Nurse, Stoke Ferry; B. C., Ramsbotham; Veritas; Matron; Medicus, Forest-hill; M.B., Manchester; M.B., Regent's-park; Surgeon, Bristol; M.B., Westbourne-park; Surgeon, Cheltenham; Medicus, Hanley; Agra; F.S.A., Wye; Medicus, Pimlico.

Alnwick and County Gazette, York Herald, Pioneer, Liverpool Mercury, South London Observer, Hereford Times, Cape Times, Temperance Record, Old Jonathan, Belfast Evening Telegraph, &c., have been received.

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An Inaugural Address
ON THE
REVIVAL OF OVARIOTOMY,
AND ITS
INFLUENCE ON MODERN SURGERY.

Delivered at the Midland Medical Society, Birmingham, November 5th, 1884,

BY SIR SPENCER WELLS, BART.,
LATE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MR. PRESIDENT AND GENTLEMEN, MEMBERS OF THE MIDLAND MEDICAL SOCIETY,—Next to the satisfaction which attends the fulfilment of the first duty of our calling—the relief of suffering and the prolongation of human life, which the Roman orator said raised the giver of health to man nearer to the Divine Giver of life—I know of no higher privilege than that of being permitted to address educated minds, of endeavouring to influence for good medical thought and opinion and practice, whether by the aid of the art of the printer, that "magic which embalms the thought," or by addressing such an assemblage as this, with the knowledge that what may be said before you (after as much careful preparation as the too scanty leisure of a very active life permits) will be carried as far as our language is read or translated. The honourable privilege, as rare as it is enviable, of addressing a great gathering of fellow-workmen, of corresponding pursuits and tastes, from whom one may confidently expect a sympathetic hearing and active response, can hardly be over-estimated. Much or little as we may know of each other, we are all united by the strong tie of professional interest; by the ambition to do well our daily work; and, I hope, by the desire so to make use of the meeting as to fuse temporary contact into durable friendship. I know that I see before me an assembly of no average intellectual standard. In days gone by, in this favoured district of our fatherland, there were "mighty men which were of old, men of renown," the generations who have helped to make Birmingham what it is—the Areopagus of the Midlands. So to-day, the men who still kindle its enthusiasm, still direct its energies, and are the master-spirits of its industry, its patriotism, its loyalty, are aided and influenced by a residential doctorate equal to the task of keeping such a population sound in body, sound in mind, and of thus economising the vast financial interests depending on its sanitary condition. The members of this Society now take the place, as a protective educational power, which was formerly filled almost entirely by the priest. Perhaps in many cases you do for the bodily health what is done by the rector or the nonconformist teacher for the moral direction of the parish. You are ready and willing to fulfil your high vocation, guiding your course of action as a beneficent, irrigating stream in the midst of a people whose bodily and mental welfare is entrusted to your charge.

What to say to such an audience is of course the first question. Of local affairs you know more than I do. Medical politics and controversial topics must be avoided. I have been told that you would probably be disappointed if I did not tell you something more of my own work—of what I have done and how I did it, why I did it, of my successes and my failures, how mistakes have become less frequent and progress more certain—than can be learnt from anything I have yet published. Acting on this hint, and knowing that in the minds of many of you my name is more closely associated with the practice of ovariotomy than with any other surgical question, I would first ask your attention to one phase in the history of the development of the operation which has been well termed the "revival of ovariotomy in England."

There are not many here who can carry back their reminiscences so far as mine go. Without being formally apprenticed, I had all the advantages of the old apprenticeship system under an unusually able and worthy man, the late Michael Thomas Sadler, of Barnsley in Yorkshire. For one year I lived with one of the parish surgeons of Leeds, attended the lectures of Hey and Teale, and saw much practice in the Leeds Infirmary. In 1837-38 I was in Dublin, under Graves and Stokes, Crampton, Beattie, Harrison, Apjohn, and Jacob. In 1839-40 I worked hard in St. Thomas's Hospital under Green, Travers, and Tyrrell. I obtained the prize for the fullest reports of examinations of the bodies of patients dying in the hospital during that period. But neither in the dead-house, nor in the wards or out-patient room of St. Thomas's, nor in Dublin, nor in Leeds, nor during my pupilage, can I remember ever having once seen a case of ovarian disease. I never heard a lecture upon the subject. Very little was said about it in any of the text-books, and the way in which it was introduced showed that it was not thought of sufficient importance for the attention of students to be drawn to it.

I very much doubt whether it ever formed any part of the examination at either the College or the Hall. We now know that, though Morgan, Key, and Bransby Cooper at Guy's Hospital, in 1839 and 1840, and Phillips at the Marylebone Workhouse in 1840, operated once, the matter was not in any way brought under the notice of the medical students of that time. I have no doubt that the operations at Guy's were done under the influence of Blundell, who had been professor of obstetrical medicine in that hospital. In the edition of his "Obstetrical Medicine," published in 1840, there is a chapter on ovarian dropsy very far in advance of the general knowledge of the day. To illustrate the routine treatment of the disease, he relates a characteristic saying of Abernethy, who, consulted on a case where tapping was useless on account of the viscid character of the contents of an ovarian cyst, said, "It won't do to go on boring holes in the belly." Probably Sir Astley Cooper's famous story of a case of "dry tapping" may be explained in the same way.

But I had not seen Blundell's book, and it was not till many years afterwards that I even heard of the name of McDowell, or of any of the fourteen cases of ovariotomy done in Great Britain between 1825 and 1839. It was not until I myself had written on the subject that I learnt what William and John Hunter had thought and suggested, or that John Bell had so lectured as to inspire McDowell with the determination to do what he afterwards did. In fact, I believe that most teachers and students of that day knew as little or cared as little about the subject as I did.

Very soon after becoming a member of the College of Surgeons in 1841 I entered the Royal Navy as assistant-surgeon, and for some six years served in the Naval Hospital at Malta. In addition to naval practice I saw many patients both male and female, and did many operations in consultation with resident practitioners in Malta. But I can only recollect one case, which I now believe might probably have been a case of ovarian tumour, but which at that time was a puzzle to us. My old friend Dr. Waters of Chester has lately reminded me that he and I had conversed on the subject of ovariotomy in Paris in 1848. But he spoke with knowledge acquired in Edinburgh under Hughes Bennett, I in complete ignorance. Still it is curious that we both came to the conclusion that, upon the facts as they then stood, ovariotomy was not a justifiable operation.

It was not until after settling in practice in London, which I did in 1853, that I ever saw a patient whom I knew to be suffering from ovarian disease. In 1854 I joined the Samaritan Hospital, at that time a dispensary for the diseases of women, a subject of which I knew less than of any other special division of our profession. In my young days I had done an unusual amount of midwifery, but latterly my practice had been almost exclusively surgical, with a strong tendency towards ophthalmic surgery. In 1853 or 1854 I became acquainted with Baker Brown. He occasionally came to the Samaritan Hospital, which he wished to join, and I two or three times saw patients with him at St. Mary's. In April, 1854, I and my friend Nunn of the Middlesex assisted Baker Brown in his eighth case of ovariotomy. This was the first time I had ever seen the operation attempted, and it certainly did not encourage me to look favourably upon ovariotomy. The patient died, and her death discouraged Brown. He, Nunn, and I talked the matter over, and I well remember Brown saying, "It's the peritonitis that beats us." His first three cases died, the fourth recovered, his fifth and sixth died, the seventh recovered, and the deaths of the eighth in 1854 and of the ninth in 1856 led him to cease operating for more than two years and a half, and again to advocate treatment by pressure and

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iodine. He did not perform ovariotomy between March, 1856, and October, 1858.

When the Crimean War broke out I left London, served with the army in the East, and of course lost sight for a time of all the diseases of women. Any impression that I had received as to ovariotomy was certainly not favourable; but I did see cases of abdominal wounds which taught me that the peritoneum would bear much rougher handling than I had previously believed permissible. I had written about hernia, and had advocated division of the stricture without opening the sac whenever possible, simply to avoid the danger of admitting air or blood into the peritoneal cavity. But I learnt in the Crimea that a man's abdominal wall might be lacerated by fragments of shell, his intestines protruding and covered with mud, so remaining for several hours; and yet, that after careful cleansing of the cavity and accurate closure of the wounds, complete recovery was possible. When I returned to London in 1856 I was certainly much less afraid than before of abdominal wounds. I took up my work at the Samaritan Hospital again, but saw very few cases at first of ovarian disease. The first made a very painful impression upon me. Snow Beck tapped a very fine young woman, and injected iodine, he thought, into the cyst, but he really injected the peritoneal cavity. He had not taken the precaution of passing a long catheter through the short cannula of his trocar; the emptied cyst slipped off the cannula, and several ounces of tincture of iodine passed directly into the peritoneal cavity. Beck was grievously distressed, but the case did not so much deter us from the use of iodine as awaken us to the necessary precautions as to the mode of injection. But we had very few cases of ovarian disease, and it was not till December, 1857, that I made my first attempt to perform ovariotomy. A tolerably full report of the case was published at the time, and reprinted in 1865. Baker Brown was present and strongly dissuaded me from going on with the operation, on the ground that, as the tumour was behind the intestines, it could not be ovarian.

It is not easy to estimate correctly the part played by Baker Brown in the progress of gynæcology. In the minds of many his really great services have been overshadowed by the errors of his later practice. Some who fully acknowledge and admire what he did to popularise the operations for the cure of ruptured perineum and vesico-vaginal fistula, and who now recognise the great success which attended his adoption afterwards of John Clay's suggestion of dividing the pedicle of an ovarian tumour by the combined action of strong compression or crushing with the actual cautery, forget, or never knew, that when Brown assisted me in the case which I have just referred to, and in another which I am about to mention, his own early experience of ovariotomy had led him rather to oppose than encourage the repetition of the operation. At my second attempt, my first case of completed ovariotomy, Brown again assisted me, and in my first and in all subsequent reports of the operation I have fully acknowledged his zealous assistance. But it was not until after I had had three successful cases that Brown himself began to operate again, after an interval of more than two years and a half. At this third case Tyler Smith was present. He was greatly surprised at the successful result, and it induced him not only to cease the opposition he had formerly offered to Brown's practice, but to operate himself, which he did with great success.

I think it would be difficult to imagine a position more disheartening than that in which I was placed when making my first trials of ovariotomy. The first attempt, as I have said, was a complete failure, and strengthened, not only in the minds of others, but in my own mind, the fear that I might be entering upon a path which would lead rather to an unenviable notoriety than to a sound professional reputation. And if I had not seen increasing numbers of poor women hopelessly suffering, almost longing for death, anxious for relief at any risk, I should probably have acquiesced in the general conviction, have been content with palliative tapping, or making some further trials of incision and drainage, or of iodine injection, or of pressure, rather than have hazarded anything more in the way of ovariotomy. It may be forgotten now, but it is true that at that time everything was against the venture. The medical press had denounced the operation, both in principle and practice, in the strongest terms. At the Medical Societies the speakers of the highest authority had condemned it most emphatically. The example of the men who had practised it was not followed; some of them had given it up. Only once had a successful result been obtained in any of our large metropolitan hospitals, that by Cæsar Hawkins, at St. George's, in 1846, and he never undertook it a second time. Every other attempt, at Guy's by Morgan, Key, and Bransby Cooper, at St. Thomas's by Solly, had ended in death.

This was how we stood at the end of 1857. It was in February, 1858, that I completed the operation for the first time. I need say no more about it now than that it led to my being congratulated by Dr. West upon "complete success," and, with other evidence, to his thorough conversion from his previous condition of conscientious and determined opposition to a state of warm support both in public and private. Let me read to you part of a letter written by my friend Keith of Edinburgh. In the *British Medical Journal* in 1873 Keith wrote: "Few watched more eagerly than I did the history of this operation, and few know so well the details of the early cases. Till 1858 I could find nothing whatever anywhere to encourage, but everything to deter one from attempting it. Ovariotomy was then as an operation simply nowhere, and had the practice of using Dr. Clay's long intra-peritoneal ligatures been continued, it would have yet been nowhere. Up till that year Mr. Brown had lost seven out of his nine patients, and had ceased operating for upwards of two years and a half. Surely there was nothing for anyone to learn from such results, except, perhaps, what there might be to avoid." Keith was one of the first to follow me, and did more than anyone else at that time to assist in the revival of ovariotomy. I had done eight cases when he began, and ever since we have gone on side by side, very friendly rivals, assisting each other, comparing notes, not always running on the same track, but always equally anxious to perfect the operation. You all know how wonderful his success has been. Some of his later cases of the removal of uterine tumours are unsurpassed as surgical achievements. He concludes the letter, part of which I just read, by asserting, as others, both before and since, at home and abroad, have also done, and which it is my highest pride and pleasure to feel was not due only to their friendly feelings but because it is true, that the period of progress, "the revival of ovariotomy," began when the results of my earlier operations were made known, and the confidence of the profession was obtained by the publication of every case whether successful or not.

Anyone who will look over the reports of my early cases, who will see the names of the men who sent me their patients—West, Rigby, Watson, Acland, Hare, Stokes, and Oldham; of those who, as well as my colleagues, Savage, Priestley, Graily Hewitt, assisted me, or were present at the operations, among whom I may mention Paget, Fergusson, Tyler Smith, Bowman, Seymour Hayden, Pirrie, Baker, Grimsdale, Bickersteth; who discussed with me various questions which arose as to pathology and treatment, Aitken, Richardson, Ritchie, Hutchinson, Frank, Druitt, Robert Lee, Churchill, Beatty, and Simpson; who, for their personal assurance, like Nélaton, Worms, Demarquay, De Mussy, Péan, Courty, came from France; or De Roubaix and Boddaert from Belgium; or from Germany, as Schuh, Billroth, Esmarch; from Italy, as Porta, Vanzetti; or from America, as Gross and Marion Sims—will find no difficulty in understanding that we had now reached a turning-point. Some of these timely allies have finished their course. Some remain, ripened and matured by years of experience, not yet worn out, but finding their greatest happiness in their daily work, and in friendly association with their fellows and juniors. When I can name such men as not only having witnessed and sanctioned the operation, but becoming convinced, by following up the cases, that it was at least as successful as other serious operative proceedings, and when I add that many of these men soon began to perform the operation themselves, and publicly to advocate it—no one, I say, who considers all this will be surprised at the rapid rise and progress of ovariotomy between 1858, when it was revived, and 1864, when it was very generally accepted as a legitimate operation, and was not long afterwards cited as a triumph of modern surgery.

If I were to select from the books and pamphlets, most of which I have carefully preserved, published during these six years any one work which contributed more than others to form professional opinion, to awaken interest, and to instruct those who had before not thought upon the subject, it would be the tables of cases most industriously collected by your own townsman, John Clay, and published as an appendix to his translation of Kiwisch's "Clinical Lectures on Diseases of the Ovaries." The tables are now of far

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more value than the lectures. One of Clay's chief merits is the example he set of obtaining all the information possible as to every recorded case of ovariotomy, completed or attempted, from the first up to 1860. He collected such a mass of facts, and arranged them for reference or study so conveniently, that he supplied us with fuller and more trustworthy information than had ever before been gathered together upon any surgical question, and I think he may be said to have done more than helped in starting what is now called the "collective investigation of disease."

From these tables as arranged by Clay, and from a perusal of the works published about that time, we can now see how fully the principles and many of the practical details concerned in the matter had been discussed. What may be called the ethical or moral side of the question had been fully argued. The fears and forebodings as to the physical and physiological effects of the removal of an ovary—such as the abnormal accumulation of fat, the development of masculine type, and the restriction of the sex of infants—were dispelled and falsified. The causes of death in fatal cases had been investigated. Many of the mistakes of the earlier operators had been corrected; and, far above all other things, the profession had gained confidence in the accuracy and completeness of the facts laid before them. The old plan of operating in a hot moist chamber, and keeping the room over-heated for days afterwards, was seen abandoned. The semi-recumbent position of the patient was exchanged with great advantage for the horizontal. Safer anæsthetics than chloroform were used. Simple bandages for keeping the patient quiet supplied the place of an objectionable crowd of assistants. Precautions, never before thought much about, were taken for protecting the patient from any infectious disease; by obliging every visitor intending to be present to declare that he had not made a post-mortem examination, nor been into a dissecting-room, nor attended any case of infectious disease within a week; by the utmost attainable purification of the house, room, bedding, and clothing, sponges, and instruments—in fact, of everything brought near the patient—and all this was insisted on with a pertinacity which often gave offence. A great deal was gained by shortening the incision in the abdominal wall, by emptying the cyst before drawing it out, or by lessening the bulk by breaking down the septa of multilocular cysts; by extreme care in preventing the entrance of ovarian fluid into the peritoneal cavity, or by very carefully cleansing the cavity from any blood or fluid which had entered it—a process christened by Worms the "toilet of the peritoneum." Sir Benjamin Brodie long ago remarked with regard to lithotrity, that success depended upon attention to a number of minute details. So with ovariotomy. No one of the details which I have just alluded to may be alone of any great importance, but taken together they did a great deal towards preventing failure and securing success. Other modifications of more or less importance were soon made. The old vegetable material for ligatures and sutures, coarse whipcord or twine, was abandoned. After many trials of silver, iron, or platinum wire, horsehair, fish-gut, and other materials, we settled upon pure silk as the most useful and trustworthy, and proved that, after a few weeks' retention in the animal body, it entirely disappeared. The mode or process of its removal by the insinuation of white blood-corpuscles between its fibres, a sort of untwisting or solution, was watched stage by stage, and long before the treatment of the pedicle in this manner was seriously proposed, we learnt that silk ligatures, and portions of omentum secured by them, might safely be left within the abdominal cavity. Nathan Smith was the first to treat the pedicle in this way, but he made his ligatures from a leather glove. Tyler Smith was the first to revive the practice, using silk. A story has been very generally believed—probably some of you may have heard it—that Tyler Smith's first trial was accidental; that he cut off the ends of the ligatures inadvertently, forgot all about them, and was surprised to find that his patient recovered. But on inquiring of his former assistant, Dr. Edwards, who is still in practice in London, I am assured that there is no ground for this story. The operation was performed in June, 1861. Dr. Edwards writes: "Previously to this operation I had strongly advocated the advisability of dropping the pedicle and cutting short the ligature, and it was at my initiation that it was done. In fact, I did it myself."

The mode of treating the pedicle became a subject of anxious discussion. The evils which attended the use of the long ligatures were soon found to outweigh any advantage obtained by their service in drainage. The extra-peritoneal method was simplified by Hutchinson's introduction of the clamp, and for a long time it was only in cases where the clamp could not be used that any other method was sought for. I had hoped much from the écraseur, but only used it once. Others had spoken of crushing the pedicle and twisting off the cyst. I had an instrument made for tearing through it, a rough bluntish saw. But all these plans, without much trial, gave way before that combination of crushing and cauterising for which surgery will be for all time indebted to your own Clay. Used at first by him for dividing omentum, both he and I suggested that this might be a good mode of dividing the pedicle in ovariotomy. Baker Brown was the first to carry out this suggestion in practice, and with immediate improvement in the results he obtained. Keith followed him, and, with occasional intermissions, has continued the practice. I also had very good results in thirty cases, and have sometimes blamed myself for not having given it a more extensive trial. I did not give it up, however, until I thought I had proved the ligature to be more trustworthy in cases of short pedicle. What is called the complete intra-peritoneal ligature—by which we mean the transfixion of the pedicle, tying it in two or more portions, cutting off the ends of the silk close to the knots, and returning them with the tied stump after cutting off the cyst—was by no means a common practice until long after the date of which I have been speaking.

The mode of closing the opening in the abdominal wall was one of the first things to attract my attention, and no one before me seems to have cared whether the peritoneum was included in the sutures or not. A very few still maintain that it is a matter of no consequence, and Kœberlé still asserts that it is better not to include it. I have not time now to trouble you with a thrice-told tale of how, by examination of patients who died after ovariotomy, and by experiments on animals, I convinced myself that by passing the sutures through the whole thickness of the abdominal wall, including the peritoneum, at such a distance from the divided edges as to permit two surfaces of the serous membrane being brought into contact when the sutures were tied, instead of merely bringing the edges together, a more permanent and complete union was obtained, and that one source of immediate danger was avoided—I mean the oozing into the abdominal cavity of blood, or serum, or fat from the divided tissues. So, too, we got rid of the inconvenience which patients who recover sometimes suffered from the adhesion of omentum or intestine to the abdominal wall.

I need not say much about the mode of dressing the wound, but I think it is of some importance to note that from the first I was very careful to keep the wound as dry as possible. I had become convinced in my naval and military practice that water dressing and other moist applications (without going into any discussions as to the cause of pyæmia) were far inferior to dry dressing. For several years I used pads containing Skinner's mixture of calcined oyster-shells and oil of tar, covered with layers of cotton wool, and supported by the gentle pressure of a flannel bandage; and the only modification, made of late years, in these dry dressings has been the substitution of the elegant and comfortable pads devised by your townsman, Gamgee, for the antiseptic and absorbent powder of Skinner.

The chief improvement made in the after-treatment was in greatly diminishing the amount of opium. Large doses had often injured the patients, and I thought might have been the cause of death in some of the earlier cases.

(To be concluded.)

ST. GEORGE'S HOSPITAL.—The following prizes have been awarded to students in the Medical School for the session 1883–4:—For the William Brown Exhibition of £100, Mr. E. C. Arnold and Mr. Allingham were equal; the William Brown Exhibition of £40 was won by Mr. A. Codd, the Brackenbury Prize in Medicine by Mr. C. Bell, the Brackenbury Prize in Surgery by Mr. R. Pinhorn, the Treasurer's Prize by Mr. R. Pinhorn; the Serjeant Thompson Medal by Mr. Trevor, the Pollock Prize in Physiology by Mr. A. H. Vernon, Sir Charles Clarke's Prize by Mr. R. Emmett; general proficiency prizes to pupils in their first year, Mr. Ernest Lancaster; second year, Mr. W. L. Dickinson and Mr. De Nyssen, equal; proficiency prizes to pupils in their third year, Mr. K. Kirkpatrick and Mr. G. F. Smith, equal; certificate of proficiency in Medicine, Surgery, and Pathology, Mr. C. F. Glass.

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Clinical Lecture

ANKYLOSIS AFTER CHRONIC JOINT DISEASE.

BY RICHARD BARWELL, F.R.C.S.,
SENIOR SURGEON TO CHARING-CROSS HOSPITAL.

GENTLEMEN,—I told you in my last lecture that in bad cases of chronic joint disease a certain impairment of mobility will result. As a sequela of the less severe forms of synovitis, this may be due to fibrous thickening of the synovial and perisynovial tissue. The more severe forms, and osseous diseases which have been allowed to run on and affect the joint itself, end commonly in ankylosis, false or true, which is often the best or only means of cure. The first two modes of impairment—viz., synovial with perisynovial thickening and false ankylosis—are more or less inconvenient, according to two factors: to the amount of immobility and to the place in angular mensuration of the arc. Let us take as examples in marked contrast with each other the elbow and the knee, both of which we will suppose to be capable of moving through an arc of 35°. If, in the former case, this movement occurs on each side 90°, so that the angle of the joint may vary from 73° to 107°, the use of the arm for most occupations will be very little damaged; but if a like amount of movement at the knee were relegated to the same part of the arc the limb would be quite useless; whereas the value of an arm would be greatly depreciated if its movement of 35° were restricted to the best possible position for the knee—viz, from 180° to 145°. But, again, immobility, very much greater than that above supposed, may be of itself a serious detriment.

Thus the surgeon will have one of two causes for interference: either great restriction of mobility, or the unfortunate position in which movement is permitted, and not unfrequently both these conditions are combined in the same case. In both we may in great measure, or entirely, eliminate the inconvenience by a surgical procedure named forcible flexion or extension, as the case may be. These operations are known in surgery sufficiently well to exonerate me from any close description here; I will only tell you that in certain cases tendons, more especially of the flexors, may require division; that the forcible movement is not a mere application of bodily strength, but is directed and governed by certain rules of art, differing with each joint and with every position of such joint. You should, however, learn to distinguish the conditions, which enable you to promise very considerable restoration from those which would cause you to encourage only hopes of less advantage. Remember, too, that there are many cases in which, though you may be unable to greatly increase the amount of mobility, you can at least cause it to take place in a more convenient position. You will perceive readily enough how important it is that, before recommending any such operation, you should be able to tell your patient what he will in all probability gain by it, and you will also see that the question divides itself into two heads: operations proposed for the restoration of mobility, and operations intended only for the correction of position. As to the former of these points, I give you now some axioms which will enable you to judge with great accuracy what you will be justified in predicting.

Provided that no subluxation nor altered form of the bones obtains, very considerable, sometimes complete, mobility may be restored; when the inflammatory attack has not been prolonged; or if it have been sharp, rather acute, and unaccompanied by marked pyrexia; when whatever movement remains is smooth, normal in direction, and free within its limits, the impediment being sudden; when, the impediment being reached, a rather acute pain is experienced. Under the same conditions of bone, less, but still some useful, mobility may be gained, even though the original disease has been rather more chronic; when already a certain amount of mobility (20° for example) is possible, though that motion is in no part of its course free, but impeded, the resistance increasing *pari passu* with the amount of change in posture, until not a sudden but a gradual check is reached. If the patient be warned that he may be required to undergo, and will submit to, one or more repetitions of the stretching, much more may be effected than in a single operation. Less mobility is obtainable by forcible stretching, if a protracted disease have left, together with a certain but not very great change in the shape or relationship of the bones, only a small amount of much impeded movement. Yet if that movement be in an inconvenient portion of the arc, the posture may often be so changed that the limb and its movement shall be in the most convenient situation.

Forcible extension and flexion can do no good, but may prove absolutely injurious if the form of the bones be much modified or their relative position considerably altered.[1] To this I need hardly add that such treatment is not applicable to true ankylosis. But I am very far indeed from telling you that this last class of cases is beyond the aid of art, or that lameness due to inconvenient position of completely stiffened limbs should be abandoned or left without remedy.

Let us take as our first example a knee with true ankylosis at a right angle or less; consider the condition of such patients as I have often shown you, and show you now again; observe the exaggerated and very unsightly limp; remember that the deformity does not remain confined to the limb, but that the spine and trunk, being, to allow of progression, thrown into awkward postures, soon become curved and twisted; therefore that the patient more or less quickly, according to age, becomes, not merely a cripple, but a deformed cripple. Obviously therefore it is the surgeon's duty to rectify the posture of the leg—i.e., to place it in a straight line with the thigh. This may be done by osteotomy—i.e., by dividing the femur just above the condyles, placing the tibia in a good position, and applying at once a plaster-of-Paris bandage. After such operation the patient may as a rule get up in from four to six weeks, but it is prudent that for two or three weeks more a poroplastic or leather splint should be worn during walking lest the union should bend. I must tell you, too, that a knee-joint disease occurring in early life and severe enough to have produced true ankylosis will also have checked the growth of the bones; therefore you should measure the length of the femur and tibia against those of the opposite side, and warn your patient of the amount of inevitable shortening, otherwise some subsequent disappointment may result. You have seen me treat very many cases of true ankylosis after this method, and you will have observed that in no instance has the operation caused the temperature to rise above 100° F. From this you may estimate the safety of the operation, but can judge still better when I tell you that I have divided seventy-three femora without having had a single untoward result. As to estimating the ultimate effect of these operations, students at a hospital, and for that matter surgeons also, lie under the disadvantage that when wounds are healed or bones united they very often see nothing more of the patient and the effect of the procedure on his after-life is generally unknown. Those of you who have followed my practice for the last few years will remember that of the many cases I have thus treated several have come from two homes for cripples with which I am connected, and I have within the last few days seen those patients. They are all walking with a barely perceptible limp, and all without artificial aid of crutch or stick, except two, whose treatment is still too recent to allow unassisted progression. I will moreover, relate to you a case from my private practice, because I have had the opportunity of watching it for a length of time, which warrants my affirming that the improvement is permanent.

In February, 1880, I was asked to visit at a sea-side town a lady suffering, I was told, from severe spinal curvature. I found her, aged thirty-one, somewhat stout, pale, and feeble, reclining on a sofa, which she only quitted once in the day to go out in a Bath chair. She complained of a great deal of pain in the back and loins, aggravated by walking, even if only about the room. In order to examine the spine I got her to stand up, and finding that one leg was lame, elicited that when nine years old she had scarlatina, followed by synovitis and suppuration, culminating in true ankylosis of the knee in a position rather less than a right angle. I need not here detail what was done for the spine. Suffice it to say that I fully explained that all such measures could be but palliative while the false position of the

[1] At the knee more especially a subluxation of the tibia backwards almost entirely precludes such procedure.

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ankylosed limb continued. It was, however, rather more than a year before the lady and her friends determined to follow my advice. In March, 1881, I divided the femur just above the condyles, and placed the tibia in a line with the femur. She remained in bed a month, and another fortnight in town; she was then supplied with crutches and with a high boot to compensate the loss of growth in the limb bones; also with a light poroplastic splint. She learned to walk, though rather slowly, for she had not really walked for more than twenty years. For the last two years and a half she has walked well without any stick or other support. She is strong and healthy, enjoying life and fond of exercise; the limb, formerly emaciated, is now plump and well formed; the spine is very nearly straight, and when I last saw her, about six weeks ago, she was in robust health, and going for a pleasure excursion up the Thames. But, as I pointed out to you just now, false ankylosis in a bad position does not permit of treatment by forcible extension when the bones are much altered in form or when their relative position is considerably changed. The modifications of form which preclude that treatment are such as affect the joint surfaces; they are, if not to be actually verified by touch, to be surmised with certainty if you find the edges of those surfaces either elevated in ridges or scooped out by old caries into hollows, while depressed cicatrices prove previous suppuration, and awkward twists or lateral deflections of the lower limb segment indicate loss of substance on one side or the other. In such cases, even if we could, which is doubtful, place the limb in a better posture as regards flexion or extension, it is impossible to predicate whether we might not at the same time increase the lateral or the rotation deformity.

Again, as regards subluxation sideways of a tibia, interference by forcible extension is extremely likely to increase that trouble, or, still worse, to rupture the altered ligaments, so that the leg becomes entirely loose on the thigh, and more useless for support than before the operation. The more common posterior dislocation requires some little care in diagnosis. We are supposing a case of false ankylosis at about a right or at a smaller angle, in many of such the femoral condyles project considerably beyond the anterior edge of the tibia, sometimes because that bone has been really displaced some distance backwards, sometimes because the leg, having been long kept in flexion, no pressure has fallen on the end of the thigh bone, and the condyles have therefore become prolonged by unresisted growth. I advise a careful diagnosis; but am bound to tell you that in both these circumstances forcible extension of the limb is inadmissible, as posterior dislocation almost certainly follows. But in these cases, whether of change in bone surface, of lateral or posterior dislocation, you may, by the help of osteotomy, procure a straight and useful limb; moreover if, as often happens, some awkward twist, either abduction or adduction, of the tibia has occurred, you may at the same time rectify that condition.

Let me call your attention to this girl. Nineteen months ago I performed that operation for her; the knee was falsely ankylosed, very much bent, abducted and rotated outwards; she was exceedingly lame. Now you see the limb is straight, the foot does not turn out, and the slight mobility permitted by the false ankylosis is of great advantage to her, as the extremity of the limb can be bent or straightened to about the extent of four inches, which improves her gait and her appearance in sitting. The slightly heightened shoe enables her to walk with only a very little limp, her spine is straight, and her health is re-established.

NURSES FOR THE SICK POOR.—The Whitechapel Board of Guardians have recently had under consideration the question of the desirability of securing, by means of the employment of a limited number of non-salaried pupils or probationary nurses, a greater degree of elasticity in the nursing arrangements of the infirmary, under circumstances of illness, absence, &c., as well as the preparation and training of suitable persons for permanent appointments. A committee of the Board has expressed the hope that the Local Government Board will see fit to relax existing rules so as to admit of the reception of such nurses, and the provision for them of the usual allowances, without report to, or approval by, the Board, as in the case of the staff appointments.

ON THE

NERVOUS OR MUSCULAR ORIGIN OF CERTAIN SPASTIC CONDITIONS OF THE VOLUNTARY MUSCLES.

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(*Continued from p. 768.*)

WE must now make the attempt to localise the disease, but before doing so we must draw attention to the fact that whilst the voluntary muscles are affected in this widespread and symmetrical fashion, the muscles of organic life escape wholly. Nowhere do we find any record of a difficulty in swallowing, or of trouble in micturition or defecation; this is of importance, for our *peripheral* search for a cause has been completely negative; we have been left with nothing but the bare symptom—muscular rigidity. Bernhardt's analysis is very clear, and we can scarcely do better than follow it. He points out that the disease is not a local one, in no case is a leg or an arm alone affected. The muscles suffer generally and symmetrically. The distribution of the hypertrophy recalls very much the disease pseudo-hypertrophic paralysis; but leaving out of account minor differences, the complete absence of paralysis and of any trace of atrophy in any part of the body, as well as the negative results of microscopic examination, at once dispose of this possibility, as also of all those cases in which a true muscular atrophy is masked by an overgrowth of the interstitial fibrous and fatty elements (lipomatosis masculorum luxurians) such as may occur in progressive muscular atrophy. In relation to this progressive muscular atrophy, we must state that Seeligmüller in one of his cases records fibrillary contractions of the affected muscles, but he at the same time emphasises the fact that there was no question of atrophy present.

With the elimination of all atrophic states, and likewise all paralyses, we have left but few possible cord affections, and in keeping with this is the entire absence of rectal or bladder trouble. Again, although in Thomsen's disease we have evidence of the face muscles and those of the tongue and eyeball being implicated, still we have no trace of an affection of the medulla such as we meet with in glosso-labio-laryngeal palsy, yet such symptoms we should expect if a lesion of the cord had been the cause, and had extended upwards in amongst the nuclei of the medulla. Almost the only region of the cord in which it would be possible to locate a lesion giving rise to symptoms like those here present are the lateral tracts; a lateral sclerosis would cover many of the symptoms, and would associate this disease with those forms of spastic paraplegia in which a lateral column affection is probable. This is Seeligmüller's view; but even here we have against such view the almost insurmountable objection that in Thomsen's disease there is no evidence of loss of power; and then, too, the rigidity characteristic of lateral sclerosis is of quite a different kind; it tends to become permanent as the disease advances, and *does not wear off with exercise of the affected part*; indeed, it is quite impossible to find any likeness between the walk in Thomsen's disease and the spastic walk of lateral sclerosis.

There remains the encephalon in which to search for the cause. But again we must record negation. Thus, though the speech is difficult, yet "there is neither stammering nor tripping up over syllables. All the other cranial nerves are unaffected. The organs of sense functionate normally; the psychosis is without anomalies."[1] Thomsen, in his original paper, suggested the name "muscular ataxy," but none have followed him along this track; and of ataxy or incoördination no other author makes mention.[2] In Thomsen's family history, while the affection itself was well marked in three generations, a neurotic history was traceable in four; this, in conjunction with the observation that the degree of manifestation of the trouble was much increased by psychic disturbance, such as any sudden emotion

1 Bernhardt, *op. cit.*, p. 530. 2 Ibid., p. 529.

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(we have here Dr. Thomsen's personal experience), led him to consider the disease as of the nature of a psychosis; hence he names the disease, "tonic contractions in voluntary muscles, the result of an inherited psychic disposition."[3] This view is unsupported by any of the succeeding authors, nor do we think that it is tenable in view of the whole facts of the case.[4]

The attempt to localise the disease has not been very successful. We have been driven from the peripheral structures to the cord, from the cord to the medulla, from the medulla to the encephalon, and have not found the morbid action. We have accordingly no other course open to us than to try back. May it be that, after all, the muscular fibres are themselves at fault? The microscope has detected nothing morbid; the electric reactions have revealed peculiarity, but nothing of the nature of morbid reaction as we are familiar with it; and, finally, the vigour of contractility of the fibres is unimpaired. Bernhardt, nevertheless, does hold the muscular fibres to be at fault. His suggestion is that we have present not morbid action but anomalous action, this anomalous action being the result of an arrested development. A faulty evolution inherited or congenital he holds to be at the bottom of the affection. In support of this theory he instances the observations of Soltmann[5] on the contraction curve of the muscles of newborn animals. This curve is lower, the top is flatter, the slope, in particular of the descending limb of the curve, is more gentle. The curve resembles that of fatigued muscles. He also draws attention to the occurrence in certain animals, rabbits, and certain fish of striped muscular fibres of two varieties. In the rabbit there are the red and the white muscles, and of these the white are characterised by the suddenness of their contraction; the red by the great prolongation of the contraction curve, and the fact that once tetanised the relaxation takes place only very slowly, though the tetanising influence have been withdrawn. Ballet and Marie follow Bernhardt in localising the affection in the muscles, but they go no further. Leyden, in his remarks on muscle rigidity, also considered the muscular fibres to be at fault, and threw out the suggestion of an increased consistence of the contents of the sarcolemma, "analogous to a rigor mortis,"[6] as possibly explaining the phenomenon, but he appears to be referring to muscle rigidity in general and not to this special disease, which indeed he does not appear to have recognised as something quite distinct from the rigidity accompanying cord diseases. Seeligmüller made an almost identical suggestion in his first consideration of the disease, but subsequently renounced this view in favour of an affection of the lateral tracts. In a note having reference to Bernhardt's view of the nature of the disease, he thinks that a congenital or inherited faulty evolution of the lateral tracts will equally meet the facts of the case. We have mentioned the objections to this view; we may add another—viz., that exaltation of the reflexes (patellar, &c.) has not been described as characteristic of Thomsen's disease, yet these have been investigated. This negative evidence is of importance, since much stress is laid on the condition of the reflexes in lateral sclerosis.[7] We think then that, on the whole,[8] the evidence is against a neuropathic, and for a myopathic, theory; but admitting this, Bernhardt's suggested arrested evolution yet remains to be considered. This we shall do, however, after we have brought forward the experimental results which we think bear on the question. We may at once proceed to these.

During the course of some experiments with the phosphate, phosphite, and hypophosphite of sodium upon the frog,[9] some very curious effects on the muscles were noticed. These consisted in fibrillary twitchings of the voluntary muscles, quite like those induced by veratria, and very similar to those observed in progressive muscular atrophy. These movements varied much in intensity, in some cases showing only as a flickering of the smaller bundles of fibres, in others being so extensive as to move even a whole limb. The movements in these latter cases were quite choreic in type, but the gradation between such and the finer fibrillary movements was so insensible that the conclusion was inevitable that the cause of the one was the same as that of the other, and hence that if the fibrillary effect was a peripheral one, the larger choreic movements were likewise peripheral. Whilst apparently quite involuntary in their nature, it was observed that voluntary movements would bring out or greatly increase these fibrillary contractions.

At this stage and later the movements of the animal were observed to be very slow and stiff, the relaxation following a contraction being very much delayed, quite recalling the action of veratria and some other muscle poisons. This muscular stiffness reached its maximum when a complete saturation of the system with the salt had obtained. At this stage a voluntary movement would cause the hind-limbs to become rigidly extended, and in like manner the toes extended and spread; simultaneously the fore-limbs would be flexed across the chest. The effect so far was very like that of strychnine, but there were decided differences—e.g., the strychnine rigidity is followed by a lapsing of the limbs into a state of relaxation, from which a fresh stimulus again starts them into rigidity. This sequence may be many times repeated; quite different is the sodium phosphate rigidity, for this after persisting some time only very slowly gives way, but having given way the relaxation is maintained. Another difference observed consisted in the involuntary nature of the strychnine spasm, this indeed being nothing else than a very widespread and violent reflex, whereas the sodium phosphate rigidity was observed to be closely related to volitional movement—in fact to supervene upon it,—though one could not regard it as actually of voluntary nature.

(To be concluded.)

[3] Arch. f. Psychiatrie, p. 717.

[4] The cases, with the exception of Thomsen's, being singularly free from distinct evidence of a neurotic temperament.

[5] Jahrbuch f. Kinderheilkunde, 1877. [6] Op. cit.

[7] Bernhardt, op. cit., p. 534.

[8] We have omitted to mention that Petsone thinks that we have present a block *somewhere* between the cortex and the terminal plaque of Rouget. See Ballet and Marie's paper.

[9] Sydney Ringer: Report on the Influence of Rhombic Phosphate of Sodium and Sodium Bicarbonate on Muscular Contraction, in Brit. Med. Journal, July 19th, 1884.

CHOLERA.

BY MAX VON PETTENKOFER, M.D.,
OF MUNICH.

(*Continued from p. 771.*)

WE shall now inquire into the time relations of cholera at its permanent home in Lower Bengal. Dr. John Macpherson has, in his work on "Cholera in its Home," tabulated the number of cases of death from cholera in Calcutta for each month of the year for a period of twenty-six years. I have calculated and arranged in a tabular form from these statistics the average number of deaths in each month, and contrasted each month with the average rainfall at Calcutta. (See Table I.) It will be seen how unequally distributed is the great fall of rain, which is two or three times greater than in many districts of Germany. Calcutta has a rainy season, which begins at the end of May and ends at the beginning of October. The cholera decreases from the beginning and increases again towards the end of the rainy season. It reaches its maximum during the driest and hot months (March and April), and its minimum is attained during the wettest and hot month of August, so that the curve of cholera falls whilst that of rain rises. The rise and fall of endemic cholera is constant, whilst the prevalence of cholera in its epidemic form is very variable. In the Punjaub the rain winds (monsoons) bring with them the cholera. This apparent contradiction of the experience above mentioned may be explained by considering that the monsoons bring to the Punjaub the necessary moisture which is believed to be requisite for the development of an epidemic of cholera. Rain falls in the Punjaub at the same time as in Lower Bengal, but in smaller quantity. The average rainfall at Lahore is 22 in., as compared with 62 in. at Calcutta; so that in Lahore for the greatest part of the year the soil is too dry for cholera. That these claims are substantial will be granted by a study of the rainfall and related circumstances in other parts of India. This is well seen at Madras, as indicated by Table II. At Madras the average rainfall is about 48 in., and is therefore midway between those of Lahore (22 in.) and Calcutta (62 in.), but the quantity of rain in the several months is different. The greatest quantity of rain falls in November, and Madras is not under the influence of the south-west, but of the north-east monsoon, and the rainy season extends from July to December. As Madras lies further south than Calcutta, and the quantity of rain is 25 per cent. less, it is

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plain that the desiccation during the dry and hot season would be much greater there than in Calcutta. And this state of affairs is reflected in the vegetation. April, May, and June are like winter months; the leaves begin to fall; the verdure fades away, and the sap descends to the roots of the trees, not because of the cold, but on account of the excessive dryness. It is at this period that cholera is at its minimum. In July, when the rain begins to fall, cholera increases, and reaches its maximum in August. The rain continues, but the cholera decreases owing to the excessive dampness of the soil; so that in November a second minimum in the number of cases of cholera is met with.

In order to inquire into the accuracy of these views, another observation, taken from India, may be cited. Places which are outside the region of endemic cholera, and which have a rainy season at the same time and of about the same amount as Calcutta, have the same amount and periodicity of cholera. Such an instance is afforded in Bombay, which is a city as large as Calcutta, and the rainy season of which depends on the south-west monsoons. In a table which shows the frequency of cholera, the rainfall, and the temperature on the average for a period of fifteen years, it is evident that in all three particulars there is a remarkable correspondence between Calcutta and Bombay. (See Table III.)

The temperature has been given for the reason that it brings out the fact that temperature has not much influence on the progress of cholera. That Bombay is not within the endemic area of cholera is sufficiently testified by the results of the statistics for fifteen years. During this period there were three years in which no epidemic occurred. That a whole year should pass without the occurrence of a single case of cholera in Bombay is not to be expected, when the active intercourse between it and the endemic areas is borne in mind. If the table of averages relating to Bombay be compared with that of Calcutta, the resemblance is seen to be striking. The maximum incidence of cholera is seen to occur in both in April, and the minimum is found in Calcutta in August and in Bombay in September. After this minimum the increase takes place equally in both cities. The years during which no epidemic occurred in Bombay were characterised either by too much wet or too great dryness. Thus in the years 1852-53 the diminished frequency of cholera followed on a period of great wetness, and that of 1860-61 came on after a very dry season. That this dependence on the weather is really sound is shown by a study of the years immediately following the lessened intensity of cholera. The years 1853-54 and 1861-62 in Bombay showed the same rhythm for cholera as Calcutta; whereas, on the contrary, the year 1858-59 in Bombay had the same abnormal rhythm as Lahore. The average number of deaths from cholera in Bombay in March was 253, in April 295, and in May 294. In June, when the monsoons begin, the number further diminishes. The number of deaths in March, 1859, was 9, in April 7, in May 69, and when in June the monsoons set in and 26·8 inches of rain fell, the number rose to 843, whilst the mean for June was only 278. After dry weather Bombay also shows, like Lahore, "monsoon cholera."

Cholera in India, as is well known, has likewise a remarkable relation in time to the years of drought in India. If rain once fail, or be very small in amount, a famine necessarily follows. Distress is then felt both in Lower Bengal and in the Punjaub, but the cholera only appears more severely in Lower Bengal and avoids altogether the Punjaub. The dependence of epidemics of cholera on the time of the year (i.e., on the moisture of the soil) comes out well in countries outside India, as, for example, in Germany. In the kingdom of Prussia from 1848 to 1860 cholera was prevalent every year, though its incidence varied in intensity and in different provinces. During this period, cholera was as much at home in Prussia as in India. Brauser has collated the cases of death from cholera week by week for the thirteen years 1848 to 1860. The numbers for the different months are as follows:—April, 112; May, 446; June, 4392; July, 8480; August, 33,640; September, 56,561; October, 35,271, November, 17,530; December, 7254; January, 2317; February, 842; March, 214. The numbers are founded on statistics, and it is proper to investigate the possibility of errors therein. No objection can be made to the Prussian statistics, for the numbers are too great to be vitiated by casual error. In India the statistics may not be so trustworthy, because registration is sometimes defective. Some cases of death from cholera may not appear as such, and perhaps some deaths may be falsely registered as due to cholera. The Indian statistics have, therefore, only been given for large cities, where more attention is paid to correct registration. The errors which may occur extend over all the months of the year, and are scattered, so there is less liability to perversion of the truth. And there is no need to prove absolute numbers, for relative statistics are sufficient. Further, in the garrisons and prisons of India, where physicians abound, the statistics are nearly as good as in Germany, since cholera is a disease so easily recognised. That a large series of numbers is able to eliminate to the vanishing point the unavoidable errors of statistics is shown by an instructive example of the statistics of typhoid fever in Munich. Buhl, in studying the relations between the

TABLE I.

Average Frequency of Cholera, and Average Rainfall (in Inches) in Calcutta.

—	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Cholera	275	359	566	745	513	243	153	132	151	239	320	317	4013
Rain	0·21	0·42	1·13	2·40	4·29	10·1	13·9	14·4	10·4	4·2	0·9	0·13	62·58

TABLE II.

Average Frequency of Cholera and Average Rainfall (in Inches) in Madras.

—	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Cholera	194	191	123	64	65	59	164	191	186	143	93	104	1577
Rain	0·89	0·22	0·48	0·68	2·26	1·65	3·46	4·38	4·58	10·9	12·90	5·42	47·82

TABLE III.

Average Frequency of Cholera, Average Rainfall, and Average Temperature (in Degrees Centigrade) at Bombay.

—	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Cholera	235	213	263	295	294	278	162	93	60	76	95	163	2217
Rain	0·03	0·01	0·01	0·02	0·41	20·02	22·69	13·10	9·47	2·01	0·27	0·09	68·12
Temperature	24·1°	24·7°	26·2°	29·1°	30·4°	29·1°	25·2°	25·2°	27·1°	27·2°	26·2°	24·7°	—

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occurrence of typhoid fever and the state of the subsoil water, made use only of figures obtained from the general hospital during the years 1856 to 1864, where every diagnosis was confirmed or overthrown by post-mortem examination. [Pettenkofer here devotes considerable space to the discussion of the question, dealing chiefly with the possible inconsistencies in the certificated causes of death. He seems to prove that the difference between the numbers gained by actual observation and those obtained by calculation is so small that it may be disregarded.] It is considered that since the rate of death from typhoid fever in the general hospital is on the above showing a fair representative of the death-rate in the town of Munich, so the numbers concerning cholera obtained from the barracks and prisons of India may be taken as a good sample of the rate of mortality from cholera in the cities themselves. Bryden has given support, in his work on the time and space distribution of cholera in India, to the reports of barracks and prisons. That cholera should attain its greatest frequency in North Germany during the months of August, September, and October, and that winter should seldom see an epidemic, may be explained by the temperature which prevails in the air and earth. In the class of ectogenous infectious diseases, to which cholera belongs, the temperature, as in all organic processes, has a decided, though it cannot be the chief, influence. That cholera is not very dependent on temperature is evidenced by the possibility of the occurrence of an epidemic of cholera during the winter. Why cholera spreads more during the summer and early autumn, as compared with winter and spring, must depend on other causes than temperature.

It is clear, in my opinion, that the soil and the moisture of the soil play a principal part. The dampness of the soil is, under certain conditions, clearly related to the subsoil water, "Grundwasser." Epidemics of cholera abound during the time that the "Grundwasser" is falling, when the earth is comparatively dry. By "Grundwasser" is to be understood that condition of dampness of a porous soil when all the pores are filled with water. If water and air together fill up the interstices, then the soil is called simply damp. I have so long and so often spoken on the influence of the rise and fall of the ground water on the frequency of typhoid fever and cholera, that I imagine a great many scientists credit me with the view that subsoil water is highly harmful. But such is not the case. The subsoil water is merely an indication of what is going on, and has no more to do with the actual processes than a dial and the hands have in the going of a clock. The fall of the ground water by pumping away, or the rise of ground water by the damming of a stream, has not the least effect on typhoid fever or cholera in the neighbourhood. The observation of the level of the surface of the water in springs as an indication of the state of the subsoil water is of no value from an etiological point of view, unless the spring be independent of the nearest watercourse, and unless at the time of the observation the real state of the spring is a true reflex of the condition of the subsoil water in its neighbourhood. When the information, however, is obtained properly from springs free from objection, then the condition of the ground water gives the state of moisture and of exchange in the overlying layers much more accurately than an observation made on the atmospheric downfall (rain and dew). Rain may fall for a week without causing any rise in the subsoil water, and again a rise may occur when there has been no fall of rain for some time. The perusal of Professor Franz Hofmann's work, published in the Archives of Hygiene, on the movement of subsoil water, may be safely recommended. When an epidemic of cholera occurs in winter, then a relatively low state of the ground water is found to prevail. In Munich three epidemics prevailed during the cold months: the first occurred between October and March, 1836–37; the second from July to November, 1853–54; and the third from July till April, 1873–74. All three epidemics were associated with a relatively dry state of the earth, as was proved also by meteorological data concerning the rainfall. No investigation had been made as to the state of the ground water during the period 1836 to 1854, but this investigation was first begun in 1856, so that for 1873 and 1874 the data were available; and it is only on the assumption that the condition of the soil as regards moisture was abnormal for the time of year that the long duration and strange division of the last epidemic could be accounted for. The subsoil water sank from the end of June, 1873, till the beginning of August. On that occasion the germs of cholera probably came from Vienna, where the epidemic had prevailed since April. Two cases coming from Vienna, one in June, the other in July, could be vouched for. At the end of July the first illness from cholera occurred in Munich, but in individuals who had never come in direct contact with the infective cases. In every fresh outbreak, in 1836, in 1854, and in 1873, the same part (the north-east) of the town was the first to suffer. As the epidemics of 1854 and of 1873 developed at the same time of the year (the end of July), so by the middle of August the height of the epidemic was reached; it then fell off rapidly during September; during the whole of October only isolated cases occurred; and by the middle of November the epidemic had ceased in the higher lying parts of the town. It was thought that the disease had become extinct, and notwithstanding that it was considered strange that the summer epidemic had chiefly fallen upon the higher lying parts of the town, whilst the lower lying districts on this occasion had been altogether spared. In the middle of November, when the weather became colder, the epidemic reappeared, and attacked chiefly those lower lying districts which had escaped in the summer. It is impossible to trace the progress of contagion in time and space from one individual to another. The contagionists cannot maintain that the unexpected falling off of cholera was due to the protection afforded by the previous prevalence of the disease, seeing that the lower lying districts had escaped the epidemic, and that the other inhabitants two months later suddenly lost their protection. Anyone who studies the movements of the ground water in Munich for the year in question will find that in the first half of August an event occurred which in suddenness and unexpectedness rivalled the retrogression of the epidemic in the second half of August. In the first half of this month there fell an abnormally large quantity of rain (171 mm.), which excessive rainfall was the largest amount ever registered since the observations had been begun. The consequent wetness of the soil was reflected in a great abnormal rise in the ground water. But from August onwards through the winter, and till the beginning of the year, the amount of rain and dew which fell was again far below the average, and the ground water steadily decreased. In the middle of April, 1874, it again began to rise, and then the epidemic of cholera ceased. The abnormal fall of rain in August, 1873, in Munich had the same effect on the cholera there as the south-west monsoons regularly have on the disease in Calcutta. In the relative dryness which follows this excessive wetness the epidemic process is continued as a winter invasion.

Munich and Augsburg are very much alike in situation and in meteorological factors. Both places lie in a direct line not sixty kilometres apart. But that differences in the amount of rainfall may occur is proved by the year of cholera 1873. In Munich, in spite of the excessive fall, the amount for the whole year was hardly up to the average; in Augsburg the excess above the average was 30 per cent. In 1873 the rainfall at Augsburg approached to that of the average at Salzburg. The distribution of the rainfall was different in Augsburg as contrasted with Munich, and the same difference in the history of the cholera holds good of the two towns. Augsburg had an epidemic of cholera in 1854, but none in 1836 or 1873, when only a few isolated cases occurred. That Augsburg in place and time and in individual disposition is susceptible of an epidemic of cholera was seen in the year 1854, when about 3 per cent. of the whole population was destroyed by the malady, whilst Munich lost that year but 2½ per cent. If the appearance of cholera in the two places mentioned differed only in the time required for the transit from one city to another, then the germs of cholera must pass either from Munich to Augsburg or *vice versâ*. In the year 1836 Augsburg remained free from cholera, which infested Munich for six months. At that period no observations on the rainfall were made, but no doubt exists that cases of cholera passed, without isolation or disinfection, from Munich to Augsburg. These facts prove that cholera is a miasmatic disease, and may be wholly independent of human intercourse. For the year 1854 meteorological data are obtainable, and this year had as dry a season in Augsburg as in Munich, whilst at both places cholera prevailed. In the year 1873 the case was different. Then there were in Augsburg regulations for the prevention of the spread of cholera, without which precautions, be it noted, in 1836, Augsburg remained free from the disease. Nevertheless, cholera did not visit Augsburg in 1873, during which period stringent measures of prevention were also in full force at

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Munich. Such considerations lead to the logical conclusion that what saved Augsburg did not relieve Munich. Further, Munich remained free from visitation in the humid summer of 1866, when cholera prevailed in North Germany; so that no importation of cholera to Munich took place from the seat of war.

(To be continued.)

OBSERVATIONS ON THE

AFTER-TREATMENT OF LITHOTOMY WHERE THE BLADDER IS SACCULATED OR POUCHED.

BY REGINALD HARRISON, F.R.C.S.,
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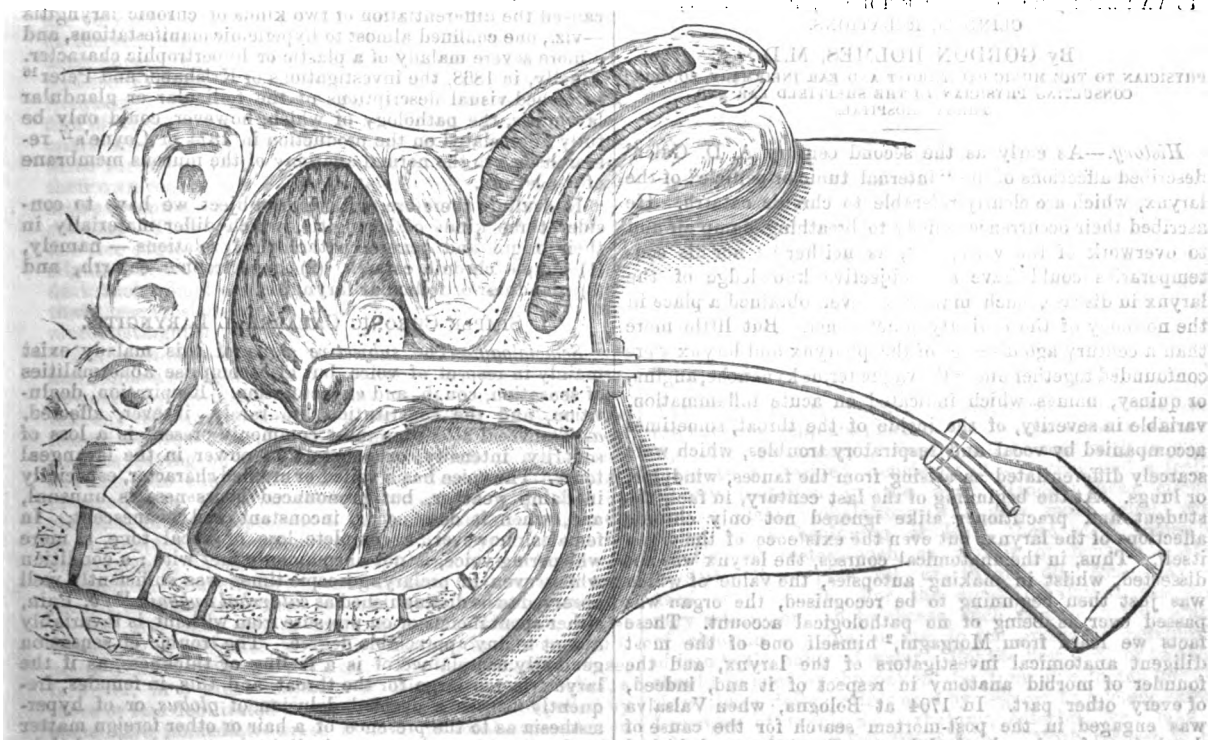
SACCULATION or pouching of the bladder is not only a frequent cause of stone in adults, but is probably the most serious complication attending its removal. An ill-shapen bladder often renders lithotrity out of the question, whilst it increases both the dangers of lithotomy and the liability to a recurrence of stone. A careful study of the results of lithotomy in adults not only shows them to be unsatisfactory when compared with the immediate risks of the operation, but also seems to point to certain defects in the after-treatment to which it is desirable to direct attention. To remove a calculus out of a pouch or depression in the bladder, and not at the same time to provide against urine lodging in the cavity thus formed for its reception and decomposition, is to incur a risk of cystitis and septicæmia which is by no means an imaginary one. It must be remembered that a saccule has no power of expelling its contents; its walls contain no muscular fibre, and it is entirely dependent on its relation to the general cavity of the bladder for the emptying of whatever it may contain. The small mortality following lithotomy in children and the extraction of stone in women is largely due to the fact that the conditions in both are favourable to the thorough drainage of the bladder.

I have recently been adopting a system of drainage after lithotomy and other cases where the bladder has been opened which has so far proved a great benefit. In the first place, in all instances of stone complicated with a large prostate and with saccules on a depressed floor I have been particularly careful by a sufficient division of the prostate to make a free access to the bladder; this has sometimes necessitated the section of the gland to a greater extent than was requisite for the removal of the calculus.

To provide free drainage after the operation for all depressed portions of the bladder, the following plan has been adopted (it is practically that of the double tube in tracheotomy):—Through an ordinary lithotomy tube open at the end is passed and retained a rubber catheter, or drainage-tube; this adapts itself to the inequalities in the walls of the bladder, and can be made to enter any saccule that may be present. In a recent case, though the ordinary lithotomy tube seemed to be draining efficiently, I had from the general symptoms reason to believe that some urine was retained. On introducing the rubber catheter in the manner described, several ounces of fetid urine escaped, after which the progress of the case was good. By the double tube a constant system of drainage is carried on, so that urine escapes immediately on entering the bladder. The accompanying diagram explains, first, the position the ordinary lithotomy tube should occupy relatively to the divided large prostate (marked *p*); and, secondly, the arrangement by the double tube for securing perfect drainage of a sacculated bladder.

I would remark that to rapidly heal up a bladder which in its mechanical construction has all the elements necessary for the production of calculus is not in my judgment a wise proceeding, so long as anything can be gained by not doing so.

In cases of calculus associated with residual urine and a large prostate, I have had some excellent results in instances where it was deemed desirable to retain the lithotomy tube for considerable periods of time—partly for the purpose of draining and partly with the view of bringing about a permanently improved condition in the outlet from the bladder—namely, cases where the tube has been retained for six, eight, or even ten weeks.



The advantages of the double tube after lithotomy performed under the circumstances mentioned may be summarised as follows:—

1. The prevention of vesical colic and spasm by retention of clots and the plugging of the ordinary tube with blood.

2. The more perfect drainage of the floor of the bladder, however irregular this surface may be.

3. A ready mode of washing out all parts of the bladder without removal of the outer tube. For the latter purpose, one of Tiemann's double current rubber catheters, fitted on to a Higginson's syringe and passed through the ordinary lithotomy tube answers admirably.

4. Increased facilities for keeping the patient dry, by

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having the inner tube sufficiently long to conduct the urine into a vessel by the patient's bedside; the bed may be kept absolutely dry until the time comes for the removal of the tube altogether. This is a point of great importance, especially in elderly persons, who are liable to bedsores and suffer much from the immediate presence of ammoniacal urine.

The tenesmus and pain at the end of the penis which are sometimes caused, where the prostate is large, by the retention of thick ropy mucus on the floor of the bladder are considerably mitigated by this plan, combined with the free use of some solvent for this secretion. The best solvent for vesical mucus I have yet found is a solution of common salt in warm water, with which the bladder should be washed out, by the double tube as described, as often as necessary. In all cases of this kind the tubes should be retained and drainage employed until the urine shows that it can pass through the bladder without undergoing decomposition in it; so long as there is any sign of the latter, there is a risk of the re-formation of stone. A considerable number of the softer stones are entirely of vesical origin. The prevention of these necessarily brings under consideration the remedying of the causes upon which they depend. These latter are not always difficult to discover.

Liverpool.

CHRONIC CATARRHAL LARYNGITIS:

ITS VARIETIES, WITH THEIR ETIOLOGY, PATHOLOGY, AND CLINICAL RELATIONS.

By GORDON HOLMES, M.D.,

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History.—As early as the second century A. D. Galen[1] described affections of the "internal tunic or pellicle" of the larynx, which are clearly referable to chronic catarrh. He ascribed their occurrence chiefly to breathing damp air and to overwork of the voice, but, as neither he nor his contemporaries could have any objective knowledge of the larynx in disease, such maladies never obtained a place in the nosology of the ordinary practitioner. But little more than a century ago diseases of the pharynx and larynx were confounded together under the vague terms kynanche, angina, or quinsy, names which indicated an acute inflammation, variable in severity, of the inside of the throat, sometimes accompanied by vocal and respiratory troubles, which were scarcely differentiated as arising from the fauces, windpipe, or lungs. At the beginning of the last century, in fact, the student and practitioner alike ignored not only chronic affections of the larynx, but even the existence of the organ itself. Thus, in the anatomical courses, the larynx was not dissected, whilst in making autopsies, the value of which was just then beginning to be recognised, the organ was passed over as being of no pathological account. These facts we learn from Morgagni,[2] himself one of the most diligent anatomical investigators of the larynx, and the founder of morbid anatomy in respect of it and, indeed, of every other part. In 1704 at Bologna, when Valsalva was engaged in the post-mortem search for the cause of death in a female who had long suffered from phthisical symptoms, nothing morbid being found in the lungs, head, &c., Morgagni, then a student, requested to be allowed to examine the larynx.[3] Destructive ulceration being there discovered sufficient to account for the symptoms, great interest was aroused by the disclosure, and Morgagni by making a point of examining the larynx in his numerous autopsies was able to record a large number of cases which established the importance of the organ as a site for pathological observation. In 1760 Morgagni's great work was published, containing his scattered cases; but not until 1790 was a special treatise devoted to chronic diseases of the larynx. In that year Petit[4] of Montpellier produced a monograph on "laryngeal phthisis," a title which included all chronic laryngeal affections, from the severe forms of catarrh to tuberculosis, syphilis, and cancer, no clear diagnostic line being drawn between these various maladies. During the succeeding thirty years several essays similar to that of Petit were published, with little obvious advance; but the first writer who attempted a separate investigation of maladies of the laryngeal mucous membrane was W. H. Porter[5] of Dublin, in 1824. A few years later Albers of Bonn[6] produced the first comprehensive treatise on diseases of the larynx, and gave a description, remarkably complete for that date, of chronic inflammation of the mucous membrane of the organ. Again, in 1837, Trousseau and Belloc,[7] in their celebrated essay on "Laryngeal Phthisis," pictured the same affection under the name of "simple laryngeal phthisis." In 1846 Horace Green[8] of New York gave the first clinical exposition of the effects of the catarrhal process in the mucous glands and follicles of the air-passages —an affection vaguely known previously as "clergyman's sore-throat"—the first suggestion of the pathology of which was given more than a century previously by Van Swieten[9] of Leyden. In 1853 Rheiner[10] investigated the same disease by morbid anatomy; and again, in 1857, Guéneau de Mussy[11] presented an exhaustive work based almost entirely on clinical observations and inferences. So far, however, the semeiology of chronic catarrhal laryngitis was mainly presumptive, and no wholly trustworthy objective knowledge of the disease existed. Thus, on the introduction of the laryngoscope, observation had a new development to take, and the void was soon filled in after 1858. In this field the researches of Czermak,[12] Türck,[13] Semeleder,[14] and Tobold[15] shortly caused the differentiation of two kinds of chronic laryngitis —viz., one confined almost to hyperæmic manifestations, and a more severe malady of a plastic or hypertrophic character. Finally, in 1868, the investigations of Krishaber and Peter[16] furnished visual descriptions of the follicular or glandular laryngitis, the pathology of which, however, could only be fully appreciated on the production in 1874 of Coyne's[17] researches as to the normal anatomy of the mucous membrane of the larynx.

In dealing, therefore, with this subject we have to consider three kinds of laryngitis, which differ materially in their origin and general pathological relations — namely, (1) simple chronic catarrh, (2) hypertrophic catarrh, and (3) glandular or follicular laryngitis.

I. SIMPLE CHRONIC CATARRHAL LARYNGITIS.

Semeiology.—The *subjective* signs of this malady exist mainly in respect of voice, but also comprise abnormalities of sensation, cough, and expectoration. Respiration, deglutition, and the constitution are rarely, if ever, affected. *a.* The vocal alteration most commonly present is a loss of sonority, intensity, or penetrating power in the laryngeal tones. The voice has a veiled or muffled character, especially in damp weather, but pronounced hoarseness is unusual, and, when it does occur, inconstant and evanescent. In females, however, a complete loss of vocal tone, a mere whispering voice, is not uncommonly met with; a condition which even in prelaryngoscopic times was sufficiently well observed to be distinguished as *catarrhal aphonia.*[18] *b.* Pain, either spontaneous or on pressure from without, is invariably absent to any appreciable degree. The trouble of sensation generally complained of is a feeling of thickness, as if the larynx is too large for the throat, and this, in females, frequently causes a decided delusion of *globus*, or of hyperæsthesia as to the presence of a hair or other foreign matter in the pharynx or larynx. A slight degree of heat and tickling is a usual symptom. *c.* Involuntary cough is a very variable phenomenon, but in a majority of cases it is altogether absent. Should it be present to any marked degree, we must

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1 De Compositione Medicamentorum Secundum Locos, L. vii., c. 1.
2 De Sedibus et Causis Morborum per Anatomen Indagatis, Lugduni, 1760, Epist. xv., 13.
3 Ibid.
4 Dissertatio de Phthisi Laryngea, Montpellier, 1790. Collection of theses.
5 Observations on the Surgical Pathology of the Larynx and Trachea, Dublin, 1824.
6 Die Pathologie und Therapie der Kehlkopfkrankheiten, Leipzig, 1829.
7 Traité de la Phthisie Laryngée, &c., Paris, 1837.
8 A Treatise on Disease of the Air-passages, New York, 1846.
9 Commentaria in Boerhaavii Aphorismos, &c., Lugduni Bat., 1745, sect. 188.
10 Virchow's Archiv, 1853, Bd. v., Die Ulcerationsprocesse un Kehlkopf.
11 Traité de l'Angine Glanduleuse, Paris, 1857.
12 Der Kehlkopfspiegel, &c., Leipzig, 1860.
13 Various papers; the collective results in Klinik der Kehlkopfkrankheiten, 1866, Wien.
14 Physiologische und Pathologische Betrachtungen über Heiserkeit, Wiener Med. Wochensch., 1868.
15 Die Chronische Kehlkopfkrankheiten, &c., Berlin, 1866.
16 Dictionnaire des Sciences Médicales, 1868, art. Larynx.
17 Thèse de Paris, 1874.
18 See Copland, Dictionary of Practical Medicine, art. Larynx.

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suspect that the trachea and bronchi are to some extent involved. When the malady is strictly confined to the larynx there is voluntary cough—that is, hacking efforts to clear the throat, which sometimes, if persisted in, induce temporary hyperæmia and irritation of the larynx, &c., with a troublesome fit of involuntary coughing. This occurrence is most likely to take place in the morning. *d.* Expectoration is very scanty, and usually consists of a little viscid mucus, small pellets of which are often brought up in the morning, formed apparently by inspissation of the ordinary secretions during sleep. A more considerable amount of mucus may, however, be discharged after long-continued hacking efforts.

The *objective* phenomena, conformably to the mild nature of the disease, indicate no impressive alterations of the larynx. General congestion of the mucous membrane is seldom well marked, but hyperæmia of the aryepiglottic and ventricular folds on one side is frequently seen, and, perhaps more commonly still, of the posterior or under surface of the epiglottis. Less frequent, but by no means rare, is a slight congestion of the vocal bands, when a red line appears to gleam faintly through the whiteness of their upper surface. Comparatively seldom one or two pink spots resembling slightly elevated granulations may be observed in the same situation. There is also usually a certain dusky or smoked appearance of the whole larynx, the colour of which in any case is more or less patchy or mottled, in contradistinction to the delicate and uniform hue of health. A very striking and common deviation from the normal state of the mucous membrane is the altered quantity, and no doubt quality, of its secretion. Thin flakes and bands of mucus are very often adherent, in a scattered manner, to the surface of the vestibule, having in most cases a blackened appearance, suggesting that they have for some time retained their position exposed to the soiling action of the inspired air. Frequently also the vocal bands are coated with a thick film of viscid, glairy mucus, which, when they are drawn apart after contact, stretches across the glottis in two or three threads till they snap by the force of respiration or their own contractility. Much more rarely than any of the above symptoms do we find patches of shallow ulceration or erosions. These, when they occur, are most conspicuous on the free edges of the vocal bands, as in this position the slightest break in the even outline is well shown up by the dark background of the space beneath. I believe, however, that these erosions are really much more common, not merely more distinguishable, in this situation.

Pathogenesis.—This malady is often of a secondary nature, and forms a sequela to acute catarrh of the larynx. It has, however, by no means invariably such an etiological relationship as some authors have concluded.[19] It may arise insensibly from a variety of slight, but persistent, causes, such as leaving off customary wrappings about the throat, shaving the chin, &c., after long disuse of the habit, inspiration of an atmosphere impregnated with dust or chemical fumes,[20] especially if the mouth be kept constantly open, frequent over-exertion of the voice, by which a series of temporary, though slight, congestions of the organ are occasioned. Its etiology often seems to be intimately connected with the inclement seasons, with frequent exposure to wet and cold, and in many cases the disease, whilst remaining in abeyance during the summer, undergoes a subacute exacerbation every winter. The fundamental cause, however, in a great majority of cases is, in my belief, a more or less debilitated state of health, which is impelled by some more immediate cause to find its local expression in this manner. When secondary it is probably always due in reality to the supplementary action of one or more of the above causes, which resist absolute recovery from the acute attack, and determine the persistency of the chronic affection. This form of chronic catarrhal laryngitis is generally stated to be most frequent in the male sex; but the fact has not been proved by statistics. I have good reason to doubt its truth, as I find it contradicted in my own experience. Thus, out of 70 cases, of which I have a record, 47 were females. As regards age, the malady is essentially one of adult life; 61 of my cases occurred after nineteen and before thirty-eight.

Pathological Anatomy.—There are naturally no special post-mortem researches on which to found a description of the actual structural alterations existing in so mild a disease, but we may safely assume that the morbid process moves in conformity with what has been observed in other mucous membranes. Thus we have increased action of the racemose and other glands, proliferation and shedding of epithelium, their investment being, under the long-continued influence, of imperfect development and comparatively low vitality, whence arises the dull or dusky tint of the surface. The action can, however, never be sufficiently intense to expose the basement membrane, and thus give rise to the excoriations mentioned. For this reason, therefore, these latter must be regarded as a proof of the secondary origin of the malady from acute catarrhal laryngitis, or of the more or less frequent supervention of subacute exacerbations.

Diagnosis.—There is little to be said under this heading, as, under all ordinary circumstances, the malady may be called self-diagnostic. When an apparently similar affection is associated with syphilis or phthisis, the concomitant symptoms will direct attention to the fact, but often time alone can determine whether the disease is a simple one or the introduction to destructive ulceration in the larynx.

Prognosis.—In uncomplicated cases this is entirely favourable as regards progress towards any serious lesion, but with respect to absolute cure we can seldom anticipate that the malady will terminate without some weeks, or even months, of more or less assiduous treatment. The longer the disease has been established, the more probability, of course, that its cure will be protracted. In the most obstinate cases, however, time unaided—that is, a period of months or perhaps years—will almost invariably bring about a gradual amelioration.

Treatment.—Constitutional as well as local measures will generally be required. (*a*) When we observe clearly or suspect a state of cachexia, in which the tendency is towards anæmia and debility, we must give tonics, especially iron and cod-liver oil, prescribing at the same time a well-regulated and nutritious diet, with a small amount of wine or other alcoholic stimulant. In the presence of corpulence or plethora, quinine should be administered and a light unstimulating diet, with perhaps a course of saline and laxative mineral waters at a suitable health resort, should be counselled. Change of air and scene will often be necessary, and always advisable. (*b*) Very few cases will get well without local treatment, and those only which are of recent date. The means to be adopted are the application of astringents directly to the larynx by inhalation, lozenges, and the laryngeal brush. In most of these cases I have found cold spray inhalations more effective than those in which steam is the vehicle for the medicinal substance. As the mucous membrane is usually in a markedly hygroscopic condition, it swells in the presence of moist and warm vapour, and hence the patients complain more of the foreign sense of thickening, &c. Instances, however, will be met with in which there is a decided deficiency of secretion and a feeling of dry irritation in the part. Under these circumstances steam inhalations will give most relief, especially for a beginning at least, those of a somewhat sedative character, such as vapour of benzoin. After a little time pine oil or thyme oil, &c., may be used with benefit. For the spray inhalation the ordinary astringents can be chosen, such as two to four grains of chloride of zinc, or six to ten grains of perchloride of iron to the ounce of water. For the first week or two they should be used by the patient for from five to ten minutes three times daily; afterwards by degrees to a lesser extent. Lozenges of tannic acid, rhatany, catechu, &c., may be taken, one, four or five times daily. With respect to the applications with the brush, solutions of the same salts as contained in the spray inhalation, but of much greater strength, may be employed. Perchlorides of iron (60 to 120 grains to the ounce of water) has generally proved most satisfactory in my hands. It should be applied daily for the first week or ten days, and often, indeed, twice daily, with decided advantage. But if the cure is at all protracted, the application will have to be varied from time to time according as toleration of the special action of any one drug is established.

(To be continued.)

[19] Krishaber and Peter, loc. cit., p. 593.

[20] See Ziemssen, Cyclopædia of Medicine, vol. iv., on this subject, with reference to the observations of Babbé, Ramazzini, Holland, &c., on inhalation of foreign matters.

AT a meeting held recently relative to the state of the Thames at Erith, resolutions were passed deploring the delay in the issuing of the Report of the Royal Commissioners on Metropolitan Sewage Discharge, and calling for thorough and speedy remedial measures forthwith.

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A REMARKABLE CASE OF A JUVENILE EARTH-EATER.

BY CLEMENT DUKES, M.D., B.S., M.R.C.P. LOND.,
PHYSICIAN TO RUGBY SCHOOL, AND TO THE HOSPITAL OF ST. CROSS, RUGBY.

THE following case seems to me to be of sufficient interest for publication.

P. B——, aged five years, residing quite in the country, was brought to the Rugby Hospital on December 18th, 1883, by her mother, who carried with her in a bottle a characteristic specimen of the common round worm, ascaris lumbricoides. The mother gave the following history: Two years ago the child did not seem well, and after a day or two she became sick, and threw up a large round worm. The mother then gave her a dose of castor oil, and she passed by the bowel three more. A week after this the mother noticed that the child ate the soil in the garden, or that by the side of the road. To stop this vicious habit the child was kept indoors and scolded and whipped, but without effect; for whenever the mother was engaged in her household duties the child would immediately run out and eat the dirt. She always said, when reprimanded, that she ate the earth to relieve the gnawing pain in her stomach. So urgent was the demand for this soil-eating that the child would, if she could not get earth, eat sand, would pick the mortar out of the walls between the bricks, and she would even store a supply in her pocket to eat at her leisure, when she could not get out to obtain it. She has continued to eat the soil, in spite of continual punishments, until the time of her entrance into the hospital on February 12th, 1884, when she ceased, as far as could be ascertained, to eat the soil. The mother states that she would put the earth in her mouth, suck it, and then swallow it. She further states that during the two years of earth-eating she has brought up or passed by the bowel about a hundred large round worms. From the number I have seen myself, and from the respectability of the mother, I fully believe this statement. While in hospital she passed many, but under santonin they failed to come away; and after being without any for a month, and having become fat and strong, I discharged her on April 10th, 1884, as I thought cured. But on May 2nd her mother brought her back, she having passed another worm, but she had not again taken to eating earth. During the child's stay in hospital her perverted taste had apparently been cured. I readmitted her, when she soon passed a worm, and vomited another; but under two-grain doses of santonin, three times a day, which she took for several weeks without physiological effects, she gradually ceased passing any more, and regained her health, strength, and good looks.

Cobbold says, round worms are rare in British practice, and usually only one occurs: this is my experience. But he also records that Mr. de Morgan had a patient at the Middlesex Hospital from whom thirty-seven were expelled. After the little patient's return to the hospital, I examined the well water microscopically, but failed to find any eggs of the round worm. On Oct. 4th I again saw the child by accident. She was looking well, and had not been troubled with more worms, nor had she again taken to earth-eating.

Rugby.

IRRITATION OF THE SKIN FOLLOWING THE APPLICATION OF VASELINE AS A SURGICAL DRESSING.

BY A. W. MAYO ROBSON, F.R.C.S.,
SURGEON TO THE LEEDS GENERAL INFIRMARY.

ON several occasions within the last two years I have, both in private and in hospital practice, noticed that severe inflammation of the skin has been set up by the application of vaseline as an ointment, which has subsided on applying some other simple dressing. The following examples will serve as illustrations:—

CASE 1.—Mrs. S—— attended as an out-patient at the Leeds Infirmary for simple ulcer of the leg, for which a Martin's bandage was ordered to be worn during the day, and vaseline to be applied at night. On her next visit she complained of severe burning in the leg, which was covered with eczema for two inches round the ulcer. The patient was advised to rest and to stop applying the bandage, but to continue the vaseline. On her next visit the inflammation had extended over the whole leg. I now thought it might be due to the vaseline, and ordered zinc ointment, which rapidly cured the irritation and enabled the bandage to be worn again, which soon cured the ulcer.

CASE 2.—W. C., aged eight, was brought to my rooms suffering from ophthalmia tarsi, for which I ordered yellow oxide of mercury with vaseline. On the next visit the eyelids were swollen and œdematous, so that the eyeballs could not be seen. I ordered the lids to be washed and simple olive oil to be applied. Two days afterwards, the swelling having subsided, I again ordered yellow oxide of mercury and lard as an ointment, and soon cured the case.

CASE 3.—A. Q——, aged four, was brought to my rooms suffering from a wound of the forehead, which was strapped but did not heal by first intention. After a week vaseline was applied; within twelve hours the forehead was covered with small blisters and the skin became brawny. On discontinuing the ointment and applying some other simple dressing the irritation soon subsided.

CASE 4.—A. B—— was admitted under my care into the infirmary suffering from scalds of the legs. Vaseline was applied and produced severe irritation, which subsided on its discontinuance.

CASE 5.—C. B——, aged seventeen, was admitted into the infirmary suffering from a smashed leg, for which I performed primary amputation. Near the termination of the case, the granulations being feeble, red lotion was used and vaseline was applied on lint over the lotion to prevent evaporation. It did very well for some time and was healing rapidly until one morning on my ward visit I found the sore inflamed and the adjoining skin œdematous. I could find nothing to account for this, as the same dressing was being used that had been employed for at least a fortnight, until the nurse told me she was using some fresh vaseline, which had a greenish colour but was said to be very pure. On discontinuing this the inflammation subsided and the sore again began to heal.

I need not enumerate any more cases, but I have no doubt other surgeons will have had the same experience. In the above examples I suppose the irritation may have been due to some impurity in the vaseline, as, if pure, it should be a perfectly bland preparation. But it may be that some skins present the same idiosyncrasy to preparations of vaseline as others do to any application of tar, and this seems to me more likely, since whilst the same vaseline was used in many other cases without producing irritation, in these exceptional cases severe dermatitis was set up.

Leeds.

TUMOURS OF THE TRACHEA.

BY HENRY CRUTCHLEY, M.D., L.R.C.P. LOND.
WITH NOTES BY DR. MORELL MACKENZIE.

J. B——, aged forty-nine, married, farm labourer, has had a family of twelve children, ten of whom are now living. His mother died of consumption, and she suffered from scrofulous glands. The patient is a steady, sober man, has enjoyed good health, and has never had syphilis. His present ailment came on gradually about two years ago, when he first perceived a "wheezing and whistling" in his throat upon exertion. His general health continued good, and he followed his employment without inconvenience, except when hurried, till twelve months ago, when he felt that there was "an obstruction in his throat," which kept gradually getting worse, until he had to give up his work, a month before last Christmas. He has not had much cough and very little expectoration, but felt roughness and tickling in his throat. He had no pain or difficulty of swallowing. When I first saw him, though somewhat thin, his complexion looked healthy, and there was no lividity. He had an occasional rough, short cough; no hoarseness. His voice was rather high pitched, and had somewhat of a falsetto character. The larynx did not rise or fall during respiration; there was inspiratory and expiratory stridor, the former scarcely more

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marked than the latter. On laryngoscopic examination the glottis was widely open, the cartilages of the arytenoids and of Santorini showing scarcely any adduction during expiration. The vocal cords came into view only on phonation. The lumen of the trachea was seen to be occupied by a large reddish tumour, and appearing to grow from the side of the tube was a smaller one with a long pedicle, the smaller tumour rising and falling in the respiratory wave with a distinct flapping motion. The diagnosis was stenosis of trachea, caused by a benign outgrowth, probably multiple papilloma. The patient was sent to Dr. Morell Mackenzie for the purpose of having it removed. A large tracheotomy low down was performed with this object on March 3rd. The tumour was then seen to be a vascular growth, the upper limits reaching to within a short distance of the larynx; the whole tumour, about two inches in length, not being visible, as it extended further towards the bronchi. The patient made a capital recovery, talks with ease, and has worked all the summer in the harvest.

Notes by Dr. MACKENZIE.—On opening the trachea the growth was seen to be attached to the whole of the inner surface of the cricoid cartilage, and to extend down the right and posterior walls of the trachea for about an inch and a half, gradually becoming less raised above the surface until it passed imperceptibly into the mucous membrane. A microscopic examination showed the growth to consist of highly vascular connective tissue. It was found impossible to remove it.

Stoke-on-Trent.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem cetalis pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

SCALP WOUND, FOLLOWED BY BRAIN SYMPTOMS; TREPHINING ON THE THIRTEENTH DAY; TEMPORARY RELIEF; DEATH ON THE TWENTY-FOURTH DAY AFTER THE ACCIDENT; SUPPURATION OF CEREBRAL MENINGES; BRONCHO-PNEUMONIA.

(Under the care of Mr. BRYANT.)

WE are indebted for the following notes to Mr. Hilbers.

Thomas S——, aged four, was admitted into Lydia ward on Oct. 9th, 1882. Five days before admission the child fell into a hole about three feet deep. He got out himself, and beyond a scalp wound seemed none the worse for the fall, for he ate and played about as usual. On the following day he became drowsy and was sick. His mother took him to the hospital, but refused to allow him to remain. The scalp wound was dressed. As the child continued in the drowsy state, and was sick, his father took him to the hospital on the 9th, and left him.

On admission there was a scalp wound over the right eye. The wound gaped a good deal, and the bone was exposed. Temperature 103°. The child looked very ill, and was very drowsy. A dose of castor oil was given, and the child was put upon limited milk diet.

On the 10th the child was still very drowsy. The wound and parts about were a good deal puffed up. The wound was dressed with terebene and oil. Morning temperature 101·4°; evening, 102°.

Next day there was a slight discharge from the wound, which was still puffy. Temperature 101·7°; pulse 102.

On the 12th there was still some discharge. The patient complained when a spot just below and to the outer side of the eye was pressed. Temperature 101·8°.

On the 13th the wound looked better and there was less discharge from it. Apparently an abscess was forming on the outer side of the outer angle of the right eye. Temperature 99° F. The diet consisted of bread and butter and milk. Poultices were applied to the abscess.

On the 16th the abscess seemed to be diminishing in size. The poultices were discontinued. The wound in the scalp discharged very little, and there was no bare bone to be seen. Maximum temperature 103°.

On the 17th (thirteenth day), early in the morning, the patient was seized with convulsions, and the fit lasted an hour. At 8.30 A.M. he had a spasmodic contraction of the left side (the wound was on the right side). The mouth and eyes were twitching towards the left side, and there were continuous spasms of the left arm and leg. The left pupil was slightly contracted. Temperature 102·4°. Heart beating tumultuously, radial pulse uncountable. The patient was given a warm bath and ice was applied to the head. The convulsions lasted on and off until 2.30 P.M., when the operation was done. At that time the left side was completely paralysed. At 2.45 P.M. an incision was made transversely through the wound, when a slight depression was discovered. The bone was bloodless. The patient was then trephined with the second smallest trephine, and the bone removed with forceps. There was no proof discernible of the inner table having been splintered, but upon one of the pieces of bone was some suggestion of it. The bone around was bloodless. The wound was dressed with terebene and bandaged. A Leiter's coil was applied to the head. At 4.45 (two hours later) the child was sensible and appeared better. At 8 P.M. he could move his left arm and leg, but not so freely as his right. The axis of the eye was now only directed upwards at intervals.

Next day the child was conscious. The wound was dressed. No pulsation of the brain was apparent, and the brain slightly protruded into the opening in the bone. He was delirious during the night, but in the morning was conscious, and the pupils were equal. Temperature 102°.

During the night of the 20th the child got out of bed and walked to the fireplace. Maximum temperature 103°.

On the 21st he was better. Temperature 99·9°; pulse regular. In the afternoon the temperature rose to 104·2° F. Ordered to be sponged with ice water.

On the 22nd the bowels were found to have been freely opened during the night. He wandered in his sleep. Face pasty and white. The wound looked well, and the trephined place was covered with granulations. Morning temperature 102·6°; evening, 103·6°.

On the morning of the 23rd he was quite sensible. Skin dry and hot; lips parched and dry; hands hot; tongue tremulous and covered with a little white fur; the papillæ were swollen and red; there was some twitching of the left eye and mouth. Wound looked healthy. Bowels not opened since yesterday. Temperature 104° F.

On the 24th, at 2 A.M., he had a fit which lasted five minutes. He had not been sick, and he did not perspire. He seemed very drowsy, and cried out at times as if in pain. Temperature 103·8°. Bowels had not acted.

On the 25th he was very pale; did not care for his food. The legs were drawn up, the abdomen not retracted. Morning temperature 103°; evening, 102·2°.

On the 26th the bowels acted during the night. The patient was in a semi-comatose condition; he cried out when his head was touched. Optic axis divergent; pupils, and particularly the right, reacted badly to light. Skin dry and hot; breathing fair and rather rapid. Morning temperature 103·6°; evening, 102·2°.

On the 27th he had two fits during the morning, each lasting only a few minutes. Beads of perspiration formed on the forehead after the fits. The right arm and leg were spasmodically contracted; abdomen fall, but not retracted; tongue thickly coated. Evening temperature 104·4°.

On the 28th the eyes were turned upwards; pupils fairly dilated; quite insensible. The patient unconscious; colour rather dusky. There was twitching of the arm and leg. Maximum temperature, 104·2°. At 2.45 P.M. he had another fit, lasting about twenty minutes. Temperature 103·1°. Pulse uncountable, weak, and quick. Difficulty in breathing; nostrils widely dilated. Eyes and face white and waxen. Later, the left leg began to twitch. Great perspiration on the body, but not of the face. At the end of the fit the face became slightly flushed, but this quickly passed away. The eyes were turned upwards. Pulse quick and feeble, respiration jerky. Had two more fits during the evening.

On the 29th he had two fits, lasting a long time. At 3.30 A.M. the temperature was 105°. He never seemed to recover from the first fit, and died at 5.30 P.M. Breathing rapid and laboured. Moist sounds in throat. Right pupil larger than left. Skin moist, pale, and slightly dusky.

Necropsy.—On the right frontal eminence, or rather above it, there was an oval wound with bare bone at the bottom, and in its centre a small trephine aperture. The bone around this aperture was yellow and evidently infiltrated with pus. On

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the inner table there was a zone of vascularisation, and a little lymph some slight way off the trephine wound, the edges of the latter being rather spiculated but not depressed. The outer surface of the dura mater had a layer of vascular granulations upon it corresponding to the trephine wound, and on examination the under surface of the membrane on the right side was seen to be exceedingly vascular and covered more or less all over by a layer of granulation tissue. The hinder part was distinctly more vascular than the front part, which might be explained by the gravitation of septic material from the front of the arachnoid cavity; The greater part of the pia mater on both hemispheres was coated with a continuous layer of greenish-yellow lymph. There was but little difference between the two sides in this respect, and at the base also there was a considerable quantity and over the upper surface of the cerebellum. The interior of the brain was quite healthy and there was no evidence of any injury to the brain from the fall. It seemed probable that the injury to the bone was the primary trouble, that this led to suppuration by extension through the membranes, and to the fatal result. There was a good deal of broncho-pneumonia on the left side. The other viscera were healthy.

LIVERPOOL INFIRMARY FOR CHILDREN.

ACUTE MANIA IN A CHILD OF FIVE YEARS; RECOVERY; REMARKS.

(Under the care of Mr. E. HYLA GREVES.)

FOR the notes of the following interesting case we are indebted to Mr. Harding H. Tomkins, M.R.C.S.

Agnes K——, aged five years, was admitted on June 26th, 1884. She had had no acute disease of fever, but had always been somewhat delicate and nervous. About two months before she began to lose her appetite, complaining of pain in her stomach, and suffering from constipation; she lost flesh, and became languid and inclined to sit about instead of playing. Timidity increased, and on one occasion she was terrified for some hours by an earwig having run over her. On June 24th, having gone to bed, the light of a candle from a house opposite shone across her bed, and she became wildly excited and could not be pacified; she remained so until admission. The child's mother is a healthy woman aged thirty-eight, but of somewhat nervous temperament. The father died at the age of fifty, was a ship's engineer, had been a hard drinker all his life, the wife never remembering him sober a single day when on shore during twelve years of married life; he had delirium tremens more than once, and "fever" when abroad; he finally died a few weeks ago from consumption. The family consisted of seven children (no miscarriages); three of these died young of measles and other acute diseases; a fourth, the patient's companion sister, died a few weeks ago from obstruction of the bowels; the eldest, a girl of eleven years, is living, as also are two others, all three being highly nervous, and one rickety. The patient was born at full time after a precipitate but natural labour. No history of insanity, consumption, epilepsy, &c., on either side of the family. The mother was not nervous till after marriage. Grandparents healthy, but maternal grandparents both died young. No consanguineous marriage of parents or grandparents.

On admission the child was very sparely nourished. Height 3 ft. 4 in.; weight 33 lb.; skin dry and harsh, even scaly on abdomen in patches, with a purpuric rash on both legs, especially near the ankles; temperature about normal; cheeks flushed; tongue slightly furred, dry; lips dry and cracking; slight sordes present. Expression indicated intense mental action, wild one moment, terrified the next; eyes wild looking, brows knit, hands clenched; movements incessant, leaping out of bed every moment, clutching wildly at those restraining her, looking quickly in all directions, as if seeing or expecting to see some terrible object, constantly crying in a piteous tone, "Were you there?" "Was mother there?" "Who was it?" Lying down one minute, then springing up wildly with dilated pupils and knit brows, shrieking; again, in a mournful tone addressing me as "father," and saying, "Were you there then?"

June 27th.—Having been put in a separate room on admission, she continued very wild, exhibiting almost incessant motion, only controlled at all by the nurse taking her in her arms; and even then frequently starting up, talking wildly, and struggling. Ten grains of bromide of potassium and five of chloral hydrate were administered at 4 P.M., 6 P.M., and 8 P.M. on the 26th without effect, the patient only sleeping twenty minutes. At 9.30 P.M. she went to sleep, waking up in an hour as wild as ever; slept again from 11 P.M. till 2 A.M. this morning. During her ramblings, which were characterised by the disconnectedness and multiplicity of topics so usual in mania, she talked of the "School Board," of a "rag and bone man," and "a bucket of water," and said she was "locked into a room," and some one had pulled the blind down and she could not get out; she looked into the corner of the room in evident terror at some unseen person, and said in a mysterious tone, "Is she white?" "Is she painted white?" and then, the relief nurse coming on duty, she shrieked in a paroxysm of terror, stamping her feet and clutching at the nurse beside her while she sprang up in bed. "Oh! cover me up; cover my face; she *is* coming." The distressed and contracted expression did not leave her even in sleep. Her attention, however, was arrested on several occasions by the nurse, who was able to make her repeat verses (which the child appeared to know) after her. The bromide and chloral were given at midnight (26th), at 9 A.M., 12 noon, 3 P.M., and 6 P.M. (27th). She slept one hour in the morning and another in the afternoon. She took her food well, consisting of mincemeat, soup, Brand's beef essence, maltine and milk, besides bread-and-butter, &c. About 8 P.M. she talked rationally for half an hour or so, and then became maniacal again. Temperature 101° F. at 5 P.M.; 102·6° at midnight, accompanied by diaphoresis. Pulse rapid and small. She passed no urine from 2.30 P.M. on the 26th until noon on the 27th, when her bowels were opened slightly.

28th.—Slept nine hours between 9 P.M. on the 27th and 8 A.M. on the 28th, waking frequently, and still manifesting the same mental condition; she also slept two hours and a half in the middle of the day, not having had any medicine since 6 P.M. on the 27th. During the day she became quieter for a short time, and allowed the nurse to leave the room; up to this time the slightest movement from her bedside on the part of the nurse had caused a paroxysm of terror; she, however, became maniacal again and exhibited delusions of sight and hearing, sitting up suddenly in bed and staring wildly at imaginary objects and straining to listen to some imaginary voice. Temperature 100° at 4 A.M.; 98° at 9 P.M. Bowels open in early morning and at 4 P.M. Urine could not be saved. Vomited after her breakfast.

29th.—The patient slept about four hours and a half, from 6.30 P.M. on the 28th to 4 A.M. on the 29th, waking frequently and exhibiting various delusions, imagining she saw and felt rats running over her legs and people coming to her, and that a picture of Garibaldi on the wall was a policeman. She continually begged not to be left alone, not to be locked up or thrown out of window, and thought her medicine was poison to kill her; she thought her mother was dead, and begged not to have her legs cut off. At 5 A.M., as she had been so wild all night, she had a solution of one-thirtieth of a grain of hyoscyamine by mouth. She soon became flushed and sweated a little, her pupils becoming dilated. She slept for one hour, her temperature being 101° on waking, and though awake for two hours afterwards she remained quiet. She had two hours and three-quarters sleep during the day. She seemed somewhat depressed, her expression and delusions more allied to melancholy; the contraction of facial muscles, though continuous, was altered in character, giving a sad expression. She still addressed the surgeon as "father," though saying her father was dead and she had never seen him, she having seen him often during two or three months before his death. She got up in the afternoon, but became so wild and unmanageable that she was put to bed and had one-thirtieth of a grain of hyoscyamine at 9.30 P.M. The temperature then rose to 100°; she became flushed, pupils dilated, pulse increased in rapidity, and she became quiet very shortly, dozing for a while and going to sleep at 10.30 P.M. Before going to sleep she fancied she saw the medical officer fighting with her mother, whom he killed. Her conversation throughout the day consisted in entreaties that she might not be killed or beaten, &c., and she even stopped when being coaxed to eat, in the middle of her dinner, to say, "You won't beat me, then; but will you beat me? you won't be angry then?" Bowels moved twice; urine, sp. gr. 1020, acid, clear, no albumen or other abnormality.

30th.—Slept five hours and three-quarters after hyoscyamine, and though waking at intervals she was quieter, and slept once for two hours and a half without waking. She

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got up at 10 A.M., and remained up till 7 P.M.; her attention more easily attracted by various amusements, her behaviour calmer and altogether improved, though she manifested an utter want of memory except for such things as nursery rhymes, some of which she repeated with help. Her mother visited her. On first seeing her the child said "Mother!" in a mechanical way, but when the mother sat down and spoke to her she turned away and said, "Where is mother?—is she dead?" and when her mother was pointed out to her she only said, in a vacant way, "Is she there?" and in the next moment went on rambling regardless of all her mother said to attract her. Temperature, morning, 98°; 10 30 P.M., 100°. Bowels open three times. She had one-thirtieth of a grain of hyoscyamine at 8 P.M. Appetite still good; tongue clean.

July 3rd.—Slept six hours and a half between 8.45 P.M. on June 30th and 9.45 A.M. on July 1st, sleeping only about fifty minutes at a time except from 2 A.M. till 4 A.M. She showed an utter want of memory for names, but was able to roll bandages when shown how to do so, and she amused herself quietly walking after the nurse about the ward, and going out into the garden under the care of other children, yet showing fear of punishment &c. as hitherto. On July 1st she slept five hours and forty minutes, having had one-thirtieth of a grain of hyoscyamine at 10.30 P.M, which produced the desired effect in half an hour, but she only slept for about forty minutes at a time until 7.15 A.M. on the 2nd, when she fell asleep for two hours and a quarter. She then woke, and was very wild, but after sleeping for an hour at midday she became quiet and lost her usual distressed expression. In the evening of the 2nd she went to sleep for the first time without medicine, and slept from 7.15 to 9 30 P.M., but as she did not seem inclined to sleep again one-thirtieth of a grain of hyoscyamine was repeated at 10 P.M. This had no effect till 12 P.M. beyond the usual dilatation of the pupils; after this she slept for an hour, and then woke up full of delusions and hallucinations—e.g., she thought she saw her dead father and sister, and other horrible sights, which made her scream with terror whenever she woke. She also thought her leg was cut off and she was bleeding to death, and that her arm was crushed and broken. One-thirtieth of a grain of hyoscyamine was again given at 2 A.M. on the 3rd, after which she slept from 2.15 to 5.30 A.M., waking frequently for a moment, and quietly going to sleep again. During the day she slept for an hour, and amused herself all day watching the other patients, and following the nurse in the general ward.

6th.—She had hyoscyamine as usual at 6 P.M. on July 3rd, but at 2 A.M. on the 4th it was repeated, as she had only slept three hours and a half; she then slept for another three hours and a half. On the 4th she did not sleep for two hours and a half after her medicine, and during the night was very wild. Instead of the second dose she had bromide of potassium and chloral at 10 P.M. as before, and slept from 11 P.M. till 2 A.M. on the 5th, after which time it became necessary to move her from the general ward to a separate room. During the day of the 5th she was at times sullen and morose, at others vicious towards the children and angry when they tried to amuse her. On 5th, at 5 30 P.M., she had hyoscyamine again, and slept from 6 P.M. till 3 A.M. on the 6th, when she became restless and had a second dose, as she had been so bad the night before. This dose had no effect. Bowels regular. Appetite good.

7th.—Having remained quiet, though deluded, throughout the 6th, she was put to bed and slept from 7.45 P.M. till 5 A.M. on the 7th, not having taken any medicine, and on waking exhibited for the first time some signs of returning memory, as she remembered a child's name and one or two other things. She was, however, passionate and wilful all day, a great contrast to her previous purposeless rambling.

9th.—Slept from 8.45 P.M. on July 7th to 5 A.M. on the 8th without hyoscyamine, but on waking was very wild and wilful, tearing her ribbons off, pulling her hair down and manifesting other destructive tendencies, and picking her head till it bled. Towards evening (8th) when quiet she asked if she was "absent," for a doctor had said she was; she helped to get the supper and asked what the patients were to have. She then asked to go to bed, soon falling asleep; she slept for three hours, waking at 10 P.M., remained awake for an hour, and then slept for three hours more. At 4 A.M. she became so noisy and violent, screaming, &c., that the medical officer was obliged to go to her. The moment he entered the room she lay down in bed pouting, looking ashamed of herself, but immediately he left her she began again. One-thirtieth of a grain of hyoscyamine was given again by mouth, which made her sleep from 4 30 A.M. to 6 A.M. (9th). Throughout the day she bit and scratched those tending her and her expression was quite malignant, but her memory and understanding improved decidedly. She went to bed not having any medicine.

10th.—Having slept all night (nine hours) she became very excited, pulled the nurse's hair, and worked herself into a paroxysm of fury, sitting up in bed with clenched fists and half-closed jaws, the saliva bubbling and frothing between her teeth as she shrieked with passion. She had several of these attacks during the day, and bit one nurse till she drew blood. By 5 P.M. she was so bad that no one could quiet her, and she was found worrying a nurse's leather waistband like an angry dog. One-twentieth of a grain of hyoscyamin by mouth was repeated. This had little effect till 7.15 P.M., when she was soothed to sleep, after having bitten her mother, who had come to arrange about removing her to the union. On waking at 9.30 P.M. she was worse than ever, hissing through her teeth in an angry tone, and with semi-tragic style, "I'll bite you! I'll kill you!" at the same time tearing at her hair and at those who approached her. She was put in a room where she could be watched, and at 10 P.M. one-fortieth of a grain of hyoscyamine was given hypodermically. In eight minutes she ceased to scream, although previously she had done so with every expiration; in ten minutes she gaped and looked about her in a sleepy way with dilated and immovable pupils, then sank down on the bed and fell asleep.

11th.—She slept till 8 A.M., only waking up partly on two occasions. On waking she was much improved, though sullen and occasionally vicious. She was taken to Walton Union, having had one slight outbreak at home in the afternoon. Weight when discharged 35 lb., being an increase of 3 lb. All her bodily functions were well performed during her residence at the infirmary.

On the 16th Mr. Tomkins visited her. She was absolutely silent and appeared not to recollect him at all, she clung to the last person she was with and appeared frightened to trust herself to anyone else. Her appetite remained good, she slept well and had had no further outbreak, though her facial expression was anything but natural. She was reported on one occasion to have thought men were hitting her on the head in the night.

On August 16th she was again visited, and found to be greatly improved mentally and physically. Her skin was fairly filled out and bronzed with exposure to the sun, her flesh being firm and healthy. She ran and raced in the airing court, highly pleased with herself, and danced when told to do so, but she had no recollection of anything previous to her residence in the union, nor could she remember the name of the nurse she was constantly speaking of and calling to when at the infirmary. She could, however, repeat several things she had learnt. Her head, which hitherto it had been impossible to measure, was 18½ in. in circumference, 13⅝ in. from the nasal process of the frontal bone to the occipital protuberance, and 12¼ in. from the tip of one mastoid process to the opposite one. She had gained another 3 lb. in weight. She appeared free from delusion.

On September 17th Mr. Tomkins visited her and found she had been in the school-ward for some time, was reported as a "sharp child," and was progressing well with her lessons, being able to read simple sentences and spell cat, dog, &c. She recognised Mr. Tomkins at once, called him by his name, saying she had seen him "in the same house where nurse Nelly was" (the nurse whose name she had not hitherto remembered). To all appearance she seemed to have entirely recovered and the resident medical officer had discharged her.

Remarks.—The foregoing case is interesting on account of the extreme youth of the patient, the slight hereditary tendency, the violence of the attack, and the speedy recovery following treatment, which was commenced within about thirty-six hours from the onset of the actual attack. The temperature was also considerably higher than that usually registered in acute mania, and the almost abrupt termination of the violent symptoms following (for a child) a large dose of hyoscyamine, suggests the possibility of that drug having cut short the attack, as it is reported to have done in several cases in the adult. Amongst the predisposing causes in this case it is interesting to consider not only the fact of the father's inveterate drunkenness, but the effect that this had

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upon the mother, and upon the early life of the patient; for it will be noticed that the mother herself had become highly nervous before the birth of the child, and during her conception and pregnancy had been subject to mental worry and frights caused by his behaviour, all of which might strengthen the neurotic tendency of the child. Then the child, naturally of a nervous temperament, throughout its early life was frequently subject to cruel treatment and mental trouble, and it is generally recognised that the recovery of all cases of acute mania is directly proportionate to the length of time which elapses before treatment is adopted, and this seems partly to explain the fact that although the patient combined several of the symptoms which usually determine a bad prognosis—e.g., her extreme youth,[1] the hallucinations of hearing, &c.,—yet the recovery took place in less than two months. The height of the temperature may, perhaps, be explained by the fact that the temperature in young children varies considerably without apparent adequate cause. It is also interesting to note that she took eighty grains of bromide of potassium and forty grains of chloral in twenty-six hours before much effect was produced, and it required half that quantity to effect three hours' sleep; also the fierceness of the excitement was in no way lessened by the medicine, whereas after the hyoscyamine, although the amount of sleep was not perceptibly greater at first, the whole tone of the delusions and general appearance of the patient altered in character, while the discontinuance of the drug for three days was marked by a corresponding increase in the intensity of the symptoms. The immediate effect of the hypodermic injection when the symptoms were at their height is also interesting, more especially as the ten hours' sleep thus produced was not followed by any relapse into excitement throughout the period of convalescence, although on two occasions she had slept for nine hours in succession without medicine, the symptoms only gaining in strength and intensity on waking. The effect of the hyoscyamine appeared to be less marked after the first few doses, and it will be noticed that the delusions and hallucinations existed on admission, and before any kind of medicine had been administered. The last dose administered was equivalent to about half a grain in the adult, for she had one-twentieth by the mouth and one-fortieth hypodermically, being in all equivalent to one-tenth, that is, equivalent to four-tenths in the adult, as the proportionate dose for her would be one-fourth the dose for an adult. Now half a grain given in the adult has several times appeared to have cut short the attack, and so it seems to have done in this instance.

[1] Vide Bucknill and Tuke's Psychological Medicine.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Coarctation of Aorta. — Caseous Pneumonia simulating Empyema. — Tubular Epithelioma. — Cardiac Aneurysm.—Lympho-sarcoma of Liver.—Intestinal Ulceration in Paraplegia.

AN ordinary meeting of this Society was held on Tuesday last, Mr. J. Whitaker Hulke, F.R.S., President, in the chair.

DR. HALE WHITE showed an example of the remarkable condition described as Obliteration of the Thoracic Aorta. The specimen was taken from a male subject aged forty-six, which during life had been diagnosed by the patient's doctor as a case of heart disease. The physical signs were a systolic bruit and some œdema of the lower extremities. At the post-mortem examination the aorta was found to be so constricted at the point where the ductus arteriosus joins it, that it would only just admit an ordinary probe. The ductus arteriosus had completely disappeared. The aorta between the left subclavian artery and the constriction was so small that the subclavian artery appeared to be the direct continuation of it. The thoracic and abdominal aorta were very small. The collateral circulation was thus carried on:—The superior intercostals were very large and convoluted, and anastomosed with the first aortic intercostals, which were also very large; the posterior scapular arteries, both of which came from the third part of the subsubclavian artery, divided on the back of the upper border of the scapula into two branches, which reuniting formed a circle on the back of that bone; from these posterior scapular arteries branches of great size were given off, which anastomosed with the second, third, and fourth intercostal arteries close to the spinal column; the right subscapular artery was extremely large and tortuous and divided into two branches, both of which joined the intercostal artery in the ninth space; the left subscapular artery joined the arteries of the ninth, tenth, and eleventh intercostal spaces; the internal mammary arteries anastomosed with the aortic intercostals—the phrenic arteries, and by their superior epigastric branches, which were very large and tortuous, with the deep epigastric arteries; the right superior epigastric gave a large branch, which descended in the suspensory ligament of the liver and anastomosed with the hepatic artery in the substance of the liver; small branches of the inferior thyroid artery anastomosed on the longus colli muscle with branches of the intercostal arteries; a descending branch of the profunda cervicis artery running down on the semispinalis muscle joined the posterior scapular arteries; the inferior thyroid artery on each side was a branch of the common carotid. The deformity in this case was, as it probably is in all of these cases, due to a faulty development of the part of the fourth left branchial arch, which extends from the left subclavian artery to beyond the ductus arteriosus. The heart, which was also exhibited, showed extreme hypertrophy of both sides, all the cavities were much dilated, the dilatation keeping pace with the hypertrophy. In the apex of the ventricular wall was a large patch of fibroid degeneration. It was pointed out how extremely rare the deformity was, very few cases having been recorded, and only one of these had been diagnosed during life. The age to which patients thus deformed attained varied very much, for one man lived to be ninety.

DR. HOBSON read for himself and DR. LANCHESTER the notes of a case of Caseous Pneumonia of the Entire Lung simulating Empyema, with general Tuberculosis, which occurred in a little girl who died seventeen weeks after an acute attack of disease following on a term of delicate health. The symptoms and physical signs were those of an empyema of the left side, including marked bulging and displacement of the heart to the right. Upon this diagnosis the chest was tapped in several places, and also incised, but with negative results. A drainage-tube was, however, inserted into the wound, which continued to discharge sero-pus to the end. A spontaneous opening formed subsequently at the seat of one of the punctures in the axilla, and purulent fluid continuously drained through this. The surgical treatment was strictly antiseptic. A few days before death symptoms of tubercular meningitis came on. After death there was found to be no pleuritic effusion, but the whole of the left lung was solid, distended, and filled with dry caseous material, which, however, had softened down and left a cavity in the superficial parts of the upper lobe corresponding to the axillary opening. The artificial opening simply led into a blind channel in the lower lobe. The right lung was studded with miliary tubercles. There were also tubercles in the fatty liver, in the kidneys, and spleen. There were tubercular ulcers in the small intestines. The microscopical appearances in the affected lung showed thickening of pleura, a decided but not uniform thickening of the alveolar walls, and the alveoli stuffed with inflammatory products in which epithelial elements could only occasionally be traced. As far as the experience of the authors went this case was unique. The sign which of all others is regarded by writers as diagnostic of effusion as from pneumonia—viz., displacement of the heart and bulging of the chest walls—was here present. The uniform consolidation and caseation of the entire lung, with an absence of a similar process on the opposite side, was also remarkable. The only cases which seemed at all parallel were those that have been described by Virchow, Wagner, and others as syphilitic pneumonia in infants. The possibility of syphilis in this case seemed to be out of the question.—DR. GOODHART had seen one other case which was exactly like it. It was, he thought, not a rare condition. He considered that the disease was one of childhood. It was not a syphilitic form of pneumonia in his opinion. In many respects it resembled a tumour of lymphomatous structure.—DR. DYCE DUCKWORTH did not think that a caseous bronchial gland could originate such extensive disease as had been exhibited in this specimen.—MR. H. T. BUTLIN recalled two cases in his experience at the Hospital for Sick Children.—DR. ANGEL MONEY had met with two cases of

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diffuse pneumonia which simulated empyema during life out of 300 autopsies.—Dr. SAMUEL WEST spoke of the frequent mistake which had been made in diagnosing between consolidation and pleuritic effusion. The specimen shown by Dr. Hebson reminded him of a sarcomatous growth.—Dr. LANCHESTER said the microscopical as well as the macroscopical characters were different from those of syphilis. No other conditions than pleuritic effusion and this form of consolidation could give rise to bulging of the chest walls, displacement of organs, and the other physical signs.

Mr. ARTHUR E. BARKER read notes of a specimen of Tubular Epithelioma. The sections and drawings exhibited were taken from an epitheliomatous tumour of the left upper jaw, on account of which Mr. Barker had removed that bone more than four years ago, the patient having been exhibited last May to the Society without any trace of recurrence. The whole of the bone was removed with the exception of a part of the orbital plate, the corresponding part of the soft palate being left intact. The tumour was extensive, but distinctly limited, and did not involve any glands. The recovery was rapid and complete. Sections of the growth showed an almost adenoid structure. The groundwork consists of a well-developed, smooth, fibroid tissue, in which large groups of cells are arranged in a manner recalling, in part of the growth, the whole of a racemose gland, in other parts resembling tubular glands in section. In the centre of most of these groups is a lumen, in some apparently the result of mucous degeneration, in others appearing like the central lumen of a gland lobule. The cells composing the lobule are arranged without any regularity towards its centre in some cases, but are more evenly placed peripherally as a rule. They are smaller than ordinary glandular epithelium, but suggest the latter on the whole rather than that they are connective tissue derivatives. The growth appears to be identical with those described by Mr. Eve as "multilocular epitheliomata," also found in the upper jaw. The slowness of its growth (three years), the distinct limitation of its border, and the immunity from recurrence, offer a marked contrast to most other epitheliomata, but are what we would expect from an examination of the structure of the growth, which shows a high differentiation of structure, and consequently a diminished malignancy in every way.—Mr. H. T. BUTLIN said that the specimen was not an epithelioma; it appeared to be a carcinoma, or a tumour which had hardly passed into carcinoma. It was not like the cases which M. Terrier described under the designation of "boring" epithelioma of the upper jaw, which was of a very malignant nature and greatly destroyed the osseous structures.—Mr. HARRISON CRIPPS would not have described the specimen either as an epithelioma or carcinoma, but as more allied to true adenoid growths. He believed that the growth was of a papillomatous or "cauliflower" structure, what appeared to be spaces being really the stalk, which was coated by the regular layers of epithelium.—Mr. W. HULKE asked whether the structure were equally distinct at the extreme periphery of the tumour as in the centre.—Mr. BARKER replied in the affirmative. He suggested that the specimens be referred to the Morbid Growths Committee.

Dr. PERCY KIDD read a paper on four cases of Cardiac Aneurysm. In the first case, which was that of a man, aged twenty-three, the aneurysm of the undefended space was obviously of congenital origin, and due to imperfect development of the membranous part of the ventricular septum. The dilatation of one sinus of Valsalva was no doubt the result of atheroma. The second and third cases, which occurred in men, aged twenty-one and forty-three respectively, illustrated the influence of friction of pendulous vegetations against the cardiac walls, the resulting erosion of the endocardium being the starting-point of an aneurysmal bulging. In both these cases there had been rheumatic fever, and great pain in the præcordial region was a prominent symptom during life. In the fourth case, that of a man aged forty-seven, the aortic valves and aneurysm were the seat of a marked fibroid change, and there were no traces of endocarditis. The patient had frequently had chronic rheumatism, but it is doubtful whether he ever had rheumatic fever. It is now well known that aneurysm of the heart is dependent on a gradual yielding of some diseased part of its walls to the intracardiac blood pressure. Of the four cases under consideration, all but one were instances of aneurysm resulting from endocarditis, acute or chronic, of rheumatic origin. In all four cases the aneurysm occurred in males.—Dr. ANGEL MONEY referred to the case of a female child, aged five years, who was idiotic. At the autopsy an aneurysm was found at the site of the undefended space. The aneurysm opened up the laminæ of one of the flaps of the tricuspid valve; all the valves were in a "pouchy" and thickened state. In the right cerebral hemisphere there was a tumour, probably gummatous, the size of a Tangerine orange.

Dr. HOWARD TOOTH read notes of a case of Diffused Lympho-sarcoma of the Liver. The specimen was taken from a child aged five, who had been in perfect health till within six months of her death, during which time she had lost flesh rapidly, and suffered from diarrhœa and epistaxis. At the post-mortem examination the glands of the neck were slightly enlarged; there were tubercles in both lungs, some caseating; the bronchial glands were not enlarged. The spleen and kidneys were natural, but pale. The abdominal lymphatics were apparently normal. The liver was uniformly enlarged, its surface smooth, its colour nearly white, and weighed forty-eight ounces. No isolated growths were seen. Microscopically the liver was found to be infiltrated with small round cells. Near the surface of the organ there was not so much glandular destruction as towards the centre. A considerable amount of fibrous tissue was seen in the central part of the organ. This condition was a very uncommon one, especially in so young a child. It might be taken for a leukæmic enlargement, but there was no concomitant enlargement of the spleen or lymphatic glands, neither was it likely to be cirrhotic in nature. The amount of connective tissue was small, and there was no history of jaundice or ascites.

Dr. THEODORE ACLAND brought forward two cases of Paraplegia, in which there had been great ulceration of the intestines. The clinical history of the two cases was very similar; both had contracted syphilis, and in both of them the disease, which resembled simple softening of the cord, ran a comparatively rapid course; the one terminating in less than three weeks, the other in less than a month, from the onset of the disease. In both cases the ulceration had been mainly confined to those parts of the bowel which had been most distended, in the one case occurring in the small intestine, in the other in the stomach and colon. The question naturally arose whether the lesion of the central nervous system stood in any causal relation to the ulceration of the bowel. The more usual causes of ulceration of the bowel were severally discussed: tubercular, syphilitic, cancerous, and typhoid ulceration being successively excluded. With regard to the last form of ulceration it should be noted that in one case Peyer's patches were chiefly affected; the lesion, however, was like a simple loss of substance rather than an inflammatory affection of the glands, and the temperature was quite unlike that of a well-marked case of enteric fever, since, after the first rise to 102°, the temperature never rose above 100°, and was more often subnormal. The question was then raised whether the lesions might not be a simple ulceration due to distension, or whether they might be due to loss of nerve power and formed on the principle of a bedsore, by great internal pressure occurring in a viscus whose distension was due primarily to the lesion of the nervous system. In support of this view, it was urged that in the case of which the affected parts had been submitted to a microscopic examination the chief injury seemed to be in the dorsal region of the cord, which implied a probable implication of the roots of the thoracic ganglia, which gave rise to the splanchnic nerves. A series of microscopic and macroscopic specimens was exhibited in support of the view taken by the speaker.

Mr. VICTOR HORSLEY showed a recent specimen of Artificial Myxœdema in a Monkey. It exhibited the macroscopic appearances fifty-four days after removal of the thyroid body. There were opacity and a gelatinous sticky state of the connective tissues throughout the body; great swelling of the salivary glands, which were pale and semi-translucent; atrophy of the muscular substance of the lower border of the right ventricle of the heart; swelling of the spleen, and commencing atrophy of the cerebral convolutions.

The following card specimens were exhibited:—Dr. Charlewood Turner: Hæmatoma of Dura Mater, and two cases of Endocarditis with Ulceration.

MEDICAL SOCIETY OF LONDON.

A GENERAL meeting of this Society was held on Monday last, Mr. Arthur E. Durham, F.R.C.S., President, in the chair.

Mr. EDMUND OWEN read a paper on Lancing the Gums. Not many years ago every practitioner carried about a lancet case, now the thermometer had to a great extent supplanted

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it. Indeed, that excellent thin-bladed instrument had fallen into unmerited neglect. Probably improved methods of diagnosis had shown that many of those ills which were previously ascribed to dentition, because they happened to accompany it, had really no dependence upon it. Dentition used to be regarded too much as a mechanical process; a tooth was on the wrong side of a tough gum and had to be helped through by scarification. Mr. Owen maintained that dentition was a simple physiological process, and that it stood in little need of professional assistance. The belief seemed somewhat widely spread amongst the laity that dentition was rather a clumsy, if not a cruel, matter. "My children always cut their teeth with a big head," says one mother. Should it not rather read, "My children are improperly fed, and are rickety"? There was a special trouble apt to be associated with teething, and that was infantile paralysis. The practitioner should be always on the watch for it; its very symptoms were apt to obscure it, and when the limbs became wasted or deformed bitterness was apt to be expressed by the mother because the doctor had assured her that that feverish attack of many months ago was "only from teething." What, he would ask, was the exact condition of gum which required scarification? Was the gum often found swollen and tender from an attack of congestion or inflammation, the direct result of dentition? If such cases are of frequent occurrence, who sees them and officiates? For his own part, he had carried a lancet in his card-case for years, but he had never yet found work for it upon a child's gum. Possibly others might give a different experience, and describe lancing the gums as a "good remedy out of fashion." Would the dental surgeons give their experience of the actual or probable effect of scarification upon the development of the teeth? In England the operation was at one time very much the fashion; now one hears little of it.—Dr. C. GODSON was sure that teething did cause pain, and that the lancet was useful.—Dr. BRAXTON HICKS agreed with the previous speaker. It was necessary to bear in mind the delicate nervous organisation of the infant. He thought that the eruption of the teeth was attended with reflex phenomena of disturbance. — Dr. PARAMORE also concurred with the views of the previous speakers.—Mr. HAMILTON CARTWRIGHT spoke chiefly of the dominance of the nervous system of the infant as an argument in favour of lancing the gums. He felt sure that diarrhœa and convulsions were caused by tension of the gums. Lancing the tumid glistening dental sac was of the greatest importance.—Dr. C. J. HARE said that his optimism had received rude shocks in the course of his existence. Fashion dominated everything. So it was with bleeding, which even now was capable of saving many lives. Abstraction of blood from the gums was a valuable remedy.—Dr. WEBB testified to the efficacy of lancing the gums.—Dr. SANSOM did not consider that the eruption of the teeth was a physiological process in the sense that it was not liable to great disturbances. He thought that there was a liability to go too far in the direction of lancing the gums. He referred to the association of diarrhœa with dentition, and found statistically that the greatest accession of diarrhœa coincided with the period of eruption of the first temporary molars. — Dr. S. TAYLOR thought the lancet might be abused as well as used. Injudicious rubbing and chewing was responsible for the hard and horny cuticle which sometimes coats the gums.—Mr. LOWNE said that nine out of ten cases of infantile diarrhœa were due to improper feeding. He could not understand how the eruption of the teeth could reflexly cause diarrhœa. He did not know that he had ever done any good with the gum lancet.—Dr. RADCLIFFE CROCKER thought that the instances in which the gum lancet could be used with advantage were few. Dentition was made to serve as the cause of almost every disease to which children are liable.—Dr. W. DUNCAN had seen a goodly number of cases of diarrhœa and convulsions which he was positive were due to dentition. He did not think that the mere abstraction of blood was of any value in relieving the sufferers.—Dr. TRAVERS had not seen a single instance in which he felt justified in using the lancet in the last nineteen years.—Dr. EWART said he was a firm believer in the value of lancing the gums, though in his experience it was but rarely required.—Dr. DREW believed that lancing of the gums would be necessitated in febrile conditions associated with pains in the gums lasting more than two days. Diarrhœa, bronchitis, and suppuration of the middle ear might be caused by dentition.—Dr. DE HAVILLAND HALL said that since the introduction of bromide of potassium into therapeutics the lancet had probably fallen into disuse. — Dr. PARAMORE asked whether any harm had been done by lancing the gums.—Mr. PEARCE GOULD believed that the bleeding resulting from lancing the gums had sometimes proved fatal.—Mr. EDMUND OWEN, in reply, felt sure that lancing of the gums had been practised too much.

HARVEIAN SOCIETY OF LONDON.

A MEETING of the above Society was held on Thursday, October 16th, Mr. George P. Field, President, in the chair.

Interstitial Keratitis.—Mr. JULER, in a paper on this subject, referred briefly to the well-known changes noticed in the tissue of the cornea as a result of chronic inflammation, and dwelt upon the leading clinical features and upon the treatment of the affection. One eye was usually affected for two or three months before the disease extended to the other eye. Pain and photophobia were symptoms subject to much variation; photophobia, when present, generally pointed to the existence of superficial ulcerations. Prognosis was favourable, the opacity ultimately clearing up completely, but the process of cure was slow. The systematic administration of grey powder and of tonics, and the local use of atropine, were eminently successful. A congenital syphilitic taint could be traced in at least 90 per cent. of the cases, and with this marked anæmia was generally combined.—The PRESIDENT alluded to the frequency of interstitial keratitis in cases of diseases of the ear. In his experience girls were affected in a much higher degree than boys.—Dr. JAMES THOMPSON expressed his firm belief in the syphilitic nature of the affection, and in its curability by mercury. Dr. Thompson called attention to a sign of congenital syphilis, never absent in these cases, and to which he had found no reference in medical literature. In syphilised children, instead of the clean frontal line formed by the healthy hair of the scalp, an irregular border of fine fluffy hair, about half an inch to one inch wide, is almost invariably present.—Mr. HARTRIDGE referred to the persistence in the cornea, after apparently complete cure of the opacity, of fine lines or stripes, due to the obliterated vessels of the "salmon-patch" of Hutchinson. A case was mentioned in which the keratitis was the outcome of acquired syphilis.—Dr. BUZZARD wished to remind the Society that the great advances made in the pathology and in the treatment of the affection were mainly due to Mr. Hutchinson's teaching. The syphilitic nature of the disease was no longer a matter of doubt, and the propriety of a mild mercurial treatment could hardly be questioned.—Dr. ALDERSON gave the full particulars of a case which exemplified the insidious mode of onset sometimes observed; the patient recovered perfect vision under the administration of grey powder and quinine, with occasional purgatives.

A Demonstration on the Mechanical Principles of Surgical Apparatus, by Mr. NOBLE SMITH.—He remarked that although the application of splints and their management in the treatment of ordinary fractures received a full share of attention in lectures and in text-books, the use of apparatus for orthopædic cases was seldom adequately dealt with, and the principles which ought to guide the surgeon in devising and in using such apparatus were almost entirely ignored. The student, left in ignorance of these matters, was obliged in after years to rely too much upon instrument makers, whose knowledge of surgery was necessarily incomplete. Mr. Noble Smith demonstrated by means of a lay figure the principles which he thought should be followed in applying a splint for hip-joint disease; he also explained by means of diagrams his views as to the successful use of apparatus in cases of diseased spine, of knock-knee, of bowed legs, and of other orthopædic affections.—Referring to some of the author's remarks, Dr. JAMES THOMPSON stated that he had recently removed a plaster jacket which had been worn for three years without any interruption. The skin presented no abrasions or marks of any kind, and the boy had felt comfortable throughout. There remained no trace of any spinal deformities.—Mr. R. FITZROY BENHAM did not regard the model exhibited to be an accurate illustration of diseased hip-joint. The pain stated to be produced by mere extension of the limb was not brought about by pressure of the fluid against the upper part of the acetabulum, but by contact of the opposed inflamed surfaces. He failed to see the difference between the

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apparatus exhibited and the apparatus known as Thomas's splint. Mr. Banham did not consider a padded back-board to be the best means of support in Pott's disease, but preferred the poroplastic jacket. Sayre's plaster jacket, unless applied with great care, might be worse than useless. He did not agree with Mr. Noble Smith that in severe cases of genu valgum it was advisable to allow the patient to go about with walking instruments until the inner malleoli could be brought together by means of appropriate supports, rest, and, above all, manipulation.

CAMBRIDGE MEDICAL SOCIETY.

AT a meeting of this Society, held on October 3rd, Professor HUMPHRY read the notes of a case of Spontaneous Fracture of both Thigh Bones. S. L——, aged fifty-six, a healthy-looking woman, broke her right thigh bone under the following peculiar circumstances in 1855. For several years previously the limb had been subject to pain, chiefly about the middle of the thigh. A month before it broke the pain was worse and she could scarcely lift her foot from the ground. Two days before it broke she caught her toe against the stair; this caused sharp pain in the thigh and a lump formed near the middle. She was walking, when it seemed as if the left foot caught, and she fell; but she is sure that she felt the right thigh break before she reached the ground. It was treated by a surgeon with splints, and united in about five weeks; the pain disappeared and the limb got quite strong. She remained quite well till soon after Christmas of 1856, when a pain came across the left thigh, similar to that which she had before experienced in the right. The limb was in very much the same condition as the other before it broke, and the pain was very bad, so that she feared it would break. On March 1st, it broke in much the same way as the other; she made a kind of stumble and felt it break before she reached the ground. She was admitted into Addenbrooke's Hospital and a long splint applied. The parts united in the usual time and became quite firm. The pain left the thigh, but she began to complain of pain in both arms a little below the shoulder. The patient was soon after unfortunately lost sight of. Professor Humphry referred to three cases recorded by Mr. Henry Smith of spontaneous fracture of the arm, in which rheumatic pains had been felt previous to the fracture. Also to one by Mr. Holmes of fracture of the femur in a stout young man whilst walking across the room, union taking place readily. The cases to which he wished to draw particular attention were those in which a bone suddenly gives way in a tolerably healthy person, the fracture often preceded by pain, and union taking place as early and as well as in other fractures. All these features were well illustrated in the remarkable case he had first related. Whether there was some inflammatory condition of the bone or some disorder of the trophic nerves previous to the fracture he was unable to say, but they were distinguished from other cases in which spontaneous fracture occurred, for instance, in mollities ossium, in cancer, locomotor ataxy, or from violent muscular action.

Mr. CRIBB (Bishop Stortford) communicated a case by letter, of a boy, aged eight, who in turning himself in his carriage Fractured his Left Femur.

Mr. ALEX. HILL exhibited a specimen of Epignathus which he had received through the kindness of Dr. Sunderland, of Thaxted, Essex, and had dissected with a view to discover if possible the explanation of this form of monstrosity. The autosite was a well-formed seven months' female fœtus. The parasite which depends from its mouth and nostrils without in any way causing their malformation, and very slightly distending the mouth, consists of a number of larger and smaller cotyledons with a total size rather greater than that of the head of the autosite. A cotyledon about the size of a chestnut with a narrow stalk projects from each nostril. One of those projecting from the mouth presented a considerable superficial resemblance to an ill-formed fœtal head with mouth and hairy scalp and central core of bone. After careful dissection Mr. Hill came to the conclusion that this resemblance was only accidental. Another mass, of the size of a bantam's egg, was covered only by a transparent membrane, and consisted of irregular columns of liver cells scattered through a matrix of fœtal connective tissue. This rudimentary liver was profusely supplied with bloodvessels. The stalk of the parasite was attached only to the basi-sphenoid and back of the vomer. It received a large artery from one of the pharyngeal arteries on the left side, and also a small artery from the left internal carotid inside the skull, communicating with a minute branch from the right internal carotid, and descending through the open pituitary canal. The brain, including the hypophysis cerebri, was perfectly normal. No specimen of this form of monstrosity is to be found, as far as Mr. Hill is able to discover, in any of the museums in Great Britain or Ireland.

Dr. CROWDEN (Waterbeach) reported a case of Concretions in the Pancreas (specimen shown) extending over twenty-five years. W. B. C——, married, aged fifty, robust and of temperate habits, consulted him in 1880, giving the following history. About his twenty-fifth year he suffered from scrofulous glands in the neck, for which he underwent a long course of iodide of potassium. Two years after he suffered occasionally in the morning from great pain in the epigastrium. The attacks soon became paroxysmal, and were considered to arise from indigestion; they increased in frequency and severity, chiefly during the effort of defecation, and were accompanied with peculiar emotional phenomena. When seen during the paroxysm his countenance was pallid and bathed with perspiration, expressing the greatest agony. Before his death, which occurred suddenly, he became very restless and exhausted. At no time were there any physical signs, and the symptoms were so masked by the emotions of the patient that during life the case was never recognised. The post-mortem examination revealed a hard substance near the centre of the pancreas, the head appeared natural, but, extending from about the middle of the body, a line of prominences could be seen running along the long axis to the tail, accompanied by great structural change. Some of these masses were very pointed, denuded, and projected under the areolar tissue and peritoneal covering. The lower part consisted of one amorphous mass of concretions without any soft gland structure. The peritoneum and wall of the stomach close to the sharp points were acutely inflamed, but there was no effusion. The concretions consisted of carbonate and phosphate of lime.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

A MEETING of the above Society was held on Oct. 9th, Mr. W. A. Garrard, President, in the chair.

Mr. GARRARD read a paper on the Treatment of Wounds. He thought we owed a debt of gratitude to Sir Joseph Lister whether we adopted his treatment of wounds or not, for he had been the means of bringing home to every surgeon the importance of personal attention to every detail of dressing as well as absolute cleanliness, thus making it possible for the humblest provincial surgeon to obtain results equal to those of the most eminent, except in such cases as opening large joints and deep cavities, as empyema, psoas and other deep abscesses connected with carious bone. He did not adopt his method in all its details, believing that as good results were obtained by simpler means. In amputations and other large wounds, he washed them first with hot iodine water, as recommended by Mr. Bryant, and then dressed with dry absorbent cotton, drainage, when necessary, and gentle elastic pressure, keeping the wound always dry. He considered the absorbent cotton impregnated with salicylic acid was much better than the favourite gauze, which was not sufficiently absorbent to keep the wound dry. Taking the last seventy-nine cases at the Rotherham Hospital, and excluding four who died in a few hours from very severe injuries requiring double amputation, there were four deaths. One was an old man, who had both legs amputated for severe injury, and died on the fifteenth day; another on the sixth day, after herniotomy, the hernia having been strangulated eight days before admission; the bowel sloughed. Neither of the two other cases died from blood-poisoning. For the arrest of hæmorrhage Mr. Garrard, whilst admitting that the catgut ligature was an excellent method, much preferred torsion, which he always adopted, believing it to be the simplest, the nearest approach to nature's own method, and not liable to be followed by secondary hæmorrhage. He had never seen an artery bleed again after having been once properly twisted, and had never had to reopen a wound on that account.—Dr. BANHAM, Mr. PYE-SMITH, Mr. ATKIN, Dr. PORTER, and Mr. WALKER joined in the discussion which followed.

At the meeting on October 23rd, the President in the chair, Mr. SNELL exhibited a section of Bony Tumour of Conjunctiva, as described in the Transactions of the Ophthal-

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mological Society; and also small flat Mirrors for Retinoscopy, as suggested by Mr. Priestley Smith, the cost being only a few pence each.

Dr. BANHAM introduced a patient suffering from Unrhythmical Spasmodic Torticollis, and who had been affected in this way for about ten months. The patient had been under his care at the infirmary four months previously, and after a few weeks' treatment with full doses of bromide of potassium and the application of galvanism to the affected muscles she had greatly improved, and left the infirmary of her own accord. Three weeks ago she again presented herself; the spasms were then more violent than ever. Previously when in the infirmary the spasms were limited apparently to the right trapezius and right sterno-cleido-mastoid, and could be arrested by firmly grasping the trapezius near its attachment to the occiput, or by the patient lying on the left side, with the left side of the face fixed firmly against the pillow. The spasms were not now so influenced, or to a much less degree, and the left trapezius seemed also involved, so that the head was now often thrown back, the neck being arched to its utmost possible limit. There was no history of syphilis, and no catamenial irregularity, excepting to a slight degree during the last four months. Dr. Banham remarked that the etiology of these cases was very obscure. He could find no cause for the symptoms appearing in the patient. She was an intelligent woman, the mother of several healthy children, and never exhibited any trace whatever of hysteria. He had seen a large number of somewhat similar cases, and he felt that they ought not to be dismissed as of no moment; they sometimes did badly, ending in epilepsy, idiocy, or death. When the movements were rhythmical he thought the prognosis more favourable.

Mr. C. ATKIN read the notes of a case occurring at the infirmary in the practice of Mr. Favell, in which he had ligatured the Brachial Artery for Secondary Hæmorrhage after amputation on the upper third of the forearm, with an immediate marked effect on the inflammatory condition of the stump. Though the flaps healed externally by the first intention, the whole limb went into a state of over-reaction after the amputation, and a general arterial oozing occurred on the tenth day. After ligation of the brachial artery the hæmorrhage ceased, and the limb, which before had been swollen to twice its natural size, dark-red, doughy, and semi-fluctuating, resumed its normal form and colour in a few hours.—Mr. JACKSON remarked that deligation for the arrest of hæmorrhage was first performed in England by Mr. Favell at the suggestion of Mr. G. A. Brown, then the house-surgeon of the Sheffield Infirmary, and now of Tredegar. Mr. Brown had already had a case in which sloughing phagedæna of the palm had been arrested by the ligature of the radial and ulnar arteries for hæmorrhage.—Mr. KNIGHT and Mr. BROWNING also made observations.

Dr. C. H. WILLEY read a paper on the Recent Epidemic of Small-pox in Sheffield. The epidemic commenced in February, and ended at the end of September last. During this time 203 cases were admitted into the Borough Fever Hospital. Details of these 203 cases, as regards the influence of vaccination on the type of the disease, complications, length of illness, and mortality were given—150 had been vaccinated, 4 revaccinated, and 49 unvaccinated. The mortality among the vaccinated and the unvaccinated respectively was 4½ and 28½ per cent. Of the vaccinated, 77 per cent. were of the two milder types, and of the unvaccinated 96 per cent. were of the two most severe types. The average duration of the illness was for the vaccinated twenty-two days, and for the unvaccinated forty-two days. Of the four revaccinated cases, three were not vaccinated until after they had contracted the disease, in the fourth case an interval of thirty-six years had elapsed since the operation. Complications occurred in 12 per cent. of the vaccinated and 71½ per cent. of the unvaccinated.—The following gentlemen joined in the ensuing discussion; the PRESIDENT, Mr. SNELL, Mr. LONGBOTTOM, Mr. WALKER, Mr. BROWNING, Mr. SUMNER, Dr. DYSON, Mr. A. JACKSON, Mr. KNIGHT, Dr. LEYTH, Mr. RECKLESS, and Dr. MARTIN.

THE Local Government Board have finally "ordered" the guardians of St. Saviour's "to cause a new infirmary to be erected (at Champion-hill) at a cost not exceeding £93,163"; the fittings and furniture are not to exceed £20,000.

Reviews and Notices of Books.

Intestinal Obstruction, with an Appendix on the Action of Remedies. By HUGH OWEN THOMAS, M.R.C.S. *Abdominal Hernia.* By RUSHTON PARKER, B.S., F.R.C.S., Professor of Surgery in University College, Liverpool. London: H. K. Lewis. 1883.

THE second part of this volume, consisting of Mr. Rushton Parker's essay on Abdominal Hernia, has already been noticed by us, when it appeared in a separate form. By far the greater part of the book before us is from the pen of Mr. H. O. Thomas, who is chiefly known to the profession as the inventor of excellent splints for the treatment of diseased joints. Mr. Thomas has certainly fulfilled one of the conditions of successful authorship; he has had something to say, and that "something" is to a large extent valuable to the profession. Unfortunately the manner in which the book is written is such as sorely to try the reader's patience, and to quickly put him out of sympathy with the author. Sentences are met with which are so involved as to be almost incomprehensible, and the most round-about phraseology is used to express imperfectly and inexactly quite simple facts or views. The criticism of the teachings, writings, and practice of many of the most distinguished contemporary physicians and surgeons as well as of other times is in a style that is happily not common, and which for bad taste is only equalled by the care taken to show that the problem which has hitherto puzzled all physicians and surgeons has at length been completely solved by Mr. Thomas, and that the treatment of intestinal obstruction is at length and for ever established on a true and scientific basis. These are errors which appear on the surface, and must arrest attention, and we can well believe that many would be inclined to put aside the book as useless on the assumption that no sound grain would be mixed with so much chaff. But it is not so. Mr. Thomas's teaching is well worthy of the careful attention of the profession, who will not be at a loss to see the extent of its value. The first point insisted on by him is the absolute necessity of withholding purgatives in every stage of the treatment of all cases of "intestinal obstruction," even the mildest. He insists over and over again that quite mild and easily curable cases of "obstruction" are quickly converted into severe and even fatal cases by the administration of purgatives. He also discountenances the use of enemata, purgatives (simple or nutrient), the introduction of long rectal tubes, inflation of the colon, or even digital rectal exploration. He teaches that all these are practically useless, and actually harmful from the peristaltic action they excite in the intestine. This may be called the negative side of the treatment recommended. The positive is this: morphia is to be given subcutaneously in amount sufficient to allay pain, and to lessen or to control entirely the vomiting, but vomiting once or twice a day is looked upon as a proper relief of the distended intestines so long as the obstruction lasts, and not as a symptom to be removed entirely. The diet is to be entirely liquid—not milk—and given in small quantity. This treatment is to be continued for some time after the "obstruction" is overcome. As adjuncts, the foot of the patient's bed is to be raised, cold wet cloths may be placed on the abdomen, and if the distension become extreme and percussion yield a uniformly clear note, paracentesis is to be performed with a fine trocar and cannula, and repeated as often as may be required. Mr. Thomas is generally opposed to operative interference, but when the treatment he recommends has been carried out with strict exactness, and the pulse continues or becomes rapid, "while the tongue has the typhoid appearance with intense thirst, and the vomiting exceeds four times in twenty-four hours, this condition, with or without collapse, indicates the necessity for considering

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the advisability of resorting to surgery. ..... These are the signs indicative of the time when the patient ought to be given the chance that can be afforded by a surgical operation." It is only necessary to add that Mr. Thomas treats all cases of failure to pass the intestinal contents with due regularity and frequency in the same way, with the single exception of external hernia, although it is not made apparent why the treatment of strangled bowel in the scrotum or groin is not amenable to the treatment which we are given to believe is the only course proper to follow in the precisely analogous condition within the abdominal cavity. We therefore read nothing of differential diagnosis of the various forms of internal intestinal obstruction, except certain brief, almost contemptuous references to it as unnecessary for guidance in treatment. Notes of several cases are included in this essay; the great bulk of them are cases of typhlitis and of enteritis, and among them are two or three cases of enteric fever. The treatment is good so far as it goes, but in that it to a large extent ignores the various causes of intestinal obstruction it stops far short of what is desirable. All who read this essay will be repaid, and will thank Mr. Thomas for his strenuous insistance on the evil effects of purgatives, and for his judicious directions for the feeding of these patients. We are conscious that there is real merit in this book, and regret that it should be marred by the defects to which we have referred.

OUR LIBRARY TABLE.

Hygiene: a Manual of Personal and Public Health. By ARTHUR NEWSHOLME, M.D. Pp. 408. London: Gill and Sons. 1884.—The author informs his readers in the preface that this work was written from the notes of the lectures he delivered at Exeter Hall, to the students preparing for the examination in hygiene of the science department in the advanced stage. We congratulate the students on having had the subject brought before them in so clear a manner. The book appears to us remarkably well adapted for a handbook for the study of the principles of public and personal hygiene. It brings under consideration the various subjects treated of in clear and intelligible language, and points out the measures necessary for the prevention of disease and the promotion of health and comfort. We strongly recommend the book to the attention of the public generally, as containing much valuable information and advice. In addition to a full table of contents it has the advantage of a copious index.

Studies in Life. By H. SINCLAIR PATERSON, M.D. Pp. 187. London: Hodder and Stoughton. 1884.—This, like the Health Studies by the same author, which we recently noticed, appears to consist of a course of eight lectures, delivered to a society of young men. It treats of life and its characteristics, its origin, varieties, record, natural history, enemies, and results. In it the views of Huxley, Darwin, Tyndall, and Herbert Spencer are discussed in a temperate and fair spirit; the enemies of life are brought under consideration, especially pestilence, famine, intemperance, and the insanitary conditions which give rise to disease; and the lessons taught under the "results of life" are well deserving of serious consideration. The book is calculated to promote the purpose for which it was written, and to satisfy the young men to whom the lectures were addressed that "life is full of meaning, full of power, and full of grandeur, when we look at it in the light of God's Word, and when we accept the teaching that Word gives us concerning its present purposes and its eternal issues."

The Medicine Stamp Tax. By C. E. MEETKERKE. London: Wyman and Sons. 1884.—The question of the repeal of the Medicine Stamp Tax has of late attracted so much attention that we record with pleasure the appearance of a work which deals exhaustively with the subject. It is, we believe, mainly due to the action of THE LANCET that the matter has been so warmly taken up by almost all classes of society. Nearly two years ago we pointed out the evil of a practically unlimited sale of poisons under the thin but misleading guise of "patent medicines." It would not be tolerated for a single instant, but that a considerable income is derived from the sale of stamps. We are glad to find that the author of the work before us entirely coincides with this opinion, and considers that it is a disgrace to the State to derive income from a source which is clearly not for the public good. The arguments are set forth clearly and logically, and in a manner calculated to carry conviction to the mind of the reader. The Chancellor of the Exchequer will do well to study it carefully.

Canadian Pictures, drawn with Pen and Pencil. By the Marquis of LORNE, K.T. With numerous Illustrations from Objects and Photographs in the possession of, and Sketches by, the Marquis of Lorne, Sydney Hall, &c. Engraved by Edward Wymper. London: Religious Tract Society.—To all who are interested in the history and present condition of Canada—and they are a numerous and increasing class—this handsome volume will be very welcome. It teems with information acceptable alike to the political economist, the naturalist, and the intending emigrant; whilst the beautiful illustrations, the graphic descriptions, and the judicious comments with which the book abounds must gain for it a favourable reception with the general reading community. In order to lessen the amount of ignorance prevailing amongst the British public of the affairs of England's dependencies, the noble author of the volume suggests that information respecting them might with advantage be systematically imparted in the course of instruction adopted in our universities and schools. On the question of climate the author corrects some prevalent misapprehensions. The climate of Canada, he says, has honest heat in summer, and honest cold in winter. Sometimes the thermometer indicates 90°F. in August and 30° below zero in January. But the dryness of the air is so great that the inconvenience and disaster which such intense cold might be expected to entail on the inhabitants are but little felt. McGill University comes in for a brief notice. It is described as a popular seat of learning, with an ever-increasing roll of students in all the faculties, and a gradually lengthening list of endowments. The author gives some interesting sketches of Indian life and customs. The natives are credited with a considerable amount of skill in the use of herbs as remedies for slight ailments; the squaws especially are adepts in the making of decoctions and poultices from trees and shrubs whose healing properties are known to science, and instances of remarkable relief having been obtained by the exhibition of Indian medicaments are narrated. The natives make great use of the sweating bath, which consists of a small arbour formed of interwoven branches of trees, within which are placed heated stones, the steam being generated by pouring water over them. No one can read this book without being impressed with the importance of the "New Dominion" to the interests of the mother country. Its features are portrayed in glowing colours by one who is well qualified to judge of its merits, and who concludes his book by exhorting "those who see the misery, the hopelessness, the overcrowding, and the unhealthiness of the thronged quarters of our great cities" to "rejoice that within fourteen days of London, Glasgow, Liverpool, and Manchester land and healthy life can be provided for all sound in health and limb."

Journal of Anatomy and Physiology. Vol. XIX. Part 1. October, 1884. Edited by PROFESSORS HUMPHRY, TURNER, and MCKENDRICK. Macmillan and Co.—This part contains the following memoirs:—1. Histology of the Vitreous Humour, by Arthur C. Young, and Plates 1 and 2.

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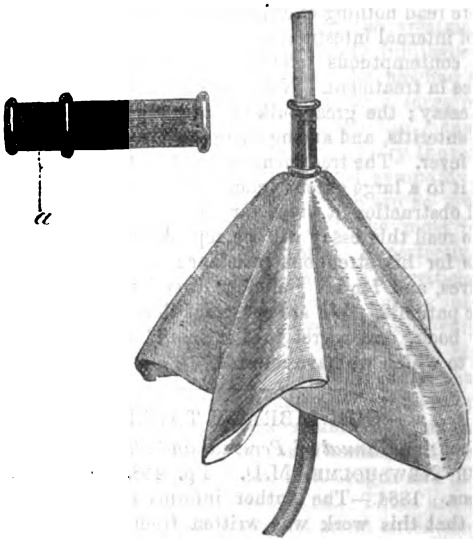
2. The Comparative Variability of Bones and Muscles, with Remarks on Unity of Type in Variations of the Origin and Insertion of Certain Muscles in Species unconnected by Unity of Descent, by G. E. Dobson, F.R.S. 3. Congenital Malformation of the Trachea of a Horse, by F. Smith. 4. Nature of Ligaments, by J. B. Sutton, and Plate 3. 5. Osteology of Numenius Longirostris, with Notes upon the Skeleton of other American Limicolæ, by R. W. Schofeldt, and Plates 4 and 5. 6. The Anatomy of Acquired Flat-foot, by J. Symington, and Plate 6. 7. New Method of cutting Sections for Microscopical Examination, by James W. Barrett, M.B. 8. New Method of demonstrating Scheiner's Experiment, by James Barrett. 9. Abnormal Disposition of the Colon, by R. Bruce Young. 10. Delineation of Skulls by Composite Photography, by Arthur Thomson, and Plate 7. 11. Repair of Wounds and Fractures in Aged Persons, by Professor Humphry. 12. Case of Abnormal Development of the Coronary Arteries of the Heart, by F. Charlewood Turner, M.D. 13. Abnormal Ureters, by W. Stephenson Richmond.

Essay on the Experiences and Opinions of John Howard on the Preservation and Improvement of the Health of the Inmates of Schools, Prisons, Workhouses, Hospitals, and other Public Institutions, as far as Health is affected by Structural Arrangements relating to Supplies of Air, Water, Drainage, &c. By R. D. R. SWEETING. Pp. 96. London: Baillière and Co. 1884.—This essay, which gained the Howard Medal of the Statistical Society and a prize of £20, contains, in a condensed form, the reports made by Howard on the sanitary condition of the various public institutions which he visited, at home and abroad, with his recommendations respecting their construction and management. It shows clearly how far ahead he was of the times in which he lived, and to what an extent he anticipated, in his recommendations, the measures which are now held by the best authorities to be essential to the preservation of public health. It brings him before us as a philosopher, a philanthropist, a social reformer, a statistician of no mean order, and an able, clear-headed sanitary pioneer.

New Inventions.

APPARATUS FOR REMOVING FALSE MEMBRANE FROM THE TRACHEA.

THE sad death and self-sacrifice of Dr. Rabbeth was clearly owing to the absence, at hand, of some efficient mechanical appliance for extracting the diphtheritic membrane from the trachea. It is now nearly nine years since I first made use of the aspirator for removing from the trachea inflammatory products threatening to cause suffocation, but finding the utility of the aspirator greatly interfered with, owing to the air being drawn into the trachea by the side of the suction tube, and thus destroying the vacuum, I devised the apparatus figured in the accompanying woodcut. It consists of a hollow piece of vulcanite, about an inch long, passed through the centre of a piece of wash-leather, or what is better, a thin piece of Dr. Scott Alison's impermeable lambskin, about six inches square, which is then tied to a groove (*a*) about a quarter of an inch wide, situated at one end of the piece of vulcanite. The hole through the piece of vulcanite is made a little smaller than the suction tube of the pneumatic aspirator which it surrounds, so that, although the vulcanite can be easily moved along the tubing when the latter is diminished in circumference by stretching, it nevertheless grasps the tubing, when not extended, sufficiently to prevent slipping. Without the piece of vulcanite the wash-leather could not be tied sufficiently tightly to the suction tube to prevent air passing between them and yet allow the position of the wash-leather, as regards its distance from the end of the suction tube, to be readily changed. To apply the apparatus, wet the wash-leather, and as the suction tube has been inserted into the tracheotomy tube or trachea, as the case may be, spread out the wash-leather over the neck of the patient, to prevent all entrance of air except through the mouth, and then turn the tap of the aspirator. By preventing air from entering the tracheotomy tube from without, the full power of the aspirator is available for extracting whatever substance may be in the trachea; but the suction power must of course be regulated as circumstances require. Although the diphtheritic membrane is rarely carried into the exhausted bottle, it is drawn sufficiently far into the suction tube to allow of its being pulled out of the trachea when the suction tube is withdrawn. I keep in my tracheotomy case a piece of indiarubber tubing already passed through the vulcanite with wash-leather attached, so that the wetting of the leather and slipping one end of the tubing over the suction nozzle of the aspirator, which is all that has to be done to make it ready for use, is the work of only a few moments. In the absence of an aspirator, a large syringe might be used to create the suction power. As all rubber goods when not in constant use are liable to perish quickly, the tubing should be seen to several times a year. Dr. Scott Alison's impermeable lambskin consists of wash-leather covered on one side with a thin layer of indiarubber. It is sold by Messrs. Ewen, 106, Jermyn-street, W.



Mansfield-street, W. T. MARK HOVELL.

ACADEMY OF MEDICINE IN IRELAND.

THE second annual meeting took place at the Royal College of Surgeons in Ireland last week, presided over by the President of the College. The office-bearers for the ensuing year were elected, but few changes taking place in the various sections. The Council had recommended a presentation of £100 to Mr. Thomson for his services as general secretary, but that gentleman very properly refused to accept it. The proposal last year caused a considerable amount of opposition, and it would have been in better taste if the Council had not sent a recommendation of the kind for the sanction of the Fellows. A resolution of Mr. Swanzy's was adopted, to the effect that it be referred to the General Council, with recommendation that the Academy should endeavour to encourage original research by grants or otherwise, and to report on the subject. The proposal that in future the election of Fellows should be made at general meetings of the Academy, and that all Fellows should the right of voting, was lost by four voters.

THE POLLUTION OF THE LEA.—At a well-attended public meeting held at Hackney on the 28th ult., a resolution declaring that nothing was feasible to secure the purity of the Lea short of an intercepting sewer to carry the sewage of Tottenham, Walthamstow, Leyton, and West Ham, after treatment, to the Thames at Barking, and that the Home Secretary be memorialised on the subject, was carried.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 8, 1884.

WITHOUT ceremony of any kind the most successful show which has been seen in this country since 1851 came to an end on the 30th ult. The grand total of visitors had reached 4,167,000, or an average of 27,000 per diem from May to November. The secret of the success was doubtless due to the breadth of the Exhibition, if we may use such a term, and to the fact that the articles displayed and the amusements provided were calculated to suit all tastes and to interest everybody, from the philosopher to the village housewife. If we are to have a continuance of such exhibitions (and this desirable project is entertained), it is of course essential that they should pay financially. Any lasting good which may be derived from an exhibition such as that which is just closed is (in this country, where voluntary effort takes the place of State endowment) contingent on financial success. When the guarantors are called upon to make good a deficit, we shall have seen the last Exhibition. The managers of the Health Exhibition did wisely to spare no effort to make the Exhibition attractive. Illuminated gardens, bands of music, concerts and restaurants, were the attractions which brought the crowd and paid the bill, and if a certain percentage of the visitors never succeeded in dragging themselves away from the sensuous pleasures of the gardens, no possible harm has been done. Some of the writers for the daily press seem to have been of the sensuous order, and because the pleasures of an open-air concert and a cigar have kept them from more serious studies, they seem inclined to pooh-pooh the whole affair, and to ridicule the idea of any permanent good resulting from the Exhibition. We do not share this view, but, on the contrary, believe that very few can have visited the Exhibition without deriving some benefit or instruction therefrom. If the Exhibition had its glittering side, it certainly had its serious side as well: and if no good results or lasting impressions remain, the fault lies with the public and not with the promoters. The fact is that while the many have been amused, the few have been instructed. There will be, we are told, twenty stout volumes as the literary outcome of the Exhibition, and this represents a large amount of serious work, produced at great cost.

The library, containing some 7000 volumes on Health and Education, has been very largely used during the summer, the number of readers showing a steady increase. The readers of THE LANCET do not require to be reminded of the Biological Laboratory, which we have been at great pains to reproduce as graphically as may be in our columns. The scientific lessons taught in this laboratory have been of undoubted value, and have succeeded in drawing public attention to the study of bacteriology, which hitherto has been too much neglected in this country. Of Lectures, Conferences, the Sanitary and Insanitary Houses, and of the various exhibits of scientific interest we say nothing, except that they were all at hand for those who had eyes and ears, and taught not a little when these were accompanied by intelligence.

The questions now arise, What is the surplus, and what is to be done with it? The second question is necessarily dependent on the first, and the destination of the surplus must clearly depend on its amount. That there will be a surplus seems certain, and we hope that it may be substantial, but it must not be forgotten that the expenses of the Exhibition have been enormous, and until the accounts are all rendered it is useless to speculate. The Executive Council is well qualified to advise the Prince of WALES as to the bestowal of the surplus funds. There is a rumour that efforts will be made to found a Central Institution for the Instruction of Sanitarians of all grades—an institution which will gather under its wing the various voluntary efforts made by different societies. Our readers will remember, however, that we recently urged with much earnestness that no use of the profits of this great Exhibition could be more satisfactory than to apply them to the creation and endowment of a biological or a bacteriological laboratory, wherein the nature and properties of germs might be investigated. This country has been lamentably behind other countries in this branch of investigation—notably behind France, Germany, and Italy. The admirable remarks of the Duke of BUCKINGHAM, or rather of the Executive Committee of which he is the spokesman, happily show that this discreditable defect in our State provisions is being realised by public men. After referring to the hygienic laboratories, biological and physical, as a leading feature of the Exhibition, his Grace said:—"The maintenance of the laboratories would ensure a means of sanitary research and teaching for the future which England has not had in the past. In these laboratories studies could be carried on and teaching could be given of a kind similar to that which is afforded by various foreign institutions which have been established in the interest of public health. These studies have a direct bearing on the relation of health problems which not only affect the well-being of communities, but exercise an important influence on agricultural and commercial interests." We cannot doubt that his Royal Highness will heartily adopt the views thus foreshadowed for his approval, which we trust to see enforced in the further report promised by the Committee. The Exhibition has been a success as a show and as a financial undertaking. But it will live much more honourably in history if it is associated with a new and permanent impulse to sanitary science. It may seem monstrous that the happiness and prosperity of great nations should be at the mercy of bacteria, beings which, judged by their weight and size, are quite contemptible; but we have to do with facts, and it looks certainly like a fact that such is the case. At any rate, the truth has to be found out. And if this kingdom, which has done so much in the way of leading sanitary science, is not to sink into a third-rate position amongst enlightened nations, it is high time to be showing some sign. We have competent men. We hold the country in which cholera has its seat and home. We practically hold the gate through which it passes thence to Europe to work such vast destruction and disaster as we have seen this year in France and Italy. On every ground we ought to be foremost in the

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investigation of great Health questions. The Exhibition itself may have somewhat disappointed those distinguished foreigners who came looking for light on deep questions of sanitation. But if it ends in the establishment of a Hygienic Laboratory, with well-equipped apparatus, and with liberal endowments for those who undertake research, the country of JENNER and CEELY, of PARKES and SNOW, and of SIMON and LISTER will not need to fear comparison or competition with the countries of PASTEUR or of KOCH, or of TOMMASI CRUDELI.

We again venture to express the hope that our great Hospitals, which exist to restore the lost health of the poor, may not be forgotten by the Committee in the distribution of any surplus. These institutions are inexpressibly useful, and at the present time extremely in need of help.

ONE of the most cogent arguments on which the adversaries of the doctrine of the localisation of cerebral function base their opposition is drawn from the difference of symptoms which may be observed between a similar lesion in man and animals. This argument, which possesses no scientific value, has frequently been refuted. Nevertheless, some experimental physiologists weigh in the scales clinical observation against experiments on dogs, rabbits, pigeons, and frogs, and many physicians insufficiently grounded in the question still remain in doubt. To speak plainly there is no contradiction in the evidence. When physicians state that in man certain destructive lesions of the brain always give rise to permanent paralysis of the opposite side of the body, they merely formulate a law which is founded on a considerable number of regular and concordant observations, which cannot be diminished in value by any experimental observation. When, on the other hand, physiologists assert that in the rabbit or pigeon destruction of the cerebral hemisphere does not produce persistent paralysis of the members of the opposite side of the body, and when ocular demonstration is given of the fact, it would be contrary to all scientific logic to contest the statement under the plea that the results were different in man. The field of clinical observation and that of experimental pathology, however much they may lead to the same end, are distinctly separate and ununited. PITRES has contributed an article to the above effect in the *Journal de Médecine de Bordeaux* and has collated the main facts concerning secondary degenerations, which he intends to contribute in full to some forthcoming numbers of the *Archives de Physiologie*. In man the principles which govern the production and topographical distribution of degeneration of the pyramidal tracts as the result of partial destructive lesions of the brain may be stated in the three following propositions. Even very extensive destructive lesions of the "non-motor" regions of the cerebral hemispheres never give rise to secondary degenerations. Destructive lesions of the "motor" region, however limited in area, are always followed by secondary degeneration. The degenerations descend in the lower layer of the cerebral peduncle, in the pons, and into the anterior pyramids of the side opposite to the lesion, a course which accurately corresponds with the well-known path of the pyramidal tracts. In the spinal cord below the decussation of the pyramids the degeneration does not invariably occupy the same regions of the cord. Sometimes the pyramidal bundles pass down only in the opposite lateral column (TÜRCK, CHARCOT, BOUCHARD); sometimes they descend in the opposite lateral column and in the anterior column on the same side as the cerebral lesion; lastly, they may proceed downwards symmetrically in the two lateral columns (PITRES). In all cases the area of degeneration is relatively considerable in extent, and may be estimated at several square millimetres.

In dogs and cats destructive lesions of the occipital lobes do not bring about secondary degenerations of the spinal cord; but similar lesions of the convolutions bounding the crucial sulcus are followed by an appreciable degeneration, which occupies the middle and internal parts of the inferior aspect of the cerebral peduncle, pons, and anterior pyramid of the medulla oblongata on the same side as the cerebral lesion. In the spinal cord the degenerated band is very slender, and generally occupies the lateral column on the side opposite to the cerebral injury. Sometimes PITRES has found symmetrical alterations in the two lateral columns of the cord, but the inner portion of the anterior column has never been altered. In all cases the extent of the area of degeneration in the cord is much less than that of the corresponding area of sclerosis in the cerebral peduncle or pons. Proper allowance being made, the area of degeneration in the spinal cord of these carnivorous animals is relatively and absolutely much less than is found in man.

In rabbits and guinea-pigs destruction of the occipital lobes produces no secondary degeneration. Destruction of the excitable region of the cerebral cortex gives rise, on the contrary, to a descending degeneration, which is easily followed in the peduncle, pons, and anterior pyramid of the same side; but, contrary to what happens in the dog and the cat, the degeneration does not pass beyond the lower part of the medulla oblongata; no sclerosis occurs in the spinal cord.

In pigeons and fowls ablation of the whole of a cerebral hemisphere does not cause any sort of descending degeneration, either in the brain or spinal cord.

A comparison of the above facts leads to the conclusion that the anatomical communications connecting the brain with the spinal cord are not established as a uniform type throughout the vertebrata. In man, a great many of the fibres which start from the motor region of the cerebral cortex are prolonged directly into the spinal cord, consequently the direct cortico-medullary fibres are very numerous. In the dog and cat the greater part of the fibres which start from the excitable convolutions are arrested in the grey nuclei of the pons and medulla oblongata, so that the direct cortico-medullary fibres are relatively less abundant. In rabbits and guinea-pigs all the fibres which begin at the excitable areas cease at the protuberance and bulb; there are no direct cortico-medullary fibres. Finally, in birds the cerebral lobes are not united by distinct bundles to the subjacent parts of the neural axis; these animals have no pyramidal tracts,—or rather this tract, if it does exist, does not begin in the cerebral lobes properly so-called. Bearing these facts in mind confusion seems to pass away when we wish to know how it is that destructive lesions of the brain produce permanent and marked paralysis in man, slight and

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transitory in the dog, diffuse and fugitive disturbances of motility in the rabbit, and no disorder of motion in birds.

A SOLITARY case of small-pox in Illinois, that of an immigrant arriving in Chicago in the eruptive stage of the disease, in November, 1879, led to a widespread epidemic throughout the State. The greatest intensity of the disease was in the winter of 1881–82, and the outbreak can only now be regarded as at an end. In the fifth annual report for the State an attempt is made to calculate the cost of the epidemic, reports having been sent in with a view to this. All districts did not report, but it is assumed that the cost per case was the same in the localities from which no news came as it was in the others. The actual cost of dealing with an individual case is first taken, and to this is added what are termed the constructive losses, which include losses to common carriers by interruption of travel and traffic, and to businesses of all kinds by panic, quarantine, &c. Taking the entire State except Chicago, it is estimated that the actual cost incurred in connexion with 2040 cases which were reported amounted to over $281,000,000, and that the constructive losses spread over 14,520 days reached over $3,339,000,000. In Chicago itself the same two items amount to nearly $783,000,000, and the expenses to the entire State from January 1st, 1881, to December 31st, 1883, during which period the disease prevailed as an epidemic, amount in all to close upon $4,404,000,000. This total sum does not include expenses for vaccination, which, in Chicago for example, is performed gratuitously; neither does it take account of the value of human life lost, time wasted, and a variety of speculative items often included in such estimates. In the face of such facts it is hardly surprising that prominence is given to the value of the order relating to compulsory vaccination as introduced into the State. It is certainly limited in its application to schools, but it is reported that whereas on the commencement of the epidemic schools were closed in very many instances, yet that they were reopened on the advice from the Board that enforcement of the vaccination was the only safeguard; and later on it appeared that in only two instances out of a total of 12,000 schools in the State was closure resorted to on account of small-pox.

ATTENTION has lately been directed to the fact that the money difficulties in which many hospitals are now involved are partly due to the too indiscriminate relief which has been afforded by them to persons whose social standing is much above the average position of out-patients. It would seem as if the hospital authorities, having their time occupied with the diagnosis and treatment of the sick who apply to them, do not care to weed out the social grades whose true place is outside the sphere of gratuitous practice; so those who apply are taken as they come. Applicants of the kind in question do not necessarily mean to deceive the hospital authorities as to their ability to pay a fee. Doubtless they do sometimes—as when they send their children, as they have been known to do, under the name and care of some poor dependent to benefit by superior professional skill, free of cost, at some public institution. In other cases they attend the hospital practitioner's clinic simply because they are more familiar with his official than with his private time and place of consultation. In either case they and theirs are out of place in the hospital waiting-room. Emergencies of course allow no rule but that of present necessity. After making every fair allowance and deduction, however, there still remains a number of non-indigent applicants for free relief, who should, in justice, be eliminated from the hospital *clientèle*, and advised to seek the services of a practitioner near their own homes, or, if they prefer it, to attach themselves to the ordinary practice of the hospital physician or surgeon.

The records of dispensary work could furnish instances of a similar, though more limited, misuse of public trust. Workmen's clubs, again, are notoriously unscrupulous in stretching their brotherly consideration to cover wide diversities of status and income. Well-to-do shopkeepers, master builders, and the like, swell the number of their *quasi*-artisan constituencies. How long shall medical men continue to countenance and support such needless benevolence? The measure of professional charity is surely full when they have applied themselves to meet the demands in sickness of the really poor. There is a limit to their encouragement of thrift on the part of those who have enough for daily wants and something over, and it must be evident that to carry charity to those who can and should contribute to it is to lessen the supply available for its proper objects.

The remedy for these abuses, we have seen, consists in the direct exclusion of all persons whose income fairly represents a position in the middle rank from the benefits primarily intended for the lower class of mechanics. Who shall apply this remedy? The rule that one should do for himself what he wishes well done applies here. The treatment of this social evil had probably best be left in the hands of the medical practitioner. The other officials of a hospital or dispensary, or the agents of a benevolent society, can render valuable assistance, but the personal earnestness and conscientiousness of members of our profession should chiefly be relied on to decide whether its generosity shall be the boon of the needy or the shrewd investment of some prosperous man of business.

Annotations.

"Ne quid nimis."

MR. GLADSTONE ON THE REPRESENTATION OF MEDICINE IN PARLIAMENT.

MR. GLADSTONE has caused the following answer to be sent to the Committee of the Association of Members of the Royal College of Surgeons who had desired the Parliamentary representation of registered medical practitioners:—

10, Downing-street, Whitehall, Oct. 29th.

SIR,—Mr. Gladstone has had the honour to receive the communication which you have made to him on behalf of the Committee of the Association of Members of the Royal College of Surgeons, urging that provision be made for the representation in Parliament of the medical practitioners of the United Kingdom. In reply, I am directed to say that Mr. Gladstone readily admits the title of the Committee to raise a question of this nature, but he cannot think that their particular proposition would commend itself to the judgment of Parliament. He would gladly welcome the presence of more members of the medical profession in the

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House of Commons, but in his opinion this can only be secured by the means which are at present open to all other professions. I am to add that Mr. Gladstone is unable to admit the contention in your letter that other learned professions are directly represented in the Legislature.

I am, Sir, your obedient servant,
E. W. HAMILTON.

This reply, though very much what we expected, is not satisfactory. Mr. Gladstone denies the direct representation of the other learned professions in the Legislature. He will scarcely deny that they are both directly represented in the House of Lords. The Lord Chancellor is surely not an accident there; neither are the bishops there by chance or by any indirect system of representation. The Lord Chancellor represents Law, and the bishops represent the Clergy and the National Church. The great profession of Medicine has more to do with the happiness and welfare of the people than that of Law, and nearly as much as that of Divinity. Yet such is the defective nature of our Legislature that it is but slightly represented in the Lower House and not at all in the Upper. It is not congenial to medical men to fight the rough battles of the hustings. The weapons of their warfare are not fitted for that kind of strife. But none the less are they entitled to be recognised in every wise State by an honourable place in its Senate.

PANICS IN PUBLIC ASSEMBLIES.

WE have so repeatedly and at such length, from points of view special as well as general, discussed the subject of panics in public assemblies, that it is difficult to offer any suggestion that can claim notice on the score of newness. There is, however, more than sufficient food for thought in this topic, and, without dwelling on the details of the recent lamentable occurrence at Glasgow, or attempting to determine the exciting cause of the catastrophe, which is, indeed, *sub judice*, it may be worth while to offer a few observations on the matter as a whole. Panics will take place as long as assemblies are held, and without in the least abating anything of the remonstrance we, in common with our contemporaries, have from time to time addressed to local and central authorities against the neglect to *enforce* proper precautions, it must be conceded that, even if the assembly in which a panic occurs consisted of a dense concourse of people in the centre of an open plain, without buildings or rails, or anything whatever to prevent the crowd from dispersing, dire accidents would be sure to befall the innermost of the persons congregated, and deaths would probably ensue either from pressure, suffocation, or trampling. It is therefore useless and misleading to wholly blame the surroundings of a panic-stricken crowd for the commotion which occurs in it, or for the consequences which ensue when silly, or, for the moment, senseless, people rush madly on their own destruction. The real fault is in the average mind; and, unfortunately, the very dwelling upon these "accidents," and the word-picture painting of their horrors in the newspapers, inevitable and necessary as publicity must be deemed, are evils inasmuch as they aggravate the susceptibility to panic which, above all things, it is most desirable to reduce and relieve. If only reason could be retained, and weak-minded and excitable folk would not go stark raving mad the instant some fool or knave cries "Fire" in a public assembly, all would be well. No punishment is too great for the wanton scoundrel who raises a needless terror. He is worse than a murderer. Hanging is too good for such a criminal. No words can adequately express the indignation that must be felt against an offender of this class; but the fatuous and contemptible excitability of the majority of sight-seers is scarcely less abhorrent to common sense and humanity. Is life so very precious, is death—the inevitable—so appalling, that the poor mean fool must lose his wits and forget everything but his miserable lien on existence the moment this right of property seems to be assailed? If half a dozen savage dogs, or a few stalwart men with cart-whips, could be let loose on a panic-stricken assembly, the best possible treatment would be adopted. This is how the shrieking multitude ought to be reduced to order. We begin to think stern reproach should take the place of compassion for the victims of panic. Harm has been done, and is done, by laying too much stress on the need of special precautions. Let crowds be taught to take care of themselves. Let those who go to crowded assemblies of all sorts and conditions clearly understand that they go with their lives in their hands, and at their own sole risk; that they must shift for themselves, and if they behave like idiots they must take the consequences. This is the line of argument which strikes us as not merely politic but proper to the case. There is too much trusting to others, and to the provisions for safety which the managers of public assemblies ought to be compelled to make. It is nonsense, idle and worthless ignorance, to talk of the possibility of emptying a building in so many minutes or seconds. All such calculations are rendered useless and inapplicable the instant a panic occurs. A doorway out of which ten men might walk abreast would not suffice for the safety of even one hundred persons if they all rushed to it at once. The *reductio ad absurdum* is made by almost every "accident." The wider the exit the greater the rush, and the greater the rush the greater the accident, without regard to the structure or the way of exit. If a thousand persons can be quietly got out of any building in two minutes, the whole thousand will be jammed together in trying to get out in half the proper time. It is the madness that causes the calamity, not the limitation of the means of exit, provided always that these are fairly adequate. Something must be done to secure immunity from panics, and still more needs to be done to induce or compel persons to act as sane creatures instead of lunatics in the face of danger. We would urge this subject on the consideration of members of our profession and the public generally. Lectures on the folly of panic might with advantage be delivered from time to time, and it would be well if a serious attempt were made in every city, town, and populous district to discipline crowds and to inculcate the great lesson of safety, which consists in the experience that cowardly craziness in the presence of real or supposed danger is alike discreditable to men, to women, and even to little children, who ought to be taught betimes that all *must* die, and that to run madly away from death is to surrender the claim to live, and to show that the gift of life has been unworthily bestowed, and is unmerited.

PEPTONISATION.

AN important contribution to the physiology of albumens has recently appeared from the pen of Herr Chandelon. It is well known that peroxide of hydrogen is decomposed with the evolution of oxygen in the presence of fibrin and organised tissue as well as of several metals and oxides; and it has generally been stated that this dissociation takes place without the albuminoids or metals undergoing any change. No evolution of oxygen occurs when other organic substances are brought into contact with the peroxide of hydrogen. Herr Chandelon suspected that in this latter case there might be a reaction, though it was not perceptible because the oxygen was used up in oxidising the organic matter. In order to test this suspicion, egg albumen was suspended in water and exposed to the action of nascent peroxide of hydrogen. At first sight there was no result, for neither leucin nor tyrosin was detected. Nevertheless, it was observed that the albumen had undergone some change, in that the volume of the precipitate produced by boiling the mixture gradually diminished, whilst the liquid after

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separation of the coagulum by filtration gave upon treatment with alcohol a copious precipitate, which, upon being redissolved in water, gave all the reactions of an albuminoid substance. Further investigation left no doubt that the albumen had, partly at least, been converted into peptone; it was therefore of interest to study the reaction more closely, to isolate and identify the intermediate products. Herr Chandelon found that peroxide of hydrogen in the nascent state peptonises egg albumen, and peptonisation may be considered a phenomenon of hydration—an opinion that is supported by the formation of peptone from albumen by reagents capable of fixing water, such as dilute acids, alkalies, &c., and the reconversion of peptone into albumen by a dehydrating material like acetic anhydride. It is suggested that the albumen (anhydride) gives up an atom of oxygen to the peroxide (H_2O_2), just as oxide of silver does, and that the two groups that had been united by the oxygen then combine with two hydroxyls. The conversion takes place by the same process as in digestion with peptic ferments. The author puts forward the hypothesis that the digestive ferments promote digestion by the production of peroxide of hydrogen. These results appear to throw light upon some unexplained phenomena met with by M. Béchamp in his investigation on the constitution of albuminoids, and are in accord with the behaviour of the papaine ferment observed by M. Wurtz. It would be interesting to know if peptones so formed are devoid of the bitterness which is an objection in those formed under the influence of ordinary ferments.

THE LATE DR. RABBETH.

WE are glad to see that a meeting to perpetuate the memory of Dr. Rabbeth has been held at King's College. At King's College School, in the medical department of the college, and in the hospital, Dr. Rabbeth received his education and training; at the University of London he took his degree; and at the Royal Free Hospital he was in charge of the wards when he performed the heroic deed which caused his death. It is only meet, therefore, that the representatives of these various bodies should join his colleagues, fellow-students, and relatives in commemorating the brave manner in which he did his duty—and died. The committee which has been formed, under the presidency of the Archbishop of Canterbury, is so large and comprehensive that no distrust can be entertained as to the thoroughly loyal manner in which any funds entrusted to it will be administered. We feel sure that the profession and the public will not only be glad to subscribe willingly, and thus testify their admiration for so noble a self-sacrifice, but will be also thankful for having the means pointed out by which practical good to the sick poor may be associated with the memory of a lost medical hero.

DEADLY TOYS.

WE have again to call attention to the extremely dangerous nature of many of the playthings put into the hands of children. A boy aged five has recently died at St. Thomas's Hospital from injuries caused by swallowing a "puff-dart." While amusing himself with the toy, the child suddenly drew in his breath and the needle of the "puff-dart" passed into the air passages. The boy died at the end of a month with symptoms of dyspnœa. At the post-mortem examination, the needle, with the worsted attached, was found to be lodged in the lower part of the trachea and firmly wedged in the left bronchus; there was also very intense suppurative lobular pneumonia affecting the lower lobe of the left lung. This case adds one more to the long list of fatal accidents caused by dangerous toys. It is to be hoped that ere long the Legislature may be induced to deal with the subject.

SIR WILLIAM MURE MUIR, K.C.B., M.D.

ON Saturday last the life-size portrait in oils of the above-named lately retired eminent chief of the Army Medical Department was presented to Lady Muir, in the name of the officers of the medical staff serving in all parts of the British Empire. Owing to the much-regretted serious illness of Sir William Muir, it was found necessary to dispense with the deputation which it was intended should formally present the portrait, and the proceedings were therefore strictly private. The portrait, a three-quarter length, by Mr. W. R. Symonds, whose numerous exhibits at the Royal Academy have been so justly admired, is a most striking likeness, and elicited warm commendations as a work of art, not only from the recipient, but also from all who had seen it at Mr. Symonds' studio. The original picture (of which this portrait is a replica) is by the same artist, and adorns the walls of the medical staff mess at Netley, forming there not only a permanent memorial of Sir William Muir, but also a lasting testimony of the high appreciation by the officers of the medical staff of the pre-eminent services rendered by him to the Army Medical Department.

"SUSPECTED POISONING."

WITHIN the last few weeks Dr. Danford Thomas has had to adjourn inquests for the purpose of obtaining further evidence as to the cause of death in three cases of suspected poisoning. In the first of these, a woman named Flagg, aged sixty-six, died whilst under the treatment of Dr. W. H. Day. This gentleman was prepared to give a death certificate, but a sister of the deceased had suspicions, not well grounded as it transpired, that poison might have been administered. At the post-mortem examination the kidneys were found to be granular and wasted. There was double hydrothorax. The heart was greatly hypertrophied and dilated, and the pericardium was adherent to it. The stomach, which was empty, presented no signs of irritation or of corrosion. The persistent vomiting from which the deceased suffered thus received a sufficient explanation. In the second case, Sarah Hickmott, aged twenty-six, died after a few days' illness, and immediately after she had aborted, although there had been no excessive hæmorrhage. Mr. Hunter of Clerkenwell was sent for, and on his arrival found the woman dead. The coroner ordered an inquiry on the information that criminal abortion might have been procured by the administration of some drug. An exhaustive chemical analysis of the contents of the stomach and of some powders and mixtures taken from the house of the deceased was made, but with negative results. The post-mortem evidence was unsatisfactory on account of the advanced state of decomposition of the organs. In fact, it was stated that the features were scarcely recognisable thirty-six hours after death. Unfortunately no urine was obtained, and so the question of albuminuria complicating pregnancy remained unsolved. That this explanation was probably the correct one, however, is supported by the fact that the deceased had frequently complained of severe and persistent headache. It may be noted that the liver and other organs were so soft that poisoning by phosphorus suggested itself. The analysis proved, however, that this was not the case. The difficulty in arriving at a conclusion was increased by the death having taken place without anyone witnessing it. In the third instance, Helen Dickenson, aged thirty, was found in bed quite insensible, and in a dying condition. It was surmised that she might have committed suicide. At the first autopsy certain signs were observed in the stomach and mouth which the medical man who conducted it held to be consistent with irritant poisoning. He also found three dark round bodies in the stomach which in external appear-

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ance resembled pills, and for which, in fact, he mistook them. A further examination led to the conclusion that the death must have been due to asphyxia; that there were no signs of organic disease of the internal organs sufficient to account for the fatal issue; and, lastly, that the supposed pills were grocer's currants. An analysis of the contents of the stomach showed the absence of cyanide of potassium, the only poison likely to account for death under all the known circumstances. It was elicited that the deceased had been treated for "fainting fits." There seems little reason to doubt that these "fainting fits" were attacks of petit mal, and that death occurred on the accession of the first seizure with clonic spasms.

ANTISEPTIC TREATMENT OF WOUNDS BY DRY AND INFREQUENT DRESSINGS.

DR. FRANCIS J. SHEPHERD has gone far towards reconciling apparently conflicting systems of wound treatment in the title which he has selected for a clinical lecture at the Montreal General Hospital, just reprinted from the *Canada Medical and Surgical Journal*. Rendering full justice to Sir Joseph Lister for having revolutionised wound treatment and rendered operations, once formidable and dangerous, comparatively safe, Dr. Shepherd announces himself a strong advocate for the system of dry and infrequent dressings of wounds advocated by Mr. Sampson Gamgee of Birmingham. The title of his lecture is justified by the use he makes of mercuric bichloride (1 in 1000), carbolic acid (1 in 20), for cleansing sponges, and carbolised catgut for ligatures and sutures. He sprinkles iodoform on his absorbent pads, and immobilises by means of pasteboard splints, made pliable by dipping in hot water. Dr. Shepherd gives an account of seventeen amputations without a death, and of eighty-six other operations with two deaths—one after excision of the tongue, from gangrene of the lung following erysipelas, and one from shock after ovariotomy. "Many of you," remarks the Canadian surgeon to his clinical class, "after you receive your degrees, will practise in country or other places where it will be difficult or impossible to carry out the elaborate ritual of Listerism in all its entirety. In dry dressing, however, you have a method of wound treatment that may be employed with as much success, and the materials for which may be carried in your breast pocket."

"LANCING THE GUMS."

A GREAT surprise gradually made itself apparent on Monday last to the Fellows of the Medical Society of London, when it became clear that the whole of the evening would be devoted to the discussion of so apparently trivial a subject as "lancing the gums." Elsewhere our readers may gather the opinions of the several gentlemen who joined in the debate. The Society was certainly indebted to Mr. Edmund Owen for the opening of so successful a discussion. The subject appears to us to be one eminently fitted for treatment by the logical method. And, first, what are the facts? At the outset it will be seen that we are anything but sure of our ground. No one will question the statement that some infants have ceased to cry and have returned to a quiet state of mind and body after the application of the gum lancet. That proposition is beyond dispute. But who can tell how many infants have continued to suffer after the free use of the lancet to the gums? It was, has been, and no doubt will be, asserted that convulsions, diarrhœa, and bronchitis are at times caused by the irritation of dentition. We do not deny that such may be the case. Of the fact that diarrhœa does occur during the period of the first dentition there is of course no doubt; and the same may be said of many other diseases. Granting the association to be so frequent that it calls for special notice, what views may be held on the connexion? The diarrhœa *may* cause the irritation about the gums and teeth; the irritation of the latter *may* set up the diarrhœa; or both diarrhœa and dental disturbance *may* be dependent upon some cause in the immediate background. Such are the possibilities. All the hypotheses may be right, and any particular instance may be best explained by one or other supposition.

THE SURGICAL STAFF OF THE HUDDERSFIELD INFIRMARY.

CONSIDERABLE dissatisfaction has been expressed by the honorary surgical staff of the Huddersfield Infirmary at the action of the Monthly Board of that institution in deciding, in addition to filling up the vacancy caused by the recent death of Mr. Brewer, upon the election of another full surgeon. Considering that the average number of in-patients during last year was eighty-two, and the total number of out-patients 5494, and that to meet the wants of these patients a staff of two physicians, five surgeons, and three fully qualified house-surgeons exists, we are of opinion that, judging from the facts as they have been represented to us, there is good ground for the dissatisfaction to which we have alluded. It is well known that persons who are fully able to pay the ordinary fee for professional advice are in the habit of procuring gratuitous medical relief at the infirmary, and assuredly an increase in the staff will not tend to check this abuse; again, by lessening the number of cases under each surgeon's care this proposed increase will diminish his chance of gaining experience, and thus tend to impair the ultimate efficiency of the institution. The honorary staff, with a few of the governors, have summoned a formal meeting of the subscribers to consider the action of the Board in thus slighting and ignoring the opinion and wishes of the professional staff, and we trust that as the result of the discussion wiser counsels may prevail.

STRAIGHTENING CROOKED NOSES.

DR. JOHN B. ROBERTS recently showed a patient to the Philadelphia County Medical Society upon whom he had practised a new operation for straightening a deformed nose. In this instance the end of the nose was bent over to the right. Dr. Roberts first passed a scalpel into the right nasal fossa, and divided the cartilaginous septum from above downwards and forwards; he then transfixed the upper segment of the septum with a pin, also passed in from the right nostril, bent it over into the straight line, and fixed its point far back in the left side of the cartilaginous septum. The left lateral cartilage was separated from the bone by subcutaneous section, and pinned over in a similar fashion. The pins were to be left in place for three weeks. Dr. Roberts stated that this operation had yielded him good results, and it had the great advantage of avoiding the use of cumbrous or unsightly apparatus.

DISORDERS MISTAKEN FOR HYDROPHOBIA.

A PAPER which was read before the Medical Society of the State of Pennsylvania during the present year is worthy of notice on at least two good grounds. The author, Dr. Dulles, has succeeded in giving a wide application to the group of symptoms which goes by the name of hydrophobia. It will perhaps be readily conceded that many diseases are characterised by the same symptoms though the mode of arrangement of the symptoms unquestionably varies widely. To recognise in a thorough manner the fact that medicine has its alphabet of symptoms, and that any disease must be constructed of the letters in this alphabet, is more than half the battle on the high road to a scientific understanding of medicine. Let the full extent of these propositions be under-

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stood, and dogmatism in scientific medicine must vanish. Admit, for example, that a disturbance of a transitory nature in the alimentary canal may give rise to the same and an equal number of symptoms as a cerebral tumour, and we believe that the goal of open-mindedness is reached. We do not assert that a differential diagnosis is impossible in the majority of cases; but that is not the question. What we should like to see more often than is the custom is the discussion of the diagnosis of cases on the basis of their elemental facts. This thorough dissection of symptoms has virtually been performed by Dr. Dulles in regard to hydrophobia. Another point of the paper which is deserving of commendation is the wealth of reference to the literature of rabies. There are, in this essay, no less than 300 apparently accurate references bearing directly on the subject.

A SCANDAL IN BERLIN UNIVERSITY.

PHILOSOPHY not seldom forgets to don the worldly robe of social tact. A neat little specimen of this general truth is now being exhibited to the Berlin University, and indirectly, to the world at large. Everyone familiar with science has heard the name of Du Bois Reymond, and nobody knows Dr. Schweninger. This sentence probably contains the pith and marrow of the pretty little scandal which is going the round of the German press. Dr. Schweninger enjoys the proud distinction of having reduced the corpulence of the Chancellor of Germany; for this merit he was made an Extraordinary Professor in the University of Berlin, where Du Bois Reymond has long lived in fame. The honour done to the reducer of the Chancellor's growing obesity did not greatly please the reducer's new colleagues. It appears that Dr. Schweninger left cards the other day at the residence of the Rector Magnificus, who showed his sense of the compliment thus paid him by returning them to their owner. A challenge was the result. Du Bois Reymond does not fight, and told his would-be opponent so. And thus a welcome subject for tattle has been furnished to the gossips by those who sit in academic furs and purple.

CRIME OR MADNESS.

WE are accustomed to see on the stage spectacles in which the villain of the piece is represented as wrecking a railway train by wilfully placing some obstruction on the rails. It is a serious question whether such scenes, "thrilling" as they may be, ought to be enacted for the public amusement. Certain forms of mental disease are known to be mimetic, and there seems to be reason to suppose that in one case at least a morbid mind has been so influenced as to perpetrate what, if it were not madness, would be an atrocious crime. Ex-captain Charles Newton Biggs is clearly a person who ought to be taken care of for more than one year, though that may prove long enough to develop and demonstrate his insanity. If he was not a lunatic, he would be a criminal of the worst possible class, much too dangerous to be again trusted at large.

FORGED FOREIGN DEGREES.

IT is an unpleasant fact that no less than two instances of an attempt to palm off forged Degrees of medicine of Vienna on the Faculty of Physicians and Surgeons of Glasgow were brought under the notice of the Medical Council at its recent meeting. These cases were referred to the Executive Committee for preparation for the consideration of the Council at its next meeting, and must therefore be considered *sub judice*. It is gratifying to know that in neither case was the culprit a registered medical man, though in one case he was a registered medical student. Henceforth we shall have to be on our guard against forged degrees as well as against bogus ones.

TYPHUS IN MANCHESTER.

AT a meeting of the Board of Guardians of the Chorlton Union attention was drawn to the prevalence of typhus in Manchester, part of the city being within the Chorlton Union. The disease commenced in August last, and since then thirty-four cases have been removed to the workhouse infectious wards, three have been sent to the Monsall Hospital, and five deaths have taken place. The disease still prevails, and a committee has been appointed to deal with the question of providing additional means of isolation. The outbreak has appeard in some of the worst localities in Chorlton-on-Medlock; the property being one which is generally condemned as a hot-bed of disease, and as unfit for human habitation. Indeed, pressure is about to be brought to bear upon the Manchester Corporation to purchase it and to convert it into an open playground, a plan which would afford a breathing space much needed in that portion of the city. It is to be hoped that very stringent measures of isolation, cleansing, and disinfection, will be adopted by the sanitary authority to get rid of the disease at the earliest possible moment, for the appearance of typhus at the onset of the winter in some of the worst portions of such a city as Manchester cannot be regarded without serious apprehension. Fortunately for the city the system of compulsory notification is in force.

IMPORTATION OF RAGS.

THE Local Government Board have extended the order forbidding the importation of rags from France and Italy until the close of the present year. The order forbidding the entrance of rags from Spain has been allowed to lapse. Rag importers are complaining greatly of the unequal working of these orders: for instance, in London the medical officer of health is carrying them out very strictly, no rags having been admitted for some time; while at other ports, notably Southampton, rags are freely admitted. Within the last fortnight no less than five or six consignments have been brought from St. Malo and Havre by the steamers of the London and South-Western Railway. Whatever may be the value of these orders from a public health point of view, it is certainly not right that they should be allowed to encourage trade at one port to the obvious injury of another. Naturally enough, the rag trade is slowly leaving London for Southampton.

PACINI'S MANUSCRIPTS.

THE Italian Education Minister is negotiating with Professor Pacini's heirs for the purchase of that pathologist's numerous and very important manuscripts. These include a diary kept by Pacini during several years of diligent experimental research. In the latter will be found a report, with almost daily entries, of cases during the cholera epidemic in Florence in 1855. The drawings of microbes were made with his own hand, after observations with a powerful microscope expresely constructed for the work.

FLOGGING GARROTERS.

IT would be a false and cruel philanthropy which could complain of the punishment administered by flogging to a man in gaol, on Saturday, for garroting with robbery. Hard labour is for a powerful man like the culprit in question a not excessive use of the strength which he possesses. Prison fare is sufficiently liberal to afford nourishment probably more wholesome, and more regularly obtained, than that which his habits out of gaol allow him to procure. It is somewhat difficult to see, therefore, how either of the latter penalties can act as a deterrent, though for a time it is necessarily a preventive, of

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crime. The fear which the lash almost invariably awakens in offenders of this class, a fear proportionate to the pain of flogging, but in excess of any after-effects, is in itself a guarantee that we have always at hand at least one simple, effectual, and relatively safe protective against a most cowardly and dangerous form of assault.

"CYCLING."

IN our leader of last week on this question we drew attention to some of the more salient features of the controversy that has lately been carried on in these columns, and attempted to show what in our opinion were the possible and probable drawbacks and advantages of cycling as regards its influence on the maintenance of health in those who availed themselves of this mode of travelling. A letter, dated Oct. 27th, from Dr. Strahan, who strenuously opposes the practice, or rather excessive indulgence in it, deals with some of the facts bearing upon the occurrence and extent of "perineal pressure" and concussion of the spine. We have little to add to what has already been set forth. There can be no manner of doubt that evil consequences may ensue from indiscretion in this as in other pursuits of business and pleasure. Nevertheless, we maintain that it is quite within the reach of mechanical skill to fashion an instrument that shall minimise the danger arising from pressure on the urethra and jolting of the body. Moreover, it behoves us to consider the collective gain of the many while discussing the misfortunes of the few; and we hold that were cycling, even with its present attendant disadvantages, to be altogether discontinued, the public would be robbed of a means of usefulness and enjoyment that it would be difficult to replace.

TYPHOID FEVER IN SOUTH AUSTRALIA.

THE tenth report of the Central Board of Health of South Australia draws attention to the continued prevalence of typhoid fever in various parts of the colony. The cases of this disease appear to be spread over a wide area; and the Board, whilst fully recognising the importance of the discoveries which have been made by our central sanitary authority in England as to the association of this disease with varying, and often obscure, conditions of excremental poisoning, are obliged to admit that it has been impossible hitherto to trace the cases to their origin. It is, however, admitted that the investigations of the sort required cannot be satisfactory except as the result of long and patient work on the part of those employed, and it is clear that no such work has yet been carried out. A system of investigation has, however, now been commenced through the agency of officers of health and others, and it is hoped that important information may be forthcoming. There seems still need for some such skilled supervision of the work as is carried out in this country by the staff of medical inspectors whose reports are evidently valued in the colony.

FIRST "BOWMAN LECTURE."

THE first "Bowman Lecture" will be delivered at the meeting of the Ophthalmological Society on Thursday, the 13th inst., at 11, Chandos-street, at 9 P.M., by Mr. Jonathan Hutchinson, F.R.S. The subject is to be "Diseases of the Eye which appear to be in connexion with Gout."

THE APOTHECARIES' SOCIETY OF LONDON.

THE Court of Assistants of the Society, on the recommendation of, and in conjunction with, the Court of Examiners, has decided that on and after January 8th, 1885, it will not grant its licence to anyone who has not passed an examination in Surgery either at the Hall or else

DEATH OF THE RIGHT HON. HENRY FAWCETT.

THE death is announced of the Right Hon. Henry Fawcett, the Postmaster-General, which took place on the 6th inst., from congestion of the lungs. The right hon. gentleman was in his fifty-first year.

VICTORIA UNIVERSITY.

AT a meeting held on Wednesday, it was resolved that the Court, having considered a report from the Council, accepts the application of University College, Liverpool, to be admitted as a college in the University.

MR. VANDERBILT having recently made a donation of a considerable sum to the College of Physicians and Surgeons of New York, land has been selected on which to build a new home for the College. The site, which is a little over 350 feet in length and 200 feet in width, is in close proximity to the Roosevelt Hospital. Access to the other hospitals in the city is afforded by the West Side Elevated and the Belt Surface Railways. The extent of land now in possession of the College is much more than is needed for immediate building purposes, but it is reasonable to suppose that requirements which are not foreseen to-day will in the course of time arise, and the College will then be able to add new departments or increase the old ones, as may be required.

THE trial of Fleet and others *versus* the Managers of the Metropolitan Asylum District is now in progress, and even in its earliest stages it is evident that some very complicated questions, such as the meaning which properly attaches to the word "convalescent," and the admissiblity of evidence as to the influence of other small-pox hospitals, are certain to arise. It is to be hoped that some authoritative decision will be come to which will place the question of the isolation of small-pox cases on a footing which, whilst satisfactory to the interests of those attacked, will also have regard to those of the surrounding community.

ON the 30th ult. a deputation waited upon the St. Pancras Board of Guardians to protest against the project of the Metropolitan Asylums Board to pull down the various pavilions comprising the present small-pox hospital at Hampstead and the proposal to erect a large and permanent establishment of a similar description. The guardians unanimously adopted a resolution calling upon the members representing the parish at the Asylums Board to use all the influence in their power with the managers to effect the entire removal of the hospital to a more suitable site.

AT the Leeds School of Medicine, during the present winter session, Dr. Clifford Allbutt, Mr. Wheelhouse, and Mr. T. Pridgin Teale will each deliver three clinical lectures. The above-named gentlemen have relinquished active service in the Leeds Medical School and the Leeds Infirmary, but by giving these lectures, at which the attendance of medical practitioners as well as students is invited, they show their continued interest in the school under its new conditions.

AT the last weekly meeting of the London School Board, the discussion on the over-pressure question was resumed, with the object of deciding whether a special committee should be appointed to inquire into the allegations of Dr. Crichton Browne, or whether the matter should be referred to the School Management Committee. No decision was arrived at, and the discussion was again adjourned.

MR. EDWARD STANFORD, of Charing-cross, has just issued an excellent large scale map of the Nile from Dongola to Khartoum.

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AN inquest was held on the 30th ult. at Guy's Hospital on the body of a man who was locked up by the police at 11 P.M. on the 26th ult. for being drunk and incapable, and who was discovered insensible in the cell at 4 A.M. on the 27th, dying before he could be got to the hospital. Medical evidence showed that death was due to fracture of the skull, and the jury returned a verdict of "accidental death."

WE hear with regret of the death of Mr. H. M. W. Macdonald, L.R.C.P. Edin., on the 3rd inst. It would seem that the deceased gentleman had resolved to inhale chloroform for the purpose of having a carious tooth extracted, and that during the operation the pulse ceased, and death ensued.

THE Professor of Chemistry at University College, Liverpool, reporting on three samples of the Windermere water forwarded to him, states that though hardly fit for drinking, yet there appears to be no reason why it should not be employed for household purposes in general.

A MEETING of the Association of Fellows of the Royal College of Surgeons will be held at the rooms of the Medical Society of London, Chandos-street, Cavendish-square, on Saturday, Nov. 8th, at 4 o'clock.

THE Right Hon. W. E. Forster, M.P. (late Lord Rector of the University), is to preside at the next dinner of the Aberdeen University Club, London, to be held at the Holborn Restaurant, on Wednesday, November 19th.

DR. YELVERTON PEARSON has been appointed by Her Majesty, through the Lord Lieutenant, to the post of Professor of Materia Medica in the Queen's College, Cork.

DR. TOMMASI CRUDELI ON MALARIOUS COUNTRIES, AND THEIR RECLAMATION.

(*Concluded from page 798.*)

ATMOSPHERIC amelioration has also been effected in the new quarter of Rome, where, especially in the Quirinal and Esquiline, formerly subject to malaria, the buildings and the pavements have excluded the soil from contact with the air, which, however, evokes the malaria whenever such exclusion is interrupted by excavation. At best, therefore, this atmospheric amelioration is only suspensive, and possible only on land where building or pasturage or continuous submersion is practicable. Permanent atmospheric amelioration—that is, such modification of the composition of the malarious soil as would render it barren in respect of malaria while conserving its power of useful production—is a result which, as men of science, we must confess ourselves impotent to effect; while as practical hygienists we may admit it as probable that the combination of hydraulic amelioration with culture of the malarious soil has in some cases modified the composition of this latter so as to make it barren in respect of malaria. But we do not know how this has been brought about, nor can we reproduce it at will. The ameliorations effected in antiquity by centuries of drainage and cultivation combined were suspensive merely, because the moment the scene of operation was abandoned it relapsed into its previous malarious condition. The Campagna of Rome seemed reduced to permanent salubrity under the Antonines; but on the fall of the empire the malaria reappeared, just as if centuries of cultivation had never been.

Indeed, no one can say *a priori* whether the cultivation of a malarious soil will render it salubrious or not. There are instances even where such cultivation augments the malaria. At first this always happens; the disturbance of the malarious soil with the plough or the spade throws an increased surface into contact with the air and so the poison develops. Often this first effect of cultivation lessens in time, and sometimes disappears. Not seldom it obstinately persists, cases having even occurred where cultivation has had to be abandoned in despair, and the soil hastily recoated with as compact a meadow covering as possible to make it tolerably inhabitable.

Still, it is well to try, on favourable opportunities, whether it is possible to augment the efficacy of hydraulic or of hydraulico-atmospheric improvement by means of cultivation. A thousand economic reasons counsel the trial though the issue be problematical. Not only courage to face the problem is necessary, however, but some assurance of its solubility, otherwise we are apt to find ourselves in a vicious circle; on the one hand, cultivation cannot be entered upon unless we can secure the uninterrupted presence of cultivators on the spot all the year round; on the other, the cultivators cannot remain on the spot during the hot season and live. There is but one way of escape from this dilemma—to wit, that of augmenting the specific resisting power of the human organism to the attacks of malaria.

Dr. Tommasi Crudeli has devoted assiduous labour in these latter years to find the means of promoting this resisting power. He does not believe that individual acclimatisation, in respect of malaria, is or has ever been possible. The infection is a progressive one, as indefinite in duration as that of syphilis, one attack sometimes sufficing to ruin the constitution for life. An acclimatisation, not individual, but collective—that is, the acclimatisation of a race—was possible in the past, when specific remedies against malarious infection were unknown, and even later, when the application of these remedies was very limited. The acclimatisation of a human race, then, happened by means of a natural selection (*cernita*), wrought by the malaria itself, which, in succeeding generations, carried away well nigh, without impediment, all those whose specific resisting power was weak, while sparing those whose resisting power was strong. The former, according to the Greco-Italian myth, were the human victims destined to pacify the demon who opposed their occupation of the territory in which it had reigned till then as absolute sovereign. The latter became the founders of the colonising race, in which, with every fresh generation, were produced new selections (*cernite*) useful for the social body, so that the collective resisting power of the race rose progressively. In our days such a selection may happen in human savage races (and it happens in the breeds of oxen and horses imported into malarious countries), but it has become impossible in human civilised races. Thanks to the specific remedies at our command, the use of which is so general, we preserve the lives of many whose specific resisting power is feeble, and who, after being cured, beget children who have even less than they; so that after a series of generations there is produced in malarious countries a physical deterioration of the human race instead of that useful selection (*cernita*) which took place in past centuries.

External nature cannot be counted on for augmenting the specific resisting power of human societies to attacks of malaria. Art must be resorted to—the daily exhibition of the salts of quinine, of the alkaline salicylates, of tincture of eucalyptus, having all had their turn. Dr. Tommasi Crudeli has found arsenious acid most efficacious, particularly as preventing recurrence of the fever. In 1880 he first employed it systematically in the Roman Campagna. Among its recommendations are—the longer duration of its antimalarial action, its low price, its beneficial influence on nutrition, and the facility with which it was taken, even by children. In the following year arsenic, in the solid form, was, at his instance, exhibited to a very large *clientèle*, including the tenants of farms and the *employés* of the Roman and South Italian railways, and at the close of 1883 the results have been these:—When the arsenic has been administered some weeks before the malaria season sets in, and when its administration has been continued regularly throughout this season, the human organism best resists the attacks of the fever. In some cases an absolute immunity, in others a relative immunity, from malaria was attained. These latter cases are sometimes attacked by the fever, but even in the worst localities it never becomes pernicious (*pernicious*), and they get over it with a little quinine. Last year, for example, Dr. Ricchi experimented on seventy-eight individuals in the Ferind district where malaria is endemic.

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He divided them into two sections, one only of which was subjected to the prophylactic treatment by means of arsenic. At the end of the febrile season it was found that while of the half consisting of those who had had no prophylactic treatment many suffered severely from malaria, thirty-six of those who had been under the course of arsenic remained entirely free from it, and the other three had had slight attacks, of which they cured themselves with a little quinine without calling in the physician at all.

These results are all the more encouraging, as the general health of those subjected to the course of arsenic is always greatly improved. Increase of weight and diminution of the anæmia so common in malarious countries are invariably found at the end of it. Prudence, however, prescribes an accurate graduation of the doses, commencing with two milligrammes a day for adults and guarding against taking the arsenic on an empty stomach. On the other hand, the dose may by degrees be augmented to eight, ten, and twelve milligrammes a day for adults when the locality is very malarious, so regulating its administration as not to produce an accumulation of arsenic in the stomach.

The true scourge of malarious countries, however, is not so much the outbreak of the acute fever as the chronic malarious infection; this it is which decimates the family, deteriorates the race, saps the sources of life, and produces a slow and progressive anæmia. This infection resists too often all the known remedies, and is even aggravated by the prolonged use of quinine, which is apt to prove a veritable poison for the vaso-motor system. A most efficacious, and at the same time easily procurable, remedy was announced three years ago by Dr. Maglieri, who had found it in traditional use in some Italian families. It is a decoction of lemon prepared by cutting the fresh fruit, rind included, into thin slices, and boiling these in three tumblers of water, until the volume of the water is reduced to one-third. Then this is passed through a thin cloth (muslin will do), while squeezing powerfully the residue of the lemon. After cooling for some hours, let it be drunk fasting. Among all the popular remedies for malaria fever this, says Dr. Tommasi Crudeli, is the most efficacious, and may be employed with advantage even in acute fevers. It seems, however, to have a specific action of great utility in chronic malaria infections which have resisted all remedies known to medicine. It has been tried on an extended scale, not only by Dr. Tommasi Crudeli, but by Dr. Pietro Cervello of Palermo, by Dr. Oreste Ferraresi of Rome, and by Dr. Giuseppe Mascagni of Arezzo, with the most gratifying results. It costs next to nothing—a very important consideration in Italy; it conquers the most stubborn fevers, and at the same time it restores to the patient his appetite, strengthens the whole nutritive process, and rapidly rehabilitates the system.

In no disease more than in malaria ought we to take account of popular experience. It is this which has rescued us from the "palustral prejudice" of the medical schools, and has taught us to extinguish malaria under our feet instead of wasting time on preventing its imagined importation. Popular experience, moreover, has shown that malaria rises from the soil into the atmosphere vertically only to a very limited altitude, so that by living, or at least sleeping, above this limit we may keep exempt from its influence. In the malarious districts of Greece and in the Pomptine Marshes of Italy the people during the malarial season bivouac at night on platforms propped on poles five or six metres high, and so escape attack. Here and there in the Roman Campagna houses are, with the same object, perched on the top of ancient tombs which have vertical walls. The American-Indians when they pass the night in malarious localities sling their hammocks to the highest trees they can find, and the engineers of the Panama railway built shanties for their workmen, also in trees, and so preserved them from the nocturnal malaria. We ought *a priori* to reject no useful remedy or precaution simply because it originated with the people. In the question of soil reclamation, it is essential to find a means accessible to all cultivators, of whatever age or condition, which is capable of overcoming the chronic infections of malaria, and of removing its grave effects. Science not yet being in a position to guide us to the discovery of such an agent, we are forced to collect with all due care the facts which may conduce to the desired result by another way; and if the means thus indicated appear innocent we must put it zealously to the test, unimpeded by any false conception of the dignity of science.

THE PROGRESS OF CHOLERA.

THE satisfaction experienced by the very complete subsidence of cholera in the south of France, Italy, and in Spain is materially marred by the wider area over which the poison has spread itself during the past fortnight. At Yport, in Normandy, cases still arise; but apart from a rumour that in some village near Rouen a single death has occurred, there has been no diffusion of the disease. Nantes, however, in the adjoining province of Brittany, is now seriously attacked. Since October 24th there have been over thirty deaths there, and fresh cases are still arising. From the fact that the first known case occurred in an hotel, it is assumed that the outbreak was due to a distinct importation from the south. In Algiers cases are still occurring at Oran, and isolated attacks are also reported from the other extremity of the colony. This extension of the epidemic, with the onset of colder weather, by no means augurs favourably for the prospects next season; indeed, it will need an amount of energy which we almost despair of seeing exercised to get rid of all the foci of infection during the coming winter.

In view of this further diffusion of the disease fresh quarantine measures have been put into operation by various States, and the importation of rags into this country is still further prohibited until the end of the year. Amongst the places where stringent quarantine regulations have been freshly established is Gibraltar, and some surprise and indignation are expressed on the Continent that England, which professes to disbelieve in the efficacy of such measures, should countenance the imposition of so rigid a code in one of her own colonies.—

LUNACY IN IRELAND.

THE inspectors of lunatic asylums in Ireland have recently issued their thirty-third annual report. On January 1st, 1884, there were in lunatic asylums, and in workhouses 14,088 inmates, being an increase of 266 as compared with the preceding year. As regards district asylums alone, on the first day of this year there were 9542 insane persons, being an excess over that on a similar date in the preceding year. The discharged cured numbered 1079, relieved 372, unimproved 88, deaths 892, and escapes 2. These contributed a gross total of 2433, including the increase of 271 above referred to. The proportion under treatment in district asylums on the 1st of January last was about 1 to every 540 of the general population, males exceeding females by nearly 18 per cent. The proportion of cures to admissions is about 40 per cent., but the daily average under treatment 11 per cent. The mortality (892) was not beyond the general average. The district asylums during the past year were especially exempt from epidemics and diseases of an acute character, death in the vast majority of cases being referable to advanced age or to a pre-existing debility of constitution. The income amounted to £252,560, which included £4750 from paying patients and £5974 from garden and farm produce, while the expenditure was £209,267. The average outlay per head for the year was £22 16s. 5d. The inspectors, while bearing testimony to the good behaviour of the attendants in public asylums, regard the present remuneration of these subordinates as totally inadequate, considering the duties they have to perform. Practically speaking, the result of inadequate wages is unsatisfactory. Attendants soon become discontented, leave the service, and their places are filled by persons often quite uneducated, and who in turn on acquiring some experience seek a like engagement wherever they can obtain better pay. No doubt a retiring pension is recognised at the end of a certain number of years, but the scale on which it is calculated is so uncertain that few remain to benefit by it. The mentally afflicted in union workhouses amounted to 3726, an increase of fifteen, all being hopeless cases, comprising epileptics, congenital idiots, or persons utterly demented for a considerable period and advanced in years. Occasionally it has become necessary to remove chronic patients from workhouses to district asylums on their becoming violent or evincing dangerous tendencies; but, for the most part, on the subsidence of excitement, they are sent back, otherwise the asylums would speedily become congested, to the exclusion of urgent or curable cases.

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FRENCH HEALTH RESORTS.

(From our Paris Correspondent.)

LA BOURBOULE; CLERMONT; VICHY; HAUTERIVE.

LA BOURBOULE being a comparatively new spa, I wished to consult some of the most recent works giving a description of the place before visiting it in person. "La Bourboule actuelle," a small treatise by Dr. Ad. Nicolas, rendered me great assistance, and I was obligingly conducted over the place by this *confrère*, who is one of the physicians of the place. From his book I learned that the origin of the term Bourboule is not, as is generally supposed, owing to the locality being muddy, but it is derived from the ancient word "borbola," which signifies "eau bouillante" or boiling water. From Mont Dore the road to La Bourboule follows the tortuous course of the Dordogne, and the place may be reached on horseback, diligence, or carriage in a little more than an hour. It is about four miles from Mont Dore and is situated in a valley at the foot of a granite rock which completely shelters it from the north and westerly winds. The valley of La Bourboule presents different aspects according as one reaches it from Mont Dore or from the plains. On arriving at the top of the valley from Mont Dore the traveller beholds before him a beautiful landscape. The valley, in the form of a spacious amphitheatre, is bounded on the north and west by mountains, the slopes of which are covered with forests of pine and beech. The town itself does not look very old, as most of the hotels and villas are of recent construction. La Bourboule is a valley compared with the neighbouring mountains, but a plateau of the second order compared with the plains. Its altitude is about 2776 feet, and its climate, compared with Mont Dore, is mild and uniform; so much so that it has been recommended as a safe sanatorium for phthisical patients in July, August, and September, as it has not the inconveniences of the too rarefied air of the mountains nor the damp windy climate of the lower valleys. There are two bathing establishments in the place, and the waters are described as being "hyperthermal" and "athermal." The baths are fitted up with all the modern appliances of hydrotherapy, and may well compare with any similar watering-place in Europe for their swimming-baths, salles d'inhalations, douches oculaires, nasales, auriculaires, pharyngiennes, anales, vaginales, &c. The temperature of the waters varies according to the height or distance of the springs (from 82° to 140° F.), and one may have a warm bath in these establishments without the aid of artificial heat. Besides the salles d'inhalations, which are used in common by a certain number of patients at a time, as at Mont Dore, arrangements have been made for the more fastidious to have their inhalations in their bathing-cabins, and by a rather ingenious process a spray is produced, so that they can have the benefit of the inhalation and bath at the same time. This mode of treatment is not open to the objection referred to in my letter of Sept. 6th, as regards the risks of infection or those resulting from the high temperature to which the patients are exposed at Mont Dore. The waters of La Bourboule are obtained from five different springs. Their composition is nearly all the same, but varying only in the degree of temperature and the proportion of the different elements of which they are composed. According to the latest analyses, they are described as being eminently arsenical, containing as much as 27 milligrammes of arsenic to the litre. They also contain a large proportion of the various chloride and bicarbonate salts, and a certain quantity of carbonic acid gas held in solution. As at most of the spas, the waters here are employed externally as well as internally, and are found useful in all cases in which arsenic and the above salts are indicated, such as general debility, from whatever cause, the various manifestations of scrofula, diseases of the skin and bones, affections of the respiratory organs, asthma, diabetes, intermittent fevers, &c. Rheumatic patients and delicate children are also benefited by these waters, and so are women suffering from chronic affections of the womb. Although the season officially begins in May, it is in July and August that the place is most frequented, and it extends even to the end of September, during which period the weather is most enjoyable. The treatment lasts from fifteen to forty days, according to the nature of the malady, and should be continued for about a month after returning home, and repeated at certain intervals twice or thrice during the year for periods ranging from twenty to thirty-five days each time. This is easily done with these waters, as they keep well in bottles without undergoing any alteration or losing any of their distinctive properties. The dose of the bottled waters is one to two half tumblers a day to begin with, and this should be gradually increased to two tumblers—never more—in the twenty-four hours. The same precautions are necessary during the use of these waters as are required in the administration of the pharmaceutical preparations of arsenic.

Before leaving Auvergne I shall say a few words about Clermont, which, though not usually resorted to as a watering-place, deserves some notice here. This town, which is also called Clermont Ferrand, is the capital of the department of the Puy-de-Dôme, and is situated seventy-eight miles west of Lyons and one mile and a half from Royat. It contains no less than fifteen mineral springs, which, according to the French nomenclature, belong to the class of chloro-bicarbonatées mixtes—that is to say, they contain a much larger proportion of lime and soda salts than the waters designated "chloro-bicarbonatées simples." It would, to my mind, be more intelligible to distinguish them by the affixes "strong" and "weak." These waters not only contain the bicarbonates of soda and of lime, but they also contain a fair proportion of the bicarbonate of iron, on which account they are found useful for anæmic, scrofulous, and rickety subjects; but from a deep-rooted prejudice they are seldom employed, and the medical men of the place have great difficulty in overcoming the objection which arises from the waters of some of the springs being utilised for the petrifaction of different objects for ornamental purposes, which are familiar to travellers, and which constitute a very important part of the industry of the place. I may, however, here observe that the term petrifaction is evidently a misnomer, as the objects in question are simply covered by a layer of calcareous matter, which is effected by allowing the water from certain of these springs to flow over them. It is more properly speaking a process of crystallisation, and the layers thus produced are as white and almost as hard as marble. In fact, the process is similar to what takes place in the manufacture of plaster-of-Paris splints. I have seen bunches of grapes, fish, &c., covered over in this way, and it struck me that the process may be of service in preserving fruit, and almost any other substance. By parity of reasoning, analogous effects are supposed by the vulgar to take place in those who drink the waters, in which case concretions would be formed in the intestines and in the bladder. Moreover, the town being within easy distance of Royat, the Clermontese prefer going to the latter, not only to drink its waters, but also to enjoy an agreeable walk.

Vichy is so well known that a description of the place would seem almost superfluous. It is certainly the most important and the most fashionable spa in France, the average number of visitors to it being about 40,000 a year. Vichy is situated on the right bank of the Allier in a large valley, surrounded by hills covered with a profusion of fruit trees and vineyards. It is 250 miles south-east of Paris, and its altitude is stated to be 880 feet; the air is temperate and pure. It is divided into the old and the new towns, Vichy-la-Ville and Vichy-les-Bains. The old town is picturesque, and it is evident from the Roman road and the ruins of olden times that Vichy was one of the foremost among the "aquæ calidæ" of the Romans. Vichy contains thirteen springs, which are used both for drinking and bathing. Eight of these belong to the State, and the other five are private property. A list of the springs with their composition will be found in a work by Dr. L. Grellety, entitled "Vichy-Cusset et leurs Eaux Minérales," and which is the most recent on the subject; but I may here give the principal: Source Chomel, Grande-Grille, Hôpital, which are thermal; Célestins, Hauterive, Lardy, Dubois, which are athermal. The waters of these springs are alkaline, the bicarbonate of soda and free carbonic acid forming the principal ingredients. They also contain small quantities of the bicarbonate of potash and magnesia with the arseniate of soda, all in varying proportions in the different springs. They are also divided, as has just been seen, into thermal and athermal, the temperature of the water ranging from 131° F. down to 59° F., the Source Chomel representing the former, and that of Dubois the latter. The hot or thermal waters spring naturally from the bowels of the earth, while the cold or athermal springs are produced by artificial boring. The

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Grande-Grille is the most frequented, particularly by those coming from warm climates, as the waters of this spring are reputed to cure affections of the liver and spleen. Next in popularity is the Hôpital, and then comes the Célestine, the former for derangements of the digestive system, and the latter for those of the urinary organs. They are also specially recommended for gout, diabetes, and albuminuria. But although certain springs are reputed to be more suitable for some cases than others, yet Dr. Grellety, one of the physicians of the place, assured me that his personal experience had shown him that the choice of a spring is frequently a mere arbitrary measure, and the result of routine or fashion, for which the local physicians are somewhat to blame. Without wishing to deny that each spring has its own individuality, and possesses properties peculiar to itself, yet the chemical composition is so similar in them all, varying only in the temperature and in the proportion of the ingredients, that it struck me the distinctive lines of the therapeutic action of the different springs were too finely drawn, and that there was a great tendency to routine and refined systemisation. In this view I was fully borne out by Dr. Grellety, who said that a patient coming to a spa ought to place himself entirely in the hands of a local physician, as he alone can guide him in the choice of the water he is to make use of. The point particularly to be attended to was not so much the composition as the temperature of the water to be drunk; for while a patient could with a certain degree of impunity drink the water from a cold spring, he could not for any length of time tolerate that from a hot one.

Cusset is an old town a little more than two miles from Vichy, and from its proximity is considered a branch of the latter. It is resorted to as a promenade, or when the town of Vichy is overcrowded. The springs are athermal and highly mineralised.

Hauterive is looked upon as another branch of Vichy, though it is about four miles distant. Its waters are also athermal, and, like those of Cusset, may be preserved for a long time in bottles without undergoing any deterioration. The thermal springs, on the other hand, lose by travelling, not only in their chemico-physical composition, but in their therapeutic action. The local physicians are unanimous that for the waters of Vichy to be efficacious they must be drunk at the source itself. On the opposite bank of the Allier is to be seen a spring at Vesse, which goes by the designation of the "Source Intermittente," as the water spouts up only at certain intervals. The water is distinctly sulphurous, but I have never been able to ascertain why it is not utilised for medicinal purposes. It is preserved as a natural curiosity, and shown to visitors for twenty-five centimes each. The spouting takes place about once in the twenty-four hours; and by studying the time it takes for the water to be drawn in, the proprietors can, with the aid of other signs, predict within half an hour when the next spouting will take place, a notice of which is daily posted up at the casino and at the principal bathing establishment at Vichy. Vichy is almost yearly extending its boundaries, and it is expected will soon form one with the establishment at Cusset. It contains upwards of 400 bath-rooms, 56 douches, and 2 swimming baths. 3000 is the average daily number of bathers in the month of July; but, as at all the other health and pleasure resorts of France, the tourists and invalids this year have been almost exclusively natives, owing to the cholera scare. The season lasts from the middle of May to the end of September, and the average duration of the cure is three weeks. The treatment, being principally internal, may be carried out at any time of the year. It should on no account be abruptly stopped, but should be continued at intervals for some time after leaving the spa. The period most unfavourable for drinking the waters is during the greatest heat of the weather (July and August), as then the waters are not so well borne, diarrhœa and congestive phenomena being often induced. Like all the watering-places of France, Vichy claims to have been frequented since the time of the Gauls and Romans, who, besides being great warriors, seemed to attach greater importance to bathing than their descendants, if one may judge from the number of remains of bathing establishments which are to be seen to this day in various parts of the country. Paris itself possesses a very good specimen in the Palais des Thermes, at the Museum of the Hôtel de Cluny.

Paris, Sept. 23rd.

THE late Francis P. Hurd, of Wakefield, Mass., bequeathed $10,000 to the Massachusetts General Hospital.

NOTES FROM ABROAD.

THE first number of a new medical serial, *Boletin de Medicina*, appeared last July at Santiago, Chili.

Professor Pacini's manuscripts have been purchased from his heirs by the Italian Minister of Public Instruction.

The widow of Professor G. B. Ercolani has presented his veterinary library to the municipality of Bologna, his native city. For rare manuscripts and books in the special subject, the collection is said to be unrivalled in the world.

The germ theory of phthisis has attained to such a position in the estimation of foreign physicians, that Professor G. Sée has just published, through Delahaye and Lecrosnier, a volume entitled "De la Phthisie Bacillaire des Poumons."

The police authorities of Berlin have just issued an order requiring all medical practitioners to notify at once to the Sanitary Commission any cases of diphtheria under their care. The ravages from this disease are steadily on the increase in Paris, but compulsory notification is not permitted under the French law.

The official statistics of cholera in Italy bring up the number of cases to October 20th to 21,519, with 11,563 deaths. Genoa is now quite free from the scourge. The first case happened there on August 30th. From that day to October 20th the reported cases were 569, with 416 deaths, nearly 75 per cent. On September 29th no less than 40 of 65 cases proved fatal. At Dronero, in the province of Cuneo, 36 per 1000 inhabitants were attacked with cholera, and just half that number succumbed to it.

Antiseptic dressings, according to the *Progrès Médical*, have recently figured before the German tribunals. A servant having received a wound in the chest last April died from septicæmia under the care of Dr. N., who, despising antiseptic dressings, treated his patient according to ancient methods. The doctor, prosecuted under article 222 of the Penal Code, was condemned, the Correctional Tribunal holding "that every medical practitioner should keep himself informed on the accomplished progress of science, and have an exact knowledge of modern systems of treatment. If these had been employed, the life of Dr. N.'s patient might have been saved." Hence his legal liability for negligence. The judgment was sustained by the Court of Appeal.

THE WILL OF THE LATE SIR ERASMUS WILSON.

PROBATE of the will and codicil of the late Sir William James Erasmus Wilson, Kt., F.R.S., F.R.C.S., was granted on the 17th ult. to Messrs. Henry Palfrey Stephenson, Frederick Lane Linging, and Charles Alfred Swinburne, the executors, the gross value of the personalty being sworn to amount to over £264,000. The testator bequeaths three oil paintings—viz., a Sea Piece, by Salvator Rosa, "Three Sheep," by Sidney Cooper, and a Hurricane in the Bay of Biscay when the ship *Cleopatra* was cast away, by E. W. Cooke—to his wife Dame Charlotte Mary Wilson for life, and after her death to his trustees upon trust to present them to the South Kensington Museum or such other public institution in Great Britain as they may think most desirable in the interests of the public; £500 and all other his pictures, prints, books, plate, wine, furniture, and effects at his dwelling-house, 17, Henrietta-street, Cavendish-square, or any other dwelling-house he may have at the time of his decease, to his wife; an annuity of £500 to his brother George John Marris Wilson, M.D.; and £1000 to each of his executors. All his real and leasehold estates, and all his personal estate savouring of realty, he gives to his wife absolutely. The residue of his personal estate he leaves upon trust to pay the annual income to his wife for life, and at her death £5000 each, free of legacy duty, to the Royal National Hospital or Sea Bathing Infirmary for Scorfula only at Margate, the Royal Medical Benevolent College incorporated by Act of Parliament, the Medical Benevolent Fund, and the Society for the Relief of the Widows and Orphans of Medical Men. The whole of the ultimate residue of his pure personalty he bequeaths to the Royal College of Surgeons of England, the receipt of the President and Vice-Presidents for the time being, or any two of them, to be an effectual discharge for such residuary bequest to the

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person or persons paying the same. No directions whatever are given as to how the Royal College of Surgeons are to apply these large funds, and the trustees of the will have no voice in the matter, as their duties will end with the paying over of the money.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria and Fever in and about Dartford, by Mr. J. SPEAR.—The neighbourhood of Dartford is acquiring an unfavourable sanitary history. The rural sanitary district was inspected in 1879 by Dr. Thorne Thorne on account of a prevalence of diphtheria; the urban and rural districts were again inspected by Mr. Spear in 1882 on account of diphtheria in the rural and enteric fever in the urban areas, and now again the whole registration subdistrict of Dartford is reinspected by Mr. Spear in 1884. The enteric fever prevalence in the urban district, previously reported on, was found to have ceased; but on the other hand diphtheria had become more general and fatal in the whole subdistrict, and the urban district, which had previously escaped this disease, was found to be implicated. So far as the sanitary circumstances of the urban district are concerned, the re-inspection resulted in ascertaining that a system of sewerage had been laid down, and that some commencement had been made in connecting houses with it, thus doing away with the ash-pits and privy-pits which had abounded there. So also there had been improvement in paving the streets and yards, and in enforcing the building bye-laws; but on the other hand, the extension of the Kent Company's water had been inadequate, and a large number of houses were still found to be dependent on supplies which are characterised as not only defective, but as often dangerous. The state of the rural district remains, in several important respects, most unsatisfactory. Diphtheria is maintained, recurring at intervals; and its reappearance is explained as affecting localities which have been previously invaded, and which still show many grave sanitary faults, such as lie within the power of a sanitary authority to remove. Such a statement, in an official report, throws a very serious responsibility on the authority, but the detailed descriptions which are given fully support the inference which is drawn. Botany Bay attracted attention in 1882 owing to the fatality from diphtheria and fever which it exhibited; during 1883 there occurred amongst its 300 inhabitants 3 deaths from diphtheria, 2 from so-called croup, and three from scarlet fever. In close proximity to the houses the ground is being riddled with cesspools. The original ones remain, and as fast as they fill fresh ones are dug; but they are so dug that the contents may to the utmost possible extent soak away. The soil also contains drains, some of which have been choked for six months, and in the midst of such filthy contrivances are sunk the wells which supply the inhabitants, notwithstanding the fact that the Kent supply is available. The sanitary condition of other localities which have already been previously reported on has also undergone no improvement. In Mr. Spear's last report he pointed out the generally defective character of the administration of the sanitary laws by the guardians, referring specially to their default in the abatement of ordinary nuisances. He also stated that the appointment of a single inspector of nuisances over an area of 35,000 acres and having a population of 20,000 was not calculated to ensure a proper performance of duty, especially as the officer in question was mainly engaged in other duties for the guardians. All remains just as it then did, and the only remedy seems to be for the inhabitants to make formal complaint to the Government under the Public Health Act.

Diphtheria in the Chippenham Rural District, by Dr. BLAXALL.—In this report Dr. Blaxall in the first case gives an account of some cases of diphtheria which were antecedent to those with which this outbreak was concerned. The particulars of the cases given are instructive, as showing how diphtheria may unwittingly be spread, and as indicating also that the infection is capable of being transmitted by persons who are not themselves affected. One other very important point transpires. Certain of the infected families occupied large farms supplying milk and cream to dairy companies, to whom the farmers have bound themselves under a heavy bond to report all cases of infectious disease occurring in or about their premises. But in these cases the actual character of the disease was not suspected, and hence no report could be made. The interests of the dairy customers could not therefore be protected, and the case affords another proof that in the boiling of all milk safety alone can be found. The epidemic more immediately considered took place at Lacock, where out of somewhat over 1100 people no less than 72 attacks and 8 deaths occurred, the outbreak dating from towards the end of November last. Thirty-eight of the cases were primary attacks in households, and of these 32 occurred in pupils of the Lacock school, who were in attendance there up to the dates of their respective attacks. Unwholesome conditions do not appear to have been specially concerned with the causation and spread of the disease, and the origin of the first case could not be precisely determined. But the affection once existing, personal communication between the sick and healthy was ample to account for the spread, and inquiry showed that after the school had been closed, its re-opening, on nearly every occasion, led to a fresh distribution of infection, some four or five children attending each time who were only just recovering from diphtheria. The village of Lacock needs numerous sanitary improvements as regards water-supply, means of closet accommodation, sewerage and drainage, &c. But of all indications to which such an epidemic as this gives prominence, the most urgent is the need for a wider provision of small hospitals, which would enable sanitary authorities at once to isolate first cases of infectious disease, and to keep them under supervision until they were really free from infection and fit to return to their homes and follow their usual avocations, whether these include school attendance or not. Such small hospitals in rural districts would save many lives, and would also prevent our system of compulsory education from acting as an indirect means of spreading disease.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hull (Urban).—The borough of Hull had, in 1883, a birth-rate of 36·0 and a death-rate of 22·5 per 1000, on an estimated population of 176,296. The infant mortality was high. In the large towns of England the deaths under one year average 156 per 1000 births, but in Hull they reach 183. The great epidemic of scarlet fever from which Hull has suffered since 1881 has now practically subsided; the deaths from this cause during the year having fallen to 74. In dealing with the subject of infantile diarrhœa, Dr. Mason shows from the Hull records during the past fifteen years that the highest mortality occurs in the first or second week of August, the suddenness of the outburst being related to high temperature and low rainfall. In his opinion the origin and pathology of this disease point to a particular germ requiring a certain temperature for its development and propagation, and expending its virulence upon the intestines and lungs. He has not infrequently found amongst children that have died of diarrhœa a pneumonia secondary to the diarrhœa, and his investigations are now being directed in tracing the relationship between the two diseases. The prevalence of cholera in Egypt led to some action towards procuring a hospital for the purposes of the port, but the proceedings have unfortunately fallen through, both as regards the purchase of an old Admiralty vessel and as to acquiring a site on shore.

Taunton Urban District.—In so far as the death-rate is concerned Taunton has improved, although a rate of 21·5 per 1000 is by no means a small one for a borough of less than 17,000 people. The efforts to secure an improved water-supply have temporarily failed, owing to geological difficulties, but renewed efforts are being made in this direction. The system of sewerage remains defective, much more efficient means both of ventilation and of flushing being especially needed. Diphtheria, which has long hung about Taunton and its neighbourhood, was less last year, but the immediate isolation of first attacks and suspicious cases of sore-throat is still needed. Enteric fever was somewhat in excess in 1883, and it was largely dependent on the use of polluted well water, together with conditions favourable to the admission of sewer air into dwellings. The sanitary hospital received 72 patients, and the establishment is reported by Dr. Alford

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as being more and more appreciated; persons able and willing to pay for their isolation making increasing use of it.

Taunton Rural District.—In the rural portion of the Taunton union the death-rate was 15·2 per 1000 living. Speaking generally, the means for the disposal of sewage is very unsatisfactory, and Dr. Alford warns the authority as to the consequences of leaving large cesspits and imperfect drains prevalent in the district. Diphtheria deaths still take a prominent place amongst the mortality records, and 28 cases of the disease were admitted into the sanitary hospital. The inspector of nuisances made a house-to-house inspection in thirty-eight parishes, and this exceptionally useful sort of work led to no less than 614 houses being dealt with as needing sanitary improvements.

Birmingham Urban District.—In his report for the third quarter of 1884 Dr. Alfred Hill shows that the epidemics of small-pox and scarlet fever, from which the borough had for some time suffered, have subsided. At the time he writes he says that not a single case of small-pox existed to his knowledge, whether in or out of the hospital; and as regards scarlet fever, though this disease never disappears from the borough, yet its epidemic prevalence had passed away. Diarrhœa caused a large fatality; in all, 559 deaths, or 70 per cent., of the gross number due to the seven principal infectious diseases occurred, the death-rate from this one cause amounting to 5·3 per 1000 of the population per annum. This fatality took place in connexion with an exceptionally hot August, the temperature during the month having been 3·6° above the average; indeed, the highest temperature ever registered by Dr. Hill in Birmingham occurred on the 11th of the month. There was also an exceptionally small rainfall; none fell for twenty-five days, and a reasonable average was only maintained by a fall of nearly one inch on the last day of the month.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 1st inst., 6000 births and 3464 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which in the two preceding weeks had been 21·1 and 20·9 per 1000, further declined last week to 20·6. During the first five weeks of the current quarter the death-rate in these towns averaged 20·5 per 1000, against 21·0 and 19·7 in the corresponding periods of 1882 and 1883. The lowest rates last week in these towns were 15·0 in Norwich, 16·5 in Nottingham, 17·1 in Brighton, and 17·2 in Birkenhead. The rates in the other towns ranged upwards to 26·3 in Bolton, 26·9 in Blackburn, 27·9 in Cardiff, and 28·8 in Preston. The 379 deaths referred to the principal zymotic diseases in the twenty-eight towns included 84 from diarrhœa, 67 from "fever" (principally enteric), 66 from scarlet fever, 57 from measles, 50 from whooping-cough, 31 from diphtheria, and 24 from small-pox. No death from any of these diseases was recorded last week in Brighton; while they caused the highest death-rates in Cardiff, Hull, and Preston. The largest proportional mortality from "fever" occurred in Derby, Preston, and Halifax; from scarlet fever in Sunderland, Cardiff, and Sheffield; from measles in Sunderland, Cardiff, and Sheffield; and from whooping-cough in Halifax and Hull. The 31 deaths from diphtheria in the twenty-eight towns included 22 in London and 4 in Liverpool. Small-pox caused 21 deaths in London (exclusive of 16 London cases registered outside Registration London), 2 in Birkenhead, and 1 in Hull. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 504, 558, and 596 on the three preceding Saturdays, were 580 at the end of last week; the new cases admitted were 104, against 68, 144, and 173 in the three preceding weeks. The Highgate Small-pox Hospital contained 18 patients on Saturday last, 3 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which in the six previous weeks had increased from 159 to 274, further rose to 348 last week, but were 38 below the corrected weekly average. The causes of 68, or 2·0 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Bristol, Nottingham, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Leicester, Salford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·3 and 21·4 per 1000 in the two preceding weeks, rose to 22·5 in the week ending the 1st inst., and was 1·9 above the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 16·0 and 16·8 in Paisley and Perth, to 21·5 in Greenock and 26·7 in Glasgow. The 543 deaths in the Scotch towns included 25 which were referred to scarlet fever, 23 to diarrhœal diseases, 22 to whooping-cough, 20 to diphtheria, 14 to measles, 12 to "fever" (typhus, enteric, and simple or undefined), and not one to small-pox; in all, 116 deaths resulted from the principal zymotic diseases, against 101 and 110 in the two previous weeks. These 116 deaths were equal to an annual rate of 4·8 per 1000, which was more than double the mean rate from the same diseases in the twenty-eight English towns—only 2·3. The 25 fatal cases of scarlet fever showed a further increase upon recent weekly numbers, and included 17 in Glasgow (against 14 and 13 in the two previous weeks), 5 in Greenock, and 2 in Edinburgh. The deaths referred to diarrhœal diseases, which had declined in the five preceding weeks from 52 to 21, were 23 last week, including 5 in Glasgow, 6 in Dundee, and 4 in Aberdeen. The deaths from whooping-cough, which had been 18 and 15 in the two previous weeks, rose to 22 last week; 7 occurred in Glasgow and 6 in Dundee. The 12 deaths referred to "fever," showing a decline of 3 from those in the previous week, included 8 in Glasgow and 3 in Edinburgh. Of the 14 fatal cases of measles, considerably fewer than any recent weekly number, 8 occurred in Glasgow and 6 in Aberdeen. The 112 deaths referred to acute diseases of the respiratory organs in the eight Scotch towns showed an increase of 27 upon the low number in the previous week, but were 10 below the number returned in the corresponding week of last year. The causes of 76, or 14 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 30·2 and 26·8 per 1000 in the two preceding weeks, further declined to 24·7 during the week ending the 1st inst. During the first five weeks of the current quarter the death-rate in the city averaged, however, 27·4 per 1000, the rate for the same period not exceeding 18·6 in London and 17·9 in Edinburgh. The 166 deaths in Dublin last week showed a further decline of 14 from the numbers in the two previous weeks, and included 25 which resulted from the principal zymotic diseases, against 25 and 29 in the two preceding weeks; of these, 10 were referred to scarlet fever, 9 to "fever" (typhus, enteric, or simple), 4 to diarrhœa, 2 to whooping-cough, and not one either to small-pox, measles, or diphtheria. These 25 deaths were equal to an annual rate of 3·7 per 1000, the rate from the same diseases being 2·1 in London and 2·3 in Edinburgh. The fatal cases of scarlet fever, which had been 5 and 12 in the two previous weeks, declined again to 10 last week, and the fatal cases both of diarrhœa and of whooping-cough were less numerous than in the previous week. The deaths referred to "fever," however, which had been 10 and 6 in the two previous weeks, rose again to 9 last week. Six inquest cases and 5 deaths from violence were registered during the week, and 69 of the 166 deaths occurred in public institutions. The deaths both of infants and of elderly persons showed a further decline from recent weekly numbers. The causes of 21, or nearly 13 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major Allan Nesbit Fox, M.B., is granted retired pay, with the honorary rank of Brigade Surgeon.

Sudden orders, it is announced, have been received by the general commanding the Aldershot district to arrange to despatch about 100 men of the Medical Staff Corps to embark at once for conveyance to Egypt. Orders were also received to prepare a strong detachment of the same corps for immediate embarkation for South Africa.

ADMIRALTY.—The following appointments have been made:—Surgeons Edw. W. von Tunzelmann and Edw. B.

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Townsend, to the *Duke of Wellington*, additional, for Haslar Hospital, reappointed; Surgeon James M. Rogers, to the *Royal Adelaide*, additional, for Plymouth Hospital; Surgeon C. L. Nolan, M.B., to the *Indus*; Surgeon Francis H. Julyan, to the *Pembroke*, for disposal; Surgeon Edward C. Ward, M.D. to the *Repulse*; Surgeons Herbert W. G. Doyne and Thomas Dunlop, M.B., to the *Royal Adelaide*, for disposal; Surgeon Alexander B. Murdock, M.B., to the *Duke of Wellington*, for disposal; Surgeon Samuel Johnson, M.B., to the *Asia*, for disposal; Surgeon H. R. Osborne, to the *Valiant*; Surgeon Alexander G. Wildey, to the *Duke of Wellington*; Harold F. D. Stephen, M.B., to the *Cambridge*; Surgeon Patrick B. Handyside, M.B., to the *Asia*; Surgeon William R. M. Young, to the *Defence*; Staff Surgeon Christopher Harvey, to Yokohama sick quarters; Staff Surgeon Otway P. Browne, to the *Kingfisher*; Surgeon John H. Thomas, to the *Humber*; Surgeon Ludlow T. Colthurst, M.D., to the *Flora*; Surgeon Percy W. Bassett-Smith, to the *Rambler*.

Correspondence.

"Audi alteram partem."

THE CHOLERA BACILLUS.

To the Editor of THE LANCET.

SIR,—You will, I am sure, excuse my troubling you with another brief communication relative to the cholera bacillus.

You state in your issue of Oct. 18th that Dr. Aurelio Bianchi of Florence has just collected and published some manuscript observations made by his late teacher during the cholera epidemic which prevailed in Florence in 1856, and that "the editor claims that Pacini was the first who instituted microscopic researches with a view to discover the nature of the Asiatic plague, and that he described, with much precision and truth, under the generic name of 'vibrio,' the organisms now known as 'microbes.'" The claim thus set forth cannot be sustained, and is capable of disproof on evidence not to be set aside.

Professor Pacini's observations were made on cases which occurred during the cholera epidemic of 1855, and the first microscopical examination was made on the body of a man who died on February 12th of that year. My investigations were made during the epidemic of 1854, and my three reports—(1) On the Microscopical Examination of different Waters, principally those used in the Metropolis during the Cholera Epidemic of 1854; (2) On the Microscopical Examination of the Blood, and Rice-water and other Excretions of Cholera Patients; (3) Reports stating the Results of the Microscopical Examination of the Skin and Clothes of Cholera Patients—were published in the "Appendix to the Report of the Committee for Scientific Inquiries in relation to the cholera epidemic of 1854, a committee appointed by the Government of that time. The report first named was dated December 21st, 1854; the second report, which contained the description of the results of the microscopical examination of the blood, rice-water evacuations, and other excretions of cholera, bore date January 22nd, 1855; while the third report bore, I believe, the same date. These dates are therefore conclusive.

Stated in the fewest possible words, I showed in these several reports that in the impure waters taken from the river Thames, with which London was then supplied, "vibriones," which would now be called "microbes" and "bacilli," were of frequent occurrence in very notable quantities; that the blood of persons affected with cholera was entirely free from such organisms, as also was the urine, but that the rice-water evacuations of cholera abounded during the life of the patient with myriads of vibriones, some of which, from the description recently given by Koch of his cholera bacillus, were undoubtedly identical with what he has described under that name.

Lastly, that the textures of the skin itself were entirely free from any organisms, but that the clothes worn by cholera patients, by having become stained with the evacuations abounded with vibriones identical with those present in the evacuations.

I am, Sir, your obedient servant,

ARTHUR HILL HASSALL, M.D. Lond.

San Remo, October 26th, 1884.

ENGLISH MEDICAL DEGREES FOR ENGLISH STUDENTS.

To the Editor of THE LANCET.

SIR,—Your able leader of last Saturday on the disastrous effects of the competition of the Scotch universities on London schools will surprise no one. And your account of the hardship to English students wanting medical degrees will be received with gratitude. As a Scotch graduate I cannot, indeed, admit the justice of your contention that Scotch degrees are as easy of attainment as the diploma or licence of English colleges. Such a statement is refuted by the experience of those who have passed both examinations and by the position taken ultimately in the profession by the graduates of the Scottish universities, as well as by reference to the curriculum of the respective bodies. I must admit, however, with grief, that the Scotch universities have chiefly themselves to blame for the persistency with which such disparagement of their examinations is expressed by yourself and by other English authorities. Their recent junction with the Scotch Corporations for the purpose of obstructing or defeating medical legislation justifies the conclusion that they are afraid of an independent board where their work would be tested at the least possible cost to their graduates and with the greatest advantage to their reputation and to the State. I readily admit that graduation on such a scale as that going on in Scotland now may readily become a temptation, and, as a Scotch graduate, I wish to see the Universities of Scotland accept, and even invite, any independent test that a reasonable and friendly Government may suggest. But if they persist in refusing such a test, it will certainly be the duty as well as the wisdom of English teachers, especially those of London, to take some trouble to create a university in London in which medical graduation can be obtained on some such terms as those of Scotland. It would be simply disastrous if the enormous clinical field of London and its unsurpassed staff of capable teachers were to cease to be in demand for the purposes of English medical education. And there is no excuse for the impracticable regulations of the London University, of which no material section even of its own medical graduates, I believe, approves. They are a crying injustice to diligent and capable English students, who may fairly claim to have an English degree within reach.

On one other point, however, Sir, I must beg seriously to differ from you—viz., in your opinion that a "University of Physicians and Surgeons" will suffice to meet this great want. "A University of Physicians and Surgeons!" This is an expression which does not sound well. There is a "shoppy" ring about it. A university, as Dr. Johnson says, is "a school where all the arts and faculties are taught and studied." Only from such a university can degrees proceed, and it is certain that degrees from a "University of mere Physicians and Surgeons" would never be able to compete with universities in the ancient and wider sense. Is it really past hoping for that the University of London will reconsider its duties on the pretext that it would practically disestablish the ancient colleges by co-operating with them? Rather by entering into co-operation with them, in my judgment, would it give these ancient colleges a new status without necessarily disturbing their existing functions. Be this as it may, there ought to be no insuperable difficulty in founding a university in London that will do for English students of medicine what the Scotch universities do for Scotch practitioners, and for so large a proportion of English students, but in doing which they refuse to satisfy English opinion.

I am, Sir, your obedient servant,

Nov. 6th, 1884. A SCOTCH GRADUATE.

THE LATE DR. SAMUEL RABBETH.

To the Editor of THE LANCET.

SIR,—A meeting was held this afternoon at King's College, at which many eminent members of the medical profession and other distinguished persons were present, in honour of the late Dr. Samuel Rabbeth, and I am desired, as one of the secretaries, to ask your assistance in making its purpose known to the profession. A large committee was appointed, including among others the chairman and vice-

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chairman of King's College and the Royal Free Hospitals, Sir William Bowman, Sir William Gull, Sir Joseph Lister, Dr. Priestley, Professors Johnson and Wood, the Rev. Dr. Stokoe, and Mr. F. J. Gant. His Grace the Archbishop of Canterbury has kindly consented to be honorary president. This committee will take into consideration the best means of commemorating the name and sacrifice of Dr. Rabbeth, at the two hospitals with which he was connected and at the University of London, of which he was a distinguished graduate. The Principal of King's College and R. Ruthven Pym, Esq., have been requested to act as treasurers. Messrs. Coutts and Co., Strand, have kindly consented to receive subscriptions to the fund.

I am, Sir, yours truly,

JOHN CURNOW, M.D.,

King's College, Nov. 5th, 1884. Dean of the Medical Faculty.

P.S.—Sir Wm. Jenner has just written me a letter expressing his sympathy with the movement, desiring that his name may be added to the committee.

SMALL-POX AND BLINDNESS.

To the Editor of THE LANCET.

SIR,—The necessity for and the great value of vaccination and revaccination have been recently brought before us in a very prominent way by the medical press. The facts which I am about to state (which are somewhat akin to those contained in Mr. Tweedy's interesting letter) are of a class not usually mentioned when dealing with this subject and are most convincing proofs of the efficacy of vaccination. The committee appointed by the Ophthalmological Society to report upon the Government scheme for the prevention of blindness from ophthalmia neonatorum, which I had proposed and which was subsequently adopted by the Society, having thought it advisable, inquiries were made to ascertain what percentage of the inmates of the institutions for the blind was due to purulent ophthalmia. With that object I examined the records of the Deaf, Dumb, and Blind Institution at Belfast, and, being strongly impressed by what was there disclosed regarding small-pox, I made the following notes:—Small-pox was the cause of the blindness of 26 of the first 87 recorded blind pupils admitted from 1845 till Oct. 18th, 1859; of two of the next 31 admitted; and of not one of the remaining 98 (up till the present year). I may present the matter in a much more striking light, thus:—Of the first 98 admissions, small-pox caused 27; whilst of the last 98 admissions it did not cause a single one. This certainly does not require comment.

I am, Sir, your obedient servant,

DAVID MCKEOWN, M.D.

St. John-street, Manchester, Oct. 1884.

To the Editor of THE LANCET.

SIR,—In your issue of the 18th inst., Mr. Tweedy narrates a striking instance of loss of sight caused by small-pox after wilful neglect of vaccination. I can supply a similar case. I lately saw at St. Mary's Hospital a young woman who had lost her right eye from variola, and whose face was very deeply pitted and disfigured. I found that she had no vaccination scars. On inquiry, she informed me that her father, having lost a baby soon after vaccination, had refused to allow his three youngest children to be vaccinated. Some years ago the eldest of these three died rapidly of "black fever," and very soon afterwards the youngest (my patient) had a severe attack of small-pox, and lost her eye. The second of the three insisted on being vaccinated, and she entirely escaped the disease. Comment is surely needless.—I am, Sir, yours truly,

DAVID B. LEES, M.D., F.R.C.P.

Thurloe Houses, S.W., October 28th, 1884.

THE LATE PROFESSOR COHNHEIM.

To the Editor of THE LANCET.

SIR,—A committee has been formed in Germany from amongst the friends and pupils of the late Professor Cohnheim, whose premature death a few months ago has been most deeply and widely lamented throughout the medical world, for the purpose of erecting a suitable monument over his grave. To the profession generally Cohnheim was only known for his great scientific attainments, and uncommon originality of research; but to a large circle of friends and pupils, who came to study under him from all parts of the world, he had greatly endeared himself by the charm of his manners and the large and warm-hearted sympathy which he freely gave to all those who were, like him, striving to cultivate the fascinating field of experimental pathology.

I have been requested by Professor Wagner of Leipzig, on the part of the committee, to acquaint, through the medium of your columns, Cohnheim's friends and old pupils in England and the United States with the object of the committee; and I shall be happy to receive and transmit any contributions towards the fund which is now being raised to the treasurer, Professor His of Leipzig. The list will be closed at the end of the year, after which a statement will be forwarded to all subscribers. I am, Sir, your obedient servant,

JULIUS ALTHAUS, M.D.

48, Harley-street, Cavendish-square, W., Nov. 4th, 1884.

PERILS OF CHLOROFORM ADMINISTRATION IN DENTAL OPERATIONS.

To the Editor of THE LANCET.

SIR,—When a student at St. Bartholomew's Hospital I remember Dr. Brunton saying that if a patient were not thoroughly under the influence of chloroform any irritation of the fifth nerve would produce slowing of the heart's action, and finally stoppage through the pneumogastric nerve. He clearly showed us this by an experiment on a rabbit. Surely this may account for the untimely and lamentable death of Mr. Macdonald, a brother medical man, at Nottingham, and many others, from operations on the face and teeth. I have always acted on Dr. Brunton's view, and, if giving chloroform for an operation implicating the fifth pair of nerves, have pushed it until the patient is completely under its influence. I think this is a matter which, if more generally known, might save human lives.

Yours faithfully,

W. E. BUCK,

Leicester, Nov. 4th, 1884. Physician to the Leicester Infirmary.

LIVERPOOL.

(From our own Correspondent.)

HOSPITAL SATURDAY AND SUNDAY.

THE annual meeting in connexion with Hospital Sunday was held on the 3rd inst. in the Town Hall, the Mayor presiding. The Committee reported that the collections for 1884 amounted (together with the contributions on Hospital Saturday) to the sum of £10,076. Although the number of collections showed an increase of twenty-one, the sum realised was £349 less than in 1883. There was also a decline of £11 in the Hospital Saturday boxes, and the total sum realised showed a decrease of £376. The total sum divided amongst the medical charities was £9800, and the expenses amounted to a trifle over 2½ per cent. on the total amount raised. The falling off in the receipts is much less than might have been expected considering the great and long continued depression in trade and commerce, but notwithstanding this a very general feeling prevailed at the meeting that the sum of £2524 raised by the working classes on Hospital Saturday ought to be at least doubled.

THE SCHOOL OF MEDICINE.

The number of students attending the anatomical classes shows a slight increase over that of last year. There is an ample supply of subjects, and the arrangements are so excellent that the mildness of the weather is not so unfavourable to dissection as it might have been. All the lectures are fairly well attended, and clinical lectures are given in rotation by the physicians and surgeons of the Royal Infirmary, and by the surgeons of the Lock Hospital.

MEDICAL CITY COUNCILLORS.

Mr. Robert Hamilton, Senior Surgeon to the Royal Southern Hospital, was re-elected one of the members for North Toxteth Ward by a very large majority. Dr. Cross, Mr. A. M. Bligh, and Mr. N. Marsh, surgeon, are also members of the City Council.

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DEATH FROM CARBOLIC ACID POISONING.

Another has been added to the already frightfully large number of deaths from accidental poisoning by carbolic acid. On Sunday last a corporation scavenger was offered by a companion a bottle supposed to contain rum, but which unfortunately contained carbolic acid. Before the error had been detected he had swallowed the poison, and died soon afterwards. At the inquest an open verdict was returned.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE HOSPITAL SUNDAY.

MR. R. H. HOLMES, the hon. secretary, and one of the pioneers of the Hospital Sunday movement in the North, writes to our papers pointing out the very encouraging fact that notwithstanding the depression in trade the first published list of the late collection shows little or no falling off in amount as regards workshops, and when compared with the corresponding collection of last year. He further points out that a collection of one penny per week at the shops would yield a more satisfactory result at the end of the year than a single collection, while a penny a week would be scarcely felt by men in regular employment.

CHEAP FOOD AND CHEAP COOKING.

Mr. Walter Scott, of Paternoster-square and Newcastle, has brought out in a penny pamphlet form, well illustrated by coloured diagrams and tables, the lecture of the Rev. Moore Ede, rector of Gateshead, on the subject of penny dinners for school children. The publication appears at a time when much attention is being given to food economics. Mr. Ede acknowledges having received his inspiration on the subject from reading the article in the *Pall Mall Gazette* of April 3rd, 1884, entitled "My Social Revolution by the ex-Brandy King of Sweden," which was an account of some social movements inaugurated by Mr. L. O. Smith of Stockholm, who was at one time head of the brandy trade in Sweden. He also acknowledges the assistance he received in his work by valuable receipts from Mr. and Mrs. Burgess, of the now celebrated Rounden School; nevertheless, the Rev. Mr. Ede must be regarded as the pioneer of the cheap dinner movement in our Northern counties, and he has spared neither trouble nor expense in its development. I saw at Messrs. Walker and Emley's factory, Newcastle, the other day, a penny dinner cooker in process of manufacture; it is circular in form, and very portable and light; the diameter varies according to the required capacity; the outer case is made of galvanised, and the inner one of tinned, sheet-iron, the space between the two being filled by a special non-conducting material. By means of this nearly all the heat from the patent gas-burners, which are fixed below, is utilised; a small expenditure of gas is sufficient to boil the water and cook the food efficiently. Soups and some other foods are cooked in a loose inner pan, which almost fills the internal space of the cooker, leaving only a margin for the surrounding boiling water. As the Rev. Mr. Ede points out, the adoption of suitable apparatus for cooking is essential to the success of the system, and he believes that Messrs. Walker and Emley have solved the problem by the introduction of their penny dinner cooker.

At Gateshead Drs. Mearns and Purdie have received testimonials from the ambulance classes which have been under their instruction.

Sir Wm. Armstrong has, with his usual munificence, sent a donation of £500 towards the building fund of the Newcastle Eye Infirmary. The late bazaar at Darlington of the hospital and dispensary has yielded the handsome amount of £2600.

Newcastle-on-Tyne, Nov. 3rd.

DR. LOUIS ALEXANDER DUGAS has recently died at his home in Augusta, Ga., in the seventy-eighth year of his age. Dr. Dugas served several times as President of the Medical Association of Georgia, and from 1851 to 1858 he acted as editor of the *Southern Medical and Surgical Journal*.

GLASGOW.

(From our own Correspondent.)

THE ROYAL INFIRMARY.

MUCH dissatisfaction has existed for some time among the students at the Royal Infirmary School on account of the fact that so few of the appointments on the resident staff have fallen to their share, Glasgow University students and graduates from Edinburgh being accepted to the almost entire exclusion of those educated at the Royal Infirmary itself. This shows bad policy on the part of the infirmary directors, and will tend much to render the school unpopular; it conveys, moreover, an unjust reflection on their own students, who have reason for expecting to be fairly represented on the staff.

CHANCELLORSHIP OF THE UNIVERSITY.

It seems now certain that this office will fall to the Earl of Stair, as his only opponent, the Marquis of Bute, has withdrawn from the threatened contest. The Marquis, in connexion with his withdrawal, has addressed to the Principal of the University a letter marked throughout by singular grace and elevation of tone.

MEDICAL BURSARIES.

Mrs. Monteath, Greenbank, Dowan-hill-gardens, Glasgow, has placed in trust the sum of £1000 for the establishment of two bursaries to be awarded to students of Glasgow University who gain the highest number of marks in the subjects of anatomy and physiology at the professional examinations on these subjects held during the year. A bursary of the value of about £20 will be awarded annually in November, and will be tenable for two years. Mrs. Monteath has founded these bursaries in memory of her husband, the late Mr. John Monteath, and she directs that it be represented to the holders that they should feel themselves in honour bound after graduation to render professional assistance to the poor as much as may lie in their power.

PANIC ACCIDENT IN A MUSIC HALL.

Another of these shocking accidents has occurred in Glasgow, happily on a smaller scale than in Sunderland last year. An audience of about 1300 rushed in a panic from a music hall in which a false alarm of fire had been raised. Fourteen persons were killed outright, and over twenty injured. The injuries, with the exception of two fractures (one of the arm and the other of the clavicle) consisted mainly of severe nervous shock.

RECTORIAL ELECTION, ABERDEEN UNIVERSITY.

Dr. Bain is put up by the Liberals for re-election to this important office. He is recommended on educational grounds solely and on no political grounds whatever. His opponent is Lord Randolph Churchill, who has accepted nomination.

PARIS.

(From our own Correspondent.)

THE CHOLERA.

SINCE my report of last week there have been nine fresh cases of cholera at Ypost, and three deaths. The disease has broken out at Nantes, and from the 24th of October to the 4th of November 72 cases occurred, but the number of deaths have not been reported. The affected provinces are becoming less in number. The following are the districts where cholera is now prevailing: Bouches-du-Rhône, Gard, Pyrénées-Orientales, Var, Oran, Seine Inférieure. The total number of deaths from the disease were 31 from the 11th to the 17th of October, and 19 for the week ending the 24th of October. In Algiers the mortality from 11th to the 17th October was 52, from the 18th to the 24th October it was seven. No reports are now published from Toulon and Marseilles, as these places have been for some time free from cholera.

ILLNESS OF M. FAUVEL.

At the meeting of the Academy of Medicine yesterday the President announced that M. Fauvel, the eminent epidemiologist, and Vice-President of the Academy, is dangerously ill, being laid up with double pneumonia.

Paris, Nov. 5th, 1884.

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MEDICAL NOTES IN PARLIAMENT.

Thames Valley Drainage.

ON Monday, in the House of Commons, in reply to a question by Mr. Giles, Mr. C. Russell stated that the Local Government Board have been in communication with the several local authorities with a view of determining whether the pending inquiry into the Thames Valley drainage shall be limited to the dissolution of the Lower Thames Valley main sewerage, or the question of the separation from the district of certain constituent authorities. The constituent authorities who have expressed themselves as desirous of being separated from the joint district are the urban sanitary authorities of Kingston, Richmond, Heston and Isleworth, New Malden, and East Moulsey, and the rural sanitary authority of the Kingston Union.

Chlorine Poisoning at Runcorn.

On Tuesday, in reply to Mr. Warburton, Mr. G. Russell stated that no information as to the alleged deaths of two children from suffocation by chlorine gas from alkali works at Runcorn had as yet been received, but that inquiry would be made on the subject.

Indian Medical Service.

On Thursday, Mr. J. K. Cross, in answer to Mr. Gibson, who inquired whether any, and if so what, steps had been taken by the Indian Government to lessen or remove the grievances of the Indian Medical Service, said the measures taken for reducing the number of unemployed medical officers in India had been efficacious. The Government of India had telegraphed that there are now only two unemployed officers in Bengal, and they have promised to communicate the number still unemployed in Madras and Bombay. It has been decided to place all surgeons of the Indian Service not holding executive charge on precisely the same footing in respect to pay as surgeons of the Army or British Medical Department similarly situated. The lower rate of pay hitherto called "unemployed pay" will for the future be called grade pay, and will only be given when the officer is in receipt of staff salary in addition to his pay.

Over-pressure in Board Schools.

Mr. Stanley Leighton inquired of the Vice-President of the Committee of Council whether, in view of the statements contained in a report made at his request, by Dr. Crichton Browne, he would take steps to procure the appointment of a commission of medical men unconnected officially with the Education Department to inquire whether the present method of applying the Elementary Education Act injuriously affected the health of the children and teachers.—Mr. Mundella replied that, as an efficient and impartial inquiry had already been undertaken, he did not see the necessity for a second inquiry. The most careful precautions had been taken to guard against over-pressure, and the operation of the revised regulations under the new code were being carefully watched. The public discussion of this question had resulted in the establishment in the metropolis of voluntary associations with the object of supplying food and clothing to necessitous children attending schools, and that with the co-operation of three or four members of the House he had been able to offer considerable help to those committees.

Examination of Surgeons-Major.

Sir Henry Fletcher inquired of the Secretary of State for War, with reference to the regulations in regard to the examination of surgeons-major for promotion to the rank of brigade surgeon, as laid down in the Army Circular, dated Nov. 1st, 1884, whether there was any precedent for examining officers ranking as lieutenant-colonel of six years' standing, and was it proposed to extend these examinations to the other scientific branches of the army; was it a fact that several of the senior surgeons-major are over fifty years of age; and was it the case that H.R.H. the Field Marshal Commanding-in-Chief, when giving evidence before Lord Morley's Committee, expressed an opinion against subjecting such old officers to examination; and by whose recommendation were these examinations instituted.—The Marquis of Hartington, in reply, stated there were several surgeons-major over fifty years of age who before being promoted to the rank of brigade surgeon would be required to undergo examination. It was the case that H.R.H. the Field-Marshal Commanding-in-Chief, in his evidence before Lord Morley's Committee, expressed an opinion adverse to the examination of officers so advanced in life; but after full consideration of the difficulty of selecting officers for the rank of brigade surgeon, the examination was determined upon at the suggestion of the Director-General. There was probably no precedent for the examination of similar rank and service; but there was probably no case in which the grounds of selection for promotion were so difficult to arrive at. There was no intention to propose an extension of the system of examination to the corresponding combatant ranks.

Obituary.

GEORGE LUMGAIR, M.D., F.R.C.S.E.

ON the 1st inst. the death occurred of Dr. George Lumgair, one of the best known and most highly respected practitioners in Fife. Born at Arbroath, Dr. Lumgair received his medical education at the University and College of Surgeons, Edinburgh, and in 1837 commenced the active practice of his profession at Largo, Fifeshire, where he continued at work for forty-seven years. Although greatly troubled by bronchial asthma, he worked perseveringly, and is only known during this long period to have taken three holidays. Two years ago he was appointed Justice of the Peace, and he was unanimously elected first President of the Fifeshire Medical Association when that body was constituted two years ago. At the time of his death Dr. Lumgair was in the sixty-seventh year of his age.

T. F. WATTS, M.B., C.M.

WE have to record the death, at the early age of thirty-two, of Thomas Fowle Watts, M.B., C.M., Medical Officer H.M. Convict Prison, Dartmoor, which occurred after a short illness on October 23rd. Mr. Watts was appointed assistant surgeon at the above prison, November 26th, 1880. On July 27th, 1881, he left Dartmoor for Liverpool, and on August 25th, 1882, returned as medical officer to Dartmoor. The funeral took place on October 28th, and the respect in which the deceased gentleman was held was shown by the presence, in addition to that of his own immediate relatives, of all the principal prison authorities and warders, and also of the greater part of the villagers and of many friends who had come from a distance.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Members of the College on Oct. 30th:—

Cullimore, Daniel Henry, M.D. Brussels, Welbeck-street.
Daly, Edward Owen, M.B. Oxford, Hull.
Maudsley, Henry, M.D. Lond., University Hospital.
Oliver, James, M.B. Edinburgh, Montague-street.
Wilkinson, William Camac, M.B. Lond., Manchester-street.

On the same day the following gentlemen were admitted Licentiates of the College:—

Anderson, Daniel Elie, Endsleigh-gardens.
Baillie, Robert Alexander, Radnor House, Blackheath-park.
Bidwell, Herbert, St. Thomas's Hospital.
Blight, William Lyne, Pendavey, Sladesbridge.
Bond, Charles Knox, Lupus-street.
Byrne, George, Withington, Manchester.
Cann, Ralph Thomas, Lambeth-palace-road.
Chapman, Harry Cecil, St. Mary's-terrace.
Crocker, John Hedley, Lyncham Lodge, Lee-road.
Davies, Jenkin, Larkhall-lane.
Des Vœux, Harold Antoine, St. George's Hospital.
D'Monte, Dominick Anaclete, Melville-terrace, Edinburgh.
Ellis, Charles Cartwright, Clarendon-road.
Fox, Herbert, Brambletye, Park-hill, Croydon.
Gray, Thomas Underwood, Essex-road.
Griffiths, Charles Thomas, Cathcart-road.
Habgood, Henry, Chewton Mendip, Bath.
Hall, Alfred Richard, Straarear-place.
Harlock, Harry, Buckfastleigh.
Hughes, Edgar Alfred, Onslow-gardens.
Humphreys, Charles Style, Chichester-street.
Jones, Isaiah Henry, Maida-vale.
Kerby, Robert John, Warltersville-road, Crouch-hill.
Koettlitz, Maurice, Bootle, Liverpool.

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Laslett, Thomas George, Grosvenor-terrace, Liverpool.
Livermore, William Leppingwell, Queen's-road, Finsbury-park.
Low, Charles William, Vicarage-park, Plumstead.
Marten, Robert Humphrey, Granby-street.
Miles, George Edward, Northumberland House, Finsbury-park.
Morgan, George, Market Drayton.
Santi, Philip Robert William, Doughty-street.
Stevens, Percy Richard, Oakley-square.
Thomas, Benjamin Wilfred, Heathcote-street.
Voisin, Alexander Bishop, St. Heller's, Jersey.
Weakley, Alfred James, Ramsay-road, Leytonstone.

The following gentlemen passed the Primary Examination for the licence of the College on the 4th inst:—

G. W. Adams, O. W. Andrews, E. C. Arnold, J. Bamfylde, G. R. S. Banbury, J. B. H. Booth, R. F. Bowie, H. W. Branson, A. A. Brockat, F. A. Brooks, R. P. Brooks, C. H. Buckley, K. T. Buée, J. T. Calvert, D. M. L. Campbell, P. T. Carpenter, J. S. Caskey, C. W. M. Castle, F. E. Cave, R. H. Chapman, A. D. Chapple, G. L. Cheatle, J. W. Cockerill, F. G. Connolly, F. Corner, J. H. Cox, W. C. Croxford, A. E. Deane, S. B. C. De Butts, A. L. Devenish-Meares, F. J. Dewes, W. F. Dewsnap, C. J. Deyns, H. M. Doyle, C. A. Ducket, E. H. Ellison, E. W. Emtage, F. G. Failes, J. H. Fardon, F. J. Fletcher, T. W. Francis, H. S. Fremlin, C. Fryer, F. E Gibbens, J. W. Gill, H. E. Gough, C. Greene, R. P. Griffin, W. G. Gyton, C. D. Hamilton, F. A. Harger, G. J. Harris, R. Hedley, Habeeb Jabboor, Hanna Jabboor, C. L. S. James, W. C. Jarvis, J. G. Johnson, E. E. King, F. J. Knowles, R. Lake, A. P. Lange, G. S. Leggatt, R. Leigh, P. G. Lewis, C. W. Lockyer, W. W. L. McLean, W. Marris, F. G. C. Martin, J. P. Martin, R. Martyn, S. C. H. Moberly, F. P. Moles, J. C. Morgan, E. Nason, P. L. Nettleship, E. J. Nixon, F. J. Oxley, E. B. Parfitt, R. H. Penton, J. Pietersen, C. F. Pridham, H. Rhodes, N. B. Robinson, J. P. Roughton, A. B. Roxburgh, D. N. Ruck, W. J. Rugg, H. A. Sansom, T. F. Shackleton, J. S. Sharman, C. W. Smeeton, L. M. Snow, P. B. T. Stubbs, A. M. Sully, W. R. Thomas, G. Thorpe, H. B. Trist, J. F. Vincent, S. G. Vinter, L. Vintras, J. P. Wagstaff, C. G. Wallis, J. J. Weaver, J. Wigg, T. H. Williams, C. J. Wills, H. E. Winter, C. F. Wright.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 30th:—

Parker, W. Turnour, Lillie-road, Fulham.
Sansom, Charles Lane, Devonshire House, Anerley.
Sugden, Edgar Brewitt, Adamson-road.

ON the 4th inst., medallions were presented by Lady Brassey to certificated pupils of the Woolwich Centre of the St. John Ambulance Association.

A MEDICAL CENTENARIAN.—The "New York Medical Journal" says that Dr. C. C. Graham, of Louisville, completed the age of one hundred years on the 10th inst.

ROYAL INSTITUTION OF GREAT BRITAIN.—William Miller Ord, M.D., has been elected a manager, in the room of the late Right Hon. Lord Claud Hamilton.

THE Swansea Choral Society's bazaar has resulted in an addition to the funds of the Swansea Hospital of £500.

THE Ocean Steam Yachting Company propose to despatch their Steam Yacht *Ceylon* for a cruise of sixty-five days to the West Indies, in December next, provided that a limited number of passengers are secured.

UNIVERSITY OF CAMBRIDGE.—The third examination for the degree of Bachelor of Medicine, part 2, will begin on Wednesday, December 10th. Mr. Walter Heape has been appointed Demonstrator in Animal Morphology.

AN evening fête is to be held on Wednesday, the 26th inst., at the Bread Reform Exhibition, Humphrey's Hall, Knightsbridge, to establish a fund to provide penny breakfasts and dinners to poor London school children.

SUPERANNUATION.—Mr. Robert Jones, M.R.C.S., L.S.A.L., late Medical Officer of the Conway District and Workhouse of the Conway Union, has been awarded a superannuation allowance of £40 a year.

IN view of the difficulty of enforcing the Vaccination Acts in Leicester, the board of guardians have decided to lay the whole circumstances before the Local Government Board and to solicit their advice.

BEQUESTS.—By the will of the late Dr. Alex. Gibb, late Inspector General of Hospitals, who died at Edinburgh on the 21st ult., the following bequests are left:—£100 to the Edinburgh Infirmary; and the balance, after the payment of certain other legacies, to be equally divided among the Royal Infirmary (for the Building Fund), the Convalescent Hospital, the General Dispensary, the Hospital for Incurables, and Sheriff Watson's Industrial School, all in Aberdeen. The share of each institution participating in the residue, after payment of all the legacy duties, &c., will amount to upwards of £200.

ALCOHOL IN RELATION TO HEALTH.—Under the auspices of the Women's Union, C.E.I.S., four lectures to ladies upon the Medical Aspect of Alcohol in Relation to Health will be given on Nov. 8th, 15th, 22nd, and 29th, at 3.30 P.M. The first two by Dr. E. Symes Thompson, at 83, Lancaster Gate, W. The last two by Dr. Oliver Leeson, at the Vestry Hall, Kensington High-street.

THE DENTISTS ACT.—The Sheriff of Edinburgh has imposed a fine of £5 on a person charged with having, though not a registered dentist, during January last issued a circular in which he used words implying that he was registered under the Dentists Act, and having, during part of last year, a brass plate on his front door bearing the word "dentist"; and also by an advertisement implying that he was registered.

DUBLIN HOSPITAL SUNDAY.—The eleventh annual collection in aid of the Dublin Hospitals will take place on next Sunday, the 9th inst. The movement commenced in 1874 when a sum of £3306 was obtained, and during the ten years that it has been in operation the money contributed has amounted to £40,060, or an average of about £4000 a year. Of this sum £37,559 has been distributed among the various participating hospitals, showing that the cost of utilising the sums obtained causes an expenditure of about £200 a year, or five per cent. on the total.

THE PARKES MUSEUM.—The new session of the Parkes Museum will commence on November 13th, when Mr. G. J. Symons, F.R.S., will give a discourse on "The Relations between Meteorology and Hygiene," which will be illustrated by the instruments in use in a meteorological observatory. On November 27th Dr. Alfred Carpenter will read a paper "On the Advantages of Co-operation in the Progress of Hygiene," and on December 11th Mr. W. Eassie, C.E., will give a lecture "On Systems of Domestic Hot-water Supply." The meeting will commence on each evening at 8 P.M.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the quarterly meeting of this Association, held at Bethlem Hospital on Wednesday, Nov. 5th, under the presidency of Dr. Rayner, Dr. Julius Mickle exhibited cases of aneurysm and Dr. Savage a case of localised brain disease. A paper by Mr. Bonville Fox, on "Exaltation in Chronic Alcoholism," adjourned from a previous meeting, was then taken and discussed in connexion with the kindred questions of insanity arising from the use of opium and Indian hemp. Dr. Savage read a paper on "Delirium Tremens Passing to Mania."

RADCLIFFE INFIRMARY, OXFORD.—At the quarterly court of the governors of this institution, held on the 29th ult., a report was presented from the Building Committee recommending extensive alterations and additions to the infirmary, the present wards being found deficient in size, light, and air. The architect's estimate of the cost was £5000, but it was advised that £7000 should be raised before the work was begun. The sum of £2500 will be received from the trustees of the fund raised for perpetuating the memory of the late Duke of Marlborough, and a munificent donor, whose name was not then divulged, has promised to pay half of the remaining cost. It was eventually agreed to refer the matter back to the Building Committee, to reconsider at what part of the infirmary buildings it would be most desirable to add a new block to contain forty beds, and the cost of such a block on two floors, and to report to a Special Court in November.

THE ORDER OF ST. JOHN OF JERUSALEM (ENGLISH LANGUAGE).—The annual report of this order, just published, gives a record of the general proceedings of the chapter during the past twelve months, and of the various special departments of the work, such as the St. John Ambulance Association; the award of medals for deeds of gallantry in saving life on land; the issue of diets to poor convalescents of hospitals in London and elsewhere, and the British Ophthalmic Hospital at Jerusalem, where the number of attendances for the year ending December last amounted to 11,343. There are also papers on the transport of the sick and injured, and on the ambulance arrangements of the metropolis on the outbreak of epidemics, read at the International Health Exhibition by Mr. John Furley and Mr. Barrington Kennett respectively, and a lecture by Baron Dr. Mundy, on the Necessity for Making Surgical Provision for Railway Accidents. The report of the St. John Ambulance

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Association states that twenty-five new centres and numerous detached classes have been opened during the past year at home and abroad. During the year, 10,053 certificates of proficiency have been awarded—viz, 5621 to men and 4432 to women, making a grand total of about 82,000 certificates granted to date. Three courses of lectures have been held at six of the metropolitan police stations, and numerous meetings to aid the movement have been held. Instances are quoted in which medical men have testified to life having been saved and "first aid" otherwise efficiently rendered by certificated pupils, and the report concludes with details of the progress of the recently developed ambulance corps for the transport of the sick and injured, and an interesting narrative by Lady Brassey of Ambulance Work in the West Indies.

ACADEMY OF MEDICINE IN IRELAND.—The following office-bearers have been elected for the ensuing year:—President: J. T. Banks. General Treasurer: R. McDonnell. General Secretary: W. Thomson. Medical Section—President: F. R. Cruise. Council: J. H. Benson, G. F. Duffey, J. Magee Finny, T. W. Grimshaw, R. A. Hayes, Henry Kennedy, J. W. Moore, W. G. Smith, H. C. Tweedy. Secretary: Alexander Nixon Montgomery. Surgical Section—President: E. H. Bennett. Council: Wm. Colles, C. Coppinger, E. Hamilton, E. Dillon Mapother, E. Stamer O'Grady, W. T. Stoker, P. J. Hayes, H. R. Swanzy, Kendal Franks. Secretary: William Stokes. Obstetrical Section—President: Lombe Atthill. Council: J. A. Byrne, Professor Dill, A. J. Horne, J. R. Kirkpatrick, George H. Kidd, Arthur Macan, T. M. Madden, R. D. Purefoy, William J. Smyly. Secretary: William Cox Neville. Pathological Section—President: A. Foot. Council: P. S. Abraham, J. W. Beatty, A. H. Corley, Samuel Gordon, J. V. Lentaigne, T. E. Little, J. M. Parser, F. B. Quinlan, W. Stoker, J. B. Storey.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the October meeting of the Faculty, the following list of office-bearers for the year was declared:—President: Dr. Andrew Fergus. Visitor: Dr. Henry Muirhead. Councillors: The President, *ex officio*; the Visitor, *ex officio*; the Treasurer, *ex officio*; Dr. R. Scott Orr, Dr. T. Lapraik, Dr. Jas. Christie, Dr. R. Perry, and Dr. J. Morton. Treasurer: Dr. J. D. Maclaren. Honorary Librarian: Dr. James Finlayson. Vaccinator: Dr. Hugh Thomson. Board of Examiners: Dr. A. Lindsay, Chemistry; Dr. Hugh Miller, Midwifery; Mr. H. E. Clark, Anatomy; Dr. James Stirton, Midwifery; Dr. J. Wallace Anderson, Medicine and Materia Medica; Dr. P. A. Simpson, Medical Jurisprudence; Dr. James Dunlop, Surgery and Surgical Anatomy; Mr. David C. M'Vail, Physiology; Dr. Alex. M. Buchanan, Anatomy; Dr. H. C. Cameron, Surgery and Surgical Anatomy; Dr. William J. Fleming, Physiology; Dr. William Macewen, Surgery and Surgical Anatomy; Dr. Robert Perry, Chemistry; Dr. Samson Gemmell, Medicine and Materia Medica; Dr. Eben Duncan, Medical Jurisprudence and Hygiene.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ALLRIGHT, FRED. WILLIAM, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Wooburn District of the High Wycombe Union, vice Warren.

BLACKER, ERNEST, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer to the Workhouse, Clutton Union, vice Perrin, resigned.

COLLIER, M. P. MAYO, M.B.Lond., F.R.C.S.Eng., has been appointed Assistant-Surgeon to the North-West London Hospital.

COLTART, WILLIAM WILSON, L.R.C.P.Lond., M.R.C.S., has been reappointed Medical Officer and Public Vaccinator for the Headley District of the Epsom Union.

COX, WILLIAM ALFRED, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer for the Banstead District of the Epsom Union.

DURHAM, FREDERIC, M.B.Lond., F.R.C.S.Eng., has been appointed Senior Surgeon to the North-West London Hospital.

DWYER, F. CONWAY, M.D., B.Ch.Dub., has been appointed House-Surgeon to the Mater Misericordiæ Hospital, Dublin, vice Cruise, resigned.

GORDON, JAMES, M.D., L.R.C.S.Ed., has been appointed Parochial Medical Officer for Aberdeen, vice McCrombie, deceased.

HALL, W. WINSLOW, M.B., C.M.Ed., has been appointed Resident Medical Officer to the Kilburn, St. John's-wood, and Maida-vale General Dispensary.

HAYDEN, W. C., L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Bishopstone District of the Wilton Union, vice Jones, resigned.

HEWITT, FREDERIC W., M.B.Cantab., M.R.C.S., has been appointed Administrator of Anæsthetics to Charing-cross Hospital.

HOOD, DONALD WILLIAM CHARLES, M.D.Cantab., M.R.C.P.Lond., has been appointed Senior Physician to the North-West London Hospital.

JENNINGS, CHARLES EGERTON, F.R.C.S.Eng., has been appointed Assistant-Surgeon to the North-West London Hospital.

KOCH, W. V. M., M.B., C.M.Ed., has been appointed Assistant Medical Officer to the Hull Borough Asylum.

MACKINTOSH, GEORGE DOUGLAS, L.K.Q.C.P.I., has been appointed Medical Officer for the Sixth District of the Market Harborough Union, vice Macaulay.

MARTIN, THEODORE, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Camley District of the Clutton Union, vice Perrin, resigned.

MENZIES, J. HERBERT, M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the West London Hospital.

PEDLEY, FREDK. NEWLAND, M.R.C.S., L.D.S., has been appointed Dental Surgeon to the North-West London Hospital.

SHAW, JOHN, M.D.Lond., M.R.C.P.Lond., has been appointed Senior Assistant-Physician to the North-West London Hospital.

STEELE, RICHARD, L.R.C.P.Ed., M.R.C.S., has been appointed Visiting Medical Officer for the Cottage Homes for Children, Leicester Union.

TAYLOR, ALFRED EVERLEY, L.R.C.P.Ed., L.R.C.S.Ed., L.S.A.Lond., has been appointed Second Assistant Medical Officer to the County Asylum, Stafford, vice W. E. Ranson, M.R.C.S., L.S.A.Lond., resigned.

TREVES, EDWARD, M.R.C.S., has been appointed additional Honorary Surgeon to the Throat and Ear Dispensary, Brighton.

Births, Marriages, and Deaths.

BIRTHS.

EXHAM.—On the 13th ult., at Lucknow, the wife of Surgeon-Major R. Exham, Medical Staff, of a son.

HALEY.—On the 27th ult., at Claremont House, Market-street, Wakefield, the wife of W. H. Haley, L.R.C.P. &c., of a daughter.

HICKLING.—On the 24th ult., at Malta, the wife of T. Hickling, Surgeon, Q.G.S., of a son.

KINCH.—On the 28th ult., at Ash, Sandwich, the wife of G. H. Kinch, M.R.C.S., L.R.C.P.Ed., of a daughter, stillborn.

LACY.—At The Cottage, Sunninghill, Ascot, the wife of A. Gairdner Lacy, L.R.C.P.Lond., M.R.C.S., of a son.

MEYERS.—On the 27th ult., at Richmond Villa, Lordship-lane, Wood-green, the wife of Herbert H. Meyers, L.R.C.P., M.R.C.S., of a daughter.

PAYNE.—On the 31st ult., at Wimpole-street, Cavendish-square, the wife of Joseph Frank Payne, M.D., of a daughter.

TEW.—On the 27th ult., at Bulwell, Nottingham, the wife of James Scott Tew, Surgeon, of a son.

WILLIAMSON.—On the 1st inst., at Settle, Yorks, the wife of Richard Ernest Williamson, M.B., of a daughter.

MARRIAGES.

BLOUNT—PLEYDELL.—On the 4th inst., at All Saints', Margaret-street, by the Rev. John D. Bally, Arthur Blount Blount, M.R.C.S., L.R.C.P., L.S.A.Lond., elder son of James William Blount, of the Priory, Penge, to Isabel Constance, only daughter of John Cleeve Pleydell, of Holford-square, London.

LANE—BRISCOE.—On the 26th ult., at Christ Church, Wanstead, William Arbuthnot Lane, M.S., F.R.C.S., of St. Thomas's-street, S.E., eldest son of Brigade-Surgeon B. Lane, to Charlotte Jane (Lottie), youngest daughter of the late John Briscoe, Esq.

MAXWELL—SUCKLING.—On the 29th ult., at the Parish Church, Edgbaston, Warwickshire, by the Rev. G. F. B. Cross, assisted by the Rev. J. Canning, Patrick William Maxwell, M.B., M.R.C.S., of 10, Lower Mount-street, Dublin, to Elizabeth Catherine, daughter of Cornelius Benson Suckling, M.D.

OSBORN—BOYD.—On the 30th ult., at St. George's, Hanover-square, Sam Osborn, F.R.C.S., of Datchet, and Maddox-street, W., to Elizabeth, youngest daughter of the late Robt. Boyd, F.R.C.P., of Southall-park, Middlesex, and Bolton-row, Mayfair.

TAYLOR—MANBY.—On the 31st ult., at the Parish Church, East Rudham, Norfolk, Fredk. Taylor, M.D., F.R.C.P., of St. Thomas's-street, Southwark, eldest surviving son of David Taylor, M.R.C.S., to Helen Mary, younger daughter of Frederic Manby, M.R.C.S., of East Rudham.

DEATHS.

BROWN.—On the 23rd ult., at Rochester, John Dan Brown, M.D.Ed., aged 66.

BURTONSHAW.—On the 21st ult., at De Beauvoir-road, N., Thomas Burtonshaw, M.R.C.S., aged 32.

KAY.—On the 21st ult., drowned while bathing at Mablethorpe, Alfred Kay, L.R.C.P.Ed., L.R.C.S.Ed., of South Lincolnshire, aged 34.

LUMGAIR.—On the 1st inst., at Largo Cottage, George Lumgair, M.D., L.R.C.S.E., J.P. for Fifeshire.

RANSOM.—On the 4th inst., Peter Parker Ransom, for thirty-eight years Surgeon, at North Elmham, Norfolk, after a few days' illness, aged 64.

RIMELL.—On the 3rd inst., at Eardley-crescent, South Kensington, Thomas William Rimell, L.R.C.P.Ed., M.R.C.S., late R.N., aged 64.

ROGERS.—On the 27th ult., at The Strand, Exmouth, Nathaniel Rogers, M.D., in his 77th year.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, November 6th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 30	30·29	W.	54	52	..	59	45	..	Overcast
Nov. 1	30·14	S.	52	51	..	56	48	..	Overcast
,, 2	30·08	S.W.	55	53	..	60	49	..	Cloudy
,, 3	30·12	N.E.	44	42	..	50	42	·26	Hazy
,, 4	29·95	S.E.	49	48	..	53	41	..	Foggy
,, 5	29·92	W.	54	51	..	52	47	·02	Fine
,, 6	30·03	S.E.	50	50	..	52	49	·42	Raining

Medical Diary for the ensuing Week.

Monday, November 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. de Havilland Hall: A Case of Surgical Scarlet Fever (postponed).—Mr. Rogers Harrison: A Case of Spontaneous Amputation.—Dr. Carrick: The Manufacture and Uses of Koumiss in Russia.

Tuesday, November 11.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. Francis Galton, F.R.S.: The Anthropometric Laboratory at the late Health Exhibition.—Mr. H. O. Forbes, F.Z.S.: Ethnological Notes on the People of the Island of Buru.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. Champneys: Expiratory Emphysema—that is, Emphysema of the Neck, occurring during Labour and during Violent Expiratory Efforts; an Experimental Inquiry.

Wednesday, November 12.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 2.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
HUNTERIAN SOCIETY.—7.30 P.M. Council.—8 P.M. Dr. Collis: Observations on the Diagnosis of Small-pox.—Dr. Turner: A Case of Suppuration of Simple Fracture of Rib, with Remarks on the Etiology of Inflammation.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. G. Massee: Life History of Millowia Nives.—Professor F. Jeffrey Bell: Structural Characters of Spines of Echinoidea. I. Cidaridæ.—Mr. T. B. Rosseter: The Gizzard of Larva of Corethra Plumicornis.—Dr. J. D. Cox: Structure of the Diatom Valve.—Mr. Lewis Wright: New Lantern Microscope.
EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Inaugural Address by the President (Dr. Norman Chevers): Certain Rare Epidemics and Endemics.

Thursday, November 13.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—9 P.M. Mr. Jonathan Hutchinson, F.R.S.: The Relation of Gout to Eye Disease (Bowman Lecture).

Friday, November 14.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Stephen Mackenzie: Cases of Dysentery treated by Voluminous Injections of Nitrate of Silver.—Mr. Morrant Baker: Three Cases of Joint Disease in connexion with Locomotor Ataxy.—Dr. H. B. Donkin: A Case of Muscular Atrophy and Joint Disease.—Dr. Hale White: A Case of Tumour of the Frontal Lobe with very few symptoms.—Living Specimens: A Case of Favus, by Mr. Malcolm Morris. Cases of Joint Disease illustrating Mr. Baker's and Dr. Donkin's papers will be present, and perhaps others.

Saturday, November 15.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

TO OUR CONTRIBUTORS.

WE do not propose to publish this year a list of intending contributors to our volumes for 1885. The response to our annual circular has in the past been so liberal that we have with difficulty been able to keep pace with the supply of papers and communications with which we have been favoured. We shall be glad, however, to receive, for private record, the names of medical officers of public institutions, as well as of physicians and surgeons in private and general practice, who are desirous of furnishing us with clinical lectures and reports of cases of interest for our forthcoming volumes.

ANÆSTHETICS IN DENTAL PRACTICE.

A Junior.—Nitrous oxide gas has been proved beyond all doubt to be the safest of anæsthetics in the hands of skilful administrators. The only drawbacks to its use are the shortness of its effect and the costliness of the necessary apparatus; but for anæsthesia during tooth extraction nothing can be simpler or better. Complete instructions as to its use for this purpose will be found in Coleman's Manual of Dental Surgery; but a few visits to a hospital where it is frequently given would be the best means of learning to administer it safely.

A Young Practitioner.—The case should be treated by dilating, and then, if necessary, curetting the whole of the inner surface of the uterine cavity.

Spes.—See Bellamy's Surgical Anatomy.

Enquirer.—Our correspondent should put Mr. So-and-So, appending his titles.

STRANGE MIGRATION OF A NEEDLE.

To the Editor of THE LANCET.

SIR,—About the end of November, 1883, a lady called upon me, stating that the greater portion of an ordinary sewing-needle had broken in the first joint of her left thumb. I remember having felt the needle point, and, after ineffectual attempts at its extraction, having advised my patient to let it alone, lest the attempt to remove it might result in greater injury to the joint. A few days ago the patient called upon me to inform me that a day or two previously she felt a pricking sensation in the right forefinger, and, having broken the skin, she without difficulty removed the greater portion of the lost needle from the point of the finger. The point of it was quite clear, the remaining portion rusty. Of all the strange journeyings of needles in the flesh this is the strangest which has fallen under my observation.—Yours truly,

Glasgow, Nov. 3rd, 1884. D. CAMPBELL BLACK.

Mr. Leonard.—Compliance with the request would, we fear, lay us open to too many applications of a similar kind.

Dr. Golaub Sing.—The pamphlet has been received.

M.B. EXAMINATION, UNIVERSITY OF LONDON.

To the Editor of THE LANCET.

SIR,—The following question is one of six in Midwifery and Diseases of Women submitted to the pass candidates at the examination which is now being held at Burlington-gardens:—"Give the anatomy and treatment of a case of unilateral hæmatokolpos (retention of menses)." May I be allowed to ask you, Sir, if this condition, "unilateral hæmatokolpos," is so frequently met with that every pass M.B. candidate should be supposed to have met with it, and to know all about it? Or is it merely an ingenious crux that has been set by a dyspeptic examiner?

I am, Sir, yours faithfully,

Nov. 5th, 1884. IGNORAMUS.

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THE KING OF ITALY'S CHOLERA TOUR.

THE following inscription, from the pen of Professor Domenico Gnoli, will be inscribed on the tablet about to be placed in the Capitol in commemoration of King Humbert's visit to cholera-stricken Naples :—

S. P. Q. R.
A RICORDARE AI POSTERI
CHE RE UMBERTO I
NEL SETTEMBRE DEL 1884
ACCORREVA A NAPOLI
AFFLITTA DA EPIDEMIA COLERICA
RECANDO NEGLI OSPEDALI E NE' TUGURI
CORAGGIO, CONSOLAZIONE, SOCCORSO
E VI RESTAVA FINCHÈ IL MORBO NON DECLINASSE
FRA LE BENEDIZIONI DI TUTTA ITALIA
PER LUI TREPIDANTE,
ROMA
LIETA DI RISALUTARLO INCOLUME,
SUPERBA DEL SUO RE,
INTERPRETE DELLA RICONOSCENZA UNIVERSALE
POSE.

(*Translation.*)

THE ROMAN SENATE AND PEOPLE.
TO RECORD TO POSTERITY
THAT KING HUMBERT I.
IN THE SEPTEMBER OF 1884
HASTENED TO NAPLES,
IN HER AFFLICTION FROM EPIDEMIC CHOLERA,
BRINGING INTO HER HOSPITALS AND HOVELS
COURAGE, CONSOLATION, RELIEF,
AND, UNTIL THE SCOURGE ABATED, REMAINED THERE
AMID THE BLESSINGS OF ALL ITALY
TREMBLING FOR HIM.
ROME,
REJOICING TO SALUTE HIS SAFE RETURN,
PROUD OF HER KING,
INTERPRETING THE UNIVERSAL GRATITUDE,
PLACED THIS TABLET.

Truth.—The amended circular on the subject of examination previous to promotion having removed what appears to us to have been the principal objection to that measure, we do not think it necessary to publish our correspondent's letter. We would refer him to the annotation on the subject in our last number.

Octavius has not enclosed his card.

M. D.—How can a person rightly add "M.D." to his name when he does not possess that degree?

OPENING THE TRACHEA.

To the Editor of THE LANCET.

SIR,—Such sad occurrences as the deaths of Drs. Foulis and Rabbeth must force upon the medical profession the question of right and wrong in the treatment of diphtheria by tracheotomy. It is a very grave question whether the stimulus to heroism given by so brilliant an example is worth the sacrifice of so much cultured energy. I have not yet heard of a child's life having been saved, but I have heard of several good men having sacrificed themselves. Even the performance of the operation is often a question of doubt, and a painful question for a surgeon to decide. In those cases which have come under my notice I have explained the case as fairly as I could to the parents, and I only urged an operation strongly in one case. It has appeared to me that when there are signs of bronchial, and more especially pulmonary, mischief (and very often there are), opening the trachea would be merely palliative treatment, and would only prolong a consciousness which deficient oxygen and blood-poisoning had almost abolished. Out of six cases which I saw during an epidemic in this place only one appeared to me to be a fair case for tracheotomy, there being slow development of the disease, which seemed purely laryngeal for days. In that case the parents refused the operation. A suction syringe to fit a tracheotomy tube might easily be a part of a tracheotomy case; but in many cases would it not be better to use no tube at all, simply dilating the tracheal opening? A freer vent would apparently be thus given to false membranes. Mr. Eddowes performed tracheotomy in one of my cases, and we had great difficulty in keeping the tube clear from the very tenacious secretion. Boiling water only would remove it. The whole question is full of difficulties, and every case must be modified by individuality and surrounding circumstances; but a discussion of the matter in your columns might do much to instruct and assist.—Yours truly,

Loughboro, Oct. 24th, 1884. J. B. PIKE, F.R.C.P.E., M.R.C.S.E.

To the Editor of THE LANCET.

SIR,—In the performance of tracheotomy for diphtheria, would it not be well to have at hand a twenty- to thirty-ounce bottle, exhausted as for aspiration, fitted with a rubber cork, the free extremity of the attached tube having something twisted round it to make it fit tightly the lumen of the tracheotomy tube—a piece of rubber tubing, for instance? The turning of the proper stopcock would answer in place of the hazardous suction which has already cost our profession so dear. Should this not clear the tube it would at least bring the obstructing membrane within reach of forceps.—I am, Sir, yours faithfully,

Oct. 27th, 1884. A. D. M.

AREA AND POPULATION OF NEW SOUTH WALES CONTRASTED.

FROM information issued from the Immigration Office, New South Wales, it appears that, giving a square yard as standing-room to one individual, the whole population of the Colony could be placed on a little over 156 acres, or less than a quarter of a square mile, and the area of the Colony is 316,320 square miles in extent. The density of the population of England is nearly 400 to the square mile, giving only about an acre and a half to each individual; while there are nearly 270 acres to every man, woman, and child in New South Wales, which, if as densely populated as England, would have a population of about 135 millions.

W. B. T.—We are unable to give our correspondent a definite answer to his question, or the reference which he desires. But it has long been a popular, though probably groundless, belief that the wearing of ear-rings is beneficial to the eyesight.

Mr. Mercer (Bath).—The paper has been received.

Medicus (Dublin).—On our second page of contents will be found a reference to the vacant appointments advertised in our columns.

"THE VENTILATION OF DRAINS AND SEWERS BY SHAFTS."

To the Editor of THE LANCET.

SIR,—I read with some interest, in your issue of Oct. 11th, an article under the above heading. On many points I agree with the opinions therein expressed; but I cannot admit that the evils which undoubtedly obtain are chiefly owing to the line adopted by "engineers" and "other professional men." The folly referred to, when practised "for the sake of a little economy," emanates almost invariably from the "owner or authority," who does not properly appreciate the money value of proper precautions in sanitary matters, and is not brought about by the engineer, who can have no possible interest in undue or false economy.

Having reference to the ventilation of public sewers, it is well understood that where sewers are properly designed and adequately supplied with means of flushing, very little effluvium, and less, if any, poisonous gas, will exude from the surface ventilators. Some engineers are to blame for being too easily satisfied with sewer velocities inadequate to ensure the rapid passing away of the foul matters before putrefaction sets in and gas is generated. To proper falls in the sewers must be added a plentiful supply of water to work them, or stagnation of sewage, the prime origin of the evils complained of, will result. Water in proper quantities not only ensures a sufficient flow to obtain in practice the theoretical velocity due to the particular size and gradient of the sewer, but, by lowering the temperature of the sewage and of the air in the sewer, it checks or delays the progress of putrefaction.

Admitting all this, however, it is to be feared that in practice sewers will continue to be so laid and dealt with as to produce noisome odours, if nothing worse; and it has long been apparent that something better than simple unaided ventilation at surface level should be adopted. The increased safety afforded by high ventilators over surface ventilators may be taken as unquestioned by engineers, but in attempting anything like a general introduction of the system they are brought face to face with a considerable difficulty. Engineers abreast of the age recommend ample surface ventilation, supplemented where practicable by high-level outlet ventilators; but the real bar to the wider adoption of a safer and better system of ventilating public sewers is the absence of statutory power to enable local authorities to place such shafts on private property, and the objection evinced by house owners to ventilating-shafts being attached to their buildings.

It is not easy to suggest a sufficient remedy without risk of interference with private rights; but if the powerful influence of THE LANCET were successfully exerted to obtain such an amendment of the Public Health Acts as to vest in sanitary authorities the necessary powers to render high-level ventilation practicable, sanitary science and the resources of engineers would, I venture to say, be found equal to the rest. The most thorough system of ventilation for sewers would be effected by forming them of a trough open up to the surface level. The introduction of this system has hitherto been precluded by considerations of expense. It is, however, possible to arrange a design of this nature at a cost not altogether beyond the range of possibility, and a material saving in many items of construction would be effected. There is undoubtedly far greater danger in sewer gas reaching the inside of houses than can obtain from gas dispersed in the open air of the streets; and, moreover, air or gas forced into a house in consequence of insufficient ventilation is obviously far more noxious than that emanating from a sewer freely ventilated. Public sewers must be ventilated to no less a degree than by the systems now in vogue, and if high shafts are to be entirely substituted for surface ventilators, they must be of such adequacy as to ensure no more pressure being exercised than at present upon the main intercepting trap between the public sewer and houses, and no less frequent change of air being in the sewer. To enable this to be done, the public must either submit to the somewhat novel, though unobjectionable, shaft being placed on their property, or pay the extra cost entailed by putting up shafts otherwise sustained. While, however, we are waiting for necessary powers, the most should be made of present circumstances. With proper care sewers may be so designed as to render the nuisance arising from surface ventilators very slight, and any actual danger remote.

I am, Sir, your obedient servant,

URBAN SMITH, A.M.I.C.E.

Westminster-chambers, S.W., Oct. 27th, 1884.

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VACCINATION IN TENNESSEE.

WE are much obliged to Dr. O. C. Tite (?) of the Hermitage Club, Nashville, Tenn., for his admirable letter on the question of vaccination, as presented to his mind in the epidemics of Tennessee. It entirely coincides with the experience of all sensible men in all communities, and, indeed, is a repetition of what is monotonously found everywhere. The letter should be published broadcast, but would be superfluous to the readers of THE LANCET. It shows that even if there were no Compulsory Vaccination Act, there is another force to drive men to the vaccination station more imperious still—viz., the terrible disease of small-pox, from which it is the only protection, perfect or imperfect, according as it is done perfectly or imperfectly.

Dr. Jas. Wilson.—1 and 2. The idea entertained by hairdressers is that the hair is a hollow structure, and the cutting of the ends causes them to "bleed" nutriment, and that singeing stops this and "heals" the ends.—3. The operation is founded on an entirely mistaken idea of the structure of the hair.—4. It is of modern introduction, and originated outside the profession.

Mr. E. Chesshire.—The notice appeared in THE LANCET of Oct. 25th, page 758.

THE LATE DR. RABBETH.

To the Editor of THE LANCET.

SIR,—Sir Wm. Gull, in commenting on the heroism and subsequent sad fate of the late Dr. Rabbeth, suggested that a memento of his devotion should be perpetuated by annually presenting a medal to some distinguished Bachelor in Medicine of London University.

May I suggest that those who are known to have previously performed an exactly similar act of bravery and humanity, and without thought of recompense or recognition, should at least be also considered worthy recipients of such an honour? A case occurs to my recollection, very similar, except in the subsequent results, to that which was performed by Dr. Rabbeth. It was about the year 1868. I had to perform tracheotomy in a very urgent case of laryngeal diphtheria. While dividing the rings of the trachea a small vessel from the edge of the wound began to bleed rather freely, blocking up the windpipe, and threatening immediate suffocation. Mr. Arthur H. Sandiland, then a student at St. Bartholomew's Hospital, who was assisting myself and partner, Dr. F. H. Daly, in the operation, with a promptitude and coolness which elicited the admiration of all present at the time, at once seized a tube or pipette, and cleared the windpipe by suction, so that the tube could be inserted, thus probably prolonging the life of the little patient in apparent comfort for several days. My late partner and myself have often since referred to the cool courage and unselfish heroism of Mr. Sandiland, conduct which will be regarded by those who know him as quite characteristic of the man.—I am, Sir, yours truly,

Kingston, Nov. 4th, 1884. GEORGE MUNDIE.

A MEDICAL HERO.—DR. RABBETH.

In trying to save a patient's life he lost his own.

No nobler gift at heaven's gate
Could mortal ever give;
Angels, approving, whispered,—
"He died that she might live!"
And though our hopes are broken,
And mothers weep full sore,
We pray that both are happy—
Not lost, but gone before.

Cley-next-Sea, Norfolk, Nov. 4th, 1884. W. SUMPTER, M.D.

M.R.C.S.E., J.P., &c.—A reference to our issue of Aug. 9th last will show that the name mentioned has been removed from the roll of the Royal College of Surgeons of England.

Mr. R. L. Albert.—We cannot find space for the continuation of the discussion.

SANITARY CONDITION OF CANNES.

To the Editor of THE LANCET.

SIR,—My early arrival at Cannes has enabled me during the last week to visit the whole of this health resort, and it is with pleasure and satisfaction that I am able to give you a favourable account of the sanitary condition of this locality. The streets, squares, and quais are perfectly clean, being constantly swept and watered. The street gulleys are most of them trapped, and the openings are painted with a thick coating of chloride of lime. The narrow streets I have also visited, and find that many of the houses are being whitewashed and painted. The hotels and villas are for the most part cleaned, and prepared to receive visitors, while some of the former are still in the hands of the painters and whitewashers. The gardens are being weeded and made tidy. On visiting the hotels the first subject mentioned, and spoken of with much pride, was the new arrangements for drainage; and I was glad to see the stamp of English manufacturers on the sanitary appliances, which were in perfect working order. The change for the better since my visit to Cannes four years ago is very great. No doubt the typhoid scare of three years ago has done a vast amount of good to Cannes and its inhabitants, and, what is still better, they all recognise it. The weather is very fine; bright sun, blue sky, with the thermometer steady at 68° F. A few good showers of rain are required, to wash the dust from the trees and brighten up the general aspect.

I am, Sir, yours truly,

Cannes, Oct. 20th, 1884. G. H. BRANDT, M.D.

Gorgius.—Sect. 29 of the Births and Deaths' Registration Act, 1874 (37 and 38 Vict., Cap. 88), enacts: "In case of the death of any person who has been attended during his last illness by a registered medical practitioner, that practitioner shall sign and give to some person required by this Act to give information concerning the death a certificate stating to the best of his knowledge and belief the cause of death." In the face of this enactment it must be clearly illegal to charge a fee for supplying a certificate which the Act declares shall be furnished. Moreover, it may be presumed that such a fee would only be paid by those who are unaware that the Act entitles them to have the certificate, for the purpose of the Registration Act, without the payment of fee or reward.

Dr. Jas. Russell (Glasgow).—The publication of the correspondence forwarded to us would probably bring about a controversy for which we have not space.

Mr. Molony (Slingsby).—Yes.

Mr. J. Barnes.—Cassell's Domestic Medicine; Wood's Household Practice of Medicine.

Mr. Henry Crosse.—We regret we cannot afford the desired information.

WASHING OUT THE BLADDER.

To the Editor of THE LANCET.

SIR,—Mr. G. B. Browne suggests, in your issue of the 18th ult., a means of washing out the bladder by the use of an ordinary indiarubber pump. I beg to mention a method first adopted by myself in a case of malignant disease, and found very convenient—viz., an indiarubber tube, such as is used for infants' feeding-bottles, only about eight feet long. One end may be attached to the plug, A B, described by Mr. Browne, and the other end passed over a small tube fixed in a leaden weight of two or three ounces. This weight may be placed in a small pail containing the medicated solution hanging by a cord passed through a hook in the ceiling. By means of a cord the reservoir may be raised or lowered, thereby increasing or diminishing the force of the stream. The patient is free to move about within certain limits, and the hands are more free; in a sensitive organ there is less danger of causing pain from movement of the instrument; the flow may be arrested by simply pressing the indiarubber. The stream, after the weight and reservoir are in position, may be readily caused to flow by rolling a bottle over a few inches of the tube towards the opening of exit. There is nothing startling in the above method; and although I have never seen it used but by myself, I do not claim any great originality in it. A trial of this cheap apparatus with a "double tube" catheter will prove its efficiency.

I am, Sir, yours truly,

Oct. 27th, 1884. BEAVER.

A RARE CASE.

To the Editor of THE LANCET.

SIR,—There is at present in this asylum a male patient who is mentally the subject of chronic mania, and physically suffering from phthisis (left lung). For several months past there has been a persistent, distressing cough, and the daily amount of expectoration has been enormous. About a week ago a small abscess appeared between the sixth and seventh ribs, just external to the nipple-line, the contents of which had very soon a free outlet without the aid of a bistoury. It was evident it had a direct communication with the pleural cavity, and over a pint and a half of grumous material escaped from the pleural space when the abscess opened, and small quantities continue to ooze from the sinus when the dressing is changed. There is now no cough or expectoration, and the patient has gained strength.

I shall be pleased to know if any of your readers have met with a similar case. I am, Sir, yours truly,

Dorset County Asylum, Oct. 28th, 1884. P. W. MACDONALD, M.B.

Mr. J. W. Sheppard and *Subscriber.*—The treasurer is Dr. Claye Shaw, Bansted Heath Asylum.

Mrs. C. E. Field.—We cannot interfere in the case.

"AN APPEAL TO PUBLIC VACCINATORS."

To the Editor of THE LANCET.

SIR,—Dr. Scoresby-Jackson does not seem to be aware that there has been an official declaration of the area of scar to be produced by primary vaccination, and that this may be obtained by any number of insertions the vaccinator may deem sufficient. The Board inspectors require an area of half a square inch, which is about the size of a sixpence. In practice I have found three free insertions sufficient; and as I received two grants for successful results while I was a public vaccinator in a country district some years ago, I conclude that my method was sufficiently effectual to satisfy the experienced eye of the inspector. I may add that I have never seen an attack of small-pox in any case in which I had performed primary vaccination with such results as above given. I am, Sir, yours truly,

Nov. 3rd, 1884. JAMES THOMPSON, M.D.

OBJECTIVES.

To the Editor of THE LANCET.

SIR,—In opticians' list of objectives there are often several of the same power, but at different prices, some being even twice as much as others. May I ask your correspondent, Dr. Griffin, who seems to have gone into the subject closely, whether the value of an objective to a practical worker is in mere proportion to the price; or which class would be most serviceable for histological work?—Yours obediently,

Oct. 28th, 1884. A STUDENT.

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Dr. Ormsby.—As we did not give currency to any of the statements of which our correspondent complains, we do not feel called upon to insert his long explanatory letter. If he has been misrepresented, he should address his disclaimer to the journal in which the previous letter and the commentaries upon it appeared.

Mr. Gem.—The report will appear in our next.

Mr. Pike (Loughborough).—Yes.

THE PRELIMINARY EXAMINATION.

To the Editor of THE LANCET.

SIR,—I hope the medical profession as a body will condemn Dr. Haughton's scheme for the Medical Preliminary Examination, which has made a ridiculously easy examination more easy still. The idea of being able to pass an examination with so simple and few subjects bit by bit is absurd. As it was, at the College of Preceptors many boys of twelve could have passed it with ease. Last year I knew men who, knowing no Latin before, and with very little other education, passed it with a few weeks' cramming. Now our examination will be easier than that of the F.P.S.Glasgow or the Edinburgh Preliminary, for they do insist on having two books of geometry. I knew a man go up to Scotland and pass in English only. The next time he crammed up and passed in Euclid, the next time in algebra and arithmetic, the fourth time in Latin, and the fifth time in chemistry. Thus, counting mathematics as one subject, he went up five times for four subjects; and this is what London is imitating. Alas, to what depths will the medical profession sink! I am, Sir, yours obediently,

Brixton, Oct. 29th, 1884. B.A.

Alpha.—The Handbook of the St. John Ambulance Association; Esmarch's Lectures, or those of Wetherly.

THE M.D. DEGREE.

To the Editor of THE LANCET.

SIR,—I am in receipt of a letter from W. K. Hilton, Esq., M.A., of the University of Durham, informing me that at present that university is not desirous of any change in its regulations for the admission of practitioners to examination for its M.D. degree without residence. I am sure this decision will be received with regret by a large number of your readers. We can only hope that this may not be the final result.

I am, Sir, your obedient servant,

Leigh, Nov. 1st, 1884. B. JONES.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Spencer Wells, London; Sir E. Lechmere, London; Dr. Sydney Ringer, London; Dr. Althaus, London; Dr. Scattergood, Leeds; Mr. E. Cheshire, Birmingham; Dr. Sinclair, Dundee; Mr. G. Ellis, London; Dr. Battams, London; Dr. Brailey, London; Mr. Evershed, London; Dr. Jas. Wilson; Dr. Buck, Leicester; Mr. St. V. Mercier, London; Dr. M'Munn, London; Dr. Kesteven, Enfield; Dr. C. T. Aveling, Clapton; Dr. Boyd, Dublin; Mr. Suffield, Birmingham; Dr. Buchan, Plymouth; Mr. T. S. Ellis, Gloucester; Dr. Smyth, Belmont; Mr. A. Dryadale, Mentone; Mr. Gem; Mr. Mark Hovell, London; Mr. H. Lee, London; Dr. Crutchley; Dr. Railton, Old Trafford; Dr. Dukes, Rugby; Mr. Jones, Leigh; Dr. Golant Sing, London; Dr. Hudson, Leeds; Dr. Gaston, Atlanta; Mr. C. C. Will, Nashville; Professor G. Waters, Bombay; Mr. Ensworth, London; Mr. Barwell, London; Dr. Adam, Foochow; Dr. Campbell Black, Glasgow; Dr. Paramore, London; Mr. Molony, Slingsby; Dr. Blakie Smith, Aberdeen; Mr. Wood, Southgate; Mr. D. S. Shroff, Calcutta; Mr. E. J. Simpson, Assam; Mr. Leonard; Mr. Dunscombe, Liverpool; Mr. Atkinson, Cambridge; Dr. Gordon Holmes, London; Mr. W. Salter; Mr. W. F. Jebb, London; Dr. Fenwick, London; Mr. A. J. Harvey; Mr. Mitkinson; Mr. T. Clarke, London; Dr. J. B. Russell, Glasgow; Dr. T. R. Lewis, Bywood; Dr. Kinkead, Godway; Mr. L. Humphry, Cambridge; Dr. Ormsby, Dublin; Mr. E. D. Bauer; Mr. Pike, Loughboro'; Mr. Mercer, Bath; Messrs. Figgins and Co., London; Dr. C. S. Taylor, London; Dr. Herbert Snow, London; Dr. J. Thompson, London; Mr. Smith, Aldershot; Messrs. Hinton and Co., London; Mr. Stevens, Biggleswade; Mr. Grant; Dr. Owen, Liverpool; Dr. Thomson, Newport; Mr. Mears; Mr. Reginald Harrison; Mr. Carey, Church Stretton; Messrs. Kirby and Co., London; Messrs. Mottershead and Co., Manchester; Mr. Murchison, Strathconan; Messrs. Wilkinson and Co., London; Dr. Hall, London; Messrs. Boulton and Paul, Norwich; Mr. Lewis, Leeds; Dr. Owen, Liverpool; Mr. Sawyer, London; Mr. Juler, London; Messrs. Southall and Co., Birmingham; Mr. Constable, Cambridge; Messrs. Burgoyne and Co., London; Dr. Campbell, London; Mr. H. L. Albert, London; Messrs. Burghope and Co., Burnley; Mr. Reynolds, Castle Donington; Dr. Harley, London; Dr. Burns, Hampstead; Mrs. Clark, Tunbridge Wells; Mr. Eddan; Mr. Genson, London; Mr. Griffith, Carnarvon; Mr. Cowlham, Glasgow; Dr. Auld; Mr. Craske, Kentish Town; Dr. Tibbits, London; Mr. Cornish, Manchester; Miss McKie, Manchester; Mr. Clement Hawkins, Cheltenham; Mr. Lucien Howe, Berlin; Dr. W. Allen, Ladgate; Mr. Dobson, Clifton; Dr. Mundle; Mr. Eddowes; Dr. Rayner, Hanwell; Messrs. Barker and Son, London; Dr. C. J. Aveling, London; In Morsu Diaboli; Nemo, Liverpool; Viator; Ajax; Jam Satis; A Young Practitioner; A. M.D.; Vibrio; Truth; G.; Spes.; Memb. Brit. Med. Assoc.; Miss S., Boulogne-sur-Mer; M. A. B.; M.R.C.S., Salisbury; X. Z., Liverpool; Surgeon; Accoucheur.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Bowes; Messrs. Wood and Co., New York; Mr. Thomson; Dr. Webster, Bristol; Dr. Wise, Plumstead; Dr. Young, Hounslow; Mr. Fox, Bristol; Dr. Imlach, Liverpool; Messrs. Isaacs and Co., London; Mr. Pugh, Birmingham; Mr. Arrowsmith, Bristol; Mrs. Curless, Liverpool; Messrs. Wyley and Co., Coventry; Miss Hart, Dartmouth; Dr. Wilson, Liverpool; Mr. Mug, Sterrington; Mr. Ransom, Stafford; Dr. Fowler, London; Mr. Carter, Glasgow; Messrs. Woolley and Co., Manchester; Mr. Bennett, Preston; Mr. St. Dalmas, Leicester; Mr. Carter, London; Mr. Kilioran, Dublin; Mr. Griffith, Clifton; Mrs. Armstrong, Rochdale; Mr. Beaman, Newton-le-Willows; Dr. Illiott, Aylesbury; Mr. Mackay, Edinburgh; Dr. Greville, Sandfacre; Dr. McNaughton Jones; Dr. Reidy; Mr. Kneebone, Bedford; Mr. Thompson, Liverpool; Dr. Davies, Bridgend; Mr. Godwin, Hackney; Messrs. Giles and Co., Bristol; Mr. Kolkman, Leicester; Mr. Stevens, Stoke Newington; Dr. Blandford, London; Mr. Birks, Sheffield; Mr. Oldham, Macclesfield; Mr. Wright, Leeds; Mr. Lair, Birkenhead; Dr. Wood, Burton-on-Trent; Mr. Stevens, St. Austell; Messrs. Lee and Nightingale, Liverpool; Mr. Denne, Cradley Heath; Mr. Brown, Faeldhouse; Mr. Saunders, Camden-town; Mr. Brown, Pimlico; Mr. Davis, St. Helen's; Mr. Pyle; Dr. Arnold, Twickenham; Mr. Fyfe, Glasgow; Mr. Castle, St. John's-wood; Dr. Drake, Dublin; Miss De Luttichau, Holloway; Mrs. McDonald, Bournemouth; Dr. Eberle, Thirsk; Messrs. Wright and Co.; Mr. Ickley, Tollington-park; Messrs. Keith and Co., Edinburgh; Messrs. Read and Co., Bristol; Mr. Tully, Wye; Dr. Dod, Mistley; Dr. Barry, Hartlepool; Mr. Kay, London; Messrs. Squires and Co., London; Mr. Wilkinson; Mr. Fume, Bulwell; Dr. Watts; Mr. Hodgkinson; Alpha, Cheapside; A. B. D.; Alpha, Liverpool; Lady Superintendent, Cambridge; M.D., Leominster; Medicus, Hanley; Medicus, Great Marlow; M.B., Regent's-park; Lex, Brixton; Delta, Hollingwood; C.; T. D., West Leigh; F.R.C.S.M.; D. T.; E. B., Chesterfield; S. S. G.; Medicus, West Brighton; B., Gainsborough; B.A.; A. C., Plymouth; W.; Medicus, Smethwick; T. B., Brockley; L.R.C.P.; Jacobus; M.D., Swansea.

Western Morning News, Liverpool Courier, Chatham News, Englishman, Glasgow Herald, Temperance Chronicle, Hackney News, &c., have been received.

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An Inaugural Address
ON THE
REVIVAL OF OVARIOTOMY,
AND ITS
INFLUENCE ON MODERN SURGERY.

Delivered at the Midland Medical Society, Birmingham, November 5th, 1884,

BY SIR SPENCER WELLS, BART.,
LATE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

(*Concluded from p. 813.*)

BY careful consideration of all the sources of danger, and by successive improvements in practical details, the mortality of ovariotomy became less excessive; and it was soon felt that the mortality, after other surgical operations, both in London and provincial hospitals, as well as in private practice, was excessive, and ought to be diminished. It was some years after Southwood Smith, Edwin Chadwick, and William Farr had begun their attempt to impress the importance of a knowledge of sanitary science upon the people of England that its influence was much felt either in hospital practice or in domestic life; and I doubt whether the attention of surgeons was ever fully awakened to the possibility of reducing the mortality of great operations before Sir James Paget, at the meeting of the British Medical Association in London in 1862, delivered his memorable address upon the study of the large group of diseases confounded under the name of "pyæmia."

Two years afterwards, at Cambridge, I addressed the Association upon the same subject; and, after alluding to many sanitary measures, called attention to the bearing of the then recent researches of Davaine and Pasteur, and to the value of Polli's experiments upon the use of sulphurous acid and the alkaline and earthy sulphites in the prevention and treatment of many of the infectious and contagious causes of excessive mortality after operations. We were on the dawn of that phase of modern surgery when the so-called laws of sanitary science were tested in the laboratory by physiological chemistry and experimental pathology, and were afterwards acted on by Lister and his followers.

During this time of reaction and activity in abdominal surgery there was a corresponding development of the literature of the subject. It appeared in all shapes and came from all quarters. The names of men who have since become celebrated were ushered in with their first contributions. Essays and records of cases abounded in periodicals. Pamphlets fell thick upon the public and books were published which, though more or less incomplete, showed how fast material was accumulating for the future composition of elaborate treatises.

A review of all this matter poured out by the press, both English and foreign, on the question of ovariotomy, a few years before and after the date of 1865, enables us in a measure to gauge the extent of the interest the operation had excited, the change of opinion in reference to it, the success that had attended it, and to trace the indications which the reports contained of the spreading eagerness of the profession to seize every opportunity of giving to humanity the benefits which the practice was capable of conferring. But that which most forcibly strikes the attention in reading this literature is the contrast furnished by its tone and tendency with that which preceded and made way for the revival. Previously all that had been written was sceptical, doubting, speculative, or even prohibitory. Wavering expectation was modest in its demands, timid in its forecastings. There was more of fear than hope for the future. That future came, and with it the revival. Then, instead of the vague prophetic inspirations of the Hunters, the moving exhortations of Bell, the qualified and cautious encouragements of Blundell, the passive admissions of Astley Cooper that ovariotomy might be done, the conscientious shrinking, in an exalted reverence for the sanctity of human life, from the realisation of what seemed so desirable and within the compass of daring power, the pathetic wailings over sufferings unrelieved and deaths unresisted, and the despondency of professional inaction, we had reports of accomplishment which proved, by the wideness of their sources, their numerical importance, and the character of their authors, that the revival was assured. The question now changed from one of possibility to one of improvement, and reports of cases merged into discussions of practical details of operative and therapeutical interest. These, from their precautionary or conservative bearing, gave good augury of the vast ameliorations which we have seen within the last twenty years, and have brought us at the present time to nearly certain success when a careful surgeon operates in a favourable case. One may truly affirm that in all these outpourings of the revival period there was nothing vainglorious, boasting, presumptuous. As contributions to science they were serious, candid, plain, aiding further progress, informing to the profession, and useful to mankind. They bore upon them the signs of a wise resolution to advance circumspectly upon the path now open; and if tinged with a glow of the personal satisfaction which flows from a sense of duty in part fulfilled, and brightened with a gleam of the complacency reflected from the visible evidence, now so constantly before the public in the living, healthy survivors of the operation, that the profession as a corporate fraternity was equalling in its philanthropic energy that which had made the reputation and had been the pride and solace of its older "men of renown"—I can only say, not that it was excusable or admissible, but that this gratulation was no more than the circumstances prompted, or than may justly be felt by all who join in working, with a right mind and to a good issue, for the welfare of their kind.

And here with 1865 I may end this retrospect of the revival of ovariotomy, of a rapid revolution in opinion and practice in less than ten years. Before 1858 the operation, like all good things, had been of slow growth. One hundred years ago it was but a germ that might be described in a lecture by John Hunter. Ten years later it was seed that fell from the hand of Bell. In little more than another decade it germinated as a living vitalising reality in Kentucky. Sixty years ago it was transplanted to the land of its philosophical conception. In twenty years more we find it a sapling on English soil, growing slowly at first, and up to 1858 looking as if it might prove no more than a withering gourd. But by 1865 its root had struck firm, its stem stood erect, its branches were wide and strong, known and sought as a refuge by the sick and dying. That it was no withering gourd has been proved by all that the world has since seen. Thousands of perishing women have been rescued from death; many more thousands of years of human life, health, enjoyment and usefulness have been given to the race; and to all future victims of a malady before inevitable in its fatality, it gives consolation, hope, and almost certainty of cure.

And passing over another twenty years—advancing from 1865 to 1884—we can rejoice that in all our metropolitan and most of our provincial hospitals, and from the best teachers on both sides of the Atlantic, medical students of to-day may hear of the good already done—may see for themselves how success is attained, and possibly, by the establishment of some new fact, or the discovery of some new device, they may increase our power over disease, and carry on the work to our successors.

I must leave it to others to speak of our great hospitals and important schools. But I cannot close this part of my address without one word of hearty congratulation to my successors at the small hospital where, with seldom more than six or eight beds at my disposal, in twenty years I completed 408 cases of ovariotomy, the deaths having diminished in successive periods of five years from one in three to one in four or five, and in the last two years to one in ten. In seven years, 1878–83, my three successors among them had 496 cases—some ninety more than I did alone in twenty years,—the deaths falling from one in five in 1878 to one in eighteen in 1883. And the recent publication of my colleague Doran adds to the satisfaction I feel in seeing my operative work so efficiently continued, the pleasure of noting how happily he is supplementing the opening of his career as an operator by the intellectually higher distinction of being acknowledged as a penetrating investigator and clear expositor of the obscure subject of ovarian pathology, to which he is devoting his philosophical earnestness. On this centenary of Hunter's lecture we may truly claim that his example is followed, his foresight verified, and our exertions rewarded.

In asking you to consider the influence which the revi

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of ovariotomy has had upon modern surgery, I think we may not only assume the revival as complete by the year 1865, but that, in the words of Paget, "the influence for good was not limited by the increased success of ovariotomy, but extended to every department of operative surgery, and will always continue to be felt in the whole practice of surgery." And the rapidity with which the success of ovariotomy led, again using Paget's words, to "an extension of the whole domain of peritoneal surgery," is not less remarkable than the rapidity with which ovariotomy had advanced in professional opinion between 1858 and 1865. The first extension naturally enough was to the removal of uterine tumours.

At first this was only done after a mistaken diagnosis; but before many years had passed it was done designedly. At first only in cases of pedunculated subperitoneal outgrowths; but latterly, under conditions most unfavourable, success has been obtained in a proportion of cases very surprising even to those who in their long experience have many times been astonished at their own success. Nothing in the whole history of surgery can be at the same time so gratifying and so astounding as the records of Keith's later cases of the removal of uterine tumours, collected and published by his son. Taken alone, they would almost justify a general law to the effect that no woman should be allowed to die of any innocent uterine growth without attempting to save her life by operation being made. When the earlier cases of Kœberlé were criticised in the French Academy by Boinet, Richet cautioned the audience against summary condemnation of an operation not dreaded more than ovariotomy was not long before. The question since that day has been decided by experience, and if a word of caution is now needed, it is only to warn surgeons of the future that they cannot hope for success unless they prepare themselves for operation upon the living body, by taking every available opportunity of practising upon the dead body, and by a conscientious determination to study rather the true welfare of the patient than, on the one hand, how to avoid responsibility, or, on the other hand, how to advance their own renown.

It is fortunate that in some of these cases of uterine tumour an alternative proposal ought to be considered. Both ovaries may be removed with the knowledge that this proceeding has been followed by atrophy of the uterine growth. This, on the part of Hegar, was the legitimate application of a principle, and the practice has often proved successful. In cases where removal of the tumour would have been impossible or exceedingly dangerous, removal of the ovaries and Fallopian tubes has led, with far less risk, to cessation of bleeding and more or less diminution of the morbid growth. But we must have further experience before we can arrive at a fair estimate of the relative value of the two courses of action. We have learned, however, that if the ovaries are not completely cleared away, if, having been adherent, they have been twisted or scraped away from their connexions, and some small portions left, menstruation may afterwards recur quite regularly, even though both Fallopian tubes have been totally removed. I have more than once warned the profession against the capricious extirpation of the ovaries, because they are supposed to be the source of all womanly ills, and I repeat my caution, seeing to what wide-spreading evils its neglect may lead. I think it a charity to lay a checking hand on an erring judgment before it has gone too far, and I would fain save our profession from the public odium which must sooner or later be the penalty suffered by all, if a few indiscreet members of our body act without general sanction, or disregard general disapproval.

I have not time to enter upon the very important question of the excision of the entire uterus, either by the vagina or by abdominal section, nor of that substitute for the Cæsarean section known as Porro's operation, nor on the operative treatment of extra-uterine fœtation; and can only say a very few words about the next kind of abdominal tumour, the removal of which followed the ovarian and uterine—the enlarged spleen. I did not meet with a case which I thought justified the operation until 1865, although I had long before that been determined to do it in any suitable case. My second case was performed in this town, and I have only met with one since. I need not tell you that the example has been frequently followed by other surgeons, and there is every reason to hope that increased experience may be followed by diminished mortality.

And so with renal and peri-renal tumours. Nephrotomy, nephro-lithotomy, pyelo-lithotomy, and nephrectomy, terms hardly entering into surgical literature twenty years ago, define operations which are now performed in increasing numbers, and, especially to the physiologist, with a wonderful success. My colleague, Knowsley Thornton, can boast of ten nephrectomies, all by abdominal section, as well as four nephrotomies, and three nephro-lithotomies, the whole seventeen cases successful. These cases, and seven successful cases of pyelo-lithotomy out of eight, as lately recorded by Anderson, can only be the effect of rigidly abiding by the observance of what we now know to be the rule and criterion of good work. So also with a variety of solid and semi-solid abdominal tumours, originating in the pelvic cellular tissue, or in the peri-renal fat, or in the mesentery, the appendices epiploicæ, the omentum, or the abdominal wall, extirpation is effected with a loss of life so small as would have been almost incredible a few years ago.

Already in several cases tumours formed by peritoneal hydatids have been successfully removed. I have not time to do more than barely allude to opening of the gall-bladder and the removal of gall-stones, the opening and draining of hepatic abscesses, of hydatid cysts of the liver, of pelvic abscesses, and of hæmatocele, to removal of the pylorus, gastrostomy, and opening of the stomach and removing a large mass of hair. In one remarkable case Mr. Thornton removed a mass of hair weighing two pounds, which was moulded into the shape of the stomach. The incision across the greater curvature was five inches long, and fifteen deep and fifteen peritoneal sutures were required to close it. The abdomen was closed, and the patient is perfectly well. Ten years ago such an account would hardly have been believed. With the exception of this and one successful case by Schönborn, in all other reported cases such masses of hair in the human stomach have only been found after death. But no one who has watched the progress of these operations, has considered the causes of death in fatal cases, and the details of the operative proceedings in successful cases, can come to any other conclusion than that one important element in the attainment of success is the scrupulous observance of the principles laid down as necessary to success in ovariotomy; not only as regards the hyglenic precautions never omitted in modern surgery, but especially as to the importance of a very accurate and exact union, not only of the edges, but of the surfaces of the peritoneal surface of the viscera and of the abdominal wall. In gastrostomy, for instance, it is found that when the stomach is attached to the abdominal wall by a single ring of sutures, the weak attachment may give way, and risk of extravasation into the peritoneal cavity may be great. But when, after dividing the abdominal wall, the parietal peritoneum is sewn to the skin all round the opening, a broad surface of visceral and parietal peritoneum may afterwards be maintained in contact by a circle of sutures, forming loops, passed through the peritoneal coat of the protruding portion of stomach, and through the whole thickness of the abdominal wall, about half an inch from the edge of the incision. Smaller fine sutures being inserted between the larger ones, a very close and secure attachment of the stomach to the peritoneal lined opening in the abdominal wall, and complete occlusion of the peritoneal cavity, are guaranteed. This done, we have an example of the carrying out in its integrity of one of the fundamental rules of practice in the operation of ovariotomy as regards the peritoneum—surface to surface, not edge to edge merely,—and it is a fact not to be overlooked that in gastrostomy the result of the operation seems to depend upon it; the rule being that the cases in which it has been neglected fail, while those in which it is observed end satisfactorily. Thus the lessons learnt at an early stage of our experience in one operation have been the means of leading directly to the successful performance of the other.

This tracking of Paget's extension of the "domain of peritoneal surgery" has carried us a long way, and perhaps those who have entered upon their career at a late stage of the successive annexations may find it not easy to understand the fascination which the subject has for their precursors, who remember its dawning, who were pioneers in realising possibility, and who now live and are still pressing forward to the ever-receding horizon before us. Far as we have come on the way, and much as we have done, there is more to do and more to gain. If formerly we plumed ourselves on our triumphs over the peritoneum—or rather, as it really was, over our fears of the peritoneum—upon our ovarian, uterine, renal, and splenic victories, and put up trophies of all those organs in our museums, we now see our way to new conquests. In proof of this, it is a satisfaction to refer to a series of cases and papers in some of the very latest English and

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foreign medical journals, showing how much more frequently than heretofore obstruction of the intestines is now successfully treated by operation, and that excision of the pylorus, and of parts of the intestines, is already a subject of careful experiment. This is directly traceable to ovariotomy, for one of the very earliest cases was my own union of the upper and lower ends after removing about three inches of small intestine invaded by cancer from an ovarian tumour. In Treves's paper on Excision of Intestine, you will see how firmly an operator of to-day is taking his stand on the true principles of abdominal surgery which we have watched emerging from their obscurity. He does not ignore the teachings from experiments upon animals. He supports himself by the nine successful resections of lengths of the intestines of animals made by Madelung. He traces the failures in many operations of the same kind on the human subject to faults in the details, such as want of perfect adaptation and insufficiency of sutures. And he lays down as rules for his own action that he must separate the peritoneum from the other tissues, introduce abundance of sutures after Lembert's method, bringing the two serous surfaces together, and avoiding the mucous membrane with the needle. A recent paper by Reichel informs us that already 121 cases of resection of intestine have been collected, the conclusion being that the two ends of the bowel should *not* be united at the time of the resection, but that an artificial anus should be established. This can be closed by a subsequent operation. You will probably soon see a report of a case, not yet published, where Mr. Jessop of Leeds cured a *fæcal* fistula by separating the injured intestine from the abdominal wall, and uniting the upper and lower parts of the gut by suture. What I said with regard to practice on the dead body before operating on living women afflicted by uterine tumours is equally applicable to the resection of intestine. But here practice on the dead is not sufficient, and if we are not allowed to experiment on living animals in this country, we must either go abroad or practise on men and women. At my request a young surgeon, Mr. Jennings, from whom I hope and expect great things in the future, has recently cut away portions of the intestines of dogs, uniting the upper and lower parts so as to maintain the continuity of the canal. Some of the preparations may be seen in our College Museum, and they strongly confirm the conclusion that success depends upon complete union of the apposed serous surfaces.

If I were reviewing modern surgery in general, and not limiting myself to the influence upon it of the revival of ovariotomy, I should speak hopefully of pulmonary surgery, of the draining of cavities in the lung, of incising gangrenous lung, of resection of portions of ribs to obtain contraction and closure of the pleural cavity, and of excision of parts of the lungs, or of an entire lung, even of the surgical treatment of purulent pericarditis. But these are subjects to which I can barely allude as proofs that we do not yet know how far we may go with rational surgery, or what may be in store hereafter for surgical enterprise.

But while we modern surgeons congratulate our science on its liberation from the trammels of tradition, upon its working in an atmosphere cleared of the mist of superstition, upon the changing of its mode of action from a blind grappling with the phantom entities of disease to a study and manipulation of over-nourished or degenerating tissues, upon its having laws which can be understood, and rules of practice which can be followed, we ought not to overlook one fact, which perhaps is more evident to outsiders than to ourselves, standing as we do in the dust and turmoil of the arena of our work. I mean that that work, good and useful as it is, has too much the character of what is technically called "salvaging," is too much in correlation with what is done by the lifeboat service. Is it there that we ought to stop? I know that we are gradually drawing on beyond that point, and that our investigations are turning in the direction of sources, causes, means of prevention, and outlets for avoidance. But before we can reach the same level of achievement in preventive medicine that we have arrived at in operative surgery, before we can arrest the formation of ovarian cysts instead of excising them, we must know and understand what we have to deal with; we must master the problems presented to us by the erratic developments and mortal decadences of the tissues and organs which we are now content to clear away. And we ought to have the means of accomplishing this task on a scale commensurate with the importance of the subject of pathology, the professional desire for original research, and the dignity of the College of which we are members.

Most of the University cities on the Continent have made provision for this necessity, with a liberality and such a profusion of accommodation that the prosecutors of these studies are there at a great advantage. I have visited some of these establishments, and have been able to make comparisons which cause me to regret that so little of the like kind has been done here, and that we have been content to leave a matter which really touches the honour of the profession, and is of national concern, to almost unaided personal zeal and efforts. In England the jesting phrase that "science does not pay" is so common that we scarcely feel the reproach. The history of medical science gives us many instances of unfairly remunerated men (W. Farr, for example), and of the appropriation of the profits of their applied work, and it would be well if the authorities of our profession took the lead in forming an organisation which should aid the modest labourers of its foundations, protect their interests, and reward their industry. I have long desired to see this done by our College, and the munificent bequest of Erasmus Wilson, a man who estimated the value of money by the good that it could be made to do, now puts it in the power of the College of Surgeons to outrival all other corporations, by setting up round the nucleus which Hunter left the most elaborate combination of all the means and appliances for physiological and pathological research, by concentrating the intellectual power which now runs to waste or is diverted to personal interests, and by guiding and directing all that can be done to the advancement of the purely scientific progress of medicine and science.

Last winter I was away from London for about six weeks. While staying at Würzburg and Munich, I could note in the most recently erected pathological laboratories how far our German brethren are in advance of anything which I, at least, have seen in this country. At Rome again, and at Naples, I was both pleased and surprised to find how much our Italian brethren were doing. And during the meeting of the Medical Congress at Copenhagen, I was shown arrangements for the study and cultivation of micro-organisms quite as complete as those which many of you may have inspected at the temporary rooms at the Health Exhibition in London, under the able and instructive guidance of Mr. Watson Cheyne. Now, one may fairly ask why provision cannot be made to ensure the continuance of this work, and its extension, in a better and permanent abode? Something of the kind I hope to see in Lincoln's-inn-fields. I concur completely in the project to make such additions to our noble building as our Council have long felt to be an absolute necessity, and for which they have already considered plans prepared by the eminent architect Mr. Waterhouse. These constructions are intended to furnish better and more convenient arrangements for the examinations for our diplomas, to guarantee the uninterrupted use of the library, and to give us further facilities for the promulgation of the higher truths of surgical science. Unquestionably this will be in some degree a credit to our College and to British surgery. But I hope I shall not be misunderstood. I have no wish whatever to add to the duties of our College as a teaching institution. We are an examining body, acting for the protection of the public by testing the success of the teaching in the schools and hospitals, and vouching for the competence of our candidates for their calling, after proving to us that they have gone through the course of study we prescribe and possess the average skill and knowledge necessary to meet all the usual demands of practice. Perhaps, hereafter, we may take the higher position of sitting simply as a court of judgment upon the qualifications of those who present themselves for our diploma, irrespective of the mode and time and place in which their knowledge has been acquired, putting aside all interference with the routine and details of the course of study.

But I aspire to something more than success in securing the requisite skill in practical surgery in those who dispense themselves among the people as practitioners under our warrant and authority. I trust that we may go further, and, no longer trammelled by State interference and sensational clamour, that we may accomplish that which such men as are on our Council would probably have done long ago, had it not been for the restrictions placed upon them by financial considerations. Now the funds at their command give ample means for the carrying out of any schemes which the most enthusiastic devotee of original research could, in

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his most sanguine dreams, imagine. My ambition is that we should not merely be the source of honour to students, and the directors and approvers of schools and teachers, but that we should become the centre of medical research, the mainspring of all the developments of medical science. And now that we can do it, why should we not do it? Why should we not have buildings and accessories, imposing in their grandeur and adequate in their accommodation; laboratories, complete in their fittings, instruments, and materials, rooms for conferences, and proper places for the storing of records and results? Why should not our Fellows and Members who are moved with the desire to advance medicine and surgery by inquiry and experiment be presented with as great facilities as are to be found in any continental city or university, such as are so profitably enjoyed by Pasteur, Ranvier, Brown-Séquard, and their colleagues and assistants, advantages hitherto unapproached on this side of the Channel, but which our Transatlantic brethren are not slow to emulate? I feel that to support the honour of our profession, to fulfil our duties as the representatives of surgical science, justly to carry out the intentions of our late president and benefactor, we ought to be magnificent in architectural and constructive outlay, active in personal work, and liberal in the encouragement and help we proffer to those who come to make use of the opportunities which our College will give, and promote the object for which we are all so deeply concerned and so heavily responsible.

I am encouraged to augur the completion of such a scheme as this for rendering original investigation in the future infinitely more easy, precise, and valuable than the surgeons of the past ever hoped for, and to believe in the accomplishment of its designs, when I think that the will of such meetings as this must be obeyed, and feel the conviction that the men of Birmingham will be among the first to avail themselves of it.

I have spoken to you of the past and the present. The future is in your hands; and I appeal to you as men typical of the thought and action of the profession, actuated by the highest moral sentiments, seeking and mutually guarding your honour as a body—chasing out, with instinctive repugnance, that which, ignominious in principle or practice, has accidentally intruded itself among you, and conscious that—by assuming the highest functions of your calling, in the investigation of national interests, in the promotion of public good by giving counsel to princes and legislators, by such a devotion of your energies, by such a sacrifice of personal consideration as is involved in bettering the condition of the people, in shielding them from disease, and in the prolongation of their healthy lives—you will add lustre and dignity to the private confidence, gratitude, and sympathy which the profession has already gained by its power over actual suffering and sickness, and by the skill, conscientious vigilance, and humane tenderness with which you make that power manifest. "I speak as unto wise men, judge ye what I say."

ON THE

NERVOUS OR MUSCULAR ORIGIN OF CERTAIN SPASTIC CONDITIONS OF THE VOLUNTARY MUSCLES.

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(*Concluded from p. 816.*)

THIS peculiar form of rigidity, then, we have observed as one effect of sodium phosphate; as another effect we have recorded fibrillary contractions. What is the nature of these effects? Are they peripheral or central? To answer this question, the hind-limb of a frog, which, by hypodermic injections, had been first brought under the influence of sodium phosphate, was severed from the body, and then the sciatic nerve was faradised momentarily. The result was rigid extension, *which extension persisted some seconds or sometimes some minutes after the discontinuance of the stimulus.*[1] This extension was demonstrable by holding the leg vertically with the foot uppermost, the extension being maintained against the force of gravity for the period mentioned, after which the leg would slowly subside. On performing this same experiment with the muscles of an unpoisoned frog, the contrast was very marked in the sudden collapse of the limb after cessation of the stimulus. In addition to this spastic condition, marked fibrillary action was observed in the poisoned muscles of the severed limb on faradising the sciatic nerve. Clearly, then, the effect is peripheral, not central.

Before analysing further this peripheral effect we may ask, Are we dealing with manifestations purely toxic, or may we observe in unpoisoned muscle anything of a similar character? The answer is that in unpoisoned muscle we may observe both the spastic state and the fibrillation. But observe the requisites: to bring out the spastic state the faradisation must be both *powerful and prolonged*—i.e., *relatively*,—and even then it will be not nearly so persistent as that induced in the poisoned muscles. In like manner, to produce the fibrillary twitchings in unpoisoned muscle, the induction shock must be *powerful*. We observe, therefore, that the effects brought out by the sodium phosphate are not new in kind, but only very much exaggerated in degree. These several points are very strikingly illustrated by means of myographic tracings, but for these reference must be made to the before-mentioned paper in the *British Medical Journal*.

During these investigations certain other facts came out. Thus, it was found that *cold* favoured the production of the spastic state; *further, that repetition of the excitation caused both the spastic contractions and the fibrillary contractions to diminish*; they would, so to speak, wear off.

To proceed with the analysis. The effect we have seen is peripheral. But this includes both nervous and muscular elements; which are the ones concerned here? To answer this, hypodermic injections of sodium phosphate[2] were practised as usual; but, in addition, curare was also injected. The limb was then severed and the sciatic faradised; this yielding no contraction, it was concluded that the motor nerve fibres were paralysed. With such curarised limb a myographic tracing from the gastrocnemius muscle was taken, and it was found that, though fibrillation could still be brought out by the strongest induction shocks, it was greatly diminished, but not so for the prolongation of relaxation; this was even more marked for the curarised than for the non-curarised muscle. This result is extremely well seen in Fig. 4 of the tracings.[3] Observe, then, that with the elimination of the nerve element fibrillary contractions have been much lessened, but the tonic spasm has, if anything, been augmented.

Admitting the efficiency of curare to eliminate the nervous element, the conclusion is inevitable that the tonic spasm is of muscular origin. Nor is this conclusion surprising, for to muscular tissue we unhesitatingly attribute the quality of contractility, but to nervous tissue the quality of conveying the necessary stimulus to call this contractility into action. If now we survey the animal kingdom we note great variation in the mode in which contractility is manifested—i.e., as to rapidity of contraction; and it is most probable that a continuous scale could be established which, according to Marey's statements, would place at the beginning the cross-striped muscles of insects with extreme rapidity of contraction; on this would follow in order the striped skeletal muscles of birds, fishes, mammals, frogs, lowest among striped muscles being those of the tortoise and of the hibernating marmot; then the muscles of the heart would follow, these occupying a mid-way position between striped and unstriped muscular fibre; finally would come plain muscular fibre, whose contraction curve is, so to speak, macroscopic.[4] In addition to this scale we meet with some curious instances of two kinds of striped muscles in the same animal. Thus, in the rabbit we have, as before mentioned, slow and rapidly contracting muscles, these corresponding to the red and the white muscles respectively. But this very slow contraction which we here record may be otherwise described as of the nature of tonic spasm, and accordingly we witness tonic spasm as a normal manifestation in the scale of animal life, and this manifestation we admit to be of muscular origin. Hence analogy comes to the aid of direct experiment, and favours the view that the tonic spasm of drug action is muscular in its nature. But

[1] Loc. cit.

[2] Or sodium carbonate; this salt appears, if anything, more active than the sodium phosphate.

[3] Loc. cit.

[4] Hermann: Lehrb. de Physiologie, Bd. i., p. 38, quotation nearly verbatim.

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we have seen that the tonic spasm of drug action presents the most striking similarity to the tonic spasm of Thomsen's disease. The inference is immediate, both on the grounds of analogy and experiment, that in this disease also the spastic state is muscular in its nature.

There yet remains for consideration the nature of the change, assuming it to be muscular. Is it to be classed under the heading *morbid*, or under that of *developmental error*? The distinction is an important one. A condition which is *morbid* implies a definite tendency away from the normal, and the divergence once started is a gradually increasing one. Disease implies movement. *Developmental error*, on the other hand, involves no such tendency away from the normal; it is compatible with rest, the degree of divergence from the normal remains a constant quantity. The distinction between the two may also be seen in the relation of the part at fault to the rest of the organism. The diseased structure reacts far more powerfully on the organism generally; it necessitates more or less deviation from the normal in the other tissues of the body; in fact, local disease always signifies to some extent general disease. This can scarcely be said to be the case for developmental error; there is admittedly a flaw in some part of the organism and admittedly a flaw in the working of the organism, in part and as a whole. This must arise from faulty construction, but it can hardly be maintained that the tissues generally take on an unhealthy action in consequence of the local structural error, rather the reverse, their tendency is to adapt themselves to the abnormal state, to compensate for it. It is clear, therefore, that the distinction is an essential one to establish.

To us it appears that the reading of the facts at present is somewhat difficult; for it is undoubted that many of the characteristics of Thomsen's disease are those of a developmental error. Thus, for the most part, the disease appears to be congenital; it shows no definite tendency either to increase or decrease; there is no evidence of general failure either subjectively (to the patient) or objectively (to the physician); the processes of assimilation and of elimination are well performed. Nor if the investigation is made more detailed can any evidence of disease, as we are familiar with it, be detected either in the structures actually at fault, or in those closely associated in function—as, for instance, the nervous structures. (The latter investigation included examination electrically and by means of the microscope.) In other words, search the organism through and in no one part can we find definite evidence of disease; for even in the muscles the peculiarity we note is not associated with evidence, electrical or microscopic, of disease. However, in spite of all this, what are we to do with the fact that the muscular rigidity wears off with repetition of the act of contraction? How, on the view that the muscles of our patient have been arrested at an early stage of development, are we to explain this phenomenon? The evolution would indeed be a rapid one, which in the course of a few contractions would have completed the task of differentiation, and have transformed the slowly acting muscle into a rapidly acting one; not to mention the fact that each such process is followed by a relapse of the muscle to its former state during an interval of rest. This to us appears a serious objection to Bernhardt's view. But even more serious is the fact that we can by means of drugs, sodium phosphate, sodium, bicarbonate, &c., actually establish a condition the facsimile almost of Thomsen's disease, for here we noted not only muscular rigidity in association with contractions voluntarily or artificially excited, but we saw that this stiffness wore off with repetition of the contractions, voluntarily or artificially excited. Other resemblances there were also, these we need not repeat; but the point on which we must lay stress is that this artificial Thomsen's disease is pathological. In the picture of the sodium phosphate rigidity we had to record fibrillary contractions of the muscles. These are not present in Thomsen's disease,[5] but by means of curare it was possible to eliminate nearly completely this fibrillation; hence we must consider the rigidity as independent of this muscular quivering, which would appear to be a nervous effect.[6]

Thus much in respect of an affection in which muscular rigidity appears unassociated with nervous lesions; but rigidity is also found in connexion with nerve-centre lesions; how are we to regard this rigidity? We cannot help thinking that we must regard this still as a muscle effect, and as a result of a change in the muscular fibre; this change may be simultaneous with, or may be consequent on, the nerve-centre change, but that the twofold change is present appears to us most probable. If it be said none will doubt that the spastic state is a muscular effect, since to muscle alone belongs the quality of contractility, it may be replied, clearly not; but many may doubt that a muscular textural alteration is present, and this indeed is the view we find Seppilli[7] advancing, according to whom Thomsen's disease consists in a heightened muscle tonus, *the result of an increased excitability of the innervation centres in the cord*. On this, however, we cannot further dwell now, for it is in the foregoing—namely, in the reading of the experimental facts, and also of the facts concerning Thomsen's disease, both of which show rigidity apart from nerve-centre lesion—that we think the argument for the myopathic theory of muscular rigidity in general is to be found. As a last word of caution, we must insist that the muscular rigidity of which we here speak is quite different from that rigidity to which we give the name tetanus. In this latter we have the muscles maintained in a contracted state because a continuous inflow of stimuli into the muscle is obtaining; so soon as the inflow stops, so soon does the contraction cease; but here it is precisely with the cessation of the stimulus that the effect comes out—the muscle is thrown into contraction, and then *when you wish to relax it* you cannot.

In conclusion, we may remark that further reference on the literature of the subject may be found in Virchow and Hirsch's *Jahresbericht* for 1884,[8] but the facts there found are almost all included in the previous records we have quoted from, with the exception that two of the cases there recorded by Engel[9] and Schönfeld[10] gave a history of sudden onset. These will class themselves along with the one recorded by Seeligmüller, and are on the side of the pathological view of the disease.

CHOLERA.

BY MAX VON PETTENKOFER, M.D.,
OF MUNICH.

(*Continued from page 819.*)

HAVING now discussed the relations in time and space which predispose to cholera, I shall pass on to consider those relations in regard to the freedom from cholera which they may enjoin. Places which enjoy an immunity from cholera are more numerous than was formerly supposed, but have been less studied from a point of view of epidemiology, just as relations in time have been but little investigated. The eye of the investigator has only fixed itself on the places where, and at the time when, cholera has reigned. We ought likewise to investigate the matter when and where cholera does not exist. Ordinarily a physician only bestirs himself when he is called to see a case. It has, however, not been so with me. Impressed with these notions, I went in 1868 to the place in Southern France which had enjoyed the greatest and most renowned immunity from cholera. Through the kindness of M. Fauvel I was introduced to M. Luuyt of Lyons. Although Lyons was in frequent communication with Marseilles and Paris when epidemics of cholera raged, yet the disease never showed itself in an epidemic form at Lyons. In 1849, for instance, Lyons was besieged, conquered, and invested by troops suffering from cholera. Then the town escaped, whilst the soldiers suffered severely. This immunity was certainly not due to greater cleanliness of that quarter of the town known as Croix Rousse; nor was it due to the social misery or to the wants of the working classes; neither had the drainage or water-supply, which prior to 1858 was as bad as it could be, anything to do in the matter. So that the immunity was probably the result of natural conditions. The Lyonese had often congratulated themselves on this excellent gift of nature, but it is probable that the constant movement of air

[5] One of Seeligmüller's patients was an exception to this statement.
[6] This observation is suggestive of the view that the fibrillary contractions so frequently witnessed in certain nervous diseases—progressive muscular atrophy, labio-glosso-laryngeal palsy—are a nervous and not a muscular fibre effect.

[7] Virchow u. Hirsch, Jahresbericht, 1884. XVIII. Jahrgang, p. 76.
[8] Jahrgang, 1883.
[9] A case of Thomsen's disease. Philadelphia Med. Times, No. 412.
[10] Wochensch. ein Fall von Thomsenscher Krankheit: Berlin. Klin., No. 27.

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which the combined flow of two great rivers (the Rhône and the Saône) originate is the cause of the immunity, although the mistral (*Mistralstürme*) which scours Languedoc and Marseilles had never been able to drive the cholera away. The situation of Lyons is far different; the bed of the two rivers is composed of compact granite, which on the right bank of the Rhône and on both banks of the Saône rises high, being in places coated with lias, molasse, and thick mud strata. On the heights lie the parts of the town called Croix Rousse, Fourvière, and St. Juste; other quarters lie low—Perroche on a tongue of land between the two rivers, Lyon Vaise on the right bank of the Saône, and Brotteaux and Guillotière on the alluvial soil of the left bank of the Rhône. The lower parts of Lyons are frequently and deeply flooded over, and yet the cholera never comes!

Just as the disposition to cholera in time and place may be due to two causes, so may the immunity from cholera be dependent either on the physical nature of the soil, as is the case in parts of Traunstein and Kienberg, or on the condition of the soil as regards moisture, as happened in the low-lying parts of Munich during the summer epidemic of 1873, or at Augsburg during the summer and winter of 1873, or at Munich in 1866. Such a degree of wetness as prevailed on those occasions may be a constant condition in some places, to this latter group the low-lying districts of Lyons belong. Indeed, both factors are at work in Lyons. In the high-lying parts the granite comes to the surface in many parts, and so a very efficient and natural drainage is secured. These districts may always be said to be free from cholera. The soil of the low-lying parts, situate on the banks of the Rhône, Brotteaux, Guillotière, and Perroche, has always a certain degree of humidity, which cholera when imported has to encounter. This moisture of the soil of parts of Lyons is dependent not only on rain, but also on the river Rhône. The impermeable bottom of its bed is of solid granite, to which fact I could bear personal testimony. This stratum of granite stretches from the left bank of the Rhône far inwards, so that Lyons is built upon it; all the springs lie below the level of the surface of the waters of the Rhône, and so rise and fall with the river. In Paris, in Munich, and in Berlin the conditions are otherwise. Here the level of the subsoil water is above that of the level of the waters of the Seine, Isar, and Spree respectively; this relation is the most general, so that Lyons is exceptional. In Lyons it may be said that a part of the Rhône runs subterraneously, so that the soil receives water from the river; whereas in Paris, Munich, and Berlin the direction of the water is constantly from the soil to the river. When the water rises in the beds of the Seine, Isar, and Spree there is no penetration of the water into the porous soil, but rather a damming and stagnation in the discharge of the subsoil water. The granite of the Rhône, chiefly composed of large blocks of quartz, contains also much fine sand, which is able to suck up water to a considerable height in its capillary spaces, possibly as high as the zone of evaporation. I investigated the hardness and moisture of this quartz by actual digging. This part of Lyons is only at times free from cholera, and would be susceptible of an epidemic were some of its water taken away. That Lyons may be fatally visited was shown in the year of cholera, 1854. As I was studying the conditions of cholera in Lyons, I found that in 1854 no less than 500 deaths occurred from the disease; whilst at other times the town escaped with a dozen deaths. It also transpired that nearly three-fourths of the deaths happened in Guillotière, and I must say, therefore, that in the year 1854 at least a part of Lyons suffered from an epidemic of cholera. The Lyonese were not pleased with this assertion, because they had always boasted of their immunity from cholera; they replied, "What are 500 deaths out of a population of 400,000 It is absurd to call that an epidemic." Of course it would not be right to speak of an epidemic of all Lyons, but most assuredly there existed an epidemic in a part of it. The higher lying districts had enjoyed their usual immunity in 1854. In the times of cholera which followed 1854 Lyons preserved its freedom. In what respect did 1854 differ from all other years? In nothing but in the fact of its greater dryness. I availed myself of the observations of the meteorological station, and found that in this year the amount of evaporation was greater than the rainfall. Observations on the subsoil water were not to be obtained, but there was the register of the condition of Rhône dating as far back as 1828. From 1826 to 1854 there was no lower register so lasting as that of the last year. These facts were sufficient to lead me to understand how the lower lying parts of Lyons could be brought into a condition susceptible of an epidemic of cholera by the partial or total removal of the influence of the Rhône.

That too much as well as too little water in the soil is unfavourable to cholera is vouched for by a large mass of facts. As I watched the cholera in Bavaria during 1854 I was surprised to find that the marshy districts, where, as a rule, the poorest dwelt, were exempt from epidemics. The great Donau bog, which lies between Neuburg and Ingolstadt, was surrounded by the epidemic, but the disease did not enter the villages on the fen. On the Freisinger moors an epidemic occurred at Halbergmoos. On going thither the affected houses were found to stand on a tongue of land composed of quartz, which tongue reached inwards on the moor. Reinhard had proved the same thing for Saxony. The northern part of Saxony, which lies on the Spree, is a highly malarious district. For the eleventh time that cholera visited Saxony it shunned this region of fever. I will not say that cholera cannot be epidemic on a fen, but I do believe that when such an occurrence takes place we ought to ask ourselves what relation it may have with the state of moisture of the soil. The theory of the soil and subsoil water requires that a knowledge should be obtained of what takes place in and over the soil on the outbreak, and on the cessation of cholera. It requires, as Port has said, a continuous record of facts. That cholera should very seldom be met with in the neighbourhood of and on mountains is also in harmony with the disposition of cholera in respect of time; so that as the frequency of cholera in these regions diminishes the rainfall increases; the weather and cholera are equally capricious. Towns amongst mountains which are refuges for the fugitives from cholera are but seldom situate on a soil which in and of itself would exclude cholera. Salzburg and Innsbrück have, for example, never yet been visited by cholera. Further, in 1866, these towns escaped although a considerable influx took place from the seat of war where cholera raged. Salzburg, but still more Innsbrück, stands on the alluvial soil of the Salzbach and the Inn, as Munich stands on the Isar; but the first-named towns have about 50 per cent. more rainfall than Munich. I can only imagine that the necessary degree of dryness for the development of cholera would be attained but very rarely in Salzburg and Innsbrück, just as occurred partially at Lyons in 1854, and in June, 1859, at Bombay, where cholera prevailed during the monsoons, which, as a rule, drives the cholera away.

The disposition of cholera in regard to time is also evidenced in the fact that cholera is so different in one and the same place at different times, or at like times in one and the same place, if different parts of the place have different kinds of soil. For instance, in Munich the houses situate on the clay ridge of the suburb of Haidhausen are never affected, but this exemption is certainly not due to the supposed prevention which clay soil in and of itself exerts against the development of the germs of cholera, but because the behaviour of rain on clay and rocky soils is very different if the rain be equally distributed over the two kinds of soil. When the rocky soil at Munich was ready for cholera the clay soil was not.

I shall now leave the arguments for the localists, and pass on to consider the circumstances which are favourable to the views of the contagionists.

That an epidemic of cholera does not permanently last in one place, but after a longer or shorter time ceases, is explained by the contagionists as due to the saturation of the population, whereby each individual acquires a protective influence against cholera similar to that acquired after vaccination as against small-pox and other like instances. This hypothesis does not explain why an epidemic is sometimes rapid and sometimes slow in its course, why it is sometimes vast in its ravages and at other times slight in its effects, whilst the condition of mankind remains practically the same. With as much reason might the localists assert that the germs of cholera find at different times the local conditions to be favourable or unfavourable with the natural consequences of growth or death. Now, in districts where cholera is endemic, as in the soil of Lower Bengal, it is easy to suppose that at one time the conditions for the multiplication of the germs are present, whilst at another time the opposite state prevails. The dormant condition of the germs must, for a limited time, frequently exist in districts outside India. This supposition will not explain the occurrence in the low-lying parts of Munich of the severe winter epidemic of 1873–74, after the summer epidemic in the higher parts of the town had ceased.

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It follows that we must suppose that the germs which give rise to an epidemic may arrive at a place and there exist for some time (in Munich for three months) without showing any manifestations. And that, indeed, the germs may die before the necessary local conditions for their growth and multiplication are present. So that one might seek in vain to trace the connexion between cases of cholera coming from without and the first cases of illness occurring in a place, as happened in 1883 at Damietta in Egypt, and in 1884 at Toulon in France. The germs may have arrived six months before without finding the necessary material for their growth, and consequently may die out before giving any signs of their existence.

How long the germs of cholera may remain latent in a place we have no evidence to show. There are cases in which we might say that a whole year elapses, but instead of that I think it can be shown that in Europe the germs die out. Since cholera has lasted for many years in Russia, some epidemiologists have supposed that in Russia in the North, just as in Lower Bengal in the South, cholera is endemic. The history of cholera, however, in two islands of the Mediterranean, Malta and Gozo, supplies an example to the effect that the germs of cholera may die out in the space of a few years, and that the germs must be again imported before fresh cases of Asiatic cholera can appear. The islands of Malta and Gozo lie near one another and are by nature so similar that it might be imagined that a single homogeneous rock had been split into two parts, a greater and a smaller, which lie as near together as possible in the water without touching one another. It is thus that the two islands project from the sea. Each has the same kind of soil, enjoys the same winds, the same sunshine and rain, the same population of Arabic origin, with like manners, customs, and daily intercourse. Vegetables, fruit, and cattle for slaughter pass daily from Gozo to Malta. The two islands differ in that Gozo has no direct intercourse with the world at large, whilst Malta is famous for its natural harbour. Both islands have experienced epidemics of cholera, but Malta was always invaded some weeks before Gozo. Finally both islands show themselves equally susceptible to cholera. In 1865 in Malta 12 per 1000 of the population, and in Gozo 10 per 1000, died of cholera. The first case of cholera occurred in 1837 on May 26th in Malta, and on July 5th in Gozo; in 1850 it was June 9th and Aug. 28th respectively. In 1854 and 1856, during the Crimean War, cases of cholera appeared in Malta and Gozo, but not in an epidemic form; nevertheless, sporadic cases first showed themselves in Malta. In the epidemic of 1865 the first case occurred in Malta on June 28th, and in Gozo on July 21st. This interval of time between Malta and Gozo makes me suspicious of the current doctrine that cholera can occur in places two days after the arrival of the infecting cases; for it has not been proved that cases might have arrived still earlier. The instance of Malta and Gozo clearly proves that cholera may have no long duration, that it is not autochthonic, that it is not brought by the wind, but that for its passage intercourse is necessary.

The facts of the influence of locality the contagionists cannot deny; indeed, they accept the facts but explain them in another way. Attempts are made to show by the localists and contagionists, how the germs of cholera spread by means of human intercourse may act in harmony with the conditions of soil and subsoil water. This is unfortunately still the darkest chapter in the book, and will probably remain so; but it is not darker than the explanation of the nature of another infectious disease which is equally dependent on conditions of soil and water—namely, malarial fever. We are firmly convinced of its telluric and climatic origin, and yet a study of von Hirsch's "Handbook on Historio-geographical Pathology" shows how little we know. Whether the infective material gets to man from the air, or water, or food, or the sting of a gnat, and so forth, we know not; and if we examine the tables showing the appearance of ague in the different months of the year in Leipzig, Vienna, &c., we come to see that the tables are not so very different from those drawn up by Brauser on cholera. In malarial fevers it is doubted whether infection is conveyed by the drinking water, whereas contagionists believe that cholera is propagated through this source. The drinking water theory played a great part in the causation of epidemics in the Middle Ages; it was believed that wicked men, either Jews or Christians, had poisoned the springs from which death was drunk. For good health, pure water is as necessary as pure air, good food, comfortable quarters, and so forth. I myself am an enthusiast in the matter of drinking water, but not from fear of cholera or typhoid fever, but simply from a pure love for the good. For me water is not only a necessary article of food, but a real pleasure, which I prefer, and believe, to be more healthful than good wine or good beer. When water fails, man may suffer not only from cholera, but from all possible diseases. In places where cholera prevails the water may always be indicted, for the water-supply is always a part of the locality, and the doctrine will frequently hold good, because the part may be mistaken for the whole. Where the influence of the water is held up to the exclusion of all other local factors error is liable to creep in. In England, where the drinking water theory is fully believed in, two like influences, in which every other local factor was excluded, were observed in the cholera epidemic of 1854. In one case, in a street in London which was supplied by two water companies, the Lambeth with pure water, and the Vauxhall with impure water, it was found that the cholera was practically limited to the houses supplied by the Vauxhall Company. I was so much impressed by this fact that I endeavoured to see whether the epidemic of 1854 in Munich could not be explained on a similar hypothesis. But my researches led me to a negative result. Without doubting the facts observed in London, I am of opinion that the impure water of the Vauxhall Company did not spread the germs of cholera, for the propagation of cholera was not effected by this means in Munich, but that the water increased either the personal predisposition to cholera or perhaps the local predisposition, since the water would be employed in the houses and about the soil. Later on, in 1866, Letheby doubted the accuracy of the drinking water theory, and proved that there had been considerable confusion; so that a house which was registered on the Lambeth Company really drew its water-supply from the main of the Vauxhall Company, and *vice versâ*. The cholera epidemic of 1866 was essentially limited to East London. The East London Water Company supplied this district with water filtered from the river Lea. Letheby brought forward a series of facts to prove that we might with equal justice accuse the East London Gas Company, since the first case of cholera broke out at the gas factory. A second instance in London was that with which the name of Dr. Snow is associated. Golden-square, a part of London with very deficient drainage, was the scene of a severe epidemic of cholera in 1854. The epidemic concentrated itself in Broad-street. There must have been some reason for this, and the reason must be discovered. Where Golden-square and Broad-street stood was formerly a place of burial for individuals dead of the plague. This pest-blast of a former century could walk rom its grave in A.D. 1854 like the Ghost in Hamlet. But a narrower inspection proved that the old pest field and the new cholera field were not exactly coextensive. Now, however, another fact was brought to light, which led to the substitution of the drinking water as the cause. In the middle of Broad-street there stood a pump of which the water was much esteemed on account of its freshness. At the end of August, whilst the cholera was raging, it was found out that many sufferers had drunk of the pump water, but the fact was not sufficiently decisive, and so a pathological experiment was required. In Broad-street there was a percussion cap factory belonging to Mr. Eley. The persons of this establishment suffered from cholera, and many of them died. Mr. Eley remained well, but he did not live at the factory, though he went there daily and returned home to Hampstead after business, and there lived with his mother and a niece. His mother, who formerly lived in Broad-street, had a great liking for the water of the pump-well, which was shown in the fact that her son daily took home the water for his mother and niece. In Hampstead there had been no case of cholera until the mother and daughter fell ill and died of cholera without having any other communication with Broad-street than through the means mentioned. What more is wanted? Who can doubt any longer? An experiment on two human beings with a disease which animals are not susceptible to! A sad privilege! Never before had facts received a more frivolous interpretation. Suppose, for a moment, that Mr. Eley had gone to and from Hampstead to Broad-street without having taken the water to his mother and niece; and, further, that they had become ill of the cholera without having drunk the pump water, would it have been imagined that the cholera had been carried by the son, who remained in good health? The contagionists would probably reply that Mr. Eley may

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have had the cholera in a mild form. The localists would say that a poison locally originated might be passed on by healthy people without giving signs of illness in them. In 1854, for example, a young lawyer went from Munich to Darmstadt, where his father resided. Up to that time the father had never lived out of Darmstadt, and Darmstadt was as free from cholera as Hampstead, and the distance from Munich was much greater than Hampstead from Broad-street. The lawyer was as well in health as Mr. Eley had been, but the lawyer's father fell ill and died of cholera. There was no other factor in the case than the return of the son from Munich. Darmstadt enjoyed an immunity from cholera as great as that of Lyons, Versailles, Stuttgardt, and many other large cities. In 1854 a workman went home from the Exhibition of Munich to Darmstadt, where he fell ill and died of cholera without the disease being spread to any other house, and no means for disinfection or isolation had been adopted. In 1866 Prussian troops were quartered in Darmstadt, and brought the cholera with them. About thirty of the soldiers became ill with cholera, and many of them succumbed; again, none of the inhabitants of Darmstadt had the disease. It must be admitted that Mrs. Eley might have been infected through the intercommunication of her son, just as the lawyer's father had been without the intervention of drinking water. The argument in favour of the drinking water theory rests on the fact that the cholera ceased when the supply of water was cut off; but no notice was taken of the great majority of cases in which the water springs were not closed and the supply of water not cut off, and yet the epidemics came to an end. Again, in Broad-street the pump handle was not taken off till Sept. 8th. Now, an examination of the facts will show that the cholera was already subsiding. In Broad-street, on August 31st, there were 31 cases of cholera; on Sept. 1st, 131 cases; on the 2nd, 125; on the 3rd, 58; on the 4th, 52; on the 5th, 26; on the 6th, 28; on the 7th, 22; and on the 8th, 14. Just as occurs in India and elsewhere, a violent epidemic generally subsides rapidly.

(To be continued.)

DILATATION OF THE CALIBRE OF SMALL ARTERIES.

IS IT A FACT IN NATURE, DISCLOSED BY "EXPERIMENTAL RESEARCH," THAT DILATATION OF THE CALIBRE OF SMALL ARTERIES IS *PRIMARY* AND OWING TO AN *ACTIVE* EXPANSION OF THEIR WALLS UNDER THE INFLUENCE OF SPECIAL VASO-DILATOR NERVES?

An Inquiry addressed to Physiological Authors, Professors, and Occasional Orators.

By T. WHARTON JONES, F.R.C.S., F.R.S., &c.

In the web of the frog's foot or bat's wing spread out under the microscope, we may sometimes see small arteries with their calibre constricted to such a degree that the stream of blood in them is for the time wholly interrupted. When, in such a case, the blood begins to flow in them again, this is observed to take place by a corpuscle or two, at first, and then more and more, forcing, under the influence of *vis a tergo*, a passage, until the calibre of the vessel becomes enlarged by distension with a full and rapid stream of blood. In this case the capillaries and venous radicles are also dilated by distension, with the increased quantity of blood thereby delivered into them. They do not of themselves become actively dilated. This dilatation of small constricted arteries is evidently owing to the distension of their calibre with blood, when, in consequence of relaxation of the circular muscular fibres, their walls yield to the distending force from within of the full stream. There is nothing observable in the phenomenon of the re-establishment of the flow of blood, in a constricted artery, to indicate that dilatation of its calibre precedes the entrance of the stream, and is owing to a primary active expansion of its wall. No intrinsic muscular mechanism of the arterial wall is known to exist by the agency of which a primary active dilatation of calibre could be produced. Is it not, therefore, quite unwarranted to assume the existence of vaso-dilator nerves for the government of a *nonentity*? There is not in the small arteries under notice an indication of even anything like the operation of elasticity of wall such as is presented by larger arteries. In the case of the rhythmically contractile veins of the bat's wing, the diastole which succeeds the systole is produced by an elastic recoil, as will be explained in another communication.

The only active mechanism inherent in the walls of the small arteries that can be discovered consists of the circular muscular fibres, by the contraction of which the calibre of these vessels is constricted, and the only vaso-motor nerves indicated by direct experiment are those under the influence of which the said circular muscular fibres contract, and probably nerves exerting an inhibitory influence on the action of these constrictor nerves. Constriction of the calibre of an artery by contraction of its circular muscular fibres, as we can see in the web of the frog's foot or bat's wing under microscopical examination, is propagated for some distance backwards in the direction of the trunk, as well as forwards, whereby the blood is not only arrested in its course, but is actually regurgitated. This phenomenon, with the attendant exsanguine state of the part, we can also see with the naked eye in the case of the large artery of the rabbit's ear, as well as perceive, by the touch, the consequent fall of temperature. Small arteries remain constricted, though their muscular coat has become relaxed, until distended by the full stream of blood entering them under the influence of *vis a tergo*. There is, as above observed, no elastic dilating reaction of the walls of small arteries like that of the walls of a caoutchouc tube, such as is presented by larger arteries. In the undistended state of the small arteries (the lumen remaining passively constricted) their wall is seen under the microscope to retain the thickness which we see it acquire when the muscular coat becomes contracted. This condition of the arterial wall persists, more or less, in the dead state, and has been erroneously described as hypertrophy. I have seen preparations of such exhibited as examples of "arteries with hypertrophied walls." In this case the accompanying constriction of the calibre of the vessel seems not to have been taken into account; for surely an hypertrophied artery ought to present an enlarged calibre as well as a thickened muscular coat.[1]

The fact that the calibre of arteries is constricted by contraction of their walls proved that the circularly disposed fusiform nucleated cell fibres composing their middle coat are muscular; the contractility of the arterial wall having been known before, the demonstration of the existence of fusiform fibres was not the proof of it, as has been illogically asserted; the nucleated cell fibres composing the middle coat of arteries, being unlike common muscular fibres, were not recognised in dissection as muscular until the structure into the composition of which they enter was observed to contract in the living state. Contraction of the muscular walls of the extreme arteries with constriction of their calibre on the one hand, and relaxation of the muscular walls of these arteries with dilatation of their calibre by distension with blood on the other, are facts which constitute the key to an explanation of the emptiness or fulness of the capillaries and venous radicles of a part. The emptiness and fulness of the vessels which we can see with the naked eye in the rabbit's ear alternating at certain intervals, though not rhythmically, are thus explained, as are also the alternating pallor and redness in blushing.

It has been erroneously alleged that by the constriction of the artery of the rabbit's ear, recurring at short intervals, the blood is accelerated in its onward course; whereas it is an easily observable fact that in consequence of the propagation of the constriction of the artery trunkwards, the flow of blood is not only arrested, but is actually squeezed back, so that the ear becomes exsanguine and cold, as before mentioned. And how could it be otherwise, seeing that there are no valves within the artery to prevent regurgitation?

This gross blunder first arose from a mistaken comparison with the phenomenon of rhythmical contraction and dilatation—the systole and diastole—presented by the veins of the bat's wing, which are furnished with valves. By the rhythmical contractions of the veins of the bat's wing, supported by the valves, the onward course of the blood to the

[1] Are not the enlarged communicating arteries, through which the circulation is carried on in a limb when the main artery is obliterated, entitled to the designation of hypertrophied arteries? Communicating arteries, it is here to be remembered, are *not* capillary arteries, as they were designated by the orator on the occasion of the inauguration of Harvey's memorial at Folkestone, in making a claim for John Hunter to be placed, in idea at least, on the pedestal side by side with the hero of the day!

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heart is promoted; whereas by the occasional tonic contractions of the artery of the rabbit's ear, which endure for a short though an indefinite time, the onward course of the blood is not only arrested, but the stream is made to regurgitate. The ensuing enlargement of the artery by distension of its calibre with blood when its wall relaxes is erroneously assumed to be an active and primary dilatation. This blundering is professed in books and lectures on physiology in a more disgracefully stupid manner even than is here represented. Thus, in one book it is stated that "the rhythmical contractility of vessels *may* appear under two forms: (1) rhythmical contractions which have been observed in the rabbit's ear (?) *or* in a bat's wing; (2) persistent contractions under the influence of the nervous system, which play an important part in the distribution of the blood." Wherein consists that important part is, however, not explained, nor is any reference made to the special effect on the flow of the blood produced by the alleged two forms of *rhythmical contractility of vessels*. In another book, it is said that "small arteries often contract rhythmically," and that "in certain (?) animals veins contract rhythmically." With what effect on the flow of blood is not mentioned, and as little the difference between rhythmical contraction and pulsation. In a third book, rhythmical movements are erroneously alleged to be manifested by the caudal vein of the eel, while no mention is made of the lymphatic heart and the rhythmical propulsion of lymph by it into the vein, though without causing any pulsation of that vessel.

When the walls of the artery of the rabbit's ear relax, we see that the blood, again entering the vessel, dilates its calibre by distension, and flows into the capillaries in full streams. Again, in blushing, arteries, capillaries, and venous radicles are said all to dilate actively, and that the supervening paleness of face is owing to active constriction of these vessels. This, however, betrays an utter misunderstanding of the mechanism of the circulation in the extreme vessels. If, as I have above maintained, there is no provision for an active dilatation of the small arteries, still less is there a provision for an active dilatation of the capillaries and venous radicles. Their dilatation is owing to distension by the increased afflux of blood into them from the relaxed arteries giving passage to fuller streams. As to constriction of capillaries and venous radicles, I never saw capillaries become constricted to closure, and have no doubt that the vessels alleged to have been capillaries becoming constricted to this degree were extreme arterial ramifications, which in the ordinary state of the capillary circulation in the frog present a narrower calibre than the capillaries themselves, as may be seen represented in Plate 4 of my essay on "The State of the Blood and the Bloodvessels," in Guy's Hospital Reports for October, 1850. I long ago pointed out that the small vessels in the mesentery of the frog described by the late Professor Th. Schwann as capillaries with thick muscular walls are, in reality, small arteries opening directly into the side of venous trunks, there being no capillaries in the frog's mesentery nor venous radicles. When vascular fulness becomes diminished in consequence of the walls of the relaxed and distended arteries resuming the ordinary medium degree of contraction and constriction, the capillaries resume their ordinary width by elastic reaction of their walls, but do not close in; whilst the venous radicles become so far constricted by the tonic contraction of their muscular coat, that their calibre is accommodated to the diminished influx of blood.

Notwithstanding that the mechanism of the circulation in the extreme vessels is such as I have here described, experimenters talk indiscriminately about an action of "all the vessels," capillaries and veins as well as arteries. In the first edition of my work on Ophthalmic Medicine and Surgery, published in 1847, as also in the two subsequent editions, I remarked that the increased vascular fulness of the eye, observed by Pourfour Du Petit in 1727 as an effect of his experiment of dividing the sympathetic nerve in the cervical region of a dog, was to be attributed to paralysis of the muscular wall of the arteries of the organ, induced by loss of the nervous influence governing them and to the increased afflux of blood permitted by the arterial relaxation. This point I specially elucidated in my essay in Guy's Hospital Reports for October, 1850, and at the same time retracted an erroneous view I had previously expressed as to the direct effect on the blood produced by the suspension of nervous influence. I there showed by microscopical demonstration that the increased vascularity of the leg and web of a frog, which takes place after section of the trunk of the ischiatic nerve in the thigh, is owing to fuller streams of blood in the small arteries (permitted by the relaxation of their muscular walls, resulting from the section of the ischiatic nerve), and consequently fuller streams in the capillaries and venous radicles. The elucidation of the state of the blood and the bloodvessels on which the phenomena of increased vascular fulness depend, after section of the nerve fibrils in the ischiatic trunk which govern the contractions of the walls of the small arteries, obtained from these experiments on the frog, is of a more exact character than can be gained from section of the nerve fibrils in the ischiatic of the dog, which govern the small arteries of the leg and paw. The reason is that we can examine the frog's web under the microscope, and observe in it the fuller flow of blood to the capillaries and venous radicles from the arteries dilated by distension of their paralytically relaxed walls, whereas it is impossible in the experiment of dividing the ischiatic in dogs to make any microscopical examination of leg and paw in order to ascertain the exact state respectively of the small arteries, the capillary network to which they lead, and the radicles of the veins which arise from that network, together with the state of the blood in the injected parts. The inferences as to the point drawn from the increased temperature are of insufficient validity. What I have here said of the insufficiency of the experiment of dividing the ischiatic in the dog is applicable to the experiment of dividing the cervical sympathetic.

Subsequently to the publication of my essay on the state of the blood and bloodvessels in inflammation in Guy's Hospital Reports for October, 1850, Du Petit's experiment of dividing the sympathetic nerve in the region of the neck in dogs, performed more than a hundred years before, came to be repeated on cats, rabbits, &c., by the late Claude Bernard, Brown-Séquard, and many other physiologists. Whatever light these experiments may have thrown on the centres of the nerves operated on they did not, and could not, add anything to the elucidation of the action of the vessels concerned in the extreme circulation. From his experiments the late Claude Bernard deduced nothing more in regard to the mechanism of the circulation in the extreme vessels than what I had pointed out as deducible from the experiment of Pourfour Du Petit; and certainly nothing so precise and detailed in regard to the mechanism of the circulation in the extreme vessels as that which I had previously shown to be observable in the frog's foot after section of the ischiatic nerve. Notwithstanding this, M. Paul Bert, who is as imperfectly informed on the subject of the mechanism of the circulation in the extreme vessels as his friend Bernard was, has laid claim for him that by the repetition of Du Petit's experiment he has presented the problem of the circulation "under an absolutely new aspect."

By this assertion M. Bert seems to imply that Claude Bernard elucidated the mechanism of the circulation in the extreme vessels in a more complete and correct manner than had been done before. It does not appear, however, wherein such elucidation consists. M. Bert does not seem to have made himself acquainted with the aspect under which the mechanism of the circulation in the extreme vessels is presented in my essay published in 1850, nor with the explanation given by Brown-Séquard as to the cause of the heat—viz., that it is the afflux of blood to the parts, and not the loss of an unknown influence exerted by the sympathetic, as Bernard supposed. Notwithstanding this, I find M. Paul Bert's parable taken up in a late Harveian Oration at the Royal College of Physicians as a standard outcome of "experimental research."

In the experiment of dividing the ischiatic nerve of a frog, the relaxation of the muscular coat of the arteries, on which the dilatation of their calibre by distension with blood depends, appears to be an effect of section of special vaso-constrictors, derived from the sympathetic, bound up in the ischiatic trunk, and not of fibrils derived from the spinal cord. Thus, I showed, in a paper on the State of the Blood and the Bloodvessels in Inflammation, in the Medico-Chirurgical Transactions, vol. xxxv.,[2] that if we lay open the lower part of the vertebral canal of a frog, and remove the roots of the ischiatic nerves with the corresponding portion of the spinal cord, so that all sensation, voluntary motion, and spinal reflex action in the posterior extremities are abolished, the walls of the arteries are, nevertheless,

[2] The paper was given in to the Royal Medical and Chirurgical Society in May, 1858.

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seen, on examination of the webs under the microscope, to retain their contractility; nay, they appear even more disposed to become contracted so as to keep up greater than ordinary constriction of the calibre of these vessels.

When now the trunk itself of the ischiatic nerve in the thigh—which comprises not only the spinal fibrils, sensitive and motor, the roots of which were with the corresponding portion of the spinal cord destroyed, but also fibrils from the sympathetic nerve in the pelvis as yet uninjured—was divided on one side, the skin of the extremity subjected to this part of the experiment was seen by the naked eye to become redder from general vascular fulness than that of the opposite extremity, and on microscopical examination of the web, the arteries were observed to be relaxed and dilated by distension with full and rapid streams of blood injecting the capillaries and venous radicles. In the web of the opposite extremity, in which the trunk of the ischiatic nerve in the thigh was left uninjured, the arteries were, on the contrary, seen much constricted, some even to closure. This remarkable fact would appear to indicate something like the operation of inhibitory nervous influence having been arrested by the destruction of the spinal roots of the ischiatic nerve and the corresponding portion of the spinal cord whence they originate, leaving the vaso-constrictors derived from the sympathetic in uncontrolled action.

Still holding firmly in view the fact that there is no primary active dilatation of the small arteries, that there is no vaso-dilator organ, and consequently no vaso-dilator nerves to excite an organ which does not exist, we may from this experiment admit inhibitory nerve fibrils in the spinal roots of the ischiatic nerve which control and suspend the action of the vaso-constrictor nerve fibrils derived from the sympathetic, and so permit relaxation of the muscular coat of the small arteries, whereby they are brought into a condition to become dilated by distension with the blood now more freely entering them. In the converse experiment of the late Claude Bernard, nervous inhibition was directly indicated by irritating the chorda tympani. When this nerve was excited by electricity, the walls of the small arteries of the submaxillary gland became relaxed, so that the blood flowed more freely through them into the vein, whence blood issued in larger quantity. This experiment certainly did not prove the existence of vaso-dilator nerves; and, it might be said, not even inhibitory nervous action. The relaxation of the walls of the arteries by the electrical irritation of the chorda tympani may have been merely owing to transient paralysis from over-excitement of the vaso-constrictors. In the web of the frog's foot under the microscope we see as the effect of the application of a drop of some irritating liquid, such as spirit: (1) constriction of the small arteries and impeded flow of blood; and (2) dilatation of the small arteries by distension with blood now flowing in full streams. The constriction in the first instance was owing to primary contraction of the muscular walls of the small arteries from excitement, direct or reflex, of the vaso-constrictor nerves of the spot; whilst the distension with blood in the second instance was permitted by relaxation of the muscular walls, arising, no doubt, from the supervening exhaustion of vaso-constrictors occasioned by the over-excitement.

In whatever way brought about, however, it still remains a fact that relaxation of the muscular coat of small arteries is the condition for dilatation of their calibre by distension with blood. Primary active vaso-dilatation is a mere assumption. The experiments on living animals which have been performed in order to prove the existence of vaso-dilator nerves and a mechanism on which they exert their excito-motor influence are utterly inconclusive, little better than gambling in vivisection with the expectation of eliciting something by chance, and betray on the part of the experimenters a want of fundamental acquaintance with the mechanism of the circulation in the extreme vessels and with the different parts played therein by the small arteries, capillaries, and venous radicles. Thus it is that experiments are sometimes performed on living animals in order to ascertain the special action of nerves without a preliminary acquaintance with the mechanism of the organ, the nervous influence on which constitutes the subject of research; nay, experiments are performed in order to demonstrate the action of supposed nerves of imaginary organs, of which the existence is assumed in order to account for inaccurately observed phenomena. And all this is dignified by the name of "experimental research," while such crucial facts as the directly observable mechanism by which the flow of blood is promoted in the veins of the bat's wing, and the remarkable phenomenon attending the propulsion of lymph from the lymphatic heart in the eel's tail into the caudal vein are unstudied and stupidly misrepresented.

Postscript.—Since this inquiry was written and left my hands, the Harveian Oration at the Royal College of Physicians for this year has been delivered and printed. As the scope of many of Dr. Russell Reynolds' statements is virtually and by implication a tacit denial of what is above said, I consider myself called upon to reiterate with emphasis my statements in exposure of his unacquaintance with the subject. Under ordinary circumstances this would not have been necessary, but considering the formality attending the delivery of an Harveian Oration at the Royal College of Physicians, the distinction of the audience, and especially the eminence of the orator on the present occasion, I should feel myself as wholly put down for a pretender did I not interpose a few remarks provisionally. In my next communication I shall have to comment more particularly on the shortcomings of Harveian Orations and the disadvantageous position in which Harvey is too often placed by his friends.

May I beg of Dr. Russell Reynolds the favour to study my paper in Guy's Hospital Reports for October, 1850, and then advise with Sir William Jenner and Sir Joseph Lister on what is to be found therein. In October, 1850, Sir William Jenner was a colleague at University College Hospital of both Dr. Russell Reynolds and myself, whilst at the same time Sir Joseph Lister was acting temporarily as my ophthalmic assistant. I showed Sir William Jenner some points of the subject under the microscope. As to Sir Joseph Lister, he studied my paper with great intelligence and interest, as I was able to infer from the pertinent inquiries he made of me in conversation in order to obtain by word of mouth further elucidations of the subject. Sir Joseph Lister may perhaps remember that so intent was he in his inquiries that he one day accompanied me in my walk to the Regent's-park after the conclusion of the hospital visit. In the course of his oration Dr. Russell Reynolds quotes various incidental expressions of Harvey, which he adduces as forecasts of several of the very important physiological discoveries of the present day. But did Dr. Russell Reynolds not consider that if Harvey is to be credited for so much, why not also Cesalpino, for whom half-scientifically informed Italian physiologists claim the honour which is due to Harvey? And did not Dr. Russell Reynolds consider that he was thereby weakening the able and just defence of Harvey, recently published by his colleague, Dr. George Johnson?

It may not be amiss here if I suggest to Professor Redfern of Belfast to put himself in communication with Sir Joseph Lister respecting the effect of contusion of small vessels by pressure with a blunt point, as observed under the microscope, referred to in my previous communication.

Ventnor, Isle of Wight.

CHRONIC CATARRHAL LARYNGITIS:

ITS VARIETIES, WITH THEIR ETIOLOGY, PATHOLOGY, AND CLINICAL RELATIONS.

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(*Continued from p. 821.*)

II. HYPERTROPHIC LARYNGITIS.

THE *subjective* symptoms in this form of laryngitis are much more marked than in the affection just described. Not only is voice modified, but respiration also is sometimes seriously interfered with. Abnormal sensations, cough and expectoration, have also to be considered. *a.* Great and progressive alteration of voice is here present. The laryngeal tones have a deep and muffled character, and give the impression of being produced with difficulty, as if the vocal bands had become incapable of continuous isochronous vibration. The voice, however, generally retains much of its normal tone; we may say that its sonority or intensity is diminished, but its volume increased. An absolutely rough hoarseness is very uncommon. Aphonia may supervene in both sexes, though it is more likely to affect women. *b.* Although in ordinary cases respiration is never seriously

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impeded, yet in a small proportion of instances dyspnœa supervenes, and may even become so urgent that a fatal termination can only be obviated by tracheotomy. An important example of this kind has been reported by Türck. *b.* A feeling of thickness and as of a lump in the throat is often complained of, but it is by no means a constant sign. Sensations of heat and pricking are also occasionally present, but pain, even on external pressure, is seldom distinctly to be observed. *d.* Cough is very rare, except in the form of voluntary hacking to clear the throat. *e* Expectoration is decidedly less than in simple chronic catarrh. Very small quantities of viscid mucus are ejected after persistent hacking efforts.

The *objective* signs of this disease, though inconstant as to extent, are always very obvious to the laryngoscopist. First, as to hypertrophy, this necessarily is always present, but may vary much in degree, according as the disease is partially or fully developed, limited to certain parts or general. Thus we may observe an almost equable thickening or tumefaction, modifying the whole contour of the larynx, or one portion only of the organ may be involved. In the latter case it is almost invariably one of the ventricular bands that shows an increase of size. In this position a slight disturbance of symmetry at once strikes the eye, but nevertheless the loose tissues of this vicinity and their dependent site favour the occurrence of any kind of swelling. The view of one or both vocal bands may be shut out by the abnormal projection towards the mesian line of the parts above. The tissues covering the arytenoid cartilages and the inter-arytenoid fold are often much hypertrophied. The vocal bands may also be much thickened, losing hence their normal regularity of shape.

According to Mandl[1] the epiglottis is often much swollen in this malady, and by consequent traction folded so as to resemble a horseshoe or *capuchon*. In my experience, however, this condition, though common enough in phthisis, syphilis, &c., is seldom present to such an extent in merely hypertrophic laryngitis. Here, indeed, I think the epiglottis enjoys a comparative immunity from attack.

In some cases the superficial structures forming the oblique surface immediately below the vocal bands are considerably hypertrophied—a condition first observed by Rokitansky[2] and Czermak,[3] and subsequently furnished by Gerhardt,[4] with the rather pedantic name of "chorditis vocalis inferior hypertrophica." This swelling, when pronounced, can be well seen with the laryngoscope, and often produces a concentric narrowing of the passage. In the only case I have met with the excrescent tissues had the pale, translucent, and gelatinous appearance characteristic of the ordinary mucous polypus of the nose. Other writers have made the same observation, and in fact it is doubtful whether this disease is not an affection *per se*, deserving a separate place in laryngeal pathology, instead of being included under the present heading.[5]

Secondly, as to variation in colour, we shall observe a great diversity in different cases. In the milder forms the laryngeal mucous membrane has much the same dull, slightly variegated tint seen in the simple catarrh. On the other hand, when the swelling is great and extensive the whole larynx often displays a vivid red hue, indicating the most active hyperæmia. Between these two extremes every gradation of colour may be noticed, the abnormality of tint bearing by no means always a strict ratio to the actual extent of hypertrophy.

With respect to ulcerations, we meet with the same erosions as occur in the simpler disease, and scarcely with greater frequency. The free edges of the vocal bands are the parts most likely to be excoriated. In addition, however, clefts, creases, or fissures, which often have the appearance of containing raw cracks in the depth of their angle, can be observed. They are mostly situated on the internal wall of the larynx, between the arytenoid cartilages and the interarytenoid fold internally, and the aryepiglottic folds externally. Whether deeper ulcers occur apart from tuberculosis is an unsettled question. The vocal bands are rarely coated with viscid secretion in this affection, but a small amount of frothy mucus occasionally occupies the laryngeal vestibule, to a great extent veiling the parts from view. Alterations of voice depend chiefly on the hampered action of the vocal bands, through the tumefied and hence unyielding state of the surrounding structures. Thus the swelling of the interarytenoid fold prevents close approximation of the arytenoid cartilages, whilst, as Mandl[6] remarks, the vocal bands cannot be drawn widely apart, owing to the abnormal resistance offered by the more or less solidified tissues supporting them externally. In this way respiration also may be impeded. The deep muffled tones of the voice probably result from inability of the vocal bands to vibrate, except *en masse*—that is, weighted with the whole of the thyro-arytenoid muscles, with which the ligamentous portion becomes firmly consolidated.

Pathogenesis.—The causes of this disease, which is mostly primary, are in nearly all instances exceedingly well defined. Persons who are continually exposed to wet and cold, to straining efforts of voice,[7] and to excessive indulgence in spirituous liquors, are almost exclusively liable to attack. Hence it is a malady specially allied to certain occupations, and, with few exceptions, met with in publicans, auctioneers, cab-drivers, and costermongers. Further than this, I would say that hypertrophic laryngitis is rarely seen without a history of alcoholic excess, and this I consider to be not only the most influential, but almost the *creative* cause of the disease. In my judgment, therefore, it might with propriety be called "alcoholic laryngitis." The milder class of cases, however, generally occurring in females, which are scarcely to be distinguished from the simple catarrh, except by the swelling of one of the ventricular folds, are doubtless etiologically similar to the latter affection, being often secondary, or arising from frequent slight colds, &c.

From the foregoing statements, it will be inferred that hypertrophic laryngitis is essentially an affection of the male sex; and in support of such inference, I find that of forty-seven cases of my own, thirty-nine were males, whilst of the eight instances in females only two belonged to the pronounced type of the disease.

As regards age, all my cases occurred between twenty-seven and forty-five, except one in a youth of nineteen and another in a boy of sixteen.[8]

Pathological Anatomy.—We have here in evidence a very complete autopsy by Wedl[9] of Vienna in the case of a man who died suffocated by hypertrophic laryngitis, the sequel of an acute attack, after it had lasted several years. On this authority it is shown that the disease consists of a chronic cell proliferation mainly in the submucous connective tissue, but to some extent in the corium of the mucous membrane. New connective tissue of impaired vitality is thus formed, and hence the malady is essentially an example of a true numerical hypertrophy. Thus, under the microscope, groups of young connective-tissue cells can be seen, along with isolated nuclei, when fully developed. These penetrate to some depth between the muscular fibrillæ and there become agglomerated. The alteration of colour of the surface of the mucous membrane, apart from hyperæmia, is mainly due to opacity from infiltration by a finely granular mass and nuclei in decomposition. The epithelium has its usual characteristics in chronic catarrh, being of stunted growth and low vitality, but rarely shed to such an extent as to give rise to erosions. From his pathological observations Wedl supposed that ulcers penetrating the corium of the mucous membrane would ultimately arise in these cases, but clinical facts are opposed to this view. Such ulcers have not been recognised, and if they exist they have hitherto and are still confounded with laryngeal phthisis.

Diagnosis.—There is but one affection of the larynx that hypertrophic laryngitis runs any real risk of being confounded with, and that is tertiary syphilis in an early or partially developed and indolent state. Incipient laryngeal phthisis, however, of the congestive type often bears considerable resemblance to the less serious malady. In both cases attention to history and collateral symptoms will in nearly all instances quickly dissipate doubts. When the swelling is confined to one ventricular band, there is a similitude to the rare cases of primary cancer of the larynx, which usually begins in this site. The malignant neoplasm is,

[1] Traité Prat. des Maladies du Larynx. Paris. 1872, p. 668.
[2] Lehrb. der pathol. Anat., iii. Aufl., Bd. iii., S. 16, 1859.
[3] Der Kehlkopfspiegel, &c., Leipzig, 1863, Obs. 1, S. 62.
[4] Deutsche Archiv für Klinische Medicin, 1873, Bd. xi., S. 583.
[5] For an extended consideration of this disease, see Schrötter, Monatschrift für Ohrenheilkunde, &c., 1878, No. 12.

[6] Op. cit., p. 668.
[7] That is shouting, not singing, properly so called. Artistic exercise of the voice in excess does not, in my opinion, produce a more serious lesion than the simple chronic catarrh or glandular lesion.
[8] This case was under my care for two months, and had a previous history of several months. The patient was afterwards lost sight of, but when last seen there was reason to suspect the development of phthisis.
[9] Reported by Türck, Klinik der Krankheiten des Kehlkopfes, Wien, 1866, p. 203.

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however, as a rule of more recent date, has a more congested, irregular, and "angry" appearance, whilst as it progresses it quickly becomes marked with whitish patches of cream-like scum, and soon after ulcerates.

Prognosis.—When hypertrophic laryngitis occurs, as most frequently happens, in close etiological relationship with certain modes of life, it is evident that our prognosis as to recovery must be unfavourable unless in the presence of a complete change in the occupation and habits of the individual. Should the hypertrophy be so great as to demand tracheotomy in a patient past middle life, a fatal termination in from six to twelve months is almost a certainty. Under these circumstances the patient perishes slowly from debility in a manner bearing a considerable clinical resemblance to phthisis, or perhaps succumbs with little or no vital resistance to an intercurrent malady, such as pleuro-pneumonia. In the less pronounced cases the malady, if left alone, will generally run a progressive course for many years, whilst in the mild instances of accidental origin, mostly seen in females, actual aggravation is rare and spontaneous cure not unfrequent. Some authorities think that the more pronounced and persistent examples proceed by intrinsic force to laryngeal phthisis. Tobold[10] is the chief advocate of this view, and bases his opinion mainly on the results of the experiments of Sommerbrodt,[11] who produced phthisis in squirrels by mechanical irritation of the larynx. The question is not yet cleared up, and in my opinion it remains to be seen whether laryngeal phthisis, as at present defined clinically, will not prove to be still a polymorphous disease, not every instance of which depends on a veritable tuberculosis.

Treatment.—The *constitutional* measures recommended for the simple catarrh, with change to a mild climate during the winter months, must be adopted and carried out with increased assiduity. It must be borne in mind, however, that unless the exciting causes of the disease be removed, when they are manifest, we shall obtain no decided or permanent benefit from treatment, no matter how diligently pursued. Should the climatic exposure, overwork of the voice, or alcoholic excess be continued or resumed, the course of the malady will, *pari passu*, be one of persistence or relapse.

As to *local* remedies, most relief will be obtained from the use of cold spray inhalations (perchloride of iron, sulphate of copper, &c.), but warm soothing inhalations impregnated with opium, conium, stramonium, &c., can often be employed with advantage in the subacute exacerbations of the malady, which are rarely absent in winter. The various astringent lozenges (tannic acid, rhatany, kino, &c.) are of great value for obtaining temporary benefit, before or after using the voice, for instance, and they should be reserved for such purposes. They do not, however, act with sufficient potency to ameliorate permanently this disease, and, if resorted to continuously, will soon lose all efficacy. In the way of local application by the practitioner, the ordinary astringent solutions, especially that of perchloride of iron (two drachms to an ounce of water), can be employed daily with satisfactory results in the milder cases, but in pronounced hypertrophic laryngitis they are of little avail. Under these circumstances we must resort to nitrate of silver, which may be applied occasionally in the solid form to those parts of the larynx most deeply implicated, whilst for daily use a strong solution (one to two drachms to an ounce of water) should be liberally painted over the whole of the affected surface. By persevering in this treatment, we can often in a few weeks obtain a virtual cure in cases which have previously resisted all efforts of a milder type.[12]

In those instances where the sub-glottic swelling is present tracheotomy is almost invariably required, for the position of the lesion almost precludes the possibility of successful treatment *per vias naturales*. Scarification may be attempted, and Voltolini[13] has once obtained a permanent diminution of the tumour by the electric cautery, but this may be regarded as a phenomenal achievement. After tracheotomy the larynx can be dilated by means of bougies or Schrötter's[14] tubes and plugs.

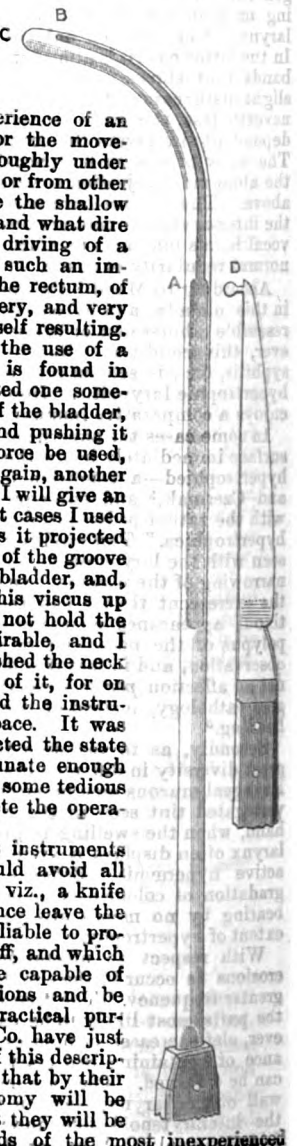
(To be concluded.)

[10] Laryngoscopie und Kehlkopf Krankheiten. Berlin, 1874, p. 265.
[11] Ueber die Abhängigkeit phthisicher Lungenerkrankung von primären Kehlkopfaffectionen; Archiv für exper. Pathol. 1873.
[12] In sending patients abroad suffering from the malady, it is advisable to let them try the "Mont Dore cure" or the baths at Aix-les Bains and the inhalations at Marlioz.
[13] Monatschrift für Ohrenheilkunde, &c., 1878, No. 9.
[14] Beiträge zur Larynxstenose, &c., Wien, 1876.

A NEW KNIFE AND STAFF FOR THE SAFE PERFORMANCE OF LITHOTOMY.

BY SURGEON H. W. BOYD, F.R.C.S., M.K.Q.C.P.I.,
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HAVING had a large experience of stone cases in India, and seen in some instances the deplorable results and the irreparable injury following on the accidental slipping of the knife from the groove, or the protruding of its point beyond the end of the staff during the operation of lithotomy, I was led to consider whether a knife might not be devised which would avoid all danger from these causes. I am sure most practical lithotomists will agree with me that the only real danger in the extraction of a stone by lithotomy (outside the large size of the calculus), in an otherwise healthy subject, depends upon the direction and extent of the deep incision. It can be readily understood how easily, owing to the inexperience of an operator or his timidity, or the movement of a patient not thoroughly under the influence of chloroform, or from other causes, the knife may leave the shallow groove of an ordinary staff, and what dire results may follow on the driving of a sharp-pointed bistoury into such an important region: wound of the rectum, of the prostate, of the pudic artery, and very frequently of the bladder itself resulting. Nor is danger confined to the use of a sharp-pointed knife, for it is found in practice that the probe-pointed one sometimes fails to nick the neck of the bladder, its blunt point hitching in and pushing it up before it, and, if much force be used, tearing the urethra across. Again, another accident may occur, of which I will give an illustration. In one of my first cases I used a probe-pointed knife, and as it projected considerably above the edges of the groove it caught at the neck of the bladder, and, instead of cutting, pushed this viscus up before it. My assistant did not hold the staff as steadily as was desirable, and I found that I had actually pushed the neck of the bladder over the end of it, for on introducing my finger I found the instrument in the recto-vesical space. It was some moments before I detected the state of the case, and I was fortunate enough to reintroduce the staff after some tedious manipulation, and to complete the operation.



I have often thought that instruments could be made such as would avoid all dangers of the above nature: viz., a knife which could not by any chance leave the groove, which would not be liable to project beyond the end of the staff, and which at the same time would be capable of making the necessary incisions and be sufficiently handy for all practical purposes. Messrs. Fannin and Co. have just completed a knife and staff of this description for me. I am confident that by their use the operation of lithotomy will be infinitely simplified, and that they will be found harmless in the hands of the most inexperienced operator.

The staff is much the same as an ordinary one (as can be seen from the accompanying woodcut), the only difference being in the groove, which in the perineal portion of the instrument is wide, to admit the entrance of the button (D) on the back of the knife, but towards the curved part it narrows (see A) so as to grasp this button and prevent the knife slipping. The groove (B) ends about a third of an inch from the extreme point (C). With reference to the position of this groove,

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it may be placed on any aspect of the staff. The one shown in the woodcut is on the posterior aspect, but one may be made with a groove on the side if desired, or commencing posteriorly, and, taking a semi-spiral direction, ending laterally; and I think this form of staff would be most suitable, as the knife in passing along lateralises the incision without demanding any attention from the operator. Lastly, by approximating the edges of the groove of Buchanan's angular staff, and leaving the angle open to receive the button, an excellent arrangement may be made.

With reference to the knife, it does not much differ from a finger knife in shape, only it has projecting from the back of the blade, and about a line from its point, a small button attached to the blade by a narrow neck. This button can enter any part of the perineal portion of the staff, but as it passes on towards the narrow portion of the groove it engages in the staff and ultimately stops a third of an inch from its point, where the groove ceases. In the narrow portion of the groove the knife can be lateralised to an angle of 45°, so that it admits of plenty of play and movement during the operation. To perform this the external wound may be made by either transfixion or cutting. The perineal portion of the instrument being thus exposed, the button is placed in the groove and the knife pushed on into the bladder. If the existence of only a small stone be suspected, the back of the knife may be kept close to the staff, when only a moderate incision will be the result; but if a deeper incision be required, as in cases where a large stone has to be extracted, then by depressing the instrument while pushing it into the bladder any sized incision may be made in the perineum; whereas, owing to the top of the knife being necessarily held in the groove of the staff only, a limited incision in the prostate and neck of the bladder can result. Thus there will be no danger of cutting through the capsule of the prostate, or too deeply through the neck of the bladder, accidents which I am sure frequently occur under the present system of making an incision while withdrawing the knife.

The advantages I claim for this knife and staff are—first, that it simplifies the operation of lithotomy, whether it be the median or the lateral method, and that in the hands of the most inexperienced the operation can be performed with expedition; secondly, that it obviates all tendency on the part of the knife to slip, thereby preventing some of the most frequent causes of death following on this operation; and, thirdly, that the protrusion of the knife beyond the point of the staff with consequent puncture of the posterior part of the bladder is rendered impossible. In conclusion, I trust these instruments will be found valuable, especially in countries where calculus is prevalent, and where skilled medical aid may not be near at hand, where often the operation has to be performed to save life by men to whom the operation is new, or whose timidity may be a bar to its performance.

Dublin.

MITRAL STENOSIS AND INSUFFICIENCY.

By T. C. RAILTON, M.D. LOND.,
SENIOR ASSISTANT PHYSICIAN TO THE MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN.

THE following notes of a case of mitral disease may be useful as showing how very important symptoms may be sometimes masked by other conditions, and the diagnosis thereby rendered difficult. They show as well, in a tolerably typical manner, the picture of the heart's gradual restoration from asystolism to comparative well-being, with the disappearance concurrently of all the symptoms depending upon the former state.

T. W——, aged thirty-two years, book-keeper, came under treatment on March 10th. His father died from heart disease and bronchitis at fifty-four years of age, but there was no further history of rheumatism or heart disease in the family. Although always troubling himself a good deal about business and working hard, the patient had considered himself to be a healthy man until quite recently, with the exception of three attacks of bronchitis which he had suffered from during the past winters, the cough, however, disappearing when the warm weather came. So far as he knew, he had not been under the care of a medical man, he had never suffered from rheumatism, from shortness of breath, nor had he lost flesh. During the last month he had taken cold and had a cough, with occasional hæmoptysis and shortness of breath, but he continued at his business until two days before coming under treatment, when his increasing disorder compelled him to remain in bed. When first seen he was found to be suffering very considerably from dyspnœa, which was aggravated by the slightest exertion. He had to be propped up in bed, and was much distressed by a constant hacking cough, bringing up a sputum tinged with blood. He had no signs of congestion in the face, being quite pale. He was perspiring freely, and there was a sour smell present, like that of acute rheumatism. He had, however, no elevation of temperature and no joint affection. There was no œdema of the extremities nor any perceptible ascites, but the abdomen was considerably swollen over the region of the liver. His fingers and toes were very decidedly clubbed at their ends. On examining the chest, it was found to be well-developed, with both sides equal; the percussion note was almost tympanitic except at the base of the right lung posteriorly, where there was comparative dulness. A few râles were to be heard scattered over the chest, and bronchial breathing in that part where the dulness existed. The superficial cardiac dulness was found to be perfectly normal; the apex beat was diffused and weak, but situated somewhere about the nipple-line in the fifth interspace, at which spot a faint presystolic thrill could just be perceived. On auscultation at the apex the first sound was remarkably short and flapping, and was not followed by any second. There was an exceedingly short and slight roughness to be heard immediately preceding the first sound, which might almost have escaped attention had not the presystolic thrill pointed out its nature. At the base there was a reduplication of the second sound, in the aortic area it was weak, in the pulmonary area it was but very little stronger. There was no tricuspid disease discoverable. The liver was found to be uniformly enlarged, but there was no pulsation or any great degree of tenderness. The dulness in the right nipple-line was six inches and a half in depth. The spleen was apparently somewhat enlarged. The urine was scanty and loaded with urates; it contained a considerable quantity of albumen. The treatment adopted was to keep the patient perfectly quiet, to supply him with a nourishing diet, more particularly Benger's peptonised beef jelly, and to administer half an ounce of the Pharmacopœal infusion of digitalis every three hours.

I need not occupy space by detailing the daily progress of the case; it will be sufficient to mention briefly the changes in the various organs implicated. The dyspnœa began to abate in the course of twenty-four hours after beginning the digitalis, and had entirely left him in three days. The sputum tinged with blood disappeared at the same time. The sweating was noted as much less by the fourth day, at which time also the liver dulness was found to be diminished. On the sixth day the size of the liver had become quite normal. At the same time that portion of the right lung which had been compressed regained its normal resonance and breath sounds. The urine was clear and free from albumen on the third day. As regards the heart, although its action continued to be irregular during the whole attack, and in fact has remained so since, the pulse became stronger in the course of two days, and with the improvement in the nutrition of the cardiac walls the sounds underwent the following modifications. On the third day the murmur at the apex, from having been genuinely presystolic in rhythm, was noted to have changed so as to occupy the whole of the ventricular pause, the second sound being still absent. It was very rough in character. The next day, the rhythm and everything else remaining the same, the roughness had changed to a loud rumble. On the fifth day the aortic second sound was to be heard at the apex for the first time, and was immediately followed by the rumbling murmur, which, however, no longer extended quite to the beginning of the first sound, thus becoming post-diastolic in rhythm. The second sound at the aortic cartilage was noticed to be louder than before. On the sixth day a faint systolic murmur accompanying the first sound was heard just at the apex, not traceable to the axilla or back, the post-diastolic murmur remaining as before. In this condition the heart has remained up to the present time, when the patient has been compelled to resume his occupation. All the sounds are stronger; at the base the aortic sound is normal, the pulmonary sound accentuated.

Remarks. — The absence of abnormal cardiac dulness

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might have rendered the diagnosis obscure if the other symptoms had not pointed so strongly to cardiac insufficiency. No doubt the enlargement of the right ventricle and left auricle is masked by an emphysematous condition of the lungs, the result of the previous attacks of bronchitis. The insidious advent of the disease, without any previous history of rheumatism, and its long existence (as shown by the clubbed ends of the fingers and toes and by the extent of the mischief in the heart itself), without having attracted attention, hardly require comment, both of these circumstances being common in this form of valvular mischief. It is worth noting, however, that after a long period of immunity the rupture of compensation was brought about with the greatest rapidity by an attack of cold. I would draw attention to the alteration in rhythm of the obstructive murmur under the influence of rest and digitalis. At first a true presystolic murmur, it changed so as to occupy both diastolic and presystolic periods, and later the diastolic period only. These changes were coincident with an increase in the strength of the walls of the left ventricle, as shown by the improvement of the aortic second sound, its conduction down to the apex, and by the appearance of the systolic mitral murmur. It is quite reasonable to suppose that by strengthening the ventricular walls their diastolic power will be increased in the same ratio as their systolic power, and this permits us to make use of Dr. Broadbent's hypothesis that the post-diastolic rumble may be produced by the blood being strongly drawn from the left auricle, through the narrowed mitral opening during the active dilatation of the left ventricle. This will account for the production of the diastolic or post-diastolic murmur, but will not explain the absence of the presystolic portion of the murmur at a time when other signs showed the heart to be acting strongly. It would seem that the increased power of the left ventricle to fill itself during the diastolic period resulted in a condition modifying the vibrations of the mitral valve during the presystolic period and so rendering them inaudible. A question of great interest in mitral stenosis is the almost characteristic loud and short first sound. It has been aptly compared with the second sound in quality, and appears to owe its shortness, like the latter, to the fact that it consists of a vibration of the valves unaccompanied by muscular bruit. The absence of tone in the walls of the left ventricle particularly is to be explained by the small amount of blood which has habitually reached it in a long-standing case of mitral stenosis, like the one we are considering, and may thus account for the imperfect contraction of the muscle. As regards the loudness of the sound, sometimes so extreme that one can hear it without a stethoscope eight or ten inches from the chest, it is difficult to explain unless we accept Dr. Broadbent's suggestion that, "it is due to imperfect distension of the ventricular cavity and the consequent absence of resistance at the beginning of the systole."[1]

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nullis autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

TRAUMATIC DISLOCATION OF HIP; USELESS LIMB; EXCISION OF HEAD OF FEMUR; SUCCESSFUL RESULT.

(Under the care of Mr. SYDNEY JONES.)

THE following case is especially interesting when taken in conjunction with the recent discussion at the Royal Medical and Chirurgical Society (see THE LANCET, Nov. 1st, p. 775).

A. R——, aged eleven, in May, 1879, met with an accident, and dislocated his right femur on to the dorsum ilii. One dislocation was recognised, and is said to have been reduced. A splint was applied. When this was removed, the head of the femur was still on the dorsum. Several attempts were made to reduce the dislocation, but without success. The patient came under Mr. Sydney Jones's care in October, 1879. Three attempts, by manipulation and pulleys, were made at reduction, but to no purpose. The limb was useless for progression on account of the shortening and inversion. On Nov. 25th, 1879, Mr. Sydney Jones excised the head of the femur, corrected the malposition of the limb, and drew down the upper end of the shaft to the acetabulum, which was filled up with condensed cellular tissue and inflammatory material. Now, five years after the excision, the boy has a straight limb an inch shorter than the opposite one. He can run, jump, play cricket, and ride a tricycle.

CITY OF LONDON INFIRMARY, BOW.

ANEURYSM OF THE LEFT SIDE OF THE ABDOMINAL AORTA BURSTING INTO THE BLADDER AND SIMULATING AN AFFECTION OF THE CÆCUM.

(Under the care of Mr. W. GEM.)

WILLIAM G——, aged forty-five, carpenter, was admitted on Dec. 27th, 1881, for rheumatic pains in the right hip and colon, and discharged well on Jan. 16th, 1882. He was readmitted on Nov. 29th, 1883, for injury of the hip and elbow-joint of the right side, discharged well in January, 1884, and again readmitted on Sept. 15th, 1884, with rheumatism of the right side and obstinate constipation. On this last occasion he confessed that he had been of intemperate habits, and was under the influence of drink when he received the injury to the hip and elbow. He appeared not to have been exposed to wet or cold at any time, but had always worked at his trade as a carpenter, not of a laborious character.

On examination of the abdomen over the right iliac fossa and linea alba, a tumour could be felt and seen, which on percussion appeared dull, and on deep pressure caused considerable pain, with sickness; it was about the size of an orange, and transgressed the median line, appearing to be in direct contact with the bladder. The patient complained of throbbing pain shooting down to the right testicle, no bladder symptoms being complained of until about two days before death on catheterisation. No alteration in the colour or constituents of the urine was visible; nor was there pain or uneasiness experienced on the left side; and no pulsation or dulness on percussion over the left lumbar or iliac regions could be made out. On stethoscopic examination over the abdomen no bruit could be detected.

The treatment adopted was perfect rest in the recumbent position, with milk diet. The bowels were first acted on with calomel, colocynth, and hyoscyamus, in pill, which gave him great relief—in fact, he appeared very much better after the purgation; the bowels were afterwards kept free by castor oil. It may be added that on admission the patient was ordered a bath, which caused fainting, and on examination over the mitral valves a systolic murmur was heard and the bath immediately stopped.

On Sept. 26th the patient complained of great pain over the right iliac fossa and obstruction of the bowels, with a feeling of sinking, for which he was ordered fomentations, with brandy and opium. From that date the patient gradually sank and died. On Sept. 30th, twelve hours before death, the urine was drawn off, and was then perfectly normal in colour.

Necropsy.—The surface of the body was blanched, except the tip of the nose, which was in a gangrenous condition (which commenced two days before death). The lungs were normal. There were slight atheromatous patches on the cusps of the mitral valves. The liver was cirrhosed. The right kidney and spleen were normal; the left kidney had an old abscess at the superior margin. There was localised peritonitis between the folds of the peritoneum and the intestines. On removal of the bowels a large black-looking mass presented itself, extending from opposite the eleventh and twelfth dorsal vertebræ to Poupart's ligament, and in direct contact with the bladder, lying above the kidney, bound down by the lumbar fascia, the ureter remaining intact. The bladder on being opened was found to contain clotted blood, and fully distended; on turning out such clot an opening was found on the posterior and left wall, in direct communication with the tumour; it was soft and friable, and broke down under pressure of the finger, like brown paper. There was no erosion of the vertebræ or destruction of any viscus except the bladder, which was as above stated. The sac of the aneurysm contained

[1] Harveian Lecture, November, 1883.

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organised laminated fibrine, of two or three layers of different thickness.

Remarks.—I consider the above case unique, inasmuch as on referring to Quain's Dictionary and Aitken and Roberts' Medicine, I fail to find any mention of an aneurysm opening into the bladder, with normal coloured urine twelve hours before death. The other points of interest are, the whole of the symptoms being referred to the right side and right testicle, and the tumour in the right iliac fossa, with pain and throbbing, with a distinct tumour in that situation, and also the disastrous consequences that might have occurred on catheterisation. How is it explained, unless the lumbar nerves on the left side were so compressed as to cause their destruction, and the right side being intact the pain was referred to the right side, either by decussation or by direct communication, or whether it was transmitted to the cord from the left nerves, and to the right through that medium, is a moot question?

TAUNTON STATION HOSPITAL.

ULCERATIVE ENDOCARDITIS; NECROPSY; REMARKS.

(Under the care of Brigade Surgeon HENSMAN.)

PRIVATE J. M——, fourth battalion Somersetshire Light Infantry, was admitted on March 23rd, 1884. He complained of diarrhœa, from which he had been suffering for some days, and of some cough, but had no pain or shivering. His temperature at 10 A.M. was 102°, and in the evening 105°. He had a feverish, heavy look, a congested face, and a petechial eruption over both lower extremities. Three drops of tincture of aconite were given every two hours, and an enema of starch. Ordered milk diet and two pints of beef-tea. The progress of the case was as follows.

March 24th.—Since the starch enema there has been no more diarrhœa; he coughs, but has no pain or expectoration; resonance is impaired in right back; a double cardiac bruit exists, and an extended cardiac area to percussion; the apex beat one inch outside, and two inches and a half below the left nipple; the liver and spleen both enlarged and easily felt on palpation. The urine is found to be acid, sp. gr. 1018, with considerable albumen. Pulse 140; respiration 40; morning temperature 105·5°. Thirty grains of quinine were given at 10 A.M., and the temperature fell two degrees.

25th.—The symptoms were the same. Temperature 105°; pulse 140; respirations 40. Quinine repeated.

26th.—Seven stools in the twenty-four hours. No iliac tenderness; no rose-coloured spots; the belly flaccid. He is in no pain. Tongue dry; rhonchus down both backs. Temperature 105°; pulse 115; respiration 36. Two grains of quinine and ten drops of tincture of digitalis every four hours. Ordered enema of starch and opium, milk, beef-tea, and eight ounces of port wine.

27th.—Great prostration; bowels relaxed; tongue dry and black; aphonia; subsultus; wandering delirium. Treatment to be continued.

28th.—Death occurred quietly, comatose.

Necropsy, twenty-four hours after death.—External appearances: The petechiæ had become more diffused, and the skin had a yellowish tint. Thorax: Pericardium entirely adherent by old adhesions; muscular structure of heart hypertrophied; valves on right side healthy. On left side the curtains of the mitral were much thickened by old-standing disease. On the free edge of the valve were three small ulcers, and on the ventricular aspect just below a segment of the aortic valve an erosion as large as a threepenny piece, the endocardium around it having a bright-pink colour. This large ulcer showed a very considerable loss of tissue; the cusps of the aortic valve were thickened and corrugated; there was no appearance of atheromatous deposit in the aorta; two of the chordæ tendineæ were beaded with minute vegetations, and recent granular fibrine appeared in the neighbourhood of the ulcers. This valuable specimen now forms part of the collection in the museum at Netley. Lungs congested; structure appeared healthy. Old pleuritic adhesions on both sides, tearing away parietal pleura on separation. Abdomen: Liver enlarged, congested; weight 5 lb. Spleen large, black, soft. Large soft infarcts found in both organs. Intestines: The cæcum and colon were inflamed and marked with dark hæmorrhagic patches; in the ascending colon were two small paches of necrosis, three-quarters of an inch in diameter, not perforating. There was no peritonitis. Ileum and small bowel unaffected. There was an absence of any enlargement of Peyer's glands and there were no enlarged mesenteric glands. Kidneys: Pale, smooth, and large capsule easily separable; surface speckled with innumerable hæmorrhagic points, the site of small infarctions. The section had a pale appearance, and a yellowish streaky infiltration took the place of some of the pyramids.

Micro-organisms.—The assistant professor of pathology at Netley, Surgeon-Major Dr. Timothy Lewis, demonstrated numbers of micro-organisms in the endocardial ulcerations. Both Professor Aitken and Dr. Lewis agree that there is nothing specific in the appearance of these micro-organisms, and that they are the ordinary bacteria of necrotic lesions.

Remarks.—The ulcers in the endocardium appeared to me as if they had existed some time, and were not of simultaneous occurrence with the more recent endocarditis, or with the man's last illness; the petechial eruption had been noticed a week or ten days prior to his admission to hospital. Two cases of violent acute inflammation of the lymphatics of the arm occurred from post-mortem inoculation from this body; the first happened to my hospital sergeant who assisted at the autopsy, and pricked his finger with the scissors; in twenty-four hours the wound inflamed and the inflammation ran up the arm to the axilla; deep abscess occurred in the hand. The second was the undertaker who assisted to lift the body into the coffin, and the moisture upon the body inoculated a small abrasion he had upon his hand. Similar violent symptoms followed as in the former case, and his life was despaired of; abscesses formed; he lost a portion of the finger and was ill for three months with useless hand and arm. I presume that, in this case, the micro-organisms were the cause of the embolisms in the skin, bowel, liver, spleen, kidneys, &c., and their extremely virulent character the cause of the violent inflammation of the lymphatics following post-mortem inoculation from the body. In these latter cases general septic infection seemed to be prevented entirely by the action of the axillary glands arresting the further progress of the poison towards the circulation.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Expiratory Cervical Emphysema.—Malignant Stricture of Œsophagus with Pulmonary Cavity.

AN ordinary meeting of this Society was held on Tuesday last, Dr. George Johnson, F.R.S, president, in the chair.

A large number of candidates for the fellowship offered themselves for election.

Dr. FRANCIS HENRY CHAMPNEYS read a paper on Expiratory Cervical Emphysema, otherwise styled emphysema of the neck occurring during labour and during violent expiratory efforts. It was an experimental inquiry, and was complementary to the previous inquiry dealing with emphysema of the anterior mediastinum after tracheotomy (vide THE LANCET for 1882 and the Medical and Chirurgical Transactions, vol. lxv., pp. 75–86). Healthy fœtuses were used, with two exceptions, in all the experiments. With regard to frequency the accident occurs about once in two thousand labours. Etiologically it is agreed that the cervical emphysema is caused by bearing down, which is only another name for violent and prolonged expiratory efforts. It occurs during the second stage of labour, and generally appears first at or about the suprasternal notch, whence it may extend in all directions. In its clinical course it was never accompanied by pneumothorax; it becomes absorbed within a week or so and seems always to end favourably. As to the pathological theories, it has been attributed to rupture of the (1) bronchi, (2) trachea, (3) lung. Three autopsies supporting the third view were given; the other opinions seem to be unsupported by facts.—*Mode of experiment:* Tracheotomy was performed, and the trachea connected by means of T-tubing with a mercury manometer, leaving an open tube for inflation. Seventeen experiments were performed, some with the lungs *in situ*, others with the thorax open, others with the lungs removed from the chest. In one an attempt was made to trace the course of the air by means of a coloured gelatine mass. The conclusions from the experiments were the following:—1. The cause of emphysema of the neck during labour is

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rupture of the lung tissue, the air escaping near the root of the lung, passing beneath the pulmonary pleura into the anterior mediastinum, and so beneath the deep cervical fascia into the neck. The route thus marked is the same by which air sometimes passes into the anterior mediastinum after tracheotomy (vide Medical and Chirurgical Transactions, vol. lxv., 1882, p. 75, *et seq.*, and p. 85). 2. The weakest parts of the lungs are opposite the pleural reflections—i.e., the spaces between the lobules and the fissures between the lobes, and especially the anterior surface of the root of the lung. 3. Pneumothorax, when it occurred during experiment, had nothing to do with the production of emphysema of the neck. The healthy bronchi and trachea are able to resist the greatest possible expiratory efforts. 4. The lungs and pleura, when quite air-tight, are freely permeable to fluids. 5. The usual rules of practice, to restrain bearing down and accelerate labour after the production of emphysema of the neck, are sound. 6. The accident would seem to be noted in about one case in 2000, but it is not improbable that slight cases are overlooked. 7. The air emerges from the thorax along the great vessels, but may not become superficial till it has travelled higher up. 8. The emphysema of the lower part of the trunk, usually connected with rupture of the uterus, belongs to quite a different category, and is generally associated with a fatal result.—Dr. ANGEL MONEY referred to the part played by the pleura, which was a very resisting structure.—Mr. R. J. GODLEE spoke of the reasons which might account for the compressibility of the mediastinal tissues; the presence of vessels from which the fluids could be expressed was thought to be one factor in the compressibility. It would be interesting to know why the air should escape into the anterior mediastinum rather than beneath the costal pleura. He suggested that the experiments should be repeated in adults because the tissues would be more like those of parturient women.—Dr. DOUGLAS POWELL thought that the experiments had a wide bearing. He objected to the use of the term "pleural reflections," as being a new phrase, and as hardly expressing the condition of the pleura where it passed over the interlobular spaces. The weak spot of the chest was generally held to be the anterior margin of the lungs. He inquired how it was that a pressure of at least forty millimetres of mercury was required to produce rupture of the lungs, whereas in the adult even a pressure of three inches and a half was probably the greatest which obtained during prolonged straining. Driving the air towards the trachea, and a reflection of the air towards the lungs, were what occurred during violent efforts of straining. The anterior margin of the lung was that part which usually gave way in his experience of subpleural emphysema. He thought that emphysema was not common at the root of the lung. He had also found by experiments that the lungs were more distensible than the thorax, and that they could be distended a good deal beyond the dimensions of the thorax.—Dr. GEORGE JOHNSON inquired what influence the use of anæsthetics might have in preventing the voluntary efforts which were probably the cause of the emphysema.—Dr. BERNARD O'CONNOR asked whether the "ruptures" had only been found at the anterior surface of the root of the lung.—Dr. SILVESTER was interested in surgical emphysema from its importance in inflating the whole body, thereby rendering the body able to float. The distension of the skin could not be accomplished by powerful expiratory efforts, and, although one sort of lizard had been credited with this power of inflation, yet no animal in existence had proved to be capable of doing so. In his experiments with water he found that the fluid went freely through the tissue of the lung. He could not get either air or water to pass into the cellular tissues.—Dr. CHAMPNEYS, in reply, said that unquestionably the use of an anæsthetic would diminish the bearing down, but the accident occurs suddenly and unexpectedly. The termination of labour would be correct treatment if the emphysema threatened to be extensive. In his experiments he could not imitate bearing down efforts on the dead body, and failed to see how bearing down could be more closely simulated. The small amount of force that was necessary in his experiments was rather an advantage than otherwise. He considered that the intermittent blowing up of the lungs did serve as an illustration of what occurs during "bearing down." With regard to the compressibility of the mediastinum, he could not fully explain why it was the most compressible structure, but he thought that the fluids were driven out more easily than any other of the thoracic contents, and probably the mediastinal fat could be forced up into the lower depths of the neck. He did not say that rupture of the lung was favoured, but that the arrangement of the mediastinal structures favoured the escape of air in that direction when the lung had been ruptured. It must be remembered that some lungs ruptured very easily, whilst others were more difficult of laceration. The bubbles of air did not appear at the anterior edge of the lung, and they were found so often at the anterior surface of the root that he concluded this was the weakest spot. With regard to relative distensibility of the thorax and lung, what he meant was that the thorax allowed the lung to be ruptured inside it. He said that the anterior surface was not the only spot which gave way. The experiments were not claimed to be anything more than illustrative.

Dr. CAYLEY exhibited a specimen of Malignant Stricture of the Œsophagus associated with a Cavity in the Lung, which was treated by thoracentesis. The patient was a man aged thirty-five, who had suffered for five months from symptoms due to œsophageal stricture. After a time pleurisy set in and he expectorated fetid pus. The first time that exploratory puncture was practised with a fine trocar and cannula the cavity at the base of the left lung was not struck. On a second occasion the trocar reached the cavity. At the autopsy it was found that the fluids burrowed from the diseased stomach and œsophagus into the pulmonary cavity. The operation relieved the distress due to the fetid expectoration. The œsophagus exhibited a cancerous ulceration over the lowest three inches of the œsophagus, and involved the cardiac end of the stomach. A continuity of space existed through the spleen and diaphragm into the left base of the lung, where there was a gangrenous cavity.—The PRESIDENT remarked on the unusually long course of the cancerous tract.—Dr. DOUGLAS POWELL spoke of an interesting physical sign, which he had observed over the situation of the base of the left lung at one point. After the patient had swallowed a mouthful of water and given a slight cough there was to be heard a curious "rippling tinkle." He referred to the difficulty which surgeons had experienced in hitting off a cavity which physicians had diagnosed. In cases of hepatic abscess it was difficult to find the abscess by exploration with a trocar.—Mr. GODLEE also spoke of the difficulty which sometimes existed for the surgeon, both as regards pulmonary and hepatic abscesses.—Mr. PEARCE GOULD said that when he first saw the case he introduced a trocar and pierced the tissues in different directions at considerable depth without finding the cavity; yet the patient's suffering was not increased. He thought it was an encouraging case for those who were interested in the progress of pulmonary surgery.

MEDICAL SOCIETY OF LONDON.

Surgical Scarlet Fever.—Spontaneous Amputation.

AN ordinary meeting of this Society was held on Monday last, Mr. Arthur E. Durham, F.R.C.S., President, in the chair.

Dr. DE HAVILLAND HALL read a paper on a case of Surgical Scarlet Fever. The patient was a girl, aged six, admitted into Westminster Hospital for caries of the lower end of the tibia, an operation for which was followed the day after by high fever, the temperature reaching 104·8°, and a bright scarlet rash was seen nearly all over the surface of the body. The tongue showed enlarged red papillæ; the rash lasted four or five days; the temperature was nearly normal on the second day after the appearance of the rash; cold sponging had been used, and desquamation followed, and was marked twenty-six days after the rash had first been seen. The course of the wound was unaffected by the complications. Dr. Hall adopted the view that the poison had been imbibed before the operation, but would not have manifested its effects so soon, if at all, unless the patient's health had been disturbed, as Sir James Paget holds. The rapid fall of temperature was considered to be due to the cold sponging. The difficulty of diagnosis, and the influence of the scarlet fever, on the progress of the wound were discussed. The condition of the tongue was said to give the most trustworthy information in arriving at a diagnosis.—Mr. FRANCIS MASON was not clear that the rash was due to scarlet fever; he thought that some rashes were brought out by an anæsthetic. Other instances were mentioned in which the rash and other symptoms served

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to indicate an "explosion," as when after a fracture a man gets for the first time an attack of gout.—Mr. BOWREMAN JESSETT thought that Dr. Hall had not proved his point, even supposing that the fever was scarlet fever, might it not be a question of coincidence?—Dr. BRAXTON HICKS said the real question was whether there was such a thing as a rash occurring after an operation, or after parturition resembling scarlet fever and yet not identical. He mentioned the occurrence of scarlatiniform rash in connexion with abscesses in various situations.—Sir JOSEPH FAYRER said he did not know whether an operation could develop such a specific disease as scarlet fever; he preferred to regard the case as one of scarlet fever occurring in a surgical patient.—Mr. R. W. PARKER was of opinion that the case was one of ordinary scarlet fever. At a children's hospital the occurrence was by no means rare in surgical cases which had recent wounds. His experience showed that the scarlet fever might be very virulent, and that the wound might take on fresh action.—Dr. C. THEODORE WILLIAMS asked whether Dr. Hall had ever come across cases which had not been in possible contact with cases of scarlet fever.—Mr. H. CARTWRIGHT spoke of the importance of the nervous system in the production of rashes after operations. He related a case of recurrent erythema, each attack of which appeared to be due to a dental operation.—Dr. W. DUNCAN thought there were two kinds of rashes which occurred in the course of lying-in; one due to true scarlet fever, others merely erythemata.—Dr. BRAXTON HICKS, in reply to a question, said that rashes had the greatest variability in puerperal women.—Mr. BRUNTON had met with at least four cases of genuine scarlet fever which arose spontaneously a few days after parturition.—Mr. DUBHAM had seen cases of surgical scarlet fever, which, in his opinion, were really of the nature of scarlet fever.—Dr. DE HAVILLAND HALL, in reply, said the general opinion was that the course of the wound was unaffected by the occurrence of the scarlet fever. He did not mean to imply that operations could give rise to such a specific disease as scarlet fever. He thought it was important that students should know that patients with wounds were more susceptible to scarlet fever than other individuals. Under the antiseptic system of treatment the cases of surgical scarlet fever were as frequent as under the old system of treating wounds. He considered that desquamation was an evidence of scarlet fever.

Mr. ROGERS HARRISON read a paper on a Peculiar Case of Spontaneous Amputation. The patient was a gentleman, aged seventy-eight, who suffered from extreme pain in the leg, which came on suddenly. When seen by Mr. Harrison the limb was cold, tense, and painful with blackness of the end of the big toe; the signs were probably due to embolism of the femoral artery. Six months after the beginning of the disease the mummified sequestrum, consisting of foot and leg, broke off of its own accord. The stump was trimmed and the gentleman made a good recovery. Sir Joseph Fayrer had told him that the disease was common in India.—Dr. THOROWGOOD asked whether there was any disease of the valves of the heart.—Dr. HARE testified to the fact that there was no suspicion of heart disease, though there was an intermittent pulse.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

AT the meeting held on November 7th, Dr. Bell, the President, in the chair,

Mr. MAYO ROBSON showed a case of Ununited Fracture of the Femur which, twelve months after the original accident, he had wired together and he refreshed the ends of the bones by silver wire suture, with an excellent result, the man being able to walk several miles less than six months after the operation without pain or discomfort. The operation, which was a somewhat difficult one, was performed strictly antiseptically, and the wire was removed by a second incision three months afterwards, the bone then being firmly united.

Professor T. R. JESSOP exhibited a boy, aged eleven, on whose, in May last, he performed a plastic operation for the closure of an unhealed burn. After an injury received four years and a half ago the skin on the posterior and lateral aspects of the joint refused to heal, over an area measuring 6½ in. by 4½ in. The elbow was ankylosed at a rather acute angle, but the hand and forearm were sound and useful. A flap 6 in. by 4 in. of skin and subcutaneous fat was dissected up from the front of the abdomen in such a manner that its attached base corresponded with a line drawn from the ribs to the crest of the ilium. This was loosely secured by sutures to the granulating wound, the limb being firmly fixed to the trunk in a convenient position. Union took place immediately, and the base of the flap was severed from the abdomen forty-two days after the operation. The result showed the elbow covered with a thick flap of sound skin surrounded by an almost completely healed scar. Mr. Jessop recommended that the wound to be covered should not be refreshed, as in previous cases he had found such treatment followed by delay in union.

Mr. HARTLEY gave a practical demonstration on the use of a 2 per cent. solution of Hydrochlorate of Cocaine on the Eyeball. In a few minutes after a drop had been placed in the conjunctival sac the eyelids could be separated by a speculum and the eyeball manipulated with complete absence of pain on the part of the patient. Mr. Hartley had used the cocaine in many instances for minor eye operations with great advantage, but found its effect did not extend to the deeper structures.—Dr. LITTLE, Prof. EDDISON, and Mr. WARD took part in the discussion.—Dr. CLIFFORD ALLBUTT mentioned that he had used it advantageously for laryngoscopic work.

Dr. BARRS showed a girl, aged twenty, suffering from Addison's Keloid or Morphœa affecting the right hand, the left shoulder and arm, the abdomen, and the left foot. The affection had existed since the second year after birth.—Dr. GRIFFITH thought the diseased patches followed the course of certain cutaneous nerves derived from the posterior cord of the brachial plexus.

Mr. M'GILL showed a patient on whom he had performed Cholecystotomy, removing about five ounces of bile and a stone the size of a pigeon's egg, firmly impacted in the bile-duct. The fistula healed in twenty days, and the patient was completely cured. The operation was done antiseptically and the temperature never rose above 100° F.

Mr. ATKINSON showed a case of Dislocation of the Astragalus Backwards and Inwards. The patient, a man of twenty-nine, had fallen two yards on to his feet three weeks ago. The astragalus is now felt filling up the hollow beneath the tendo Achillis and obliterating the prominence of the heel. The posterior surface of the bone projects backwards and inwards. Behind the scaphoid a pit is felt where the head of the astragalus should be. He can now walk fairly well, but there was much pain and swelling at the time. This form of dislocation is rare, only seven recorded cases being mentioned by Erichsen; it is probably always the result of a fall, combined with a twist of the foot inwards, which forces the head of the astragalus outwards. The case was seen too late to render any attempt at reduction successful.

Mr. J. A. ERSKINE STUART described a case of Neuroma complicating Acute Rheumatism. The tumour, which had existed for twenty-nine years, was situated on a small cutaneous nerve on the back of the forearm. In an attack of acute rheumatism, besides affecting the joints, the pain centred in the nerve and radiated from it. The usual plan of treatment was adopted without relief, but on excising the tumour the local and constitutional symptoms completely subsided. The growth was of a fibro-cartilaginous character.

Dr. HUDSON described a method of treating Gleet by means of Metal Bougies anointed with carbolic oil, iodoform and resin ointment, or iodide of sulphur ointment. The bougie was retained *in situ* for from twenty minutes to four hours, and passed at first every four days and afterwards weekly till a cure was effected. He had used the method in eighty-eight cases and more than fifty had been cured. He attributed the success to the long-continued application of the drug and the paralysing influence of the bougie on the urethral muscle.

Dr. ALLAN brought forward cases illustrative of the good effect of Ergot in allaying Cough. He had used it in fifty cases of various kinds, both by subcutaneous injection (Bonjean's system) and by the mouth. In a large proportion of cases the relief was very remarkable.

Dr. JACOB showed Microscopic Sections of Actinomyces or the "ray fungus" from the tongue of a cow. Also specimens of the Micrococcus Pneumoniæ, asserted by Friedländer and others to be the active agent in the production of acute pneumonia.

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Reviews and Notices of Books.

Lectures delivered at the Royal College of Surgeons of England on some important points connected with the Surgery of the Urinary Organs. By Sir H. THOMPSON, F.R.C.S., M.B. Lond., Surgeon Extraordinary to H.M. the King of the Belgians, Professor of Surgery and Pathology to the Royal College of Surgeons, Consulting Surgeon to University College Hospital, &c. Students' Edition. London: J. and A. Churchill. 1884.

On Tumours of the Bladder; their Nature, Symptoms, and Surgical Treatment. Preceded by a consideration of the best Methods of Diagnosing all Forms of Vesical Disease, including Digital Exploration and its Results. By the same Author. With numerous Illustrations. London: J. and A. Churchill. 1884.

OUR readers have already been put in possession of tolerably full abstracts of Sir Henry Thompson's Lectures at the College of Surgeons, but the former of the two volumes whose titles head this notice contains them in full, and it is very valuable to all surgeons and practitioners, containing as it does the result of the author's large and in some instances unrivalled experience. The first lecture is an able defence of the operation of internal urethrotomy for all strictures of the urethra which do not respond to the simpler treatment of dilatation by bougies. Sir H. Thompson is a staunch advocate for using a urethrotome which cuts from behind forwards; and although many able and very experienced surgeons with strong reason advocate the alternative method, the opinion he gives from a very large experience is well worthy of the careful attention of all who would practise this operation. But the chief interest in the lectures undoubtedly centres in the discussion of the nature, diagnosis, and treatment of vesical tumours, and in the results of Sir Henry Thompson's "more than 800 cases" of stone in the bladder.

The Lectures on Vesical Tumours, together with one on the Diagnosis of Urinary Disease, have been published separately in the latter of the two books before us. This makes a useful volume, in which the reader will find the present state of our knowledge of this question, to which Sir Henry Thompson has contributed so largely, fully given. Beautiful coloured plates of the microscopical appearances of the different groups into which the tumours are separated, as shown by specimens prepared by Dr. Heneage Gibbes, are added in this separate edition of these lectures, and they greatly add to the value of the volume. Two facts stand out pre-eminently as results of the author's great experience in vesical calculus. One is the enormous advantage which has accrued from the general adoption of the "one-sitting" operation of lithotrity with which Professor Bigelow's name must ever be associated; and the other is the demonstration of the greater frequency of stone in the bladder in the latter third of life than at any earlier period. The value of the eight hundred calculi, with accurate notes of each case appended, which Sir Henry Thompson presented to the College of Surgeons, is difficult to estimate, and it will stand as an evidence not only of the experience and skill of this distinguished surgeon, but also of his patience and care. We are very glad that these lectures are published in a cheap form which puts them within the reach of everyone interested in the subjects discussed in them.

A Handbook of Ophthalmic Science and Practice. By HENRY E. JULER, F.R.C.S. London: Smith, Elder, and Co. 1884.

THE author of this work has presented his readers with a very complete and systematic treatise on diseases of the eye. Having regard to the light which the ophthalmoscope has thrown on some of the most important diseases of the eye, and that by its use the eye has been connected in clinical practice with the cerebro-spinal system of which it is itself a part, Mr. Juler has rightly devoted a not inconsiderable section to diseases of the fundus. And in this part, as indeed throughout the work, the value is much enhanced by excellent coloured illustrations of healthy and of pathological microscopical appearances. Under the head of "optic neuritis" a clear and succinct account is given of the various theories which have been advanced to explain its production. The author avows himself a supporter of what may be called the continuity of tissue theory. Much as can be adduced in favour of this view, it does not explain the occurrence of optic neuritis in connexion with intra-cerebral growths—growths often small and far distant from the eyeball, and in some cases situate on the same side of the brain as the optic neuritis,—nor does it account for its presence in such diseases as spinal myelitis and spinal caries, cases of which are recorded by Allbutt, Séguin, Dreschfeld, and others. Of late years much has been learnt by which errors of refraction can be ascertained and corrected, and Mr. Juler gives ample attention to this part of the subject; the "shadow test" is also explained, and is illustrated by woodcuts. The visual field and the use of the perimeter are treated of, and typical coloured charts are given showing the utility of the instrument in detecting various affections, such as glaucoma, pigmentary retinitis, hemiopia, &c. The significance of defective colour-vision in relation to cerebral and spinal affections is also considered, and Mr. W. Adams Frost contributes an excellent article on colour-vision and its defects. The anatomical changes in glaucoma are well explained in the text and by means of coloured plates, and the various views as to its method of causation discussed. Mr. Juler rightly insists on the necessity of early operation in acute glaucoma, but does not allude to those cases sometimes met with in young women, where acute glaucoma, with marked high tension and loss of vision, have yielded and perfectly recovered under medical treatment. Such cases were recorded at a recent meeting of the British Medical Association, and are even said to yield very bad results if submitted to iridectomy. In another chapter the action of the various muscles of the eyeball is entered into, and their affections, paralytic and spasmodic, are dealt with. The causes of paralysis are discussed at some length, but no allusion is made to diphtheria until some pages further on, where it is casually mentioned under the head of "treatment." The subject of alterations in the size of the pupil is too briefly dealt with; myosis is dismissed in a few words, and no mention made of its occurrence in corneal and such affections; the subject of mydriasis is conspicuous by its absence. Throughout the work the latest and most approved methods of operation are pointed out, and rendered clear by means of woodcuts. A departure is made from the ordinary text-book by the introduction of coloured plates of certain affections of the anterior visible portion of the eye, such as pannus, pterygium, iritis, &c., and these will be of much service to the student. But to the text of this part of the work scarcely sufficient care has been given; in the symptomatology of iritis there is no allusion to the altered shape of the pupil; phlyctenular keratitis is dismissed with a brevity which the troublesome nature of the disease scarcely warrants, and its tendency to produce erosions of the cornea and permanent scars is not alluded to; gonorrhœal ophthalmia Mr. Juler attributes to "the introduction of the urethral discharge into the conjunctival sac," but the views of others, that it is in some cases of constitutional origin, have grounds of support sufficient to entitle them to notice. Molluscum contagiosum is more than mere "hypertrophy of a sebaceous follicle," having been shown to consist in actual proliferation and growth of the cells of the Malpighian layer of the skin. Pterygium, Mr. Juler writes, is "thought to be caused" by mechanical irritation,

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but there is good evidence that it is frequently so produced; the author does not allude to its tendency to recur after removal. Lastly, "perivascularitis" is not a word which we wish to see in general use. But these blemishes are easily remediable in future editions, which the merits of the work will undoubtedly secure. The work is of larger size than most of the recent manuals on eye diseases, but many of these suffer from their condensation; and we can confidently recommend Mr. Juler's treatise to all who wish to acquire a sound knowledge of ophthalmic practice.

Dental Medicine: a Manual of Dental Materia Medica and Therapeutics for Practitioners and Students. By FERDINAND J. S. GORGAS, A.M., M.D., D.D.S. London: J. & A. Churchill.

ON opening this book haphazard, the first thing to strike the eye happened to be the somewhat dangerous advice for the treatment of alarming symptoms during anæsthesia of administering an inhalation of three to five drops of nitrite of amyl. This is scarcely a wise dose; for from one to three drops will very quickly produce most marked symptoms, and a dose of five drops inhaled would be attended with very great risk; indeed the author himself, a few pages further on, says very wisely that not more than three drops should ever be given to a patient unaccustomed to its use! For the rest of the book it may be said that it is a careful compilation of the various remedies employed topically in dental surgery, besides many which are recommended for internal use. It is satisfactory to find, however, that the medical uses are kept distinct from the dental uses of the various drugs; and in the latter those which are employed purely locally have the most stress laid upon them; though it would appear that dental surgeons are encouraged to prescribe for their patients in America to a greater extent than is common in this country. A very curious fact, which may also be looked upon as Transatlantic, is the entire omission of any mention of a very similar work by Mr. Stocken, the third edition of which was published in England in 1882, nearly two years before this appears! The dental student and practitioner will find either of these works serviceable as a text-book or for reference.

Brain: a Journal of Neurology. Part XXVII. October, 1884. London: Macmillan and Co.

THIS is a most interesting and readable number of a valuable periodical. Its cosmopolitan character is evidenced by the fact that the first two articles are contributed by Prof. Obersteiner of Vienna and Prof. Pitres of Bordeaux. The former writes upon the Cerebral Bloodvessels in Health and Disease, an important feature of which is the description of changes commonly recognised as morbid but met with under normal conditions. Dr. Pitres's article is on the Early Occurrence of Ankle Clonus in Hemiplegia, a symptom, he says, "of evil omen and an almost certain sign of an incurable paralysis." Dr. Bristowe contributes detailed accounts of cases of Tumour of the Corpus Callosum, and Ormerod on Muscular Atrophy after Measles in three members of a family. A tolerably extensive review of present knowledge upon Lesions of the Nervous System etiologically related to Cutaneous Disease is furnished by Dr. Radcliffe Crocker, and a theoretical discussion of the Nervous Discharge by Dr. C. Mercier. The number contains also Records of Clinical Cases by Drs. Handfield-Jones and Angel Money, and reviews and abstracts of recent literature.

QUARANTINE.—"The London Gazette" of Tuesday contains notifications that the Portuguese Government have reimposed five days' quarantine on arrivals from England, and that in consequence of the appearance of cholera in Paris quarantine measures by land and sea will be re-established in Spain in all their rigour.

New Inventions.

ST. DALMAS' "LEICESTER" SURGICAL DRESSINGS.

WE have had submitted to us samples of the St. Dalmas' "Leicester" Bandages, Adhesive Plaster, and Belladonna Swansdown. They are all very excellent. The bandage is woven with a soft selvedge on each side, is light, porous, elastic, and strong, and is greatly superior to calico. The adhesive plaster is spread on fine flesh-coloured cambric, is very flexible, thin, and readily adheres firmly but cleanly to the skin. The dressings are well worthy of trial.

SKIN GRAFTS FROM THE FROG.

To the Editor of THE LANCET.

SIR,—Finding that the treatment of granulating wounds by skin grafting is in country practice liable to fall into disuse through the unwillingness of patients to part with the little bit of skin necessary, I have lately been induced to try experiments with other substances as a substitute for human grafts. As the outcome of these experiments I find that bits of skin from a decapitated frog make grafts which admirably answer all purposes, forming a source of supply always at hand in the country, except during the winter months, being easily applied on account of their uniformity in thickness, and necessitating no pain to suffering humanity. The skin of a single frog yields grafts for an enormous extent of surface and preserves its vitality so long that, if the patient is at a distance, the portion of skin required can be carried by the surgeon in his pocket for an hour or more without injury provided it is wrapped up in gutta-percha, or other waterproof tissue, to prevent drying. As witnessed by me in three cases in which I employed this mode of treatment during the month of August, the frog grafts at first act as human grafts are known to do, but later on their behaviour is different. Thus, soon after being applied they disappear, but after a short time they appear again as a thin transparent film on the surface of the granulations, some of the films being raised in the centre and depressed at the edges, forming small conical elevations. At this period the skin at the edge of the wound takes on a very rapid growth, but, curiously enough, the grafts themselves grow but little, and some stop growing altogether, this being so different from what occurs in the case of human skin grafts. If the wound or ulcer is a large one, the rapidity of epidermal growth at the circumference also soon diminishes, unless stimulated afresh by a second application of grafts, so that often a series of settings of grafts is needed before the granulations are closed over with skin. Material for graft making, however, being so easily procurable, the large quantity of seedlings required offers no difficulty.

Apart from the surgical importance connected with the process, there is in it something of scientific interest as well. My friend and former teacher, Chief Professor Cleland of Glasgow, long ago suggested privately to me, and subsequently, I believe, in 1877 to his class, that in his opinion the process of healing by skin grafting forcibly demonstrated the correctness of Stricker's view of the existence of sexes in the tissues. The colonies of epithelial corpuscles at the edges of the ulcer remain quiescent through lack of one sexual element, which the grafts no sooner supply than reproduction rapidly sets in, fertilisation being probably brought about through the medium of the fluid which bathes the surface of the granulations. If the sexual theory accounts for the process, the skin that grows after the application of the frog grafts must be of the nature of a new breed, a cross between human and frog epidermal elements. The disproportionate growth between the frog grafts themselves and the circumferential epithelium in no way invalidates this supposition, seeing that a somewhat analogous condition exists amongst animals when families of the same species are crossed with one another, fertility being greatest on the side that tends to degeneration, and less on the side that aims at a higher development. I have not as yet studied the process histologically, but may be able to do so soon.

I am, Sir, yours truly,

WILLIAM ALLEN, M.D. M.Ch.

Leadgate, co. Durham, Oct. 1884

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 15, 1884.

WHEN the Royal Colleges of England lately presented their Conjoint Scheme for the approval of the Medical Council, and when that learned body so jauntily accorded its sanction to the scheme, probably neither the Colleges nor the Council had any conception of the surprise and dissatisfaction which the scheme would occasion. The scheme and its sanction by the Council are, indeed, a wonderful illustration of the fact that the great profession of medicine is little cared for and is hopelessly at the mercy of the medical corporations, who, by the legislation of 1858, were made masters of the situation, and who are likely to remain so, so long as Parliament continues to be incapable of doing the work of the nation. The English Colleges know best their own views and motives in the piece of trades unionism to which they have just committed themselves. But like other pieces of selfish and unwise trades unionism, it is likely to drive trade away and throw the business of educating and examining English students of medicine into the hands of the examining and teaching bodies of Scotland, or of the least of the medical corporations of England. This danger is now beginning to be perceived, and may, perhaps, be soon brought home to the respective Colleges which have so much to lose by wanton experiments. There is not much reliance to be placed on the Colleges. These two great bodies seem to be hopelessly led by some half dozen of their leading members, who seem to be unable to perceive the energy and the multiplication of rival bodies around them, but fancy that the institutions of Pall-mall and Lincoln's-inn have some inherent virtue which is to counterbalance all defects and faults. Take the College of Physicians, in which the Fellows have a considerable voice and responsibility. There is no proof that a dozen of the Fellows understood all the bearings and probable consequences of the Conjoint Scheme, and that in voting for it the majority of them were doing so independently and from conviction, and not from a blind kind of deference to the leaders of the College. At the beginning of the century the College of Physicians, in something like a spirit of contempt for general practitioners and their accomplishments, handed them over to the care of the Apothecaries' Society, or anybody else who chose to accept the duty of looking after them. It seems not impossible that the end of the century will witness the same [illegible] on the part of the College for the [illegible] of the general body of the profession and the same [illegible] between it and them. Of late years the College has been doing better. It had discovered that the licensing of general practitioners, in the full and complete sense, was one of its great and most honourable functions. It had been doing the work so well that increasing numbers sought its licence until the present year, when it is expected fully 200 entrants of the profession will take its double licence. Not only was the licence sought after, but the examination on which it was founded is spoken of with general respect; while the fees demanded are reasonable. In the midst of one-sided bodies granting *half* diplomas, here was one ancient body expressing in its diploma the *wholeness* of the Medical Act. Now all this is to be changed. The College is to enter into a contract with its sister College to refuse to grant its own licence and to discharge the functions assigned to it by charter. This sister College, now becoming, or about to become, wealthy beyond all expectations, might have been expected to take new and large views of its future relation to the profession. Instead of this, it has become a party to an extortionate, an imprudent, and probably an illegal conjoint scheme.

A correspondent last week, signing himself "A Scotch Graduate"—with perhaps a dash of pardonable national vanity—speaks of the disastrous effects of the competition of the Scotch Universities on London schools. We do not believe that the great schools of London are going to be eclipsed either by provincial schools, by the great school of Edinburgh, or by the other Scotch universities. The professors of these universities would be the first to recognise the enormous field for clinical research and study afforded by the hospitals of London, and not only afforded, but well used by the London teachers. At no previous time has the work of London physicians and surgeons and of London medical teachers stood higher in the estimation of Europe and America than it does to-day—for its thoroughness, its originality, its soundness, and its carefulness. Surely all this is not going to be lost to the cause of medical education in Great Britain. It only needs a better organisation of London schools, and the creation of a teaching university in London, to give to London advantages beyond all those cities which would presume to be her rivals. If metropolitan teachers would throw the same energy into the question that the Scotch Professors exhibit in fighting for their privileges, the cause would soon be won, and Parliament would be made to feel that the education of medical practitioners and the very progress of medicine itself were at stake. But if this energy is not soon forthcoming, it may be too late. Those responsible for medical education in London have hitherto given no hearty help to those who have been trying to procure medical legislation; they have acted as if the demand for legislation was work for agitators and not for them. They are beginning to open their eyes now, and to see how deep and grave is the need for some strong and independent authority to control the "battle of the shops." The absurd scheme to which the Colleges have committed themselves may do much to damage the London schools; and it cannot be too soon reconsidered by the Colleges and disowned by the teachers. We very much mistake if any folly on the part of the Royal Colleges will ever again drive men in great numbers to the Apothecaries' Society. That Society has had its day; and only by the grossest unwisdom on the part of the Royal Colleges could it have a new lease. The aspiration of men now is to be graduates in medicine, not apothecaries. It is an honorable ambition, and ought to be fairly within the reach of every good English student, as it is within that of every good Scotch student.

THE scheme for the reform of the Royal College of Surgeons of England, discussed and [illegible] general meeting of the Association of Fellows of the College

held on Saturday last, gives form and character to ideas and suggestions that have long filled many thoughtful minds, and embodies the principles for which this journal has contended for more than half a century. All that is now needed is an awakening of the whole of the Fellows and Members to the value of the recommendations proposed by the Association, and to the necessity of insisting on their speedy adoption. These are indispensable, not only in the political and academical interests of the Fellows and Members, but also in the best interests of the College itself. Though this necessity has been obvious to many persons within the Council of the College as well as without, no organisation has hitherto existed to give it a practical and workable shape. This organisation has at length arisen, and the effect of its operation may be seen in the report published in our columns on the 1st inst., and in the account of last Saturday's meeting which appears in our present issue. We have so often proposed recommendations identical with those contained in the scheme prepared by the Association of Fellows that further criticism or argument is unnecessary. It will be seen that the changes and alterations recommended to be incorporated in a new Charter embrace every department of the College and every phase of its action. The constitution of the Council, the mode of electing the President, the character of the Court and of the Board of Examiners, and the relations of Fellows and Members to the Council, are all fully considered, and definite proposals are submitted for their alteration and improvement. Suggestions are made by which the Fellows and Members may actively participate in the management of the College, and facilities are provided for affording them authoritative information of the transactions of the Council.

It is pleasing to note that, though the scheme has been prepared by the Association of Fellows, the Members are liberally provided for. We are, of course, aware that the Association of Members seems to think that the concessions made to Members might have been still greater. But this view cannot fairly be maintained. The Association of Fellows has recommended that Members shall be eligible to be members of the Board of Examiners in Anatomy and Physiology, and that they shall have a parity of voting power on all matters relating to the affairs and management of the College, which may be discussed at the annual general meeting. These provisions give to the Members a power and influence in the College to all intents and purposes commensurate with those enjoyed by the Fellows. Indeed, almost the only matter in which Members are not placed on a level of perfect equality with the Fellows is that of electing the Council and the President. In favour of the continuance of this disparity, at all events for the present, it may be urged that when the order of Fellows was instituted one of the alleged objects was to constitute a higher grade of Members who should enjoy electoral rights. Most of the existing Fellows have made great sacrifices and expended time and money to acquire these rights; and it should not be forgotten that it is open to any Member who wishes to participate in them to secure them by the same means. Every restriction and disability has been removed by which Members may have been prevented from becoming Fellows. All that now stands between a Member and the Fellowship is an examination which requires a sufficient knowledge of Anatomy and Surgery. It is surely no great hardship on the Members to demand from them those guarantees which most of the existing Fellows have had to furnish. To attempt to abolish them savours rather of Communism than of rational Republicanism. But even if it were allowed that no tenable argument can be advanced against the justice of the plea that Members should enjoy equal corporate rights with the Fellows, it is only reasonable to require that the Association of Members should show the practicability of conferring upon Members electoral rights. It will be soon enough to demand that these rights should be bestowed when the Association of Members has prepared a feasible plan of polling the votes of sixteen thousand persons. Meanwhile we would fain hope that the Association of Members will sink minor differences, and, keeping in the background all controversial and debatable matters, will lend all its force and influence to the Association of Fellows to secure those changes which are essential to the continued and permanent welfare of the College.

THE outbreak of cholera in Paris is a matter of European concern, and in this country especially the first feeling will be one of sympathy with our neighbours across the British Channel. The first deaths which were publicly recorded were three on November 3rd; during the next three days they varied between eight and ten; on the 8th there was a rapid increase to thirty-three, and since then a continuous rise has gone on, the mortality on the 10th instant having reached ninety-eight. No explanation is given as to the precise manner in which the disease commenced, but in view of the occasional recurrence of attacks in the south of France, and of the spread of the infection to Nantes and other places in the north, it is but too evident that the ordinary channels of communication have for a long time past amply sufficed to bring about a diffusion which, until a few days since, it was hoped had been averted. It is, indeed, stated that cholera has been in Paris ever since June, a statement which is probably founded on the occurrence of cases of the sporadic affection such as are met with in all large centres of population during the autumn months. Had the disease been genuine cholera it is difficult to understand why it made no material headway when so many circumstances, meteorological and other, were favourable to its spread. But, on the other hand, it is quite possible that scattered cases had occurred before the disease was officially recognised on November 3rd.

It is, however, the future that most concerns us at the present moment; and attention is largely centred on the circumstances which are in prospect both for Paris and for this country. As regards Paris, it is satisfactory to note that the later epidemics of cholera from which that city has suffered have shown a diminishing mortality. To compare only the last two outbreaks. During 1865 cholera broke out in June at Marseilles; thirty-six departments became infected. The disease reached Paris on September 18th, and by the end of the year it had caused 6441 deaths. The disease did not die out during the winter; indeed, according to the late Mr. NETTEN RADCLIFFE, eleven departments were newly attacked between November 3rd and December 26th; one, in which the first case occurred as late as December 13th, exhibiting a mortality of 132 before the expiration of

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the year. In Paris occasional cases recurred month by month until July, 1866, when the disease again became epidemic, and remained so for four months, after which it gradually died out. The next outbreak was in 1873, when the disease reached Paris on September 5th. On this occasion it continued till December, but it then became finally extinguished. It will thus be seen that whilst too much trust cannot be placed on the mere advent of cold weather to stay the progress of cholera in Paris, yet there are grounds for believing that such sanitary advances as were made between 1865 and 1873 held an important place in lessening the extent and duration of the latter epidemic.

As regards this country, we find ourselves for the first time during the epidemic of 1884 in direct and daily communication with an affected city, and in view of the extent of the passenger traffic between the French and our own capital, and of the rapidity with which the journey can now be made, it is evident that we are open to the importation of the disease to a degree which has hitherto not been possible. Any attempt at quarantine could serve no useful end, for even the *reductio ad absurdum* which the process would bring about within the first forty-eight hours is hardly needed for any educational purposes as regards our own countrymen; and even a rigid system of inspection at such ports as Dover and Folkestone would almost certainly fail in detecting incipient attacks and patients passing through the period of incubation. Every sanitary district in England must, therefore, trust to its own resources; and we believe it is mainly, in so far as the authorities have come to see that under the circumstances of this country the Government cannot afford any useful protection by quarantine measures, that their respective districts will be found to have been prepared against invasion by cholera. It is essentially a local, and not an imperial, effort that is needed under existing circumstances; and, above all things, it behoves authorities to be prepared in advance with means for the immediate isolation of any imported cases, and to proceed with the utmost haste in removing from amongst the inhabitants of their districts all conditions favourable to the contamination of water and air. The need for isolation in hospital is the greater because treatment at home tends to the discharge of infected evacuations into sewers, cesspools, and privy pits, and to the diffusion of the poison by means of drain air and polluted wells; and as regards conditions leading to nuisance, whether by reason of faulty drains or accumulations of refuse, it should be a rule to regard filth in any form as affording the most favourable nidus for the development and diffusion of the cholera contagium. The infection may not reach us this year, but any expenses incurred in order to ward it off will, as pointed out by Dr. BUCHANAN in his official Memorandum on Cholera, not be thrown away; on the contrary, it will be an expenditure tending to the removal of the costly burden which infectious disease so often imposes on authorities who have disregarded the advice to keep their districts in a wholesome and cleanly state.

THE outbreak of cholera in Paris can only surprise those who are unacquainted with the sanitary condition of that city. There has been no lack of talk concerning sanitary measures, but no important improvement has been the result. The worst quarters of Paris remain much in the same condition as in 1882, when typhoid fever, always endemic, assumed the proportions of a formidable epidemic. In vain have Dr. DUMESNIL and the other members of the Commission on Unwholesome Dwellings protested against the insanitary character of the lodgings crowded by the poorer sections of the community. Nothing has been done. Closets remain not merely untrapped—there are hardly any closets in Paris, either in the wealthy or the poor quarters, that possess traps,—but they have no valves provided. The closet in many dwellings is merely a round hole in the floor, communicating with a huge ten- or twelve-inch iron pipe, that goes right down into the cesspool. The cesspools, of which there are 80,000 in Paris, are, it is true, ventilated by a pipe taken up to the roof of the houses. But there is no inlet ventilation provided; and consequently, as the soil pipe is warmer, it follows that the air must frequently, if not generally, descend the ventilating pipe, pass through the cesspool, to travel up the soil pipes into the houses. In a large number of houses the cesspool has been replaced by a metallic tub, which, while it retains the solids, allows the liquids to escape into the sewers. Thus the sewers are contaminated, though, according to the French theory, they should not receive anything worse than rain water and kitchen water. As a matter of fact, the water they contain is so foul that it frequently kills the fish in the Seine. Paris therefore, in spite of its cesspools, is exposed to all the dangers that arise from sewers. Nor is this all. As the sewers were not built for the purpose of carrying away the entire drainage of the houses, but were supposed to receive only comparatively clean water, they were not ventilated or constructed with the same care as would otherwise have been displayed. The fall is often insufficient, no proper means of flushing are provided, and the deposits formed are so considerable that an army of 800 men are at work, cleaning and scraping and pushing the heavy material along. Dr. BROUARDEL has calculated that in some parts of Paris any heavy substances thrown into the sewers would take no less than six weeks to reach the outfall. In Paris, we believe, forty is the average number of inhabitants to each house; while in London the number does not amount to eight per house. In the poorer quarters of Paris there are houses containing no less than 200 inhabitants; and, though such houses generally possess two, if not three, cesspools, an epidemic quickly spreads from one tenement to the other. Even if these dwellings are in a street of reasonable width, the back of the houses are too often devoid of light and air. The space restricted by the encircling fortifications and the dearness of land probably account for these grave defects. Topographically, Paris lies as if in a basin surrounded by hills, and the circulation of air is perhaps not as constant or as thorough as might be desired in times of epidemic; while above the gay city remains, suspended like a pall, a cloud of foul emanations from the 80,000 cesspools that vomit their gases over the roofs of the houses. As not more than 70,000 cesspools are cleared in the course of a year, it follows that these receptacles are only cleansed at very long intervals, and are therefore a constant source of danger to the population. Nor are the environs of Paris free from grave sanitary defects, for here are situated innumerable unwholesome industries, and notably the tanks of Bondy, where the

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contents of the Paris cesspools are emptied in the open air. The nuisance that this occasions has been felt throughout the neighbourhood, and has led to many energetic but as yet vain protestations.

Greater, however, than all these defects is the uncertain character of the Paris water-supply. There are two exceptionally pure sources. The little river Vanne in the department of the Yonne has been brought to Paris by an aqueduct a hundred and five miles long, and is supposed to supply 110,000 cubic metres of water per day, while the Dhuis, a similar stream brought from a distance of seventy-four miles, yields about 20,000 metres per day. So long as these waters are drunk it would be difficult to find any cause of complaint. Unfortunately this provision occasionally runs short; then the authorities, without issuing any sort of warning, supply through the same pipes the dilute sewage water of the Seine or the Ourcq canal. Thus, though as a rule Parisians drink exceptionally good water, they at times unconsciously imbibe water which all authorities agree in condemning as foul and that is generally only used for washing the streets and flushing the sewers. The amount of pure water arriving daily in Paris is sufficient for drinking purposes if care were taken that it should not be used in other ways. On the other hand, the supply from the Seine of water for flushing drains and washing streets is practically unlimited, and new pumps for this purpose have been recently set up at Ivry, which can add 85,000 cubic metres to the former supply. If this dual supply were carried into the houses as well as into the streets, there would be an abundance for drinking purposes, and for the flushing, where practicable, of house drains. At present it only exists in the street; and, in the one pipe supplying the house, the pure water and the foul water are alternately turned on. Outbreaks of typhoid fever in certain streets have been traced to this cause, the dates of the cases corresponding with the time when the water was altered. A town suffering from all these disadvantages cannot be otherwise than accessible to the importation of epidemic diseases. This is not merely a question of cholera. The zymotic death-rate, especially with respect to typhoid fever and diphtheria, has been steadily increasing of late years. Surely measures can be taken at once to prevent the recurrence of such lamentable consequences. The water-supply of Paris cannot be increased in time to mitigate the present outbreak, but it can be better distributed. Nor can the sewers of Paris be rebuilt, the cesspools abolished, and a new system of drainage instituted, at a moment's notice; but a great deal can be done within the houses, to disinfect the soil pipes, ventilate the closets, and so close the various apertures as to prevent the filtration of foul gases through the dwelling rooms. We are glad to note that the Municipal Council has voted funds for such purposes, and trust that prompt and vigorous measures will at once be taken.

WE had hoped that long before this the personal bickering caused by the Report of Dr. CRICHTON BROWNE and the commentary thereupon by Mr. FITCH would have subsided, but the hope has not been realised. There is still manifest a strong desire to oppose the reforms suggested by Dr. CRICHTON BROWNE, and we regret to find at least one member of our profession, with purely negative opinions, throwing the weight of his influence on the other side. Members of the medical profession who support Dr. CRICHTON BROWNE'S allegation of over-pressure have not been so successful as Mr. CHARLES ROBERTS, F.R.C.S., in obtaining an extended publicity for their protests, and therefore so far as *the* lay journal is concerned, the evidence is one-sided and the case less strong than it might be in favour of reform. Mr. MUNDELLA'S play with the question would be amusing if it were less mischievous. When the Vice-President of the Council suggests as a consolation to those who complain of the injury wrought by brain-worrying and forcing that "there is a general sense of responsibility on the part of school-boards, school managers, and Her Majesty's inspectors as to the discharge of their duties in this respect," the position is absolutely grotesque. Imagine for one moment the probable effect of "a sense of responsibility" on the mind of an official person like Mr. FITCH! Surely Mr. MUNDELLA has of late lost his hold on common sense. He is disappointing his friends and losing confidence on all sides, and particularly in this matter of over-pressure has he struck a great blow at the confidence our profession has desired and honestly endeavoured to repose in him.

Again we protest — and with some means of judging, it will be admitted — that the voice of the profession is almost unanimous in acclaiming the justice and wisdom of Dr. CRICHTON BROWNE'S inquiry and report. The opposition—in so far as there can be said to be any—is the outcome of jealousy or inattention to the facts. If those members of our body who possess any special acquaintance with the subject of brain-training and development were interrogated individually they would, we are assured, be found in accord on the main facts. There *is* over-pressure, and its effects are already becoming evident in the prevalence of "nervousness" and nerve-troubles among children of an age and of a class which have not hitherto been notably affected with these ills. There will be worse consequences to deplore in the next generation than in this if the brains of growing, underfed, and worried children are to be forced at the caprice of *doctrinaire* educators, who know little of the children of the poor, and nothing—effective at least—about the physiology of the organ they are trying to cultivate. We do not for an instant doubt that it would be quite possible for the Education Department to accumulate opinions directly contradictory to that which we have expressed, and which we unhesitatingly affirm to be the opinion of the profession. It is always easy—too easy a great deal—to secure medical evidence on either side of a "case." Nevertheless, without quoting the old adage which insists on the greatness of truth and its final triumph, we are firmly persuaded that the upshot of all this controversy must, sooner or later, be a reconstruction of the educational system evolved by library philosophers, and unfortunately too recklessly applied and ruthlessly enforced by optimist administrators.

Brain-pressure without brain-feeding is a perfectly infatuated policy. The cerebral organism may not in all, but must in many, instances be permanently injured, because exhausted at the precise moment when healthy nutrition—that is, nutrition naturally promoted by, and proportioned to, healthy exercise—is essential to the integrity of the growing brain. Just as the muscular system of a two-year

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old colt is ruined for life if its strength be too severely taxed, so the brain of a growing child will be irreparably injured if it be overworked, particularly when it is underfed. We are, in truth, much less concerned with the small increase of mortality which has occurred as a result of over-pressure than with the mind-weakening which is becoming evident among young children and the prevalence of "nervous" cases in a class of the population which has heretofore been especially free from this affection. Nor is this all. Nothing is more painfully apparent to the student of sociology than that this excessive or ill-timed education of the masses is already showing a tendency to deprave the moral character in a direction which it is most important in the interests of the race to protect. We cannot speak too plainly on this subject in the interests of public morality. We have grounds for believing that certain well-known depravities which progress *pari passu* with cerebral exhaustion are on the increase among those overworked children. Physiologists do not need to have this connexion of cause and effect expounded to them. The *fact*—for such it unhappily is—may be accepted, and it should have at least as much weight in this controversy as will suffice to enforce the need of looking below the surface, and pushing the inquiry much further than it has yet been carried. Dr. CRICHTON BROWNE has gone far, but others have gone still farther, and instead of being hoodwinked by the well-meaning but officially blinded executive of his department, the Vice-President would do wisely to institute a searching scrutiny before it is too late. We repeat, Dr. CRICHTON BROWNE'S protest has the support of the medical profession, and, as a body, we distinctly endorse what he has said.

DR. KOCH has broken the silence which he had maintained during the promulgation of various statements as to the comma bacillus and its etiological relationship to cholera, and in the last issue of the *Deutsche Medicinische Wochenschrift* he writes explicitly upon these subjects, adhering as strenuously as ever to his original belief in the specific character of this bacillus. Referring our readers to the article itself for the full argument, we may here present its salient points. In the first place, he points out that morphological similarity is not the same thing as actual identity, when dealing with bacterial organisms. Some, such as the spirochæte of relapsing fever, do possess unmistakable and peculiar morphological characters, but in the case of a large number the possession of other properties is needed to make a distinction. Thus the tubercle bacillus is recognised largely by its special staining reactions. But the best method of differentiation is that which is based upon the behaviour of the bacteria in cultures, under varying conditions of media and temperature, their power of spore production and their pathogenic qualities. It is becoming more necessary to study these organisms in all these respects before concluding as to identity or difference. The cholera bacilli have many points in common with other micro-organisms, resembling in their potato cultures the bacilli of glanders, and, in the slowness with which their growth causes liquefaction of gelatine, many other bacilli; and morphologically there are similar forms. But when all their properties are taken into account, the bacilli of cholera remain distinct from all others. Dr. KOCH complains of being misunderstood by many in his contention for the specificity of the comma bacillus, which if disproved would of course render it impossible to utilise its detection as a means of diagnosis in a doubtful case, and set at naught the indication thereby derived for the adoption of prophylactic measures. He maintains that many of those who have disputed the alleged specificity have done so from incomplete observation, not sufficiently appreciating all the methods employed, or being imperfectly versed in these methods. Since the Conference in July, when he described in detail the characters of these bacilli, he has received specimens from many quarters purporting to contain these organisms; but in not a single instance was he able to verify the fact. As an instance, he mentions specimens of curved bacilli and spirilla from cholera nostras, sent by Dr. KLAMANN of Luckenwalde; but neither Dr. KOCH nor his colleagues could detect any resemblance between them and the comma bacillus. He then proceeds to confute the statements made by LEWIS in THE LANCET of September 20th to the effect that curved bacilli closely resembling the bacillus of cholera occur in the buccal secretions. This, Dr. KOCH says, is no new observation; it has been known for years, but these buccal bacilli in gelatine cultures behave quite differently from the cholera bacillus; they are moreover larger, more slender, and less blunted at their extremities. If Dr. LEWIS had only taken pains to cultivate them in gelatine, he would have found that, unlike the cholera bacillus, they do not grow in a feebly alkaline peptone gelatine. Passing to the alleged discovery of the comma bacillus in cholera nostras by FINKLER and PRIOR, he alleges that these observers did not pursue the well-established principle of isolating the bacterial forms in their cultivation experiments, and consequently in their specimens many different kinds of bacteria can be detected. Four of these varieties were differentiated by KOCH—one not liquefying gelatine, and producing a green colour on cultivation; another, a short bacillus, not liquefying gelatine; a third form, which did liquefy the medium; and a fourth, slightly curved in shape, and also having this last-mentioned property. This last-named form alone bears any resemblance to the comma bacillus, and that only in the dried and stained specimens. As to its reactions, it grows more rapidly in gelatine and on potato than does the cholera bacillus; the colonies it forms in gelatine are rounded and finely granular, and it speedily causes the liquefaction of all the gelatine; in all of which respects, as well as in the effect on its growth of temperature, it differs notably from the comma bacillus. Dr. KOCH has lately had opportunities of examining the dejecta and intestinal contents in three cases of cholera nostras, two of which were fatal, but no comma bacilli were present. He also examined with a like result a case of arsenical poisoning, fatal in ten hours with vomiting, purging, and collapse, just as in a case of cholera; numerous bacteria were found in the watery stools, but not a single comma bacillus. And although at the Institute there have lately been made hundreds of examinations of normal and morbid stools, the latter from all classes of diarrhœal disorder, micro-organisms resembling the cholera bacilli have never been found. He has not therefore met with any evidence to disprove his contention that the comma bacillus is specific, belonging exclusively to Asiatic cholera;

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and until the arguments he has adduced can be upset, the diagnostic value of the bacillus must, he thinks, be recognised. There is also hope that the obstacle in the way of accepting this doctrine, arising from the failure to transmit the disease to animals, may be overcome. For RIETSCH and NICATI at Marseilles succeeded in producing cholera in dogs and guinea-pigs by injecting pure cultures of the bacilli into the duodenum. In their first experiments they performed a preliminary ligature of the common bile-duct, but this was found later to be unnecessary. KOCH has repeated this experiment, employing for the purpose a highly attenuated culture of the bacillus, and not tying the bile-duct. With few exceptions the animals died in from twelve hours to three days with choleraic symptoms, and the duodenum presented reddening of the mucous membrane, and contained watery contents, colourless, reddish, or flaky, and in them were found large numbers of the bacilli in a "pure culture." The minute quantity of material used in the experiment precludes the idea that the effects were due to the simultaneous introduction of a chemical virus; and he concludes by believing that a further prosecution of this line of research will establish the truth of the doctrine he enunciates.

DR. DE HAVILLAND HALL has done good service by calling the attention of the Medical Society of London to the subject of surgical scarlet fever. His paper was a careful account of a typical case observed by himself in a patient recently submitted to operation in the Westminster Hospital, and an able review of the literature of the question. There are many points of great interest connected with this malady. The first and most important is as to the nature of the affection, whether it is scarlatina or some disease allied to it but separate from it and owning a distinct cause. On this point there seems to be now no room for doubt. The affection is veritable scarlatina which runs the ordinary course of that malady, or rather may run any of the varied courses the many forms of that exanthem present, and, what is most important, it has all the infectiveness of the ordinary disease, and may convey it to unprotected persons who are not the subjects of wounds or surgical diseases. This being so, the question arises, What connexion has the disease with operation wounds? It cannot for a moment be held that a wound is the efficient cause or generator of the scarlet fever poison, but it is quite in harmony with our knowledge of this disease to believe that the existence of a wound may so act upon a person's system as to make it a fit nidus for the development of the "germs" of that disease acquired from some other source. It is a very common observation that of several individuals equally exposed to the scarlatina poison only some will suffer from the disease. Again, a person may be exposed to the scarlet fever infection many times with impunity and yet eventually be attacked. The most striking instance of all is that of the pregnant woman, who passes scathless through infection during the period of gestation but at once falls a victim to it after confinement. It is, then, a familiar fact that all persons, and the same persons at all times, are not alike prone to suffer when exposed to the infection of scarlet fever, and it is therefore fully in harmony with this view to hold that a wound may predispose to the development of scarlatina, or may remove the protection against the disease which the individual previously possessed. The fact that the other exanthemata are not thus associated with wounds by no means invalidates this argument. We do not yet know what the particular state of the system is which renders it a suitable soil for the development of these specific poisons, and there is no evidence to show that it is the same for all. Indeed, cases are not unfrequently met with of individuals or families who suffer with particular readiness and severity from some one or other of the acute specific diseases, and show no similar special proclivity to suffer from any of the others; or, indeed, they may seem to be specially protected from some one or other of them. The discussion that followed upon Dr. HALL'S paper brought out the fact that other erythematous rashes besides that of scarlet fever may follow upon a wound. This is a very important field for diagnosis, which demands the utmost care, for the distinctions between simple erythema, slight superficial erysipelas, and scarlet fever are not to be easily drawn, and it may be that there are other eruptions, more or less specific in nature, which may follow recent wounds, and which have not yet been classified, or even recognised. However this may be, it seems clear that surgeons should be on the look out to recognise scarlet fever in connexion with surgical operations and affections, and that they should at once take all the known precautions to prevent infection which are adopted in the more usual epidemic forms of the disease.

Annotations.

"Ne quid nimis."

INDIAN MEDICAL SERVICE.

WE observe with much satisfaction that measures have been taken to remove some, at least, of the grievances which have been the subject of complaint by the officers of the Indian Medical Service. The absurd, because incorrect and misleading, term "unemployed pay" is to be abolished, and that of "grade pay" substituted. This of itself would have been of little consequence, but an important modification has been at the same time introduced into the conditions under which this rate of pay is in future to be issued. Instead of being applicable to all officers not holding appointments which entitle them to charge-money, it will be confined to those who are in receipt of staff salary in addition to their pay; and it has also been decided "to place all surgeons of the Indian Service not holding executive charge on precisely the same footing in respect of pay as surgeons of the Army or British Medical Department similarly situated." This does away with one of the grievances which we have always thought pressed most unjustly upon the officers of the Indian Service. There are still two others to the removal of which we think the attention of the authorities ought to be directed. The first is the rule by which officers have "to pay their way to all appointments in which they draw higher pay." In some cases this operates most unfairly, the expense incurred exceeding the benefit derived by the officer. Where an exchange is effected for the convenience of officers at their own request, such a rule is quite fair; but where the appointment is made in the interests of the service, the necessary expense should clearly be borne by the public. The other grievance which, in our opinion, deserves consideration is the issue of what is termed "officiating pay" to medical officers put in charge of native regiments, but not permanently appointed to them. So long as the system is kept up of paying for

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certain duties by allowances in addition to grade pay, it appears but fair that the officer who discharges the duty should receive the allowance; if any distinction should be made, it ought rather to be in the way of giving a higher rate to the officer who is merely temporarily employed. The rule in the Army Medical Service is that the officer in charge shall draw the "charge pay" whether he fills the post temporarily or permanently, and we do not see why a similar rule should not hold in the Indian Service. It may be presumed that the allowance is made with reference to the amount of work to be done and of responsibility to be incurred, and it seems somewhat anomalous that it should vary with the permanent or temporary tenure of the appointment, which creates no difference in these two conditions. We are glad to see that Mr. Cross, in announcing the change as regards "grade pay," stated that the number of "unemployed" medical officers had been reduced to two in the Bengal Presidency; the numbers in Madras and Bombay had not been received. While we congratulate the Indian authorities on the manner in which they have redeemed their promise to remedy as far as possible this grievance, we trust they will not rest satisfied till they have been equally successful in removing the still existing causes of discontent to which we have, on previous occasions as well as now called attention.

THE PROFESSION IN PARLIAMENT.

IN his delightful "Memoirs of an ex-Minister" Lord Malmesbury records a visit of Dr. Fergusson — the late Dr. Robert Fergusson, we presume, who is so honourably associated with Sir Walter Scott's declining years,—and reports the Doctor's opinion on the state of parties and the political outlook of the day. "I fear he is right," says Lord Malmesbury (and right he unquestionably was, as all who remember the agitated spring of 1857 can attest), "for," adds his Lordship, "nobody is a better judge of public feeling than a doctor who is constantly seeing all kinds of people." The biographies and the published diaries of English statesmen abound with similar acknowledgments of the sagacity of their medical advisers in probing and forecasting affairs, and yet the English Parliament is conspicuous among the legislative bodies of Europe for the almost absolute exclusion of physicians and surgeons from its membership. Our representative system is on the eve of vital transformations, the aim of which is to render Parliament a just and efficacious reflex of the collective interests of the community, and redistribution will assert itself not in electoral districts only or in the sense of the traditional wire-puller. If fewer barristers and financiers are to command the suffrages of future constituencies, is it unreasonable to expect that the seats they vacate will be filled by representatives trained in the study and application of other laws than those of contract and capital—of that law particularly which controls the highest and widest of all interests, the *salus populi*? Certainly, if such a consummation were brought about, no statesman ought to be better pleased than the genial ex-Minister whose Memoirs are on everybody's lips, and whose great chief once inscribed upon his banner: "Sanitas sanitatum, omnia Sanitas!"

INTERNATIONAL MEDICAL CONGRESS.

AN influential committee has been formed in Stockholm under Professor Axel Key's presidency to carry on the work of collective investigation in Sweden in connexion with the International Committee. A similar committee has been formed at Professor Runeberg's instance in Finland. The recommendations of the subcommittee as to the lines of inquiry to be pursued are at present under the consideration of the International Committee.

THE PUBLIC HEALTH IN THE PAST SUMMER.

THE Registrar-General's quarterly return, recently issued, shows the result of the past hot summer upon the public health. The mean temperature of the three months ending September last was 3·0° F. above the average in 113 years, and has during that period only been equalled or exceeded six times—in 1779, 1780, 1818, 1857, 1859, and in 1868. The summer of 1868 was the hottest on record. When it is also borne in mind that the rainfall was only four inches and a half, and three inches below the average, it will not be surprising to find that the meteorological conditions of the past summer were not favourable to health. The annual death-rate in England and Wales, which had averaged only 17·1 per 1000 in the three cool summer quarters of 1881-82-83, rose to 19·7 in the corresponding quarter of this year; this rate was, however, exceeded in four of the seven summer quarters of 1874-80, and was 4·0 below the rate that prevailed in the unprecedentedly hot summer of 1868. Compared with the mean rates in the three preceding healthy summer quarters, the mortality last quarter showed an increase of 16 per cent. in the principally urban, and 13 per cent. in the mainly rural population. Mortality in the summer quarter is, to a great extent, governed by the fatality of diarrhœa, principally infantile, which caused 18,630 deaths last quarter, and an annual rate of 2·72 per 1000, the average rate in the ten preceding summer quarters being only 1·91. Hot summers are specially fatal to infant life; and the rate of infant mortality last quarter, measured by the proportion of deaths under one year to births, was 191 per 1000, exceeding by 32 the average proportion in the summer quarters of the ten years 1874-83. It is satisfactory to note that infant mortality was lower last quarter than in the more moderately hot summer of 1880. Notwithstanding the excess in the death-rate last quarter, the annual rate of English mortality during the nine months ending September did not exceed 19·4, and was 1·3 below the mean rate in the corresponding periods of the last ten years, and there is every reason to conclude that the national death-rate of 1884 will scarcely, if at all, exceed the low rates in the three preceding years, giving the strongest ground for hope that the remarkable reduction in the rates of mortality recorded since the beginning of 1881 represent a corresponding and permanent improvement in the public health.

SENILE GANGRENE.

AT the Medical Society of London on Monday last Mr. Rogers Harrison showed a remarkable specimen of a mummified foot and leg, separated by spontaneous amputation. The patient was a gentleman in his seventy-ninth year, who was suddenly seized with severe pain in his foot, which became cold and benumbed, and then completely mummified. After several weeks the member was detached by the natural process of separation a little below the knee, and the patient recovered with an excellent stump. The case is remarkable for the great height to which the gangrene extended, as well as for the successful conduct of it by unaided nature. In a discussion upon the treatment of senile gangrene raised by a paper of Mr. Jonathan Hutchinson's at the Medical and Chirurgical Society some months ago, stress was justly laid upon the fact that different cases of this affection present varied features and run a different course. Mr. Rogers Harrison's was a case of true dry, or arterial, gangrene, due in all probability to a blocking of the popliteal artery just at its bifurcation. There was no disease of the heart or aneurysm to be detected, and therefore the affection was probably a thrombosis caused by calcification of the artery, and most probably, the clotting, having started in the popliteal trunk, spread down the two tibial trunks, and so precluded any sufficient establishment of an anastomotic circulation. It was a case of primary gangrene, the death

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of the part being directly due to a want of blood, and not dependent in any degree upon inflammation. The treatment adopted was undoubtedly the wisest possible, and was brilliantly justified by the result. Such a mummified member was not a source of danger to the patient from blood-poisoning, and there was at no time any tendency for the gangrene to spread, so that there was no justification for amputation, which would have been attended with grave risk to a man of this advanced age, suffering as he was from chronic pulmonary disease. Dr. Hare, who had several times seen the patient previous to the occurrence of the gangrene, laid stress upon the little evidence of atheroma in the large vessels. This, however, is quite consistent with advanced calcareous disease of the smaller arteries.

THE DEATH OF MR. FAWCETT.

THE death of Mr. Fawcett, humanly speaking, is one of the saddest events which could have occurred, and deprives the State of one of its most faithful and promising servants, and society of one of its most remarkable men. The existence of such a man—blind, yet "leading the blind," and showing them the possibilities of life under conditions of blindness, and full of light and hope for humanity, as well as of political wisdom and strength—was a national blessing and credit, of which the country might have hoped for a continuance for years to come. Many men with sight might have been better spared. We have little to add to what has been already made public of the nature of his illness. It was of a pneumonic and pleuritic character, and accomplished its deadly work with much quickness and, we regret to say, with much pain, the pleura covering the diaphragm being much affected. It is easy to speculate on the probable causes of such a disaster to a man of fifty-one, whose father and mother, by the way, are yet alive. The season has been favourable to such attacks. His previous illness did not lessen his liability to them, and we should probably not be far wrong in supposing that the worrying autumn session, added to his departmental labours, produced that fatigue which makes the system more vulnerable to the causes of catarrhal disease.

ISOLATION AT BRISTOL.

IT is not often that we find ourselves at variance with the veteran medical officer of health for the city of Bristol, but in the matter of the isolation of infectious diseases we are quite unable to understand the advice which he tenders, and it is evident from the comments in the local press that we are not alone in this matter. The whole system, as indicated by a letter which he, in his official capacity, has addressed to the *Bristol Mercury*, is evidently regarded by the sanitary authority from a point of view which we think to be faulty. Although from recent reports it appears that two hospitals exist, and although their value in enabling the city to crush out an outbreak "in the bud" is prominently brought forward, yet now, when the closure of the fever hospital is in question, Mr. Davies, instead of advocating the maintenance of a building to which first attacks could be removed, points out all the hindrances to isolation, explaining that he can only compel removal on a justice's order, that no one would be admitted unless payment is guaranteed in advance; and then he goes on to say that typhus can be safely isolated in a private house, he having done so in his own house successfully. With all due deference to Mr. Davies's high merits as a sanitary official, we would urge that the tendency of his letter is retrograde in the extreme. In the first place, Bristol, whilst keeping open a hospital for the only infectious disease the spread of which can be prevented by other means than by isolation—namely, small-pox—never makes any attempt to "nip in the bud" the far more fatal scourge of scarlet fever, and now it would appear that typhus is to be relegated to private houses. Unfortunately, the people amongst whom this disease of dirt and overcrowding almost exclusively prevails have not such houses as Mr. Davies possesses. Then again, although the Public Health Act contains a clause as to compulsory removal, experience everywhere shows that the powers given as to this are rarely resorted to, and that thousands of cases of such diseases as scarlet fever are isolated without any reference to it; and this with nothing but benefit to the surrounding community. And further, though the same Act enables sanitary authorities to recover the cost of the maintenance of patients in isolation hospitals, yet it was certainly never anticipated that such authorities would make an undertaking as to payment an absolute condition of admission. The prime object of infectious hospitals is to prevent the spread of infection, and not to make such prevention dependent on recovering a small payment on behalf of the individual who assents to be isolated in the interests of the community. We wish that Bristol could see its way to follow in the path of many other sanitary districts which, having provided themselves with proper isolation hospitals, so use them as to protect to the utmost possible extent the public by whom and for whom they have been constructed.

TREATMENT OF MARSH FEVER BY SUBCUTANEOUS INJECTIONS OF CARBOLIC ACID.

DR. DIEULAFOY communicated to the Société Médicale des Hôpitaux of Paris, on the 10th ult., the history of a patient who since 1877 had had tertian fever three times, which had always been successfully treated by the administration of sulphate of quinine. The fever having returned last June, the patient came under the care of Dr. Dieulafoy, who on the first day injected subcutaneously two centigrammes and a half of carbolic acid dissolved in a hundred parts of water. The quantity was increased on the following days to five centigrammes, and to seven centigrammes on the days of apyrexia. Recovery was complete at the end of seventeen days. The patient had then absorbed eighty-four centigrammes of carbolic acid, without showing any signs of poisoning. In the subsequent discussion, Dr. Laveran reverted to the fact that carbolic acid injections had been employed against marsh fever so far back as 1869, with questionable success. He doubted the propriety of attempting to supplant so certain a remedy as sulphate of quinine. Dr. Huchard related the case of an Arab in whom quotidian attacks of fever, which had resisted all other remedies, yielded to bromide of potassium; and Dr. Labbé alluded to the good effects, too much overlooked, of arsenical medication in malarial poisoning.

ALLEGED DEATH FROM VACCINATION.

AN inquest was held on Friday, Oct. 31st, at the Clapton Park Tavern touching the death of an infant aged four months. From the evidence it appears that the deceased was found dead in bed by its mother's side. Dr. Aveling of Clapton was called in, and at the inquest he deposed that he had not the slightest doubt that the child had been suffocated through overlaying, but a majority of the jury, ignoring the expressed belief of Dr. Aveling, refused to return a verdict in accordance with it, though advised to do so by the coroner, Mr. Collier. Very wisely, as we think, the inquiry was adjourned for a post-mortem examination to be made. The jury, however, declined the assistance of the doctor nominated by the coroner, and demanded that the autopsy should be supervised by a gentleman of their own selection. After much bickering, it was eventually settled to ask Dr. Collins to officiate. This he did in the presence of Dr. Bristowe,

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of St. Thomas's Hospital, and Drs. Aveling, White, and Millar. At the adjourned inquest Dr. Collins is reported to have said that death "could have arisen from three causes—asphyxia, convulsions, or blood poisoning; he thought convulsions." That the proximate cause of death was asphyxia there seemed no manner of doubt, but we contend that there was no evidence to show that it was due to convulsions. What were the facts as sworn to by the mother? The child appeared in good health when she retired with it to rest; in the morning she found it dead. We venture to say that had the child not been recently vaccinated no difference of opinion would have arisen as to the cause of death. That the mother of the infant was blameless is beyond question, but for all that we maintain the most reasonable explanation of the fatal event was, as so frequently happens, that the deceased was overlaid. Scarcely a week passes without the record of such a mishap; and it is notorious that it occurs apparently without a struggle, the insensibility of sleep passing quietly into that of asphyxia. In a case like the one under consideration, it is very essential that the facts should be read by the light of similar cases the nature of which is understood. Had convulsions been suddenly induced whilst the infant was awake and restless, in all probability the mother would have been aroused. It is not our purpose to deny that septic absorption can take place through the medium of a vaccination sore, but to insist, with all deference to those who had the responsibility of deciding upon the facts as disclosed at the inquest, that in this case there was no proof that it occurred. Speaking impartially, for we have only the well-being of the community at heart, we are compelled to come to the conclusion arrived at by Dr. Aveling, and, as a matter of justice, to protest against non-professional men assuming the function of skilled scientific witnesses by interpreting facts without the necessary knowledge for their elucidation. It was the *positive* opinion of the doctors against the *negative* opinion of the mother, and not the reverse, as a member of the jury seemed inclined to think. We do not cast the slightest imputation on the honour of the "twelve good men and true," nor question their *bona fides* in the matter of their inquiry, but we wish to point out that they are satisfying at once the dictates of their consciences and the requirements of the law when they content themselves with solving medical problems by the aid of medical testimony.

PULMONARY SURGERY.

AT the meeting of the Medical and Chirurgical Society on Tuesday last, Dr. Cayley made another contribution to the subject of "Pulmonary Surgery," which he has already so much advanced. The case he related was, like his two previous ones, an instance of localised gangrene of the lung, which was treated by the insertion of a drainage-tube into the sloughing cavity. The origin of the affection was unfortunately malignant disease of the œsophagus and stomach, with perforation into the lung, from which the patient died a few days after the operation. But looking at it in the light simply of a gangrenous cavity of the lung, treated surgically, the case is important and distinctly encouraging in its result. It shows that these patches of gangrene can be sufficiently well localised to admit of surgical treatment, and that the operation of opening such cavities is devoid of serious risk and attended with marked relief to the very distressing symptoms of this affection. But the case also illustrates the difficulty the surgeon finds in exactly hitting the cavity, even when the physician has localised it as accurately as possible; for Mr. Gould, who performed the operation, failed to reach the cavity on the first attempt, although he punctured the lung in several directions. This difficulty probably results from the different intensity in which the various physical signs produced in the gangrenous area are conducted to the surface of the chest. Solidification of the lung in a small patch over such a cavity may render the physical signs much more distinct there than just around where the lung is not solid, and so it may happen that the physical signs of the pulmonary gangrene are not most clear vertically over the sphacelus. The surgeon is then left in doubt as to the direction beneath the spot indicated on the walls of the chest in which to thrust his trocar; but in spite of this uncertainty this case, and also in particular Dr. Cayley's other cases, clearly indicate surgical interference and drainage to be the best means of treating localised pulmonary gangrene.

SIR MOSES MONTEFIORE.

NOW that Sir Moses Montefiore has achieved his century of existence, it is to be hoped that he may be permitted to spend the remainder of his days in quietness. The very celebration of his birthday and its accompaniments involved no small risk to life. The tension of hope and fear, the desire not to disappoint one's friends of such a notable event, must have been trying, and indeed were. Sir Moses, we have reason to believe, feels perceptibly not so strong as at the time of his previous birthday. He was very anxious lest he should not be well enough to present a chain of office to the first Mayor of Ramsgate. This he was able to do, and did well, but the previous anxiety joined to the labours of the two days of ceremony told on him much, and on the Wednesday following his birthday he was greatly prostrated. For ten days the improvement was very slow, but on Saturday and Sunday last it was distinctly marked. Sir Moses is quite free from any particular illness, and by reason of his fine constitution, the good care taken of him by his medical adviser and others, and the blessing of the benignant Providence which he has experienced so largely, there is ground for hope that his useful age may still be considerably prolonged. Touching the element of heredity in his longevity, we should be glad to see full particulars for a few generations back. His father died at so early an age as forty-four, his mother, we believe, at seventy-nine.

A QUESTIONABLE APPOINTMENT.

IT is certainly very unsatisfactory to find that the system of promotions and appointments in the Indian Medical Service is worked in a manner which cannot fail to create a feeling of dissatisfaction among its officers. It may be in the recollection of some of our readers that in the early part of last year a junior brigade surgeon was selected for promotion to the rank of deputy surgeon-general and was immediately nominated to the charge of the North-West Provinces and Oudh, with the local rank of Surgeon-General. As we pointed out at the time (THE LANCET, Feb. 3rd, 1883), such an appointment, although within the conditions of the Royal Warrant, was at variance with its spirit and contrary to the principles of justice by which such proceedings should be regulated. It is, therefore, with much regret that we learn from the Indian papers that this unjust and illegal course has again been followed. Dr. Dallas, an brigade surgeon, has been selected for promotion to deputy surgeon-general and has been nominated to the charge of the North-West Provinces and Oudh, with the rank of surgeon-general, over the heads of a considerable number of medical officers senior to him in rank. Dr. Dallas is, we believe, a very able officer, and we have no doubt good reasons could be assigned for his selection for promotion, but we are curious to know on what grounds his advancement to the higher local rank, carrying with it increased pay, over the heads of can be justified. It is stated in a letter [illegible]

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tary Gazette that Dr. Bellew, one of the officers thus unfairly superseded, addressed a memorial to the Lieutenant-Governor on the injustice thus done him, but that through some means the receipt of it was delayed until after the appointment had been made. We are unwilling to believe that this statement can be well founded, but, publicly advanced as it has been, it appears to call for inquiry. Mr. Cross has shown himself to be interested in the welfare of the Indian Medical Service, and we have no doubt that if this repetition of an act apparently so unjust as that involved in the appointment of Dr. Bellew as local surgeon-general is brought to his notice it will receive his careful consideration. Until an inquiry has been made by some competent and authorised person we refrain from imputing blame to any individual, but if no such step is taken there can be little doubt that a very unpleasant feeling will be aroused with regard to the administration of the department. We recommend the subject to the consideration of Sir Joseph Fayrer, who is the authority in this country by whom the interests of the service should be looked after, and on whom should devolve the responsibility of seeing that any act of apparent injustice is brought to the notice of the governing authorities.

THE DRAINAGE OF LONDON.

ALTHOUGH the evidence taken before the Royal Commission on Metropolitan Sewage Discharge is supposed to be kept secret, still there can be no doubt from the prominent way in which the scheme of Sir Joseph Bazalgette has been put forward in this journal that the Commissioners have practically decided upon recommending either that scheme or some altered modification of it. Roughly, it is to carry the sewage from Crossness under the river to the north shore, and to convey the whole volume to Thames Haven and there to discharge it in its *crude* state. So far as London is concerned, this will be an enormous benefit, but it is well not to forget the claims of other small places. Southend (the Brighton of the East-end) is within ten miles of the proposed outfall, and as for miles on either side of it there exist large flats and mudbanks, there can be little doubt that the deposition of crude sewage thereon must cause serious detriment to the prosperity of the place. The estimated rate to pay for the extension of the sewage works is but 1¾*d.* in the pound. Surely it is worth while to spend another farthing in precipitation, and save the possibility of ruining a very popular resort. It would be a serious blunder to benefit London by destroying Southend.

SCROFULA AND TUBERCLE.

FOR the most part experimental pathology has sided with the view that scrofula and tubercle are practically the products of one and the same disease. Clinical physicians frequently maintain the distinctive nature of these diseases. Some recent experiments made by M. Arloing would seem to give countenance to the opinion that scrofulosis and tuberculosis are not precisely similar morbid processes. It was found that subcutaneous inoculations from a caseous gland performed on a series of guinea-pigs and rabbits was followed by tuberculosis in the former animals, but for the most part the rabbits remained unaffected. When intra-peritoneal injections of the virus were carried out it was discovered that at the end of about a month all the guinea-pigs had died of tuberculosis, whilst none of the rabbits had suffered in any way. In this double set of experimental inoculations, caseous glands taken from the neck of a boy were employed as the material for inoculation. A third set of experiments, where inoculations were practised with fungoid material from the synovial membrane of joints affected with white swelling, both rabbits and guinea-pigs were simultaneously affected with tubercle. Again a fourth series was carried out with some matter taken from swollen cervical glands in a young woman who had no other symptoms of disease. A rabbit and a guinea-pig inoculated with this material died of general tuberculosis; and three weeks after the operation for removal of the cervical glands the young woman herself succumbed to acute tuberculosis.

EXHIBITIONS AND HOSPITALS.

IT is announced that an International Exhibition is to be held at the Alexandra Palace next year, commencing about March 31st. Exhibitions are very popular just now, and we hope that this one may be crowded every day of the six months during which it is to be open. Our enthusiasm on its behalf is evoked by the following paragraph in the prospectus:—"The administration have determined upon setting aside one-tenth of the entire receipts for admission for distribution amongst the various hospitals of the British metropolis, under the control and management of a committee for charitable purposes, of which Col. Sir Herbert Sandford, R.A., has been appointed chairman." The committee also includes, among others, the names of Sir Andrew Clark, Sir Henry Pitman, and Dr. George Johnson. We trust that the benevolent, kindly, and, as we believe, far-seeing policy adopted by the promotors of this Exhibition may result in a substantial addition to the funds of those institutions which, in the truest and best sense of the word, "entertain" the sick and wounded. Following the successful example set at South Kensington, the attractions of the exhibits will be supplemented by amusements, &c., and the building and grounds will be brilliantly illuminated by the electric light. In the interest of the hospitals, we trust that the executive, who by reason of their kindly thought deserve, will do everything to command, success.

THE BERLIN MEDICAL FACULTY AND PROFESSOR V. SCHWENINGER.

THE dissatisfaction at the arbitrary appointment of Dr. v. Schweninger to an extraordinary professorship of dermatology in the University of Berlin is growing, and has found expression in a protest from the medical faculty. This gentleman, hitherto unknown to fame, has the fortune of being "Leibarzt" to Prince Bismarck, and rumour says that it is owing to influence from this high quarter that the Minister of Education, Herr v. Gossler, made the nomination that is so distasteful to the faculty. Professor Virchow in the Chamber questioned the legality of this appointment, and also the conferring of the title "Professor" upon several "Privat-docents," which has recently been practised. Professor Virchow maintains that new professors cannot be appointed unless there are vacancies to be filled up. Dr. v. Schweninger has already entered upon his duties, and taken charge of the dermatological *clinique* at La Charité Hospital.

THE TRICYCLE UNION.

A SPECIAL general meeting of the members of the above-mentioned union was held on November 6th at the Westminster Palace Hotel. Dr. Richardson, the President, occupied the chair. In the course of his interesting and suggestive address we find that he assumed very much the same position that THE LANCET has taken up as regards the dangers attendant on the immoderate use of the tricycle, pointing out the ill effects likely to follow continued or excessive tension on the heart and lungs, and fixation of the body for long periods in a constrained position. He deprecated the custom of making an enjoyable and instructive mode of travelling a means for "sport" and sustenance for society journals. With his accustomed lucidity and happy

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faculty of devising how the public may gain by physical and intellectual pursuits, he proposed a division of the union into artistic, antiquarian, geographical, and mechanical sections; that is to say, cyclists should use their machines as levers for the elevation of their minds, by travelling to the scenes where nature's stores are unrolled for the delight and profit of those who seek her guidance and teachings. In other words, Dr. Richardson would not have the whole nervous energy of an enthusiastic cyclist expended in the propelling of his body at so many miles per hour or through so many hours per day, but would divert a just proportion of that energy to the acquirement of useful knowledge. We sincerely hope that his advice will not go unheeded, but that his fellow-unionists will lay to heart and put into practice his words of wisdom.

LIGATURE OF THE RIGHT COMMON CAROTID AND INTERNAL JUGULAR VEIN.

AT the October meeting of the North-West Provinces and Oudh Branch of the British Medical Association, Surgeon Shirley Deakin, I.M.D., showed a Eurasian male patient, aged forty-two, on whom he had ligatured with carbolised gut the right common carotid and internal jugular vein two months before. The operations were performed at the time of the removal of a large, foul, fungating epithelial mass, which had sprung from some cervical glands, in which the disease had recurred after the removal of the right half of the tongue at a hospital in Calcutta, where a second operation was attempted and abandoned. One ligature was applied to the artery, two to the vein; and as much as possible of the diseased tissue, which extended deeply beneath the angle of the jaw, was scooped out previous to the application of zinc chloride paste with morphia. Zinc paste was applied at intervals, five times in all, the application being followed by pain on swallowing, so severe that gastrostomy was contemplated. Poultices and iodoform ointment were applied in the intervals between the applications. Subsequently dry tannic acid was dusted on the small remaining mass, a saturated solution of the acid in glycerine with carbolic acid being also applied. The original opening had greatly contracted; the incision made for the ligation had completely healed, and the patient was free from pain. Though his appetite was poor, he could eat food and swallow it; he was able to be up and to walk about the garden. A complete cure could hardly be hoped for, yet the relief and comparative comfort experienced by the patient showed how much might be done in apparently hopeless cases to mitigate pain and distress.

THE CHOLERA AND THE THAMES.

A LETTER signed "Anti-Panic" appears in the columns of the *Standard*, which very reasonably points out that great sanitary improvements have taken place since the last cholera epidemic visited these shores. But, if London is now well drained, the Thames is still polluted; and to this we might add that, if public authorities have built good sewers, private individuals have not always been equally successful in draining satisfactorily the interior of their dwellings. The correspondent to whom we allude considers that it is highly probable the cholera will reach London by next spring; but urges that between this and then works might be established at Crossness and Barking to deodorise the main sewer outfalls. This would at least mitigate the present dangerous and deplorable contamination of the Thames below London. The proposal to carry the metropolitan sewage to Sea Reach would not only cost some £4,000,000, but could not possibly be realised in time to protect us against the present danger. Deodorising is, therefore, for the present the easiest if not the best measure that can be adopted. This, however, would only improve the Thames at and below London. The intake for the water-supply at Teddington would not be rendered any the less exposed to the possibility of contamination from places situated higher up the river. A new water-supply, however, though urgent, cannot be extemporised in a few months; but the present danger should serve as a strong argument for those who, in the name of public health, have ventured to attack the vested interests of the water companies. In a word, our position has sufficiently improved to warrant a sense of confidence that should disarm panic-mongers; but this feeling of security must not be allowed to check the agitation in favour of further sanitary reforms. Apart from the menace of cholera, the daily increase of population renders these reforms more and more indispensable.

During the last summer the Metropolitan Board of Works spent a very large sum in the purchase of chemicals in attempting to deodorize the River Thames. This was naturally all wasted. It must not be forgotten that the nuisance during hot weather does not arise so much from the recent discharge of sewage as from that which has been deposited upon the banks and shoals for weeks and months, and is in a state of active putrefactive change. From this it will be seen that the use of chemicals must be carried on for a long period before the desired effect can be produced. It is the sewage of to-day which will cause the nuisance complained of months hence, and therefore it is the sewage of to-day which must be treated. If the Metropolitan Board of Works is anxious to prevent a recurrence of the awful condition of the river during last summer, let them begin steadily and quietly to treat the sewage during the months of spring and early summer, and in this way some temporary relief may be experienced in the hotter months.

INCREASE OF SMALL-POX.

SMALL-POX, as we anticipated, is, with the advent of colder weather, again steadily on the increase, and it is by no means improbable that during the coming winter a serious epidemic may prevail. The last returns of the Metropolitan Asylums Board tell of an increase of sixty-eight under treatment on the previous fortnight, and the mortality is shown by the Registrar-General's returns to be in the same direction. London has never had so complete an organisation for the isolation of small-pox as she now possesses, but it will have to be supplemented by efficient vaccination and revaccination, otherwise it may not be able to cope with such extension of disease as may be in prospect.

THE RABBETH MEMORIAL.

THE committee appointed to consider the best means of commemorating the name and self-sacrifice of the late Dr. Rabbeth have decided that this end will be best secured by the establishment of medals bearing his name at the London University and King's College, the endowment of children's cots at King's College Hospital and the Royal Free, and the erection of memorial tablets at these two institutions. We are informed that Sir Wm. Jenner has joined the committee and has sent a donation to the fund. We shall be happy to receive subscriptions towards the above object.

IN the course of an impressive sermon on Sunday last at Swanley the Rev. John Nowers, the present vicar in charge, dwelt at some length upon true heroism, illustrating his remarks chiefly by the contemplation of the characters of the heroes of sacred history. He referred also to the bright examples of the true heroism afforded us in the present age, alluding especially to the noble conduct of the King of Italy in personally visiting the cholera-stricken patients at Naples,

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and to the noble and unselfish act of the late Dr. Rabbeth, who not only risked but lost his own life in endeavouring to save that of a poor little child.

ACCORDING to the *Gaulois*, a doctor engaged in the laboratory of Professor Vulpian has swallowed some pills made from the vomit of a person who died from cholera. The medical man is still in perfect health, but two guinea-pigs which were inoculated with the same vomit succumbed at once. The experiment was made with a view to proving that the microbes discovered by Dr. Koch are innocuous, and that the vomit of choleraic patients is not infectious.

IN an action brought on the 6th inst. at the Bristol County Court by the Incorporation of the Poor to recover £2 1*s.* 2*d.*, the cost of the maintenance and care of a child of the defendant in the hospital for infectious diseases for a period of five weeks, the judge ruled that, although the guardians had merely done their duty, as the child was removed without the consent of the father, judgment must be entered for the defendant.

THERE is a serious outbreak of diphtheria in South Mimms, near Barnet. The medical officer of health reports the condition of the village to be in a very unsatisfactory state from a sanitary point of view. Overcrowding exists to a large extent, and the drainage arrangements are seriously defective.

THE Technical Exhibition at Humphreys Hall, Knightsbridge, which was conducted under the able management of Mr. W. Southwick Rogers, was closed on the 12th inst. A substantial balance will be handed over to the funds of University College Hospital, in aid of which institution the Exhibition was inaugurated.

IT is stated that the Government contemplate the closure of several of the Dublin hospitals and the erection of a Government hospital on the plan of Guy's, with a school of medicine attached. The Government intend giving £150,000 towards the scheme, and it is rumoured that Lord Spencer will present £50,000 to the hospital.

MR. SAMPSON GAMGEE, F.R.S.E., has been elected a Corresponding Member of the Medical Society of St. Petersburg.

ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

A GENERAL meeting of this Association was held on Nov. 8th at the rooms of the Medical Society of London, 11, Chandos-street, W., Mr. Pollock in the chair. On the motion of Mr. JOHN TWEEDY, seconded by Mr. J. WICKHAM BARNES, Mr. Wheelhouse of Leeds and Mr. Bartleet of Birmingham were elected members of the committee of the Association.

Mr. BRUCE CLARK, one of the hon. secretaries, read a preliminary report, which showed that out of 254 Fellows who sympathised with the objects of the Association, he had received answers fully approving of the new recommendations and alterations proposed to be included in a new charter of the College from more than one-half of that number. A full statement of these recommendations may be found in THE LANCET for Nov. 1st, p. 795. The meeting then passed on to consider the recommendations.

Mr. J. WICKHAM BARNES then moved, as an amendment to the first recommendation, that "any Fellow of the College who has been a Fellow for ten years or a Member for twenty years shall be eligible to be a member of the Council." This was carried unanimously.

The next recommendation discussed was as follows: "That not more than one-half of the members of the Court of Examiners, and not more than two members of the Board of Examiners in Anatomy and Physiology, shall have seats in the Council." Mr. Brodhurst had written to Mr. J. H. Morgan, one of the hon. secretaries, to the effect that none of the members of the Court of Examiners should have seats in the Council.

Mr. BUTLIN thought that a half was too large a proportion, and suggested one-third.

Mr. ALLINGHAM was in favour of the original clause, as were also Mr. POLLOCK, Mr. OLIVER PEMBERTON, and others. The original proposition was carried.

Some discussion took place on the recommendation relating to the conditions and term of tenure of office of a member of Council. The report recommended "that the six members of the Council who shall have served longest on the Council without re-election shall vacate their office every year, instead of three members, as provided by Sec. 12, Chap. 7, Vict."

Mr. HICKMAN proposed an amendment to the effect that whenever one vacancy or more should arise otherwise than through retirement by rotation, only so many senior members of Council as would make up the number six should vacate. There should, he thought, always be the same number of vacancies; and it would be hard on some members of Council to make them seek frequent re-election.

Mr. ALBAN DORAN said that anyone acquainted with the mysterious formalities of the Council knew how impossible it was for junior members of Council to make themselves heard. It took a long time to learn the etiquette of the Council.

Mr. LOCKWOOD spoke against Mr. Hickman's amendment; and Mr. ALLINGHAM, as a member of Council, gave an amusing account of the mysteries of the ways and doings of that body.

Mr. J. TWEEDY said that, so far from hesitating about shortening the term of office of members of Council, he would not be sorry if all the members had to seek re-election every year. The scheme of combination between the Colleges of Surgeons and Physicians would never have been carried if the body corporate had been consulted. There was no advantage to be gained by Mr. Hickman's amendment. He felt sure that they would get no reform until the autonomy of the Council had been broken up.

Mr. POLLOCK and Mr. REGINALD HARRISON supported the proposal to let the original recommendation stand.

Mr. HICKMAN'S amendment was not supported and so fell through. The proposition relating to the abolition of "substitute members" was approved.

Referring to the approved recommendation respecting the mode of voting, Mr. TWEEDY proposed that at the annual general meeting the chairman should appoint three Fellows of the College as scrutineers to superintend the ballot or other mode of voting at the next election of members of the Council and of the president.

Mr. PEARCE GOULD, in seconding the amendment, suggested that the scrutineers be appointed at the Council meeting immediately preceding the annual election. This suggestion was adopted by the mover, and then the original amendment with this alteration was carried. When the section referring to the mode of election and tenure of office came forward for consideration, Mr. POLLOCK said that one member of the Council had informed him that the recommendation to elect the president by votes from the whole body of Fellows would be strenuously resisted by the Council.

The proposition "That the president be elected at the time and in the manner that members of the Council are elected, on the nomination of the Council" was commented on by Mr. WALTERS, who wished the addition of a clause empowering any body of thirty Fellows to nominate a candidate for the presidency.

Mr. COLLINS seconded this addition, but the proposal was negatived.

The recommendation "that no one shall hold the office of president for a longer period than five consecutive years" was objected to by Mr. J. W. BARNES, who moved that "three" be substituted for five years. After this had been seconded,

Mr. PEARCE GOULD spoke in favour of retaining the original recommendation, feeling that if the president were a good officer he could not receive too much distinction, and he also referred to the custom at the Royal College of Physicians.

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Mr. JOHN H. MORGAN, hon. secretary, said that though such was the custom, yet there was no written law to support it.

Ultimately Mr. J. W. BARNES's amendment was lost.

As a suggestion for a bye-law, Mr. TWEEDY referred to the possibility of the occurrence at an election for the presidency of an equality in the number of votes polled for each of the three candidates. In such an event, he thought that the retiring president or, if he were not a candidate, the candidate who was the senior Fellow should be elected.

In dealing with the recommendation "that a treasurer be appointed from amongst the members of the Council, and that his accounts be audited by a professional auditor, whose report shall be submitted to the annual meeting of the Fellows and Members," Mr. POLLOCK expressed the opinion that the treasurer should be appointed for a term of years.

The practice at the Medical Societies was referred to by Mr. BUTLIN, who thought this matter might be left to the discretion of the Council of the College, a view which was accepted by the meeting.

Respecting the election of Fellows without examination some discussion was elicited. The recommendation of the Committee of the Association proposed that Section 5, Chap. 15, Vict., of the charter of the College be altered, so that instead of a possible annual election of two persons as Fellows without examination the number might be increased to five.

Mr. BUTLIN thought that the Fellowship should not be given too freely. He proposed that the original clause in the existing charter be not altered.

Mr. TWEEDY said he felt very strongly on this matter. It should be borne in mind that the Council had removed every restriction in the way of any Member of the College wishing to take the Fellowship. It was sufficient now for a Member to have been engaged for six years in the practice of his profession to qualify him for presenting himself for the final Fellowship examination. As only about fifteen to twenty Fellows by examination were made every year, he thought the possible creation of five Fellows without examination was too great a proportion. He therefore seconded Mr. Butlin's proposal, which was unanimously carried.

With regard to the election of Honorary Fellows, Mr. PEARCE GOULD thought that if the recommendation permitted only two distinguished members to be elected annually, the proposition would be more acceptable. He moved "That the Council every year may nominate two distinguished members of the medical profession, whether Members of the College or not, as Honorary Fellows to be elected by the Fellows and Members at the annual general meeting," which, after having been discussed by Mr. HICKMAN, Mr. ROYES BELL, and the CHAIRMAN, was seconded by Mr. BUTLIN, and carried unanimously.

The recommendation respecting meetings of Fellows and Members separately and collectively was also altered at the instance of Mr. TWEEDY, seconded by Mr. LOCKWOOD, so that the new proposition would read thus: "That there shall be an annual general meeting of the Fellows and Members on the first Thursday in July, on the day when the election of the Council takes place, at which the annual report of the Council, including the treasurer's statement of accounts, duly audited, shall be presented, discussed, and, if approved, adopted."

Mr. TWEEDY proposed, as a new clause, "That no bye-law, rule, regulation, or ordinance of the College shall be made, altered, or revoked without the consent of the Fellows and Members at the annual general meeting, or at a meeting specially convened for the purpose."

Mr. J. WICKHAM BARNES seconded the proposition, which was carried.

The other recommendations were adopted in the original form in which they had been drawn up by the committee of the Association.

It was then decided to leave to the committee what steps should be taken in order to acquaint the Fellows of the College, the Association of the Members, and the Council of the College with the proceedings which had occupied the Association of Fellows at their present meeting.

A meeting was held on Friday, the 7th inst., at 3, New Inn, Strand, to consider the alterations proposed by the Association of Fellows to be made in the regulations of the College. Approval was expressed of the first six clauses, but Clause 7 was unanimously objected to, and it was agreed to suggest to the Association of Fellows that this clause should read as follows: "That the Council of the College shall be elected by the Fellows and *Members* of the College, and that the president of the College shall be elected annually from amongst the members of the Council, and that no one shall hold the office of president for longer than three years." It was also suggested that in Clause 8, referring to the election of treasurer, the words "That a treasurer be appointed from amongst the Members" should read as follows: "That a treasurer be appointed BY the Members." The remaining clauses were thoroughly approved of, although it was considered that Clause 10, referring to the Board of Examiners in Anatomy, would be improved by the addition to it of the following words: "That should any Member of the College be elected a member of the Board of Examiners, he shall by virtue of such election become a Fellow of the College."

Great disappointment was expressed at the manner in which the Fellows had ignored the right of the Members to vote in the election of the Council, without which the Members would have no voice in the government of the College.

After the propositions of the Fellows had been considered, an animated discussion followed in reference to the difficulty students experienced in obtaining a medical degree in London. A strong opinion was expressed that the General Medical Council had greatly neglected the welfare of the profession, and that the interests of the great mass of the profession were not represented on it, and were not protected by it.

THE CASE OF LIEUT. HUBBARD.

WE are indebted for the following notes to Dr. T. B. Adam, surgeon to the Native Hospital and Dispensary, Foochow:—

With the permission of Surgeon Lory I send you the following notes of the case of Lieut. Hubbard, H.M.S. *Zephyr*, who recently succumbed to injuries inflicted by a shell, fired by mistake from a Chinese fort in the river Min. Apart from the public interest necessarily attaching to such an unfortunate occurrence, the history of the illness has a medical value, and raises important questions. I saw Lieut. Hubbard for the first time, in consultation with Dr. Lory, about 2 P.M. on Sept. 6th, the injury having been received about 9 A.M. on the same day. I found him suffering pretty severely from shock; the lips were pale, with cold perspiration. The left leg and foot were very much swollen, the skin was very tense, and on the foot bluish discolourations were present. A wound of about one inch in extent existed over the fibula, about two inches above the malleolus. The fibula was fractured. Chloroform was given, and the wound enlarged to about five inches. The fibula was found obliquely fractured, a partially loose splinter intervening. One of the ends of the fractured bone had been driven inward, and divided the anterior tibial artery; hence internal hæmorrhage. The muscles of the calf tended to protrude through the incision, being much infiltrated with blood coagula. Having tied the anterior tibial artery at both ends, the tourniquet was removed, a few bleeding points secured with ligatures, and the wounds dressed with carbolic oil. Shortly afterwards Lieut. Hubbard was removed ashore, where comfortable accommodation had been provided. Throughout the afternoon hot fomentations were applied to the injured limb; and in the evening, the tension of the skin having quite disappeared, and circulation being perfect in the foot, the wounds were washed out with carbolic lotion and antiseptic dressings applied. Pott's splints were fixed on either side of the leg, outside the dressings.

Sept. 7th.—Patient passed a good night; shock perfectly recovered from; temperature normal; leg dressed under spray; swelling found decreasing; wounds antiseptic; sensation perfect everywhere, save in bruised skin over the front of the ankle. Inside splint dispensed with.—8th: General condition good; in the morning the leg was again dressed; swelling still further decreased; wounds perfectly moist; skin of calf and foot present the varied hues of colour characteristic of normal absorption of effused blood. Throughout the day temperature was strictly normal, but in the evening the patient became a little restless, and the temperature rose to 101·8° in axilla; no preceding chill; no pain

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in limb; five grains of quinine given.—9th: Spent a restless night; no special complaint, however, of pain or trouble anywhere; temperature in the morning still high, 101°; leg dressed; wounds free from discharge; no tension in limb; swelling still satisfactorily decreasing. During the day restlessness increased, and in spite of frequent doses of quinine the temperature rose in the evening to 103°.—10th: Had passed an unsatisfactory night; while tossing about patient had jerked the leg somehow, acute pain followed from which relief was only obtained by a sleeping draught. In the morning the dressings were changed; swelling had occurred in the lower parts of the leg and around the ankle. Circulation and sensation in foot, however, were perfect. To relieve the slight tension of skin the wound over fibula was extended about one inch, above and below. The cuts made bled freely; the wounds were dressed with carbolic oil, a layer of salicylic wool was wrapped round the limb, and an antiseptic bandage applied over all. Splint dispensed with. Limb felt more comfortable after dressing, but the patient's general condition was most discouraging. Temperature throughout the day continued about 103°, skin dry and hot, no other symptom being present, however, save marked restlessness. Quinine and stimulants given freely, with opiates.—11th: During the first part of the night the patient had been restless, but towards midnight pain left the limb, and he slept well till morning. At 8 A.M. the left knee joint and lower part of thigh were much swollen, and skin thereof had a peculiar livid colour. On opening the dressings the whole leg was found cold, and in a state of complete gangrene. Patient's breath had a marked gangrenous odour. No attempt at a line of demarcation was perceptible in the thigh. Temperature 103°. Amputation was at once performed in the upper third of the thigh. Dr. Rennie, who was called in consultation, operated. Patient rallied successfully from shock. The evening temperature rose again to 102°.—12th: More or less delirious all night. In the morning the intellect perfectly clear. Temperature 103°, pulse 140. Cold perspirations. On removal of the dressings the flaps were found gangrenous. Patient passed the day perfectly free from pain, intellect unclouded, and spirits marvellously cheerful, though fully informed of his condition. Lost consciousness only about an hour before death, which occurred early in the morning of the 13th.

Remarks.—With such a history as the above before one, the question is naturally asked, Was this a case in which a life was sacrificed in a mistaken zeal to save a limb? For two days and a half progress towards recovery was all that could be desired; the wounds were perfectly antiseptic, and the effused blood was being rapidly absorbed; fever then occurred. The patient's constitution was unfortunately not a good one. Previously stationed on the West Coast of Africa, Lieutenant Hubbard had suffered severely from malarial fever, been invalided home on that account, and had left the Naval Hospital but a few weeks when he started for the China station, eleven months ago. For the first thirty-six hours of the fever the injured limb continued apparently to make satisfactory progress; acute pain then occurred from some sudden movement on the patient's part. On the following morning a suspicious increase of swelling around the ankle was noted. The most serious view of the case was taken, and the question of the patient's chances for life was discussed. With the grave constitutional disturbance present, and no signs of failure of circulation in the injured limb, both Dr. Lory and myself were agreed that amputation at that moment would be unwise and unjustifiable. Relief of all tension in the limb, and efforts to reduce fever, were the measures adopted. Perhaps we were wrong, but of that I am yet in doubt. The waste products poured into the blood by lymphatics from the injured limb would, of course, supply fuel for the fever flame, but the repair of a thigh stump also calls for active tissue changes, and these, *plus* the depression to the system from the shock of the operation, could scarcely result in abatement of fever. In spite of all endeavours, however, the high fever continued, and this, with the accompanying rapid circulation, soon proved too much for the injured limb. During the night of the 10th venous return was blocked, and a very few hours with such high temperature sufficed to bring about the state of affairs found on the morning of the 11th. The amputation then performed I admit was hopeless and a questionable proceeding, but by securing to the patient comfort during the remaining forty hours of his life, the end, I think, justified the deed.

Roseberry, Sept. 18th, 1884.

THE DESTRUCTION OF CHRISTIANSBORG PALACE.

REPLY OF THE KING OF DENMARK TO THE ADDRESS BY THE ENGLISH, SCOTTISH, AND IRISH MEMBERS OF THE INTERNATIONAL MEDICAL CONGRESS.

THE following letter has been sent to us for publication:—

British Legation, Copenhagen, November 3rd, 1884.

SIR,—I beg to inform you that the King was graciously pleased to receive me to-day in private audience for the purpose of delivering to His Majesty the address, signed by the English, Scottish, and Irish members of the International Medical Congress recently assembled here, expressing their profound regret at the loss sustained by His Majesty and Denmark in the destruction of Christiansborg Palace on the 3rd ult. The King seemed fully to appreciate this graceful tribute of sympathy, and commanded me to convey to its authors his "heartfelt thanks."

I am, Sir, your most obedient humble servant,

AUDLEY GOSLING,
Her Majesty's Chargé d'Affaires.

Henry Morris, Esq.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5784 births and 3569 deaths were registered during the week ending the 8th inst. The annual death-rate in these towns, which had been equal to 20·9 and 20·6 per 1000 in the two preceding weeks, rose last week to 21·3. The lowest rates last week were 16·6 in Birkenhead, 17·1 in Brighton, 18·0 in Portsmouth, and 18·3 in Birmingham. The rates in the other towns ranged upwards to 25·9 in Newcastle-upon-Tyne, 26·0 in Liverpool, 27·4 in Cardiff, and 31·5 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 390 and 379 in the two previous weeks, rose again to 392 last week; they included 82 from scarlet fever, 79 from measles, 73 from diarrhœa, 60 from "fever" (principally enteric), 26 from diphtheria, and 23 from small-pox. No death from any of these diseases was returned last week in Brighton, whereas they caused the highest death-rates in Bolton, Preston, and Cardiff. The greatest mortality from measles was recorded in Bolton, Preston, and Cardiff; from scarlet fever in Sunderland, Sheffield, and Newcastle-upon-Tyne; from whooping-cough in Bradford and Leeds; and from "fever" in Leeds, Derby, and Blackburn. The 26 deaths from diphtheria in the twenty-eight towns included 17 in London, 3 in Liverpool, 2 in Portsmouth, and 2 in Newcastle-upon-Tyne. Small-pox caused 22 deaths in London (exclusive of 7 London cases registered outside Registration London), and 1 in Sunderland. The number of small-pox patients in the metropolitan asylum hospitals, hospital ships, and camps, which had been 596 and 580 on the two preceding Saturdays, rose to 675 at the end of last week; the admitted cases, which had been 173 and 101 in the two previous weeks, rose to 233 last week. The Highgate Small-pox Hospital contained 30 patients on Saturday last, 18 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had steadily increased in the seven preceding weeks from 159 to 348, further rose last week to 357, but were 78 below the corrected weekly average. The causes of 91, or 2·6 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Bradford, Sunderland, and in three smaller towns. The largest proportions of uncertified deaths were recorded in Norwich, Halifax, and Wolverhampton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·4 and 22·5 per 1000 in the two preceding weeks, further rose to 22·6 in the week ending the 8th inst.; this rate was 1.3 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 13·4 and 14·1 in Perth and Leith, to 25·5 in Glasgow and 28·5 in Aberdeen.

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The deaths in the eight towns included 93 which were referred to the principal zymotic diseases, against 110 and 116 in the two previous weeks; 21 resulted from diarrhœal diseases, 19 from measles, 18 from scarlet fever, 18 from diphtheria, 11 from whooping-cough, 6 from "fever" (typhus, enteric, or simple), and not one from small-pox. The rates from these diseases averaged 3·8 per 1000 in the Scotch towns (against 2·3 in the twenty-eight English towns), and ranged from 0·0 in Perth to 4·7 in Aberdeen and 5·5 in Glasgow. The 19 fatal cases of measles showed an increase of 5 upon the number in the previous week, including 12 in Glasgow, 5 in Aberdeen, and 2 in Dundee. The 18 deaths from scarlet fever, including 15 in Glasgow, were fewer by 7 than those in the previous week, and the deaths referred to diphtheria, which had been 17 and 20 in the two preceding weeks, declined again to 18 last week, of which 6 were returned in Glasgow, 4 in Dundee, 3 in Aberdeen, and 2 in Edinburgh. Seven of the 11 fatal cases of whooping-cough (but half the number in the previous week), and 5 of the 6 of "fever" (also but half of the number in the previous week), occurred in Glasgow. The 21 deaths attributed to diarrhœal diseases showed a decline of 2 from those in the previous week, but exceeded the number in the corresponding week of last year by 4. The 119 deaths referred to acute diseases of the respiratory organs in the eight towns showed a further increase of 7 upon recent weekly numbers, and were 28 above the number in the corresponding week of last year. The causes of 60, or 11 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 30·2, 26·8, and 24·7 per 1000 in the three preceding weeks, rose again to 25·3 in the week ending the 8th inst. During the first six weeks of the current quarter the death-rate in the city averaged 27·0 per 1000, whereas it did not exceed 18·8 in London and 17·8 in Edinburgh during the same period. The 170 deaths in Dublin last week showed an increase of 4 upon the number in the previous week, and included 18 which were referred to the principal zymotic diseases, against 29 and 25 in the two previous weeks; 8 resulted from scarlet fever, 6 from diarrhœa, 1 from measles, 1 from diphtheria, 1 from "fever" (typhus, enteric, or simple), 1 from whooping-cough, and not one from small-pox. These 18 deaths were equal to a zymotic rate of 2·7 per 1000, the rate from the same diseases being equal to 2·2 in London and 1·5 in Edinburgh. The deaths from scarlet fever, which had been 12 and 10 in the two previous weeks, further declined last week to 8; the fatal cases of "fever" and whooping-cough were also fewer than those in the previous week. The 6 deaths from diphtheria, however, exceeded the number in the previous week by 2. Four deaths resulted from violence and 44 were recorded in public institutions. The deaths of infants showed an increase, while those of elderly persons were fewer than in any recent week. The causes of 20, or nearly 12 per cent., of the deaths registered during the week were not certified.

VITAL STATISTICS OF JAMAICA.

The fifth annual report of the Registrar-General of Jamaica deals with the vital statistics of that island during the year ending September, 1883. We must once more protest against these reports relating to years ending with the third quarter of each year, thus in great measure destroying the value of their statistics for comparative purposes. The population of this island, which was 580,804 at the last census in 1881, is estimated to have now increased, by excess of births over deaths, to 600,000; this increase during the twelve months under report amounted to 10,735. The rate of marriages did not exceed 4·9 per 1000, but showed an increase upon still lower rates in previous years. The condition of elementary education in Jamaica may be inferred from the fact that 49 per cent. of the males and 69 per cent. of the females who married during the year signed the marriage register with a mark. The birth-rate in the year was 41·5 per 1000. The low marriage-rate in part explains the fact that no fewer than 61 per cent. of the births registered during the year were illegitimate. The death-rate of the island during last year did not exceed 23·0 per 1000, but the 13,397 deaths showed an increase of 1523 upon the number in the previous year. The deaths included 3695, or 27·6 per cent., of infants under one year of age, and 5555, or 41·5 per cent., of children under five years of age. Measured by the proportion of deaths under one year to births, infant mortality was equal to 153 per 1000, which, considering the tropical climate and the large proportion of illegitimacy, may be considered low. In the town of Kingston, however, infant mortality was equal to 226 per 1000, and slightly exceeded, as is pointed out in the report, the mean rate in Liverpool during the eight years 1870–77. It is noteworthy as evidence of the insanitary condition of Kingston, the capital of Jamaica, that the deaths exceeded the births by 718 during the five years ending September, 1883. As regards the causes of death in Jamaica, the information, although given in considerable detail, is bereft of most of its value from the fact that medical certificates are obtained in so small a proportion of the deaths. During the year under report professional certificates of the causes of death were only obtained in 2459 cases out of 13,397 deaths. It follows, therefore, that in 81 per cent. of the deaths recorded in Jamaica during the year under report no trustworthy information as to the cause of death was obtained. In face of the unsatisfactory nature of the return of causes of death, it appears to be under consideration whether the present detailed statistics of causes of death should be maintained. It may be hoped that means may be found to increase the proportion of certified cases rather than to discontinue these statistics. It is important from a public health as well as from a statistical point of view to secure an increased proportion of medical attendance in Jamaica, and this will be more probably attained by means of the attention drawn to such statistics as are now given, than by discontinuing them. In the early days of registration in this country the proportion of uncertified deaths was nearly as large as it now is in Jamaica, whereas it is now reduced to 4 per cent.

Correspondence.

"Audi alteram partem."

"LAWN TENNIS LEG."

To the Editor of THE LANCET.

SIR,—I read with much interest Dr. Wharton P. Hood's paper in your issue of Oct. 25th on the above subject. I met with the accident he describes more than twenty years ago. I was running to overtake a messenger when I felt the sharp pain in the calf of my leg, and should have fallen on the ground had there not been some iron railings to which I clung. I limped home, and reached my house about an hour after the receipt of the injury. The calf of my leg was swollen and tense, and on running my finger down the leg it entered a sulcus, giving exquisite pain. I put my leg into a bucket of hot water, which gave relief, but when I tried to walk a few steps the pain was so great that I found progression difficult. As the pressure of my hands relieved the pain, I applied a calico bandage from the instep to the knee. To my delight I found I could walk well and without pain. I wore the bandage for a fortnight, and was not kept at home a day. As I was ignorant of the nature of the injury I had met with, I searched for information in books. I found a paper in the seventh volume of the Transactions of the Medico-Chirurgical Society by the late Mr. James Wardrop read May 23rd, 1815, in which the injury is well described and the treatment advised by Dr. Hood inculcated. Two cases are given in illustration.

I am, Sir, yours truly,

CLEMENT HAWKINS, F.R.C.S.

Cheltenham, Nov. 5th, 1884.

DOUBLE WOUNDING OF TWO PARTS OF A LIMB.

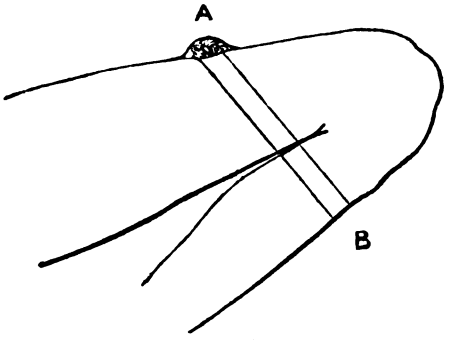
To the Editor of THE LANCET.

SIR,—The following case may be of some interest in relation to Brigade Surgeon Hinde's report of a gunshot wound of the hand and upper arm in THE LANCET of October 25th.

Some years ago I saw a young gentleman who had received the charge of a fowling-piece in his lower extremity. There was a wound of entry on the anterior part of the inner face

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of his leg, one of exit on the posterior part of the same surface. This having been looked to, he complained of stiffness in front of the thigh, where I found a lump of small shot under the skin. On searching to find how they got there, I discovered a wound of entry on the back part of the inner face of the thigh and a hollow between it and the shot; so we had two wounds in the leg and a transverse subcutaneous passage; one wound in the thigh with an obliquely



A, Charge of shot. B, Wound of entry.

ascending hollow to the place of lodgement of the shot. Let anyone bend his leg to the full extent on the thigh, and he will at once see that the line of the course of the charge becomes a straight one, as in the above diagram, though the two lines of traverse were so distinct and differing in direction in the straight position of the limb.

I am, Sir, yours truly,
W. W. MOXHAY,
November, 1884. Surgeon, Royal Berks Hospital.

DEATH DURING THE ADMINISTRATION OF METHYLENE.

To the Editor of THE LANCET.

SIR,—I beg to report the following case of death under methylene.

John B——, aged nineteen, a miner, was injured six months ago by an explosion of gunpowder while he was "tamping" a hole. A number of pieces of stone were blown into his arm, and his right ulnar nerve was divided. On Sept. 19th, he was put under methylene in this hospital, and several pieces of stone were removed. On that occasion he took the anæsthetic perfectly well. On Oct. 17th he was brought into the theatre for suture of the ulnar nerve, when methylene was given on a leather mask. The patient took the anæsthetic badly from the commencement, struggling violently, and it was with difficulty that anæsthesia was induced. The pulse during the induction was good, but on the commencement of the operation the patient became rapidly cyanosed, and the heart's action suddenly ceased, the pulse having given no indication of danger.

A post-mortem examination was made by order of the coroner, when the right ventricle was found full of blood, and the left ventricle slightly hypertrophied and contracted. The valves of the heart were quite healthy.

I may mention that a sample of the methylene used was tested, and found to be pure.

I am, Sir, yours faithfully,
W. A. BUCHAN, M.D., House Surgeon.

South Devon and East Cornwall Hospital, Plymouth, Nov. 4th, 1884.

EXAMINATION OF ARMY MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—I do not see that the valuable suggestion made in your issue of the 25th ult., on the examinations for army medical officers, has attracted the attention it deserves.

With regard to the new examination for Surgeons-Major you offered two suggestions, one of which the revised circular issued last month has anticipated, and concerning which therefore no more need be said. The other, and to my mind far the more important of the two, is still a suggestion, and nothing more. It is this: that it should be possible for surgeons-major to take the examination earlier than after twenty years' service. This seems to be a most judicious proposal and if carried out would remove the only reasonable objection that can be alleged against the examination. That it is a reasonable objection there can be no doubt. As it stands now, an officer has hanging over him this ordeal for years, and he cannot get through it until he is over forty. Why should this be? The average individual in the forties is taken up with the practical side of things, and to have to undergo yet another examination at such an age is an anachronism which must be particularly irritating. He is called upon to renew the days of his youth without being able to feel young. There is a time for everything, and in the fitness of things that for examinations should end with a man's eighth lustrum at furthest. Why should it not be taken after fifteen years' service instead of twenty, and so at once get rid of the only other remaining objection to the examination? I commend this to the consideration of your readers; and in connexion with your remarks of the 26th ult., on the elderly surgeons-major, who are close on fifty and yet must undergo examination, no doubt the new rules press hardly. I would say to them take a broad view of the subject. As the principle underlying these examinations is recognised as a sound one, it follows that in the interests of the State they should be carried out in practice without delay. Individual interests must yield, but the officers may depend upon it that evidence of good practical knowledge, the natural outcome of their experience in various climates, will be the thing looked for in the examination, and least of all will it be one of books and cramming.

I am, Sir, yours truly,
Nov. 2nd, 1884. G.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

HOSPITAL ACCOMMODATION IN NEWCASTLE AND GATESHEAD.

AN important meeting was held at the Newcastle Infirmary on the 6th inst. to receive the report of a special committee appointed to consider the subject of increased room for patients. The committee recommended very strongly the erection of a new wing on the present site, and in connexion with the existing building; this, if carried into effect, would admit of 100 new beds being put up at an expense of probably £25,000. Lord Ravensworth (who presided) supported the recommendation, and thought that extension of the present building was far more feasible and economical than any project for removal of the infirmary, or, in other words, the erection of a new building. Dr. Gibb also advocated very strongly the retention and extension of the present building. Dr. Heath, on the other hand, along with others, was strongly opposed to the present building, which he thought was objectionable from many points of view, and showed with much force that the present objections would increase rather than diminish, and the removal of the building would have to be ultimately faced whatever were done at present. It cannot be disputed that the situation of the Newcastle Infirmary is about as bad as it could be, regarded from a sanitary or hospital point of view, surrounded as it is by a cattle-market goods station of the North-Eastern Railway, and receiving pollution of its atmosphere from the smoke of the Tyne, and from the evacuations of many of the factories of Newcastle and Gateshead. Dr. Newcombe of Gateshead writes to our papers to point out that the time is ripe for the extension of the Gateshead Dispensary into an hospital for that borough, and he contends that the wants of the public would be better fulfilled, instead of spending a large sum of money on enlarging the Newcastle Infirmary, by building a permanent one in Gateshead in the midst of a teeming population. Many will agree with Dr. Newcombe as to the absolute necessity for a hospital in Gateshead, but the whole question is opened now, and is certain to be fully gone into, and I shall endeavour to make you aware of the feeling on the subject as regards both sides of the Tyne.

SMALL-POX IN THE CITY OF DURHAM.

There is as yet no sign of any subsidence of the small-pox epidemic in Durham, which has become very serious and is having a disastrous effect on the trade of the place, a matter of much consequence at the present time. A public meeting has been held calling on the sanitary authority to provide adequate hospital accommodation, and the Dean and Chapter

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of Durham have offered to assist in the way of providing a suitable site for an infectious hospital. Dr. Barron, the medical officer of health, has stated that the disease had abated neither in extent nor in strength; this might be inferred from the fact that, of twenty-one deaths which had been ascribed to small-pox, no less than fifteen had occurred in the month of October. Dr. Barron has all along urged upon the authority the duty of providing a hospital, and at one time his advice appeared to have been taken; but then, again, the authority, in the strangest possible manner, rescinded its own motion on the subject. Now, however, it is felt that the pressure of public opinion will prove too strong for this stolid and inert body.

NORTH RIDING INFIRMARY, MIDDLESBRO'.

A meeting of governors of the North Riding Infirmary was held last week to fill the appointment of house-surgeon. There were no less than thirty-nine applications for the post; out of these the house committee made a selection of four, and from these an election took place by ballot. The choice of the governors fell upon Dr. Fraser of Edinburgh, who was elected by a large majority.

THE LATE MR. JOHN TAYLERSON, M.R.C.S., WHITBY.

The recent death of Mr. John Taylerson of Whitby has deprived that town of its oldest practitioner, and one of its most prominent medical men. Mr. Taylerson was appointed medical officer for the workhouse as far back as 1838, so that he would be also one of the oldest Poor-law medical officers in the kingdom. I mentioned Mr. Taylerson's declining health a short time ago, when he received a useful testimonial from his fellow-townsmen, with many expressions of sympathy from them in his affliction. The late gentleman was distinguished by his kindness to his poorer patients, and some time ago, when a movement was made to curtail the supply of stimulants to the workhouse, he plainly told the guardians that to do so with his feeble patients would be to shorten their lives, and left the responsibility with the guardians; a course they were reluctant to take, and here, I believe, the subject ended.

Newcastle-on-Tyne, Nov. 10th

GLASGOW.

(From our own Correspondent.)

OPENING OF THE MEDICAL SCHOOLS.

THE various medical schools of this city are now in the full swing of their winter work. At the University the session was opened by a most thoughtful and interesting address by Professor Leishman on preliminary education, the medical curriculum, and the general spirit in which the work of student and practitioner should be done. Under the latter head his remarks were unusually plain and to the point. He deprecated the cry for legislative protection against quacks; so long as there was no limit to human credulity there was no possibility of suppressing quackery. There were quacks within as well as without the pale of the profession, and he took it that the moral turpitude of these was even greater than that of the bolder rascal who could not shelter himself behind the robe of a professional title. Speaking of the profession generally, he said that as practised by some, indeed he might confidently say by many, the profession merited all that could be said in its favour; but they must not fancy that the mere registering of their names, which legally constituted them medical practitioners, necessarily entitled them to share in the encomiums which the conduct of some had called down on the profession as a whole. There was this, he thought, to be said in favour of their calling, that it was one in regard to which it might confidently be asserted that any man might command moderate success—or, if they preferred to put it in that way, a moderate livelihood. He knew of no profession, of no department of commercial life, in regard to which the same might be said with equal confidence. But certain preliminary conditions were essential to success, however moderate, such as energy, punctuality, sobriety; while habits the opposite of these almost certainly led to failure.

At the Andersonian College the introductory address was delivered by Dr. Thomas Barr. After a few words of welcome and advice to the students, the lecturer entered on the discussion of certain matters which he hoped would soon engage the attention of Parliament. He said that education was an important thing no doubt, but the people required as yet to be educated as to the value of good health. To a working man a good constitution was really of more account than the three R's. He would therefore urge the electors to call for legislation in the following directions:—The compulsory inspection and supervision of drainage, water and milk supplies, the purification of the air of large cities by freeing them as far as possible from smoke and chemical vapours which generally covered them as a pall, increase of air-spaces in cities, and instead of having closely built double rows of black buildings, to have the houses built on open sites, with spaces adjoining planted with trees and flowers, in which the wives and children of the operative classes could take the air instead of having in many cases to go to the inaccessible outskirts; the controlling of the erection of dwelling-houses so that they might at least be as comfortable as reformatories or barracks; the compulsory registration of cases of sickness, and the protection of people against infectious disease; the purification of rivers; and the compulsory education of children in matters relative to health. In conclusion, he said that before another year the medical school might be removed westwards, and the old Andersonian building entirely devoted to the teaching of science.

At the Royal Infirmary School, Dr. J. Glaister, after cordially welcoming the students, delivered an address on a matter of very great importance—namely, the necessity for legislative reform in regard to uncertified deaths in Scotland. Uncertified deaths, he said, had a tendency to lead to the commission of secret crime or culpable neglect. The present state of things had not been overlooked, for municipal authorities, medical corporations, and medical societies had all made representations in order to have the number of uncertified deaths lessened; and as the question had now come again to the front it ought to be pushed to an issue. Having said that the State ought to be able to account for the death of every unit of the population, and that the larger the number of uncertified deaths under a given system of legal registration the greater the evidence there was that the machinery was not being worked effectively, and that there existed some defect in the law which required alteration, Dr. Glaister proceeded to state that in 1882, in Glasgow, nearly 9 out of every 100 deaths were uncertified; in Aberdeen nearly 4; in Greenock 10; in Leith nearly 11; and Perth 6½. If they took a series of years, from 1881 to 1883, he found that the total number of uncertified deaths was declining. In Glasgow, in 1882, the total number of uncertified deaths amounted to 1137; Aberdeen, 85; Greenock, 162; and South Leith, 91. In order to show how much Glasgow had improved in the last twelve years the lecturer mentioned that in 1872 the uncertified deaths numbered nearly 23 out of every 1000 deaths; or, in plain figures, 3281 people died the causes of whose deaths were not known. The change for the better had been mainly due to the operation of the Friendly Societies Act.

DR. RUSSELL ON DISINFECTION.

In a paper read recently by Dr. J. B. Russell, on "Disinfection," we find him returning to simple washing as the most easy and practical means of disinfection. Speaking of its efficacy as a disinfecting process he says, "I am able to establish my opinion from the experience of many years, during which this has been the sole method of disinfection applied by the sanitary department of Glasgow to all washable articles. We have during the last ten years washed in the same washing-house over a million of articles of every sort infected by every variety of contagion known in this country. Everything has been done exactly as any good housewife would do it, only in a place provided for the purpose, and with ample supply of water and steam, and recently with mechanical aid. Blankets and woollen articles have not been boiled; all others have. The most crucial fact is this, that there has never been a single case or suspicion of a case of interchanged disease—e. g., of small-pox—appearing in a house from which clothes had been removed on account of scarlet fever or typhus. In short, I am convinced that in every case the result was obtained for which the operation of washing was undertaken." An apparatus for disinfection by high-pressure steam had to be discarded, as this fixed in the fabrics all kinds of stains from animal matters, such as blood, fæces, pus, &c.

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THE LORD RECTORSHIP.

The lamented death of Mr. Fawcett has rendered vacant the office of Lord Rector of Glasgow University. To avoid a contest for the office, the students' Conservative, Liberal, and Independent Clubs unanimously requested Mr. Robert Browning to accept the rectorship, but he declined. Mr. Matthew Arnold's name was then proposed, but the Clubs failed to agree on the matter. Finally, a unanimous requisition was sent to Mr. E. L. Lushington, LL.D., D.C.L., who was long the occupant of the Greek chair in the university. Should he accept nomination, his return is certain. The election must take place not later than Nov. 15th.

IRELAND.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At the recent examinations for the Second Professional Examination of this College a large number of the candidates were unsuccessful; and as it would be an extreme hardship for these candidates not to be re-examined until July next, applications for a Supplemental Examination were last week brought under the notice of the Council. It is expected that the latter body will grant a Supplemental Examination to take place next March, and also give credit for the lectures and hospital taken out this session. Under the new scheme of the College, the examinations take place at certain periods—viz., July and October; and supposing a student to be rejected in the latter month, he cannot take out any lectures or hospital for that session, but, losing an entire year, must await the examination of the following July. If the extra examination be refused, those unsuccessful at the recent examinations will almost to a man leave the College, and obtain diplomas from other licensing bodies. Complaints have been made by many that some of the examiners do not confine themselves as strictly as they might to the subjects prescribed in the curriculum for the diploma of the College, and if this be correct the Council should undoubtedly interfere and prevent a recurrence of the evil.

MEATH HOSPITAL, DUBLIN.

Last week the annual dinner of old past students and governors of the Meath Hospital was held at the Shelbourne Hotel, presided over by Dr. William Moore, ex-president of the College of Physicians. The meeting was a very successful one, the toast of the evening, "The lecturer of the day, Professor Rawdon Macnamara," being proposed by Dr Cameron, vice-president of the Royal College of Surgeons, and suitably acknowledged. I may add, as an interesting fact, that in 1776 one of the first entries in the earliest minute book of the hospital, which was then located in Earl-street, states that the annual dinner of the governors took place at three o'clock at the Phœnix, in Werburgh-street, the cost of the dinner being 2*s.* 8½*d.* each.

"THOMPSON MEMORIAL HOME."

Situated in the district of Magherafelt, near Lisburn, the Home, erected to the memory of the late Dr. William Thompson, is now almost completed. The deceased was a distinguished surgeon, and enjoyed a most lucrative practice, and as a fitting tribute to his memory his family have raised a Home for convalescent patients, as the late Dr. Thompson had often regretted the want of an institution of the kind. The Home stands on some nine acres of ground, handsomely planted, while the cost of building, furnishing, and fitting up the hospital will be about £20,000, a similar amount being allocated as an endowment fund.

MEDICAL ETIQUETTE.

A very disagreeable circumstance connected with one of our city hospitals, in which the resident surgeon and one of the visiting staff were engaged, was the subject of comment in medical circles this week. I do not deem it necessary to enter into the particulars of the dispute, but will merely remark that hostility between the colleagues of a hospital must be prejudicial to the general interests as well as to the students of any institution in which it occurs. Would that it were the only hospital in Dublin where such a condition of matters exists.

Dr. J. Magee Finny has been elected President of the University of Dublin Biological Association for the ensuing year.

The Rev. S. Haughton, M.D., has been granted by the Royal Irish Academy a sum of £15 in supplement of a grant of £35 to defray the expenses of calculation of sun-heat co-efficients and radiation.

Dublin, Nov. 11th.

PARIS.

(From our own Correspondent.)

THE LATE DR. FAUVEL.

I HAD just posted my letter of last week reporting the serious illness of Dr. Fauvel from double pneumonia when I heard of his death—that is, in the afternoon of Wednesday last, the 5th inst. Dr. Sulpice-Antoine Fauvel was born in 1813. He took his degree in 1840, and was for a long time physician to the Hôtel Dieu, from which post he retired only five or six years ago, when he attained the age limited for hospital physicians. He was, however, retained on the honorary list in recognition of his valuable services. He was a member of the Academy of Medicine since 1869, and was elected its vice-president this year. He was for many years Inspector-General of the Sanitary Department of France, which appointment he resigned only three months ago owing to failing health. But it was more as a hygienist than as a practising physician that he had distinguished himself. It will be remembered that, at the outbreak of the cholera epidemic at Toulon, Dr. Fauvel expressed himself to the effect that the disease was not the Asiatic cholera, but the sporadic form, that consequently it was not imported but engendered by local causes, and that it would not extend beyond a very limited zone. This opinion he held to the day of his death, notwithstanding that events have proved that he was wrong in his prognostications. At the various discussions on the subject in which he took part, either in person or in writing, he met with vehement opposition, some of his opponents being amongst his best friends and former pupils; yet nothing could convince him, and he lived just long enough to know that the cholera had not only extended to other parts, but that it had reached Paris itself. This, I am told, affected his health, and contributed in no small measure to the development of the disease which carried him off in three days. Dr. Fauvel had acquired a great reputation and authority on all questions touching public sanitation. He was the representative for France at two International Sanitary Congresses; the first was held at Constantinople in 1867, and the second at Vienna in 1874, when the conclusions adopted at Constantinople were overthrown, in spite of Dr. Fauvel's efforts to maintain them. In 1881 new regulations respecting the maritime sanitary arrangements of the French ports were published in the official journal, the measures recommended being those decided upon at the Vienna Congress, and are now in vogue. In practice Dr. Fauvel confined himself more especially to the treatment of phthisis and contagious affections. His researches on the nature and progress of epidemics of cholera, of the plague, of typhus, &c., raised him to the rank of an epidemiologist of the first order. He was a man of peculiar disposition and rather reserved in his manner. A *confrère* the other day, speaking of the deceased physician, observed to me: "Il était très estimé, mais pas aimé," which I thought very expressive of the feeling entertained towards him. He was Officer of the Legion of Honour, and had many other foreign decorations conferred on him. He leaves three daughters and two sons, one of whom has just taken his degree and promises to be a distinguished biologist, if one may judge from the papers he has already submitted to some of the learned bodies in Paris.

THE LATE DR. HENNINGER.

Dr. Henninger, one of the youngest agrégés of the Paris Faculty of Medicine, has just died. His death will be considered a great loss to science, as he was a promising young man. He took his degree only in 1878, and yet he held many distinguished positions. He presided over the Section of Chemistry at the Scientific Congress recently held at Blois. He was a favourite pupil of the late Professor Wurtz, for whom he acted at the School of Medicine during his illness. Soon after he had taken his degree he was promoted, after a brilliant competitive examination, to agrégé

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of the Faculty, on which occasion he wrote a remarkable thesis on the action of soluble ferments on albuminoid substances. He was also Professor at the Municipal School of Chemistry. Dr. Henninger was the author of several works on biology and on chemistry, among which may be cited the Synthesis of Orcine, and another on Erythrite. He was also one of the coadjutors of M. Wurtz in his construction of his great Dictionary on Chemistry.

THE CHOLERA EPIDEMIC.

The cholera is at last in our midst, and though not unexpected, it has taken the Parisians by surprise. It cannot be said that they are terror-stricken, but they are in the state of excitement common to them in any great event, such as a revolution or a war. Cholera is everywhere the topic of conversation, and the newspapers are taken up with avidity. The disease is officially reported to have broken out in Paris on the 4th inst., and yet it is now known that several cases had occurred in and about this city almost simultaneously with the outbreak of the epidemic at Toulon and Marseilles, but the fact was kept a secret. The disease seems to be of a mild form, and it is not confined to any particular district, though the first cases that occurred were in a narrow filthy lane in the Faubourg St. Antoine, which is generally inhabited by *chiffonniers* and the most degraded specimens, morally and physically, of civilised society; but how it got there it is impossible to find out, nor yet in the majority of the cases that have since occurred in other parts can any direct connexion be found between them to account for its spread by contagion. All possible precautions are being taken to prevent the extension of the disease, and printed rules for the guidance of the public are posted up in every quarter. Among the measures prescribed are, of course, the most scrupulous cleanliness in and out of doors, and the thorough disinfection of everything that has been in contact with cholera patients. Water boiled for drinking and other personal use is enjoined, as it is now admitted that water is the most ordinary vehicle of the germs of the disease. Official reports of the number of admissions and deaths are daily published, and the following is that given to the 11th inst:—

	Admissions.	Deaths.
November 4th	3	2
,, 5th	9	6
,, 6th	10	5
,, 7th	37	12
,, 8th	70	Unknown
,, 9th	185	51
,, 10th	119	50
,, 11th	152	56

At Nantes there have been forty-five fresh cases since Wednesday, the 5th, to Monday, the 10th inst., and there have been twenty-two deaths from the disease during that time. The last report from Yport, dated the 9th inst., states that there were then only seven cases under treatment. After an absence of three weeks the cholera has reappeared at Toulon, where it is reported that ten cases occurred on the 10th inst., of which three died. The disease broke out in a charity school situated in a street where it had been raging to a great extent.

THE NEW DIRECTOR OF PUBLIC ASSISTANCE.

M. Cazelles, Prefect of the Bouches-du-Rhône, who was named as the successor of M. Quentin as Director of Public Assistance, having declined the honour, Dr. Peyron, Director of the Asylum for the Deaf and Dumb, has been appointed to the office.

Paris, Nov. 12th.

THE SERVICES.

Owing to the drain upon the Medical Staff Corps, nearly one-third of its entire strength being now in Egypt, and in anticipation of other emergencies, instructions have been issued for the formation of a Militia Reserve of 1200 men. To form this reserve ten men will be selected from each battalion of Infantry Militia, and when a battalion is called up for annual training the men joining the Militia Reserve of the Medical Staff Corps will be placed at the disposal of the principal medical officer of the district to which the regiment is to be attached, and will undergo a course of training in all the duties appertaining to the Medical Staff Corps.

RIFLE VOLUNTEERS.—5th Durham: Lieutenant Charles James Sutherland is appointed Acting Surgeon.—18th Middlesex: Clement Godson, Gent., M.D., to be Acting Surgeon.—2nd Volunteer Battlion, the Royal Fusiliers (City of London Regiment): Acting Surgeon William Joseph Atkinson resigns his appointment.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council on Thursday last, a resolution from the Committee of Management of the Combined Physicians' and Surgeons' Examining Scheme was considered. The resolution was to the effect that it be recommended to the authorities of the two Colleges to proceed as early as possible to the appointment of examiners in accordance with the provision of Part II. of the Scheme.

Mr. Erichsen asked what had been done respecting the preparation of the new Charter, and it was answered that a new Charter had been drawn up by the standing counsel of the College, and was awaiting the changes that might arise from the consideration of the Recommendations of the Association of Fellows. The Recommendations of the Association of Fellows were presented and read, and will be taken into consideration at an extraordinary meeting of the Council, which is convened for Wednesday next. At the same extraordinary meeting Mr. Heath's motion respecting the mode of election of president will be considered. Respecting the appointment of examiners under the Combined Scheme, it was agreed to appoint the examiners in Anatomy, Physiology, and Midwifery; and Mr. Marshall proposed that the examiners in Anatomy and Physiology on the Conjoint Board may be selected from the Members of the College as well as from the Fellows. The appointment of the examiners was deferred.

Mr. Marshall gave notice of motion that at the next meeting of Council he will move that it be considered whether the fee for the diplomas granted under the new Conjoint Scheme cannot be reduced.

Mr. Jonathan Hutchinson, whose diploma of Member is dated May 21st, 1880, and who passed his examination in November, 1883, was admitted a Fellow of the College.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Lords on Monday, in answer to Lord Stanley of Alderley, Lord Carlingford stated that the managers of the school concerned had been written to by the Education Department respecting the death of Harriet Stocker from alleged over-pressure, and had been requested to give their view of the case, and to make whatever observations they wished upon it. This answer had not, however, yet arrived.

Quarantine.

In the House of Commons on Thursday, Dr. Cameron inquired of the Under Secretary of State for the Colonies whether it was true, as stated by a Madrid correspondent, that the authorities at Gibraltar have decided to impose twenty-one days' quarantine on all arrivals from Italy and France, counting from the day of departure, whether with clean bills or otherwise; and if so, whether, in view of the belief as to the uselessness of quarantine entertained and acted on by the Home Government, and the frequent remonstrances which this country had occasion to address to other nations regarding their quarantine regulations, he would instruct the authorities at Gibraltar to adopt precautions less at variance with the practice and policy of the United Kingdom.—Mr. E. Ashley replied that twenty-one days' quarantine was imposed on all arrivals from Italy. In the case of France, it was only imposed on particular vessels coming from French Mediterranean ports. The governor would be asked whether he could make some relaxation of the rule; but the Secretary of State was not prepared to require the local government to act on the opinions of the Home Government in such matters, in opposition to the very decided wish of the people there, and having regard to the peculiar position of Gibraltar.

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Captain of Orderlies C. Cook.

In answer to Mr. Justin M'Carthy, the Marquis of Hartington said that the rank of Captain of Orderlies is retained entirely for the benefit of the late Army Hospital Corps, who did not elect to join in the new rank of quartermasters under the Warrant of 1881. For this reason it was not necessary that they should be specified in the Royal Warrant, as the preamble provided for them. The abolition of the title in no way affected the position or the emoluments of the officer referred to in the question. He continues to hold the same position in the Medical Department as he held before, and is not in receipt of a lower rate of pay than that drawn by the other officers of his grade of service before they accepted the terms of the Royal Warrant of June 25th, 1881. In that Warrant the officers who accepted the new rate now draw a higher rate of pay than the quartermasters. The fact is, a captain of orderlies is not worse off than formerly, but his brother officers become better off by accepting certain conditions.

Medical News.

UNIVERSITY OF CAMBRIDGE. — At a congregation held on the 6th inst. the following degrees were conferred:—

M.D.—Herbert Tyrrell Griffiths, Trinity.
M.B.—Charles Arthur Morris, Gonville and Caius.
B.S.—Charles Arthur Morris.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 6th:—

Barrett, W. Peard, Bunwell House, Cheltenham.
Bell, W. Howard, Myddelton-square.
Dagg, Trevor Augustus, St. Bartholomew's Hospital.
Farr, Ernest, Gloucester House, Barry-road, East Dulwich.
Jones, Herbert Charles Walter, St. Bartholomew's Hospital.

The following gentleman also on the same day passed the Primary Professional Examination:—

Jones, Herbert Josiah, Middlesex Hospital.

SIR LYON PLAYFAIR has been appointed President-Elect for the next meeting of the British Association, to be held at Aberdeen in September next.

A COPY in bronze of a marble bust of the late Dr. J. Marion Sims has been presented to the New York Academy of Medicine by Dr. H. Marion Sims.

THE Mayor of Leamington, in commemoration of his re-election, has presented the local hospital with a donation of one hundred guineas.

SUPERANNUATION ALLOWANCE. — E. N. Sison, medical officer of the eleventh district of St. Luke's Union, has obtained a superannuation allowance of £70 a year.

SANITARY INSTITUTE OF GREAT BRITAIN.—At an examination held on Nov. 6th and 7th, twenty-seven candidates presented themselves, eight as local surveyors and nineteen as inspectors of nuisances.

MR. GLADSTONE has recommended that a grant of £300 be paid from the Royal Bounty Fund to Mr. George Smith, of Coalville, as an acknowledgment for his great services on behalf of the brickyard, canal, and gipsy children.

SEAMEN'S HOSPITAL.—The work of erecting a new chapel and of laying down fresh drainage has been commenced at this hospital. The cost will, it is estimated, reach the sum of £8850.

SALOP INFIRMARY.—At the anniversary of the infirmary held on the 6th inst. at Shrewsbury, it was announced that a legacy to the institution of £9000 had been bequeathed by the late Mr. Henry Spence, of Shrewsbury.

IN consequence of the prevalence of small-pox in the city, the authorities of Durham University have intimated to the students that they can commence the Christmas vacation as soon as they have completed the forty-six days necessary to enable them to keep term.

SANITARY ASSURANCE ASSOCIATION. — At the ordinary Council meeting of the Sanitary Assurance Association, 5, Argyll-place, W., on Monday last, Sir Joseph Fayrer in the chair, it was arranged for four lectures to be given on sanitary subjects during November and December, to which admission will be free.

DEATH FROM BICHLORIDE OF METHYLENE.—At Bedminster on the 7th inst., whilst a dentist was complying with a patient's request to use his painless dentistry process, in which bichloride of methylene was used, he observed that the boy's head dropped, that he turned pale, and that he was gasping for breath. A restorative was administered, but without success, and a medical man was summoned, but before his arrival death had occurred.

ST. JOHN AMBULANCE ASSOCIATION.—Mr. John Furley, deputy chairman of the Association, opened the winter session at Sevenoaks on Friday evening, the 7th inst., Mr. Multon Lambard in the chair. Sevenoaks, though comparatively a small town, has done well as regards ambulance work. The second place out of London to form a centre, it has an organised ambulance corps, and material, such as stretchers &c., deposited for use at the railway station and other suitable points.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY. — At a meeting of the Medico-Chirurgical Society, held on the 5th inst., the following gentlemen were elected office-bearers for the ensuing year:—President: Dr. Henry D. Littlejohn. Vice-Presidents: Drs. David Wilson, J. Batty Tuke, and John Duncan. Councillors: Drs. George Hunter, J. Jamieson, Graham Brown, J. M. Cotterill, Rattray, A. Moir, Mr. Johnson Symington, and Dr. Macbride. Treasurer: Mr. A. G Miller. Secretaries; Drs. MacGillivray and James. Editor of Transactions: Dr. William Craig.

DEATHS DURING ANÆSTHESIA.—An inquest was held on the 10th inst. at Spitalfields on the body of a boy who had died whilst under the influence of ether administered at the Metropolitan Free Hospital for the purpose of performing an operation for bronchocele. The jury returned a verdict of death by misadventure. At Derby, too, on the 10th inst. an inquest was held on the body of a boy who died in the infirmary from paralysis of the heart immediately chloroform was administered. The jury exonerated the medical men from all blame.

LONDON HOSPITAL MEDICAL COLLEGE.—The subjects of the course of six lectures which will be delivered by Mr. Jonathan Hutchinson, the Emeritus Professor of Clinical Surgery, are as follows:—Monday, Nov. 24th, "On the Art of Note-taking and other Matters;" Wednesday, Nov. 26th, "On the Surgery of the Receiving Room;" Monday, Dec. 1st, "On Head Injuries, Hernia, and other Matters;" Wednesday, Dec. 3rd, "On Dislocations and Fractures;" Monday, Dec. 8th, "On the Treatment of Wounds," &c.; Wednesday, Dec. 10th, "On Retention Cases, Injuries to Viscera," &c. &c. The lectures will be delivered at 3 P.M. each day.

MEDICAL MAYORS.—The following members of the medical profession have recently been elected chief magistrates of their respective towns:—Arundel: Mr. Philip Hubbert, M.R.C.S., L.S.A. Bacup: Dr. W. J. Clegg. Blackpool: Mr. W. H. Cocker, M.R.C.S., L.S.A. Glastonbury: Mr. J. A. Bright, M.R.C.S., L.S.A. Grimsby: Mr. T. B. Keetley, M.R.C.S., L.S.A. Hanley: Mr. J. Charlesworth, M.R.C.S., L.R.C.P. Hartlepool: Mr. J. Rawlings, M.R.C.S., L.S.A. Honiton: Mr. J. C. Macaulay, M.R.C.S., L.S.A. Liskeard: Mr. W. Nettle, M.R.C.S, L.S.A. Southport: Mr. G. A. Pilkington, M.R.C.S., L.S.A. Tewkesbury: Mr. J. H. Boughton, M.R.C.S. West Bromwich: Dr. T. Underhill. Wilton: Mr. C. R. Straton, F.R.C.S.

LOWER THAMES VALLEY DRAINAGE.—The Local Government Board have announced their intention to hold an inquiry at Kingston-on-Thames on the 19th inst., with reference to the proposed dissolution of the Lower Thames Valley Main Sewerage Board, and to hear the applications of the constituent authorities seeking separation from that board. Sir Joseph Bazalgette has submitted his report on his scheme for the sewerage of the united district. It is proposed to collect the sewage of the various contributory places by sewers converging to a pumping station situated either on the east of New Malden, or on a still more eligible site near Sutton-common-road; there to be raised into a tunnel sewer, the dimensions of which will be 6ft. 6in. by 4ft. 4in., and through which it will be carried by gravitation, the sewer having a fall of nearly 3ft. to the mile, right away to a piece of land already provisionally secured at Crossness, lower down but immediately adjoining the metropolitan reservoir, there to be disposed of in conjunction with the sewage of London.

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Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ALEXANDER, FRED. WILLIAM, M.R.C.S., has been appointed Assistant Medical Officer to the Workhouse Infirmary and Schools, Mile-end Old Town Hamlet, vice Atkins.

BLUMER, W. PERCY, F.R.C.S.E., has been appointed Honorary Surgeon to the Monkwearmouth and Southwick Dispensary, vice James Murphy, M.D., resigned.

BROWN, WILLIAM PERRIN, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Skircoat District of the Halifax Union, vice Scholefield.

CÆSAR, JULIUS, L.R.C.P.Ed., L.R.C.S.Ed., L.S.A.Lond., has been appointed Medical Officer for the Workhouse and Eastchurch District of the Sheppey Union, vice Bland.

CLOUGH, MORLEY EDDISON, L.R.C.P.Ed., M.R.C.S., has been appointed Government Medical Officer at Gympie, Queensland.

FRASER, T. A., M.B., C.M., M.R.C.S., has been elected House-Surgeon to the North Riding Infirmary, Middlesbrough.

GARMAN, JOHN COOPER, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Brewood District of the Cannock Union, vice Duce.

GELL, THOS. SILVESTER, M.D., C.M.Ed., M.R.C.S., has been appointed Medical Officer to the Hodgkinson Goldfields District Hospital, Thornborough, Queensland.

GIBB, WILLIAM, M.B., has been appointed House-Surgeon to Barnhill Hospital, Glasgow, vice Thos. S. Dunn, M.B., resigned.

GRIMSDALE, T. B., B.A., M.B., M.R.C.S., has been appointed Assistant Medical Officer to the Children's Infirmary, Liverpool.

HAXWORTH, WALTER, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the West Breton and Crigglestone Districts of the Wakefield Union, vice White.

LESLIE, WILLIAM BURNUP, M.D., C.M.Aber., has been appointed Medical Officer for Fetteresso Parish, Stonehaven, vice Edmond, resigned; also Medical Officer of Health of the Stonehaven Rural Sanitary District.

LITTLEWOOD, J. O., L.R.C.P.Lond., M.R.C.S., has been appointed Consulting Surgeon to the Walsall Cottage Hospital.

SHEARS, CHARLES H., L.R.C.P.Lond., M.R.C.S., has been appointed Assistant-Surgeon to the Liverpool Eye and Ear Infirmary.

STEWART, ROTHSAY C., M.R.C.S., L.S.A.Lond., has been appointed Assistant Medical Officer to the Peckham House Asylum, Peckham, S.E., vice Dr. W. G. Coombe, resigned.

TAYLOR, WILLIAM, M.D.Ed., L.R.C.P.Ed., M.R.C.S., Physician to the Glamorganshire and Monmouthshire Infirmary, has been appointed Medical Officer to attend the Workmen at the Llanishen Waterworks.

WATTIE, ALEXANDER, M.B., C.M., M.A., of Strathdon, Aberdeenshire, has been appointed Medical Officer for the Parish of Stronsay, Orkney.

WHOLEY, T., L.R.C.P.Lond., M.R.C.S., has been appointed House-Physician to the London Hospital, vice A. F. Peskett, M.R.C.S., L.S.A.Lond.

Births, Marriages, and Deaths.

BIRTHS.

DAWSON.—On the 5th inst., at Hyde-park-street, the wife of Yelverton Dawson, M.D., of twin-boys.

PRICE.—On the 6th inst., at Sloane-street, S.W., the wife of Robert J. Price, M.R.C.S., of the Middle Temple, of a daughter.

PRINGLE.—On the 4th inst., at Aberdeen-terrace, Blackheath, S.E., the wife of R. Pringle, M.D., H.M.'s Bengal Army, of a daughter.

RENDALL.—On the 9th inst., at Maiden Newton, Dorset, the wife of William Rendall, M.R.C.S., of a son.

SMITH.—On the 11th inst., the wife of Clement M. Smith, M.D., of Argyll Hall, Torquay, and St. Enoder, Cornwall, of a daughter.

MARRIAGES.

MITCHELL—DUNN.—On the 9th August., at Adelaide, South Australia, James Thomas Mitchell, M.B., of Port Adelaide, to Edith Mary, eldest daughter of the Hon. John Dunn, of Hackney, Adelaide.

STOKES—HINUBER.—On the 30th ult., at St. Thomas's Church, Lymington, Surgeon-Major Alexander Haldane Stokes, Medical Staff, to Mary Williamina Chaloner Hinuber, youngest daughter of the late Adolphus Hinuber, Esq.

DEATHS.

CHILCOT.—On the 11th September, at Wardell, Richmond River, New South Wales, James Chilcot, M.R.C.S., only son of J. W. Chilcot, Esq., of Southsea, after a few days' illness, aged 37.

HAFFENDEN.—On the 9th inst., at Holland-road, Kensington, Ada E., widow of D. A. Haffenden, F.R.C.S., aged 40.

HUNTER.—On the 11th inst., at Isleworth, Richard Henry Hunter M.R.C.S., aged 46.

KIDD.—On the 31st ult., at Hamilton, Bermuda, Leonard Kidd, Deputy Surgeon-General, Army Medical Staff, in his 55th year.

RIDSDALE.—On the 11th inst., at Endsleigh-gardens, Gordon-square, N.W., George Ridsdale, M.D., aged 69.

SIMPSON.—On the 11th inst., at Inverleith-row, Edinburgh, Magnus Simpson, M.B., C.M., youngest son of the late Sir James Young Simpson, Bart., aged 32.

VEITCH.—On the 10th inst., in London, John Toswill Veitch, M.D., of Brahrang, Warrington-road, Ipswich, late Colonial Surgeon, Penang, aged 67.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, November 13th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Nov. 7	29·86	S.W.	56	54	..	62	49	·14	Bright
,, 8	30·35	W.	44	42	..	55	46	·09	Hazy
,, 9	30·32	S.W.	54	47	..	57	42	..	Hazy
,, 10	30·63	E.	51	48	..	56	48	·02	Foggy
,, 11	30·45	S.E.	47	45	..	51	45	..	Foggy
,, 12	30·29	S.E.	48	45	..	50	45	..	Overcast
,, 13	30·34	E.	47	45	..	..	45	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

TO OUR CONTRIBUTORS.

WE do not propose to publish this year a list of intending contributors to our volumes for 1885. The response to our annual circular has in the past been so liberal that we have with difficulty been able to keep pace with the supply of papers and communications with which we have been favoured. We shall be glad, however, to receive, for private record, the names of medical officers of public institutions, as well as of physicians and surgeons in private and general practice, who are desirous of furnishing us with clinical lectures and reports of cases of interest for our forthcoming volumes.

"IRRITATION OF THE SKIN FOLLOWING THE APPLICATION OF VASELINE AS A SURGICAL DRESSING."

To the Editor of THE LANCET.

SIR,—Some recent experiences induce me to write and confirm the opinion of Mr. A. W. Mayo Robson of Leeds, given, under the above title, in your issue of the 8th inst.—viz., that it may be "some skins present the same idiosyncrasy to preparations of vaseline as others do to any application of tar."

Since the time that vaseline has been in common use, both as a simple emollient and as a vehicle for various ointments, I have on several occasions convinced myself that it has had an irritating effect of no inconsiderable kind, amounting to the production of "severe dermatitis." From repeated observations I have made I am unable to come to a conclusion other than that certain persons do possess this predisposition or idiosyncrasy. I may add that I have witnessed similar results in connexion with simple benzoated zinc ointment. It may be that some of your readers have noticed that cutaneous ulcers have occasionally been rendered so painful by this latter ointment also that its use has had to be discontinued.—I am, Sir, yours faithfully,

Finsbury-circus, Nov. 10th, 1884. J. HERBERT STOWERS, M.D.

Anxious Enquirer.—We should be inclined to doubt the fact, and have therefore no explanation to offer.

Mr. Niven.—The first number of the "Chronicle" was noticed in our issue of the 1st inst.

TOBACCO.

To the Editor of THE LANCET.

SIR,—Amongst your numerous readers there must be several who are interested in the above subject. I should be very grateful if they would kindly acquaint me with the names of works on the subject, or any information referring thereto. I am, Sir, yours truly,

Sidcup, Kent. FRANK SHAPLEY, M.R.C.S.

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EXTRACT OF MEAT.

Since the publication of our annotation on this subject in our issue for Nov. 1st, we have ascertained that the Liebig Extract of Meat Company actually use from 40 lb. to 42 lb. of lean meat to produce 1 lb. of their extract, instead of 34 lb., as stated by us.

L.R.C.P. thinks that when men receive their qualifications they should be informed of the necessity for registration, and of its advantages.

THE INDIAN CHOLERA COMMISSION.

To the Editor of THE LANCET.

SIR,—In your issue of Sept. 20th, received here by last mail, under the heading of "The Indian Cholera Commission," Surgeon-Major D. D. Cunningham gets brevet rank as Surgeon-General and Sanitary Commissioner with the Government of India, and has attributed to him the character and views of the actual incumbent of these senior appointments, Dr. J. M. Cuningham.

Dr. D. D. Cunningham is now Professor of Physiology and Pathology in the Medical College here, but was for many years associated, in carrying on cholera investigation, with Dr. T. R. Lewis, whose able paper on Koch's bacillus appears in your issue under comment.

The appointment by the Secretary of State of Drs. Klein and Gibbes to supersede the perfunctory arrangements of the Indian Government for continuing cholera investigation in this country gave some hopes that the subject would get the attention it deserves. It is now, however, understood that these gentlemen, after a short sojourn in Bombay, having exploded Dr. Koch's theory, are about to return home. If the object of their visit was only to upset Dr. Koch, an end apparently attained by Dr. Lewis, the result is not satisfactory to India, and whatever new theory they may have established it will be a matter of regret if they do not strengthen their position by personal acquaintance with, and careful investigation of, the numerous cholera localities throughout India. The origin of the disease is too mysterious to be demonstrated by a *veni, vidi, vici* visit to Bombay. I am, Sir, yours truly,

Calcutta, Oct. 13th, 1884. VIBRIO.

* In our annotation on "The Indian Cholera Commission," in THE LANCET of Sept. 20th, by an oversight, Dr. D. D. Cunningham, who was appointed a member, was confounded with Dr. J. M. Cuningham, the Surgeon-General and Sanitary Commissioner.—ED. L.

A RARE CASE.

To the Editor of THE LANCET.

SIR,—The case mentioned by Dr. P. W. Macdonald in THE LANCET of the 8th inst. under the above heading reminds me of a similar one.

A young lady aged about twenty-one years, the subject of asthma, was seen by me some time ago suffering then from incipient signs of phthisis of the right side; in course of time a little tumour formed on the front of the chest, between the third and fourth ribs, which soon broke, discharging a good deal of very unhealthy pus, it continuing for weeks and being aggravated by the patient coughing, when it had all the appearance of being pumped. Her health and surroundings improving under the use of the chemical food I stopped my visits; then, after about a month, I was asked to see her, as her mother said another abscess was forming. On examination I found my patient no worse as far as looks, strength, and auscultatory signs went; in fact, she was in better spirits, felt stronger, and free from fits of asthma. The place above-mentioned was still open, but discharging little, if any, pus, but on the posterior part of the same lung and over the ribs was a swelling, which in the course of a week or so I opened; this continued to discharge a good deal, being increased on coughing and while the lower one was open the top ceased. I now endeavoured to close the top opening, leaving the lower one to carry off the matter, but nature thought otherwise, and healed up the lower opening, leaving the top one open to this day. I should say that during all this time the patient got better, and though I have not seen her lately I often hear that she continues well and gets out on horseback, &c. I cannot give exact dates for the above facts, as I did not note them down, but it is clearly impressed on my memory.

I am, Sir, yours truly,

Ashburton, Devon, Nov. 11th, 1884. WILLIAM FRASER, M.B.

Nemo.—£1 1*s*. for each day of attendance at the trial. A medical man cannot claim a fee for detention on Sundays, not even for hotel expenses. For further details, consult THE LANCET of April 26th, 1884, and Taylor's Medical Jurisprudence.

Mr. F. D. Perrott had better consult our advertising columns.

CASES SIMULATING EMPYEMA.

To the Editor of THE LANCET.

SIR,—In your report of a discussion which took place at the Pathological Society on the 4th inst., on a case of caseous pneumonia simulating empyema, Dr. Lanchester is reported to have said: "No other condition than pleuritic effusion and this form of consolidation could give rise to bulging of the chest walls, displacement of organs, and the other physical signs." If he refers to page 200 of vol. xiii. of the Clinical Society's Transactions, he will find that I have there recorded a case of intrathoracic sarcoma in which all the signs of a fluid effusion into the pleural cavity were simulated. In this instance, as in the case reported by Dr. Hobson to the Pathological Society, several attempts were made to evacuate what, relying on the physical signs and symptoms, was considered to be an empyema.—Your obedient servant,

Queen Anne-street, W., Nov. 11th, 1884. H. P. DE HAVELAND HALL.

NEW VIEWS ON THE ACTION OF OPIUM IN CHOLERA.

THE following ingenious explanation of the efficacy of opium in cholera, based on the hypothesis that the disease is due to the presence of a bacillus, is given by Dr. Kispert in *El Genio Medico-Chirurgico*, Sept. 30th, 1884. He remarks that opium has a powerfully preventive action in cases of choleraic diarrhœa, and is the only remedy of avail in the most severe attacks. As to its *modus operandi* in cholera, he suggests three possible explanations:—1. Since opium obviously cannot have any direct action on the cholera bacillus, it may, by arresting peristalsis and exudation, produce such a modification of the intestinal contents that the bacilli are deprived of the conditions necessary to their development and vitality. 2 Koch has shown that the comma bacilli cannot exist in putrefying fluids containing the products of metabolism of other bacteria, especially of putrefactive bacteria. The arrest of the normal intestinal transudation by opium probably favours the development of putrefactive organisms, which thereby tend to exclude or destroy the comma bacilli. 3. A further hypothesis may be based on the researches of Metschnikoff (Untersuchung über die intracelluläre Verdauung bei Wirbellosen Thiere, Wien; und Untersuchung über die mesodermaten Phagocyton einiger Wirbelthiere.—*Biolog. Centralbl*, No. 18) of the part played by living cells of the organism—the "phagocytes" of the intestine, which, during the arrest of transudation by opium, may enter into a struggle for existence with the comma bacilli.

Mr. W. Eddowes.—We think the nurse cannot claim further remuneration; but the point is a legal one, which we do not undertake to decide.

Ajax.—Barnes, West, Duncan.

CLEARING TRACHEOTOMY TUBES.

To the Editor of THE LANCET.

SIR,—Having had a very considerable experience in the operation of tracheotomy, perhaps you will allow me to offer a few remarks on the above subject.

Most of the letters which have appeared in the medical journals and the lay press since Dr. Rabbeth's lamented death indicate on the part of their writers, as you justly observe, considerable ignorance of the nature of the problem to be solved. Tracheotomy and its after-treatment in most London hospitals appear to me to be too much a matter of tradition. In more than one hospital I know that the tubes and appliances are of the most antiquated description, and the after-treatment of these cases is frequently too little regarded. I would strongly advise every house-surgeon to read Mr. Parker's little work, "Tracheotomy in Laryngeal Diphtheria." It contains within a short compass practical instructions of great value, and all the greater because they are the outcome of a large and varied experience. Speaking from my own experience, I should say that in hospital practice it ought to be extremely rare to have a case of tracheotomy in which it could be necessary to apply the mouth for suction purposes either to the tube or to the tracheal opening. It indicates, as a rule, faulty methods and instruments. At the time of the operation, and before the tube is inserted, the wound should be kept open with dilators, and all obstructing membrane removed. This is best done by passing feathers into the trachea and twisting them round. The membrane is thus easily withdrawn, or so loosened and detached that it is expelled by the reflex cough excited. Should the membrane have extended into the main bronchi or tubes, or should much blood have been inhaled, and respiration seem to be impeded from these causes, then it is almost useless to suck the tube with the mouth. Some form of elastic tube should be passed down the trachea, and suction with the mouth or a syringe practised. The "tracheal aspirator" designed by Mr. Parker, and figured in his book, is a most simple and useful appliance for this purpose. It consists of a small glass cylinder, to one end of which is attached a flexible tube, and to the other a glass mouthpiece. The glass cylinder can be half filled with antiseptic wool, and thus all risk of infection is prevented. An alkaline spray greatly assists the solution and expulsion of membrane. In the absence of the tracheal aspirator, an elastic catheter may be used, or a piece of drain-tube. I have frequently used a combination of catheter and elastic tube. A few layers of antiseptic gauze or other material placed over the sucking end of the catheter make the proceeding practically safe. An easily worked syringe might be attached to the catheter, though the mouth is the most efficient suction machine. It is in the subsequent stages of a tracheotomy case that these last measures are chiefly demanded. But whenever during the course of a tracheotomy case the breathing becomes at all seriously impeded, the tube should be at once removed, the wound kept open with dilators, and the trachea feathered and sprayed.

The question whether such risk as Dr. Rabbeth ran need have been incurred depends very much on individual opinion, on the nature of the case, and on the conditions under which the operation was performed. I am decidedly of the opinion that a medical man is not justified in thus risking his own life, with all its possibilities, for the sake of a child suffering from a very fatal malady. I am quite aware that if everyone held this opinion and was actuated by it there would be fewer medical heroes and martyrs. Probably I may not always act up to this opinion, though I am not likely to change it.—Yours truly,

J. SCOTT BATTAMS,
Resident Medical Officer, East London Hospital for Children.

Nov. 4th, 1884.

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Boaz.—The conditions of Fellowship of the Royal Society are scarcely matters within our special knowledge as medical journalists. Scientific distinction ought, of course, to be the only condition; but it must be admitted that the honoured letters F.R.S. are sometimes seen to follow names which with the greatest charity can scarcely be associated with advance in science. M.D.'s of foreign universities are never, as far as we know, admitted *ad eundem* to British universities; we cannot answer for Colonial ones.

Mr. F. D. Hamilton.—The handbill is beneath notice.

"HONORARY HOSPITAL SURGEONS IN BOMBAY."

To the Editor of THE LANCET.

SIR,—In your issue of Oct. 4th appeared an annotation under the above heading. As I was one of the honorary surgeons referred to, will you permit me to point out a few inaccuracies in the article? I ask this indulgence in self-defence, on your own motto, *audi alteram partem*.

1. Your article states that "the appointment of honorary surgeons to the Goculdas Tejpál Hospital has proved a complete failure." If this statement is correct, it is no less wonderful, seeing that in this city of Bombay we have about 120 non-official medical men in private practice from whom to choose honorary surgeons. Further, at a special general meeting of the Bombay Medical Union, this Union numbering about eighty medical men, held on Sept. 20th last, the following proposal was unanimously carried: "That the Bombay Medical Union regrets that the Government of Bombay should have deemed it advisable to discontinue the scheme of appointing honorary surgeons to the Goculdas Tejpál Hospital, and that a memorial be sent by the Union to Government, soliciting them to give a further trial to the scheme of employing honorary surgeons, as advocated by Dr. Cook, Principal of the Grant Medical College." All the speakers at that meeting were emphatic in declaring that the scheme of employing honorary surgeons in the Goculdas Tejpál Hospital had not failed. Still further, the Town Council, a few days ago, emphasised the opinion of the medical profession in Bombay by recommending the Corporation to reject the proposal of the Surgeon-General to appoint to the Hospital a highly paid medical officer of the Indian Medical Department, the hospital being not a Government institution, but a civic one. The only question on this subject that remains to be decided by the Corporation is whether to appoint paid or unpaid men. The source whence they are to be drawn is to remain unchanged—namely, from non-official medical men. As far as I can learn the views of members of the Corporation, the vote that will be passed will be in favour of honorary men.

2. You observe that the chief complaint made against the late honorary surgeons by Mr. Hojel was that "they come and go as they like." This report was made secretly and behind the backs of the honorary surgeons. As soon as it saw the light the honorary surgeons defended themselves in the local press and before the Corporation, and pointed out that the only irregularity of attendance which had occurred, or that could be proved, was the irregular attendance of Mr. Hojel.

3. You have also stated that Mr. Hojel communicated with the honorary surgeons "both verbally and in writing" in regard to the irregularity of attendance. I have long ago challenged Mr. Hojel to produce the writing referred to; but he has failed to do so, even after I publicly pronounced his statement to be untrue.

4. You say correctly that Mr. Hojel did "fix the hours of attendance of the honorary surgeons," but you do not say that he failed to fix the time of his own attendance. A daily record of the attendance of the honorary surgeons was kept for a period of five months; and I have been so much satisfied with my own regularity of attendance that I have submitted the daily hospital record of that attendance to the Corporation, to disprove the gratuitous charge which Mr. Hojel has made against me.

I am, Sir, yours faithfully,

Bombay, Oct. 24th, 1884. ROLAND BLANEY, M.A., M.B.

*** We consider the appointment of honorary surgeons to have been a failure, because the interests of the patients suffered from "the want of regularity and punctuality" in the attendance of these gentlemen, as stated in the Government resolution of Feb. 15th. This was so marked in the case of one of them that he was not reappointed, and new regulations were adopted to ensure regularity in future. We shall be glad to learn that these regulations have had the effect of protecting the patients from the neglect arising from want of punctuality, and that there is now no ground for complaint on this head.—ED. L.

Dr. C. Theodore Ewart.—The Secretary of the Aberdeen University Club is Dr. R. W. Burnet, 94, Wimpole-street, W.

Messrs. Mertens and Co.—We fear we shall be unable to find space for the article.

THE INCOME-TAX.

To the Editor of THE LANCET.

SIR,—I should like to know through your columns if there are many surgeons in the same plight as myself. I have received notice from the Income-tax Commissioners that I am assessed on £600 and shall have to pay £12 10s. Six hundred pounds is the very outside of my gross average receipt, and yet I have to keep an assistant, two horses, and a groom, besides purchasing drugs, bottles, instruments, &c. Is a surgeon not entitled to deductions for these as necessary expenses in carrying on his profession.

I am, Sir, yours truly,

Nov. 5th, 1884. IN MORSU DIABOLI.

THE LADIES' LAVATORY COMPANY.

DR. DAVID JOHNSON, calling attention to the institution of a lavatory for ladies in Oxford-street, writes as follows on the subject:—"In France, or say, Paris, as its great city, they manage these things better; or perhaps the general sense is less prudish; or gradually the caprice of common sense and common humanity has been less hampered by social proscriptions. The result in this particular, however, is a wiser freedom and official hospitality of this kind which we may well envy. The Ladies' Lavatory Company is a step in the right direction. The lavatory already constructed in Oxford-street is well and tastefully arranged, with a good entrance, convenient dressing-room, and every other requisite. I trust all who take an interest in this subject, as a mere matter of health, will visit this little establishment, and find themselves in duty bound to assist in organising a series of lavatories to be placed in well-considered centres of usefulness throughout the City, Strand, Oxford-street, and other great thoroughfares. It is a matter for consideration whether our vestry boards might not regard such conveniences for both sexes and all classes generally as falling within the scope of their administration, and out of parish rates provide institutions capable of being even a source of profit to the parishes in which they are located. Many things they do, and do well perhaps; but this, as a supplement to the suspicious iron cages, they have left undone. Fountains have been instituted here and there, as have cabmen's shelters and fire-escapes, and railway stations have been utilised; but the right kind of thing in the way of lavatories has yet to be put plentifully about, and near the places of popular resort."

L.S.A.—Notes on Nursing, by Miss Nightingale; Lectures on General Nursing, by Eva C. E. Luckes.

Mr. Cursham Corner.—Coxeter and Son: Leclanché's Elements.

"A NEW FORM OF SUTURE."

To the Editor of THE LANCET.

SIR,—Although in my opinion little good ensues from the public display of controversy between two correspondents, because each in endeavouring to set forth his own ideas and opinions not only ignores those of his opponent, but fails oftentimes to grasp them, yet I consider the letter from Dr. J. Ward Cousins to you, in reference to 'A New Form of Suture," requires to be answered. That gentleman says he has used a "very similar" suture, but after many trials has discarded it. Had it been exactly similar, under these circumstances, I myself might also discard it. Granting, however, that the practical application of such a thing proved troublesome at first, I do not at all agree with Dr. Cousins that such a principle of fixation of wounds, as suggested by me, is so hastily to be thrown aside by such negative assertions as he uses.

I adhere to my former expressions, that the ordinary means of closing wounds is objectionable, and that sometimes ulceration and strangulation of tissue ensue at the points of suture, even when skilful fingers manipulate. Where a wound, for instance, is deep and transverse to the axis of a muscle the degree of strain borne by the threads, if efficiently applied, is considerable, to which is often added inflammatory tension. The chief objections, however, to the thread suture are, the fact of its forming a foreign body, and that in a mechanical sense its mode of action is defective. A wound requiring sutures is generally a cavity, and, with more or less parallel walls when approximated, the scientific means of closing it would be a parallel and continuous force some distance from it, which would bring their entire surface into contact; and this could be best done by curved and sharpened wires such as I suggest. Thread as usually applied is an interrupted and partially misdirected force, binding up portions of the wound and leaving other parts unapproximated, which form nests for retrograding products.

I beg to refer Dr. Cousins to my first communication, where my expressions are qualified, and where I do not claim that such a suture as I suggest could supersede the old one, except in certain cases and situations; although if ever superseded, it must be by a principle here in question—viz., the closing of wounds by a force applied outside their cavity parallel to their walls, and ensuring universal and continuous apposition. With this object the suture may be of a form depicted by me, or, to ensure more easy introduction, each side may be separated with mechanism to keep them in situ.

Lastly, the application of a piece of cork or thread to the points is not essential, and were it so, would be easy and simple.

I am, Sir, your obedient servant,

Finsbury-park, N., Oct., 1884. JAMES MACMUNN.

AN APPEAL.

To the Editor of THE LANCET.

SIR,—You very kindly inserted an appeal for my father, S. F. Scarnell, L.A.C., in THE LANCET of Dec. 15th, 1883. Will you oblige him again this year? He enters his ninetieth year on Dec. 3rd, and has been bedridden ten years and three months. His sole income is £20 per annum, from the Medical Benevolent Fund. He practised for nineteen years at St. Osyth, Essex, and in Vassall-road, Brixton, for twenty-five years, where he was taken ill in 1865, since which time he has not been able to practise.

I am, Sir, yours respectfully,

19, Dante-road, Newington-butts, S.E., Oct. 31st, 1884. E. D. BAUERS.

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M. B., B.S. Lond.—Parkes' Practical Hygiene, Wilson's Manual of Hygiene, Fox's Sanitary Examination of Air, Water, and Food, Douglas Galton's Healthy Houses, Buchan's Introductory Text-book of Meteorology, Huxley's Physiography, Wanklyn's Water Analysis and Milk Analysis, Registrar General's Annual Reports and Supplements, Reports of the Medical Officer of the Local Government Board, also Recent Special Reports, Orders, Memoranda, and Model Bye-laws. For sanitary law it would be well to get the original Acts—viz., Public Health Act (1875), Water Act, Interment Act, Artisans and Labourers' Dwellings Acts and Amendment, Rivers Pollution Act, Food and Drugs Acts, Vaccination Acts, Canal Boats Act, Alkali Acts, Factories and Workshops Acts; and refer later, if necessary, to the Annotated Summaries by Smith, Husband, or Hime.

Mr. Barbarach.—We are not acquainted with any monograph on the subject.

ORIGIN OF TYPHOID.

To the Editor of THE LANCET.

SIR,—In the annotation on "Typhoid Fever in South Australia," in your last issue, you remark that the Central Board of Health are obliged to admit that it has been impossible hitherto to trace the cases to their origin.

Where typhoid arises in isolated places, or in fresh centres, apart from human infection, may I be allowed to direct the attention of my professional brethren, through the aid of your widely read journal, to a probable cattle origin of the disease. While practising in the Cape Colony I had many opportunities of observing cases of typhoid arise *de novo*, and in every case the presence of cattle manure infecting the air or water, or both, was the only explainable cause of the disease. Numerous instances were given in an article on the Genesis of Typhoid Fever in THE LANCET of Dec. 8th, 1883. My own belief is that typhoid is as essentially a cattle disease as cow-pox, communicated from cattle to man in the first instance, and afterwards spread by means of the excretions of persons affected with it. It is very difficult to prove the matter in densely populated countries; but, if true, evidence from the Colonies in its favour should be forthcoming. The question is, Does typhoid ever arise *de novo* where no cattle are present?

I am, Sir, yours truly,

Brighton, Nov. 10th, 1884. HENRY LAWRENCE, L.R.C.P.L., &c.

J. D. H.—A summary of Pasteur's experiments was given in our issue of Aug. 23rd last. A good, though rather brief, account of hydrophobia will be found in Quain's Dictionary.

"CORROSIVE SUBLIMATE AS A SURGICAL DRESSING."

To the Editor of THE LANCET.

SIR,—As I am in a position to controvert the interpretation placed on Sir Joseph Lister's case by Dr. Badcock, perhaps you will allow me to reply to his letter under the above title.

I recently excised a female breast for scirrhus. The wound was dressed with Hartmann's wood-wool, enclosed in his corrosive sublimate gauze, so as to form a large pad. When this was removed, on the third day, copious vesicles covered the whole of the skin under the pad, just as described by Sir Joseph Lister. I have never employed eucalyptol gauze; but the exact similarity of its action, as witnessed by Dr. Bantock, to that of corrosive sublimate tempts me to question whether the latter had not somehow entered into the manufacture of the sample used by him. I have since, in two or three instances, tried smearing the skin with an egg beaten up and rendered aseptic by sulphurous acid, and, so far, find that this entirely prevents the irritating effects of the sublimate. I should like to mention that the above case showed an additional peculiarity. When the dressing was first removed the skin beyond the limits of the pad was covered with a red, patchy, erythematous-looking rash. On the following day this had spread downwards to the thighs, and on the next day to the feet. Some also appeared on the arms and hands. It then faded slowly away. That this quasi-erythematous eruption was not ordinary erythema was proved, I think, by the healthy condition of the patient, by the aseptic course of the wound, and by the normal temperature.

I am, Sir, yours faithfully,

Norfolk-terrace, Bayswater, Nov. 2nd, 1884. HERBERT L. SNOW.

"LANCING THE GUMS."

To the Editor of THE LANCET.

SIR,—As I notice some doubts expressed as to the necessity for, and the efficacy of, lancing the gums of infants in your last issue, I beg to record my own experience in favour of it.

Some years ago a child of mine, a very fine boy, aged about one year, was, to us, very unaccountably ill at Bangalore, Madras, with feverish symptoms, hot head, constant crying, &c. He was then only, and well, nourished by his mother's milk. He was seen by the local medical practitioner, who, I think, never looked at his mouth, and nothing was done for him. By accident, on account of my own health, I was sent to Madras by the same practitioner, who was attending me, and, of course, my family went with me. Immediately on arriving there I sent for the local practitioner, for myself principally, who, on seeing the child, said, "Oh, he is suffering from his teeth," and straightway proceeded to lance the gums. The child improved from that time, and is now a strong young man. I am perfectly persuaded that had I not gone to Madras I should have lost the child.—Yours truly,

Nov. 11th, 1884. EXPERTO CREDE.

Reform Club.—The humorous letter of our anonymous correspondent who writes from the above address seems to show that an elementary knowledge of anatomy may lead to prudery. We commend to him and his friends the motto, "Honi soit qui mal y pense."

Dr. B. Beer (Vienna).—Yes, if not too long.

Mr. Welsford.—There is no novelty in the suggestion.

RESTORATION OF FUNCTION IN DIVIDED NERVES.

To the Editor of THE LANCET.

SIR,—In your issue of July 19th you mention two cases of divided median nerve resected, tied, and cured by M. Tillaux, one of a few months' standing, and the other of fourteen years'. In the first case sensibility began to return two days after the operation, and in the other twenty-four hours after.

Allow me to state that about ten years ago I published, in the *Edinburgh Medical Journal*, a case of excision of the elbow joint, where the ulnar nerve was completely divided accidentally. I immediately joined the ends by transfixing with a catgut thread. There never was any suspension of either sensation or motion in any of the parts supplied by the divided nerve; and at that time I called attention to the extraordinary fact that a divided nerve, if at once brought into juxtaposition, would carry on its functions before there had been any organic union at all, just as a broken telegraph wire would convey the electric current if brought into apposition without being soldered. This is, as you have observed, certainly a new departure in our views of the functions of nerves, and I humbly claim to have been the first to have brought this interesting fact before the profession. The restoration of function was not immediate in M. Tillaux's two cases, and this I account for by the nerves divided being toned down even in their conducting power by want of use. We can scarcely suppose that the restoration of nerve function in the second case recorded was owing to organic union, as it appeared next day; all the more so if studied in the light of my own case, where it was restored immediately after the operation.

I am, Sir, yours truly,

Oct. 18th, 1884. JAMES P. BRADWELL, M.D., L.R.C.S. Edin.,

"M.B. EXAMINATION, UNIVERSITY OF LONDON."

To the Editor of THE LANCET.

SIR,—Observing in your last issue the questions proposed by a correspondent, I turned to my bookshelves for information respecting "unilateral hæmatokolpos." The first four English text-books referred to do not so much as mention the condition, and I could find no allusion to it in Quain's Dictionary. I therefore began to think it would be very unjust if a candidate for a pass should lose one-sixth of his marks through ignorance of "the anatomy and treatment" of such a case. But I looked further, and lo! in vol. x. of Ziemssen's Cyclopædia I found an allusion to such a condition in a few lines, which just suffice to show how rare it is. I next found a paragraph about it, though under a different name, in a Scotch manual which, I have heard, is strongly recommended to his class by one of the examiners. I am also assured, but have not the book at hand to refer to, that the answer wanted is to be found in the same examiner's volume of Clinical Lectures.

I am, Sir, yours faithfully,

Nov. 8th, 1884. A LONDON TEACHER.

Accoucheur.—There is no remedy in the present state of the law. The only course likely to lead to a remedy would be to refuse certificates in such cases, and so compel their investigation by a jury. But this would be a painful procedure on the part of any medical man.

R. N. J. is referred to an article in THE LANCET of Aug. 23rd last.

Dr. Robert Fowler.—If possible, next week.

THE LIBRARY OF THE COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—On going to the College of Surgeons this afternoon I was disappointed to find the library closed, and on inquiry I learnt that it was shut every Saturday at 1 P.M. Now, as Saturday afternoon is the only time that a large number of young medical men, like myself, have the leisure for uninterrupted reading, it is somewhat hard upon us to be denied this privilege. I understand the Royal College of Surgeons to be a comparatively wealthy corporation, apart from the fact that they have recently been left a legacy of nearly a quarter of a million of money. The expense of keeping the library open on Saturday afternoons would involve at most only a few pounds a year, and the benefits that would accrue to members of the College would, I am sure, be incalculable. They may, perhaps, now that their attention has been drawn to it, consider this proposal. I am, Sir, yours truly,

Nov. 8th, 1884. A MEMBER.

WIRING THE PATELLA.

To the Editor of THE LANCET.

SIR,—I have found the same difficulty in passing the wire through the second fragment as Mr. Ogier Ward seems to have met with in the cases he reported in your issue of Nov. 1st; and like him I have had a trochar and cannula made, with a bradawl point, so that the cannula being left behind in the bone after the bradawl is withdrawn the wire can be readily passed. I showed this instrument at a medical meeting at Bath in July last. I now write to direct the attention of surgeons who may be contemplating wiring the patella to the practical usefulness of this instrument.—I am, Sir, yours faithfully,

Clifton, Nov. 10th, 1884. NELSON C. DOBSON, F.R.C.S.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from — Sir E. Lechmere, London; Dr. De Havilland Hall, London; Mr. W. Fraser, Ashburton; Dr. De Maurel, Paris; Dr. W. H. O. Sankey, Baschurch; Mr. W. J. Spence, Bradford; Dr. Bartley, London; Dr. Isambard Owen, London; Mr. S. C. Lawrence, Birmingham; Mr. Paramore, London; Mr. A. S. Ormsby, London; Mr. Woods, Wandsworth; Dr. Sizer, Brooklyn; Dr. Glaister, Glasgow; Dr. Prudden, New York; Mr. Molony, Tredegar; Messrs. Smith and Stevens; Mr. John Lucas; Mr. St. Clair, Buxton; Dr. Niven, Manchester; Mr. Greenish, London; Mr. C. Corner, London; Mr. S. Snell, Sheffield; Mr. W. J. Barkas, Sydney; Mr. T. W. Jones, Ventnor; Mr. Shirley Murphy, London: Dr. J. MacMunn; Dr. Blaney, Bombay; Dr. Sergeant, Camberwell; Mr. Morgan, Lichfield; Dr. Jones, Llanfair; Mr. Jesse, Henbury; Mr. Russell, Liverpool; Messrs. Robertson and Scott, Edinburgh; Mr. Fanrbridge, London; Dr. Rothera, Tottenham; Mr. Chillcott, Bristol; Mr. Davies, Newport; Messrs. Whitehead and Son, Appleby; Dr. Davies, Bridgend; Messrs. Maclehose and Son, Glasgow; Mr. McLaurin, London; Dr. W. Ewart, London; Dr. J. C. Crawford, London; Dr. Hickman, London; Dr. Gordon Holmes, London; Dr. Hudson, Leeds; Mr. Haslewood, Buxton; Dr. Herbert Stowers, London; Mr. Monier Williams, London; Mr. C. Bader, London; Dr. Latham, Cambridge; Mr. Adams Frost, London; Mr. Startin, London; Mr. Hadley, London; Mr. Munro Scott, London; Dr. Beer, Vienna; Dr. Corfield, London; Messrs. Fisher and Son, Strand; Messrs. Beal and Co., Brighton; Messrs. Southall and Co., Birmingham; Mr. Bowes, Elham; Messrs. Burgoyne and Co., London; Mr. Sawyer, London; Mr. Russell, London; Mr. Lever, Stratford-on-Avon; Messrs. Rigby and Sons, Rochdale; Mr. J. B. Pike, Loughborough; Dr. Van Ermengem, Paris; Mr. J. R. Whitley, London; Mr. Boyd; Mr. Hamilton, Sydenham; Dr. Aveling, London; Dr. J. H. Galton, London; Mr. Trueman Wood; Dr. J. W. Ogle, London; General Practitioner; Omega; Senex, Godalming; M.R.C.S.; A. B.; L.R.C.P.; E. C.; A London Teacher; Boaz; L. S. A.; E. H.; Rector.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Alioth, Geneva; Mr. Montgomery, Londonderry; Mr. Hodgson, St. Helen's; Mr. Reiley, Newcastle-on-Tyne; Dr. Cheesman, Cape Colony; Mr. Crassweller, Clapton; Mr. De Ceste, St. John's-wood; Mr. Oliver, Harrogate; Surgeon-Major Dobson; Mr. Constable, Cambridge; Mr. Law, Newcastle-on-Tyne; Mr. Lowland, Newcastle-on-Tyne; Dr. Mitchell, New Wortley; Messrs. Mackay and Co., Edinburgh; Mr. Walker, London; Mr. Coltman, Leicester; Mr. Wray, Newtown; Mr. Pennington, Hyde; Mr. Thomasz, Hythe; Mr. Lees, Redditch; Mr. Pritchard, Bristol; Mr. Husband, Leeds; Mr. Dess, Exeter; Mr. Worsley, Wigan; Mr. Skelton, Downand; Mr. Salmon, London; Messrs. Burghope and Co., Burnley; Mr. Grant, Birmingham; Mr. Smith, Dumfries; Mr. Ducannon, Glasgow; Mr. Buckle, Peterboro'; Dr. Geach; Mr. Kneebone, Bedford; Mr. Cytron, Mottram; Mr. Hime, Ilminster; Messrs. Bullock and Reynolds, London; Mr. Duncan, Glasgow; Mrs. Hay, Bournemouth; Dr. Heelas, Hampstead; Mr. Worsley, Standish-gate; Mr. Mayo, Great Yarmouth; Mrs. Moon, Brompton; Mr. Thorp; Dr. Davies, Newport; Mr. Maythorn, Biggleswade; Medicus, Normanton; Hibernia, Dublin; Medicus; Nox; Epsilon, Walsall; E. H. F.; N. W. P.; C. D. G. H.; Alpha; Medicus, Bradford; Fides, Edinburgh; W. J. C., Bath; Penybont; M B., Torrington-square; J. C.; W. E.; A. Z.; J. T., Bowness; L. N., Dublin; Nurse, Edinburgh; Rev. R. T., London.

Bristol Mercury, Dundee Advertiser, Alnwick and County Gazette, Nottingham Daily Guardian, Malton Messenger, Farm and Home, Light, Musical Opinion, La Cronica Medica, City Press, &c., have been received.

Medical Diary for the ensuing Week.

Monday, November 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Carrick: The Manufacture and Uses of Koumiss in Russia. (Postponed.)—Dr. Markham Skerritt (Clifton): The Conduction of Physical Signs in Diseases of the Lungs.—Mr. Noble Smith will show a case of cured Meningocele.

Tuesday, November 18.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Percy Kidd: Fatal Hæmoptysis from Bronchial Ulceration.—Dr. Carrington: Addison's Disease, with Cancer of the Liver and Supra-renal Capsules.—Dr. Norman Moore: New Growth in Stomach of a Child.—Mr. Sutton: Uterine and Ovarian Disease in Animals and Birds.—Mr. Knowsley Thornton: Hydronephrosis caused by Papillary Growths and Calculus.—Mr. Hopkins: Bones from a Case of Ataxia.—Mr. Treves: Two Specimens of Tumour of the Soft Palate.—Mr. Lane: Fracture of First Rib (card).

Wednesday, November 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, November 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.—Opening Meeting, 8 P.M. Address by Sir F. Abel.
HARVEIAN SOCIETY.—8.30 P.M. Mr. Thomas Bryant: The Mode of Death in Acute Intestinal Strangulation and Chronic Intestinal Obstruction.

Friday, November 21.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7.30 P.M. Mr. Alfred Spencer: Noxious Trades.

Saturday, November 22.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M

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The "Bowman" Lecture

ON THE

RELATION OF CERTAIN DISEASES OF THE EYE TO GOUT.

Delivered before the Ophthalmological Society of the United Kingdom, Nov. 18th, 1884, by

JONATHAN HUTCHINSON, F.R.S.

GENTLEMEN,—At the request of your Council I have the honour this evening to deliver the first "Bowman" Lecture. This lecture has been instituted with the design of gratefully commemorating the services of Sir William Boman to science, and more particularly those which he has rendered to this Society in his capacity as its first president. It is intended that the lecturer shall on each occasion undertake the investigation of some special subject in connexion with ophthalmology. I do not think that any more appropriate method could have been devised by which to pay respect to one of our very foremost workers. For myself, I can only say that I feel deeply the responsibility of the yet very agreeable duty which has devolved upon me, and could heartily wish that your Council had selected someone more capable of doing it justice. Having made this personal apology, I feel, however, that I shall best honour the name of Bowman by trying to imitate the example of his life, and proceeding at once, to the best of my ability, to deal with the subject in hand.

I take for the subject of my lecture the relations which exist between certain Diseases of the Eye and Gout. We shall have to classify several different forms of disease—for the most part, but not exclusively, inflammations of the iris—to describe their peculiarities and to examine the evidence which is forthcoming as to their real connexion with gout. The inquiry is an important one, for a gout taint is an extremely common occurrence in a large proportion of the British population. The investigation is also in many of its ramifications one of great intricacy and difficulty. Certain facts we shall, I trust, be able to establish with clearness; but respecting many others we shall not be able to get further than the stage of more or less confident inference. I had at one time intended to bring before you a good deal in the form of attempted proof—that is, of statistical tabular statements of fact. I have found, however, in the preparation of the lecture that the time at my disposal will not permit of more than a brief sketch of the whole subject, and I shall therefore, on compulsion, spare you much of the detail. It is, however, only just both to you and to myself to state that my arguments and assertions this evening will be based upon the careful examination of a lengthy series of recorded cases. A large part of these will be found given at length in vols. vii. and viii. of the Ophthalmic Hospital Reports, and the remainder I have in type before me, although not yet published.

Definitions of Gout and Rheumatism.—Before we proceed to inquire whether gout may be deemed to be the cause in some instances of such diseases as hæmorrhagic retinitis, recurring iritis, glaucoma, and others, it may be well to state that I wish to keep a clear distinction between gout and rheumatism. This distinction is in practice often very difficult, and sometimes quite impossible to draw, but for all purposes of accurate clinical pathology we must insist upon its existence. By gout I shall mean all states of health which are, whether directly or remotely, connected with the accumulation of lithate of soda in the blood as the result of overfeeding or defective assimilation.

Under the laws of inheritance of morbid tendency it may easily be the fact that a person may feel the effects of this condition in his parents, who may yet himself never exhibit it. We may have a form of inherited gout which is not associated in the patient with either lithiasis or lithæmia. Hence, as I shall have to show presently, some very peculiar forms of morbid action.

Thus it may perhaps be conveniently laid down that there are two fundamental conceptions of what gout is. They are not antagonistic, but rather in mutual coexistence. In practice the two methods of influence constantly modify each other.

What I may call the primitive conception of gout regards it as due to a state of the blood induced in part by errors in feeding, and in part by defects in assimilation and depuration. It has regard to the food, to the digestive power, to habits as regards exercise, and the integrity of the kidneys. In this form of dietetic or humoral gout the stage of lithæmia is essential, and the final product of deposit of urates in the tissues is almost equally so. We must, however, seek a wider vision than this. As an introductory stage to such wider view let us imagine the condition of a man who many years ago was subjected for a long period to the ordinary causes of primitive or humoral gout, but who for a considerable series of years has carefully avoided them. In such a person it is easy to see that although his blood may have been long kept free from excess of urates, yet, as the consequence of conditions of long duration in the past, his tissues may have received modification, and may be prone still to suffer in a peculiar manner when exposed to the ordinary exciting causes of disease. In particular they may be liable to grow old on a peculiar type. Not only are his tissues in general modified, but those of his nervous and vascular systems have probably been especially influenced. Hence the power of control over any process of inflammation, by whatever cause it may have been initiated, is peculiar and effective. If such a man sprain a joint it will not recover in the way it would have done had he never had gout, yet the joint may nevertheless be very far from assuming a typical gouty state. There may be no tendency whatever to the deposit of urates. Now, let us take another step in the attempt to give reality to our conceptions of the hidden influences under which the everyday phenomena about us are produced. Let us imagine that such a person as we have supposed—one who has suffered severely and through many years from humoral gout—becomes a parent. His offspring will inherit his tissues, his tendencies as regards digestion, kidney excretion, skin elimination, and all the rest. These will, no doubt, give a greatly increased proclivity to common typical gout should the cause of it come into play. They may, however, do much more than this. They may render their subject liable—quite independently of exciting causes, or with but little help from them—to forms of inflammation or of degraded nutrition, which are not unequivocal gout, but which are yet the direct consequence of it in his predecessors. The modification which is here inherited is, I suggest, of the tissues and not of the blood, though it is obviously very easy that the two may complicate each other. The subject of tissue modifications from inherited gout may easily become the victim of humoral gout as well.

Inherited Gout.—It is clear from this argument that we must be prepared to see inherited gout assume very different forms from those to which we are so well accustomed to in the primitive type. Permit me now to suggest that it is the clinical, or rather the social, fact that a not inconsiderable proportion of the well-to-do classes of the British population are born under the conditions which I have been supposing. The number of those who are the descendants of parents who have suffered from humoral gout is very large indeed, and, especially in our large towns, it is by no means restricted to the educated classes. We must be prepared, then, to encounter, not unfrequently, peculiar types of morbid action which derive their peculiarities from this association. It is the duty of the clinical investigator to carefully examine the evidence which is forthcoming as regards each before he admits its claim. Certain diseases of the eye for which this claim is with more or less confidence put forward will form part of our topics for discussion this evening. It may, perhaps, facilitate matters if I express at this stage the belief that most of the varieties of what is called rheumatic gout stand in this relation to true gout. This list would include lumbago, sciatica, neuralgia, crippling rheumatism, arthritis deformans, osteo-arthritis, many forms of iritis, and many cases of glaucoma. I by no means wish to suggest my belief that any one of these is in all cases in some degree dependent upon the inheritance of gout. Some of them are doubtless in not a few instances purely rheumatic, and this admission renders it desirable that I should say two or three words as to what our conception of rheumatism ought for the most part to be. Let me then hint that from our primitive idea of rheumatism I should like to exclude all causes having reference to food or assimilation, and to count only those which

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regard climate and weather, and especially exposure to cold and damp. The rheumatic diathesis, like that of gout, may become ingrained, and at the same time modified by hereditary transmission, and in this connexion it is easy to overlook its original causes, and even to believe that it may begin spontaneously, or in consequence of other influences than the true ones. The hereditary diathesis of rheumatism (arthritic susceptibility to weather) may easily coexist with that of gout (arthritic susceptibility to diet), and each of them or both together may combine in endless variety with other forms of morbid tendency. It follows that we have to study many hybrid or mongrel types of disease in more or less close connexion with them.

"Hot Eye," Irritable Eyes, Quiet Gout, &c.—There is a condition to which, for want of a better name, I have for long been in the habit of recognising as "hot eye." It is one of the many curious phenomena which attend quiet gout. I use the term "quiet gout" as distinct from acutely paroxysmal gout. In families liable to gout, for one person who becomes the subject of acute attacks of podagra, what is known as unequivocal gout, there are often half a dozen who are the subjects of minor symptoms which denote a similar tendency. In them the tendency never rises to sufficient height to induce a severe and characteristic paroxysm. They are nevertheless liable, after taking beer or wine injudiciously as to quantity or quality, to experience slight pricking pains in the joints, attended by lithic acid in the urine and other unmistakable signs of the diathesis. In many these symptoms occur in such invariable association with the causes suggested, that it is not possible to doubt as to their nature. The liability varies with the weather and time of year, and it often ends, unless precautions are taken, in a sharp attack in the great toe. The terms "suppressed gout," or better, "undeclared gout," are often used in reference to it; but since it is simply a minor form of the disease not in any way suppressed, and certainly not to trained observers undeclared, I prefer the term "quiet." Amongst the frequent occurrences which denote its presence are repeated short attacks of congestion of the eye. Usually one only is affected, but sometimes both. The conjunctiva becomes red, and the eyeball feels hot, and pricks, as if sand were in it. The attack may come on within half an hour of the meal which has disagreed, and it may last a few hours, or a day or two. Sometimes, owing to interference with the ciliary muscle, vision is slightly dim, and all attempts at accommodation are usually painful. Those who are liable to hot eye not unfrequently in the end suffer from iritis; indeed, it is not unfrequently an introductory stage to that disease. On the other hand, many are liable for years to very frequent attacks of it without apparently any risk of its assuming more serious proportions. In the intervals of the attacks the eye is usually quite well, and it is indeed its definitely paroxysmal character, its sudden development, and very complete and rapid disappearance, which especially mark its arthritic relationship.

In connexion with this subject it may be noted that not unfrequently those who suffer from unequivocal gout experience shoots of sharp pain in the eyeballs, the nature of which they well understand. A man, William B——, aged fifty-four, who had suffered much from gout, and whose father and four of his father's brothers had all had it, complained much of this kind of pain, yet he had never had iritis. When he was gouty he said he frequently had "darts of pain through the middle of each eyeball," and occasionally across the bridge of the nose.

A further practical note I must ask leave to make. It is to the effect that many cases of irritable hyperæsthetic and easily tired eyes in young persons are in association with inherited gout. I feel sure that in some of these cases we are in the present day in danger of pushing the recommendation of spectacles to an excess. Some slight degree of hypermetropia may be detected, and it is assumed to explain the irritability of the eye. Yet glasses do no good, and, in fact, only increase the irritation. In such cases, very often, the real malady is inherited gout.

Transverse Calcareous Bands of the Cornea.—I must admit, in the commencement of our investigation, that little or no evidence exists as to the deposit of urate of soda in any of the structures of the eye. I doubt whether it has ever been proved in any single case, although several observers have suggested its presence. I trust, however, that we are long past the stage of belief which regards such deposit as essential to a gouty inflammation. The nearest approach to proof of gout deposit has been made probably in the case of what are known as the transverse calcareous bands in the cornea. Sir William Bowman, in the year 1848, was, I believe, the first to publish cases of this kind, but the earliest case had been observed by Mr. Dixon. Valuable information respecting the disease has recently been collected and studied by Mr. Nettleship. I believe I may fairly sum up the present state of our knowledge by saying that no one has yet proved that the salt deposited is that of gout. It is usually calcareous. The disease occurs in persons very likely to suffer from gout, and sometimes with a gouty history, but we are not as yet justified in holding that this earthy deposit is in direct connexion with that diathesis.

Arthritic Iritis.—It will be admitted without dispute from anyone that there are several forms of iritis which are arthritic in their origin—in other words, they occur to those who are liable to attacks of inflammation of joints, and the inflammations of the eye occur under conditions similar to those which excite the inflammations of the joint. Both are in some cases prone to occur in an acute but transitory attack. Both are very apt to recur after periods of complete immunity, whilst in other cases both may assume a chronic, persisting, and destructive form. With such features of similarity we are justified in assuming, as indeed is done by all authors, that they are due to the same causes. The problem which I have to consider to-night is whether these causes belong to gout or to the rheumatic class; whether they are sometimes the one and sometimes the other; and, lastly, whether they are not in some cases of a hybrid or mixed nature. Permit me briefly to state some of the peculiarities which are to be observed in different types of arthritic iritis; and to ask respecting each what evidence we possess which would connect them with the tendency to gout. Let us take first the common form in which the iritis occurs in acute transitory paroxysms. Of this, good typical examples will be in the memory of us all. Its subjects are usually men, and often of vigorous health, and past middle life. The iritis scarcely ever affects both eyes at the same time, but occurs first to one and then to the other, sometimes keeping to the same eye during several successive attacks, and then leaving it to assail its fellow. The attacks are often acute, beginning very suddenly, and attended with great pain. When they subside, they subside completely, and leave the eye without the slightest degree of irritability. The duration of the severity of an attack may vary greatly at different times in the same patient. The tendency to form adhesions is extremely great. It is very remarkable how in most cases of this class the disease restricts itself to the iris and shows no tendency to disorganise the globe. Thus, a patient in whom, in consequence of repeated attacks, the pupils may be occluded, with the exception of mere pinhole apertures, may yet continue to enjoy very fair sight. I by no means wish to imply that this is usually the case. The case of Dr. Curry, as recorded by himself in the Medico-Chirurgical Transactions, is a good type form of this disease. Dr. Curry had suffered much from true gout. I may cite, however, as another good type illustration of this class, that of a gentleman whose friendship I had the privilege to enjoy during a long period of my early life. He was a florid fair complexioned man, of vigorous habits, a large eater, and through life accustomed to drink beer. He inherited rheumatism, but there was no known history of gout. He had suffered in boyhood in consequence, as he believed, of too free bathing when hot, from rheumatic fever. When I knew him first he was about forty-five, and from that time onwards to his death, at the age of sixty, he had a variety of arthritic complaints—lumbago, sciatica, chronic arthritis of the knees and other joints, and recurrent iritis. Both his pupils were closed with the exception of very small apertures, through which, however, he still continued to see enough to follow an occupation in which everything depended on good sight. I attended this gentleman year after year, usually in the early part of February, for most severe attacks of iritis, never affecting both eyes at once. He was benefited by large doses of iodide of potassium and the free use of blisters. At length his attacks ceased to occur, and during the ten years preceding his death I believe he had not had any. I made a post-mortem examination of his body, and found no proof of gout. His knees contained loose cartilages, and there were patches where the articular cartilage was wearing away, but there was no urate of soda.

I have the record of a considerable number of cases in which the liability to these recurrent forms of iritis occur

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in those who were the subjects of unequivocal gout. But there were a far larger number in which the concomitant symptoms were of rheumatic arthritis and not of true gout. The question remains, however, whether this form of rheumatic gout, although unattended by lithate of soda deposit, be not in reality a hybrid disease possessing, in addition to an unquestionable share of rheumatism, an admixture also of gout tendency. The infrequency of the disease in women, the age, the habit of body and the mode of life of those who are usually its subject, seem to me to strongly support this view. So does also the extreme severity of the attacks, and their rapid and complete subsidence, when once the point is turned. When this form of iritis does occur to women, it is never, I think, so acute or so paroxysmal as in men; and it almost always happens to those whose relatives have suffered from gout.

Various Forms of Arthritic Iritis.—Next to this form of recurrent iritis, and including perhaps some of its examples, I have to mention the iritis which occurs in connexion with gonorrhœal rheumatism. All observers will admit, I think, that iritis associated with ordinary rheumatic fever is infinitely rare. So also is it in connexion with that type of arthritis to which the name of crippling rheumatism may be given—in other words, iritis in association with either acute or chronic rheumatism is a thing that we scarcely ever observe. In men, however, the rheumatic affections, whether acute or chronic, which are induced by gonorrhœa, are not unfrequently accompanied by iritis. This iritis is less distinctly paroxysmal and much more liable to persist and be destructive than the case in the form which I have just described. My explanation of this is easy. The reason why gonorrhœal rheumatism so often causes iritis is because it occurs usually in the subjects of inherited gout.

A third form of arthritic iritis is one which affects women more frequently than men, which not unfrequently attacks both eyes at once, which is apt to spread to the ciliary region and choroid; to persist and to prove destructive. In a very considerable proportion of the women who suffer from this form there is a history of gout in former generations.

Another group of arthritic iritis might be constituted of cases in which the malady happens to young patients, and proves but slightly, if at all, liable to recur. These single attacks of iritis without history of gonorrhœa or syphilis, and occurring in young persons, usually, I think, affect the male sex, and almost always there is the history of gout in relatives.

I must just mention, in order to complete my classification, although it is but of little clinical importance, the group of cases in which iritis occurs in association with glycosuria. In these, according to my experience, the patient is almost always the subject of gout also.

To sum up, then, I would say that although in many individual cases of arthritic iritis there may be no proof of liability to gout in either the patient or his relatives, yet the tenour of the evidence in general is in favour of the conclusion that when iritis occurs there is in reality some gout complication. The more purely and definitely is the case one of rheumatism, and the less the probability that iritis will happen. When iritis occurs the complications are almost invariably those which suggest what we call rheumatic gout rather than rheumatism pure and simple; that the smaller joints are often affected and nodi digitorum present, whilst sciatica, lumbago, and neuralgia are frequent complications. I have elsewhere tried to prove that gonorrheal rheumatism occurs in nine cases out of ten to those who inherit a gouty constitution, and that it is chiefly this inheritance that gives the proclivity to it. I cannot stop now to recapitulate the evidence on which this belief rests; but if it be trustworthy, it offers an explanation of the fact that iritis is so frequently met with in association with this type of rheumatism.

In certain cases of iritis with arthritic associations a very peculiar condition is observed. I allude to the filling of the anterior chamber with a soft gelatinous jelly-like mass. This material, which produces an appearance most alarming to the uninitiated, concealing the pupil and suggesting entire destruction of the cornea, is susceptible of very rapid absorption, and may, in the course of a very few hours, clear right away. I believe that in some cases of syphilitic iritis this peculiar form of appearance has been noticed; but if I were to speak from my own experience, I should cite it as a symptom very strongly indicative of gout. I would make the same remark, though with less confidence, respecting the rare cases of iritis complicated with hæmorrhage.

Statistics as regards Arthritic Iritis.—My report on arthritic iritis, published in the *Ophthalmic Journal* of 1872–74, contains the narrative of 104 cases which are suitable for our present purpose; for various reasons I omit a few on account of doubts as to their nature or imperfections as to the details. The report comprises cases of all varieties in which either rheumatism or gout, or the two together, were supposed to have been the causes of inflammation of the eye. They were collected from my note-books, both from hospital and private practice, up to the date mentioned. It is right to state that at that time my opinions as to the influence of true gout were less advanced than they are at present, and that my knowledge as to the means of recognising it was also less. The notes of many of the cases had been taken some years before they were published, and thus certain inquiries, which I should now carefully make, were unfortunately omitted. On this account I have no doubt that we must consider that the report does not show the influence of gout so strongly as it would have done had the cases been taken with better knowledge. Out of the 104 cases, I find a positive history of gout having occurred in the patient in only eighteen cases, and only in twenty-nine was there the history of positive gout in near relatives. It is to be observed, however, that these numbers take cognisance only of what has been termed "unequivocal gout"—namely, of those in which an unmistakable attack of inflammation in the great toe or other single joint had unquestionably occurred. It omits altogether the much larger number in which the gouty tendency had remained undeclared or had been manifested only in what we may term its quiet form. Any one who will examine for himself the narratives to which I refer will, I feel sure, agree with me in this opinion. In a very large proportion there was, I think, good reason for believing that a taint of gout existed where the narrative mentions rheumatism only; the arthritis had constantly been of the chronic type, and had very frequently presented exceptional conditions. If we may count such maladies as sciatica, lumbago, neuralgia, nodi digitorum, gonorrhœal rheumatism, rheumatic gout when affecting the smaller joints, as being for the most part indications of gout rather than of pure rheumatism, we shall then find that facts at any rate suspicious of gout are present in nearly all the cases. It is, I think, decidedly exceptional for rheumatism pure and uncomplicated to show any tendency to attack the tissues of the eye. Iritis in conjunction with rheumatic fever of the ordinary form is almost unknown, and even in cases in which patients suffer from repeated attacks, as is sometimes seen, the eyes usually remain free. So soon, however, as changes of type occur, the disease showing a tendency to attack the smaller joints, or to affect only single joints, or to pass into the chronic form, then we get the liability on the part of the eye to suffer. On this point my own experience is quite in accordance with that previously expressed by an acute and zealous clinical observer, the late Dr. Fuller. Dr. Fuller in his first edition, speaking of rheumatic gout, stated that in 11 out of 101 cases which he had tabulated when medical registrar to St. George's Hospital, the eye had suffered more or less severely, and in 14 out of 193 cases which had subsequently been under his own care in the hospital. In a second edition, he stated that he had so far modified or developed that opinion, that he had come to believe that many, if not all, of the cases in which this complication occurs were examples of obscure gout or else of gonorrhœal rheumatism, adding, "This at least is certain, that since my attention has been specially directed to this question, I have been enabled to find a gouty or venereal [meaning, I think, gonorrhœal] taint in every case in which the eye has been inflamed in connexion with presumed rheumatic gout." This is strong testimony, stronger certainly than I am prepared to give, but I doubt whether it much exceeds the truth. Among other authors who have distinctly recognised gout as a cause of diseases of the eye, and appear to have referred a considerable proportion of those diseases, when arthritic, to gout rather than to rheumatism, I may mention Dr. Jacob, Mr. Weller, Mr. Middlemore, Dr. Copland, and perhaps Mr. Wardrop. Mr. Middlemore goes so far as to think that he has seen in one or two cases the pupil occupied by calcareous concretion of a gouty nature. None of these observers have, I think, recognised any other special disease as connected with gout than recurrent iritis. Almost invariably I find sclerotitis put down as rheumatic.

(To be concluded.)

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CHOLERA.

BY MAX VON PETTENKOFER, M.D.,
OF MUNICH.

(*Continued from page 864.*)

THE further one investigates the drinking-water theory the more and more improbable does it appear. Robert Koch, too, the famous bacteriologist, has hitherto failed to substantiate the drinking-water theory, and I feel convinced that the time is not far distant when he will own that he has gone in the wrong direction. Koch has succeeded in finding the comma bacillus in a water tank in a region where cholera was prevalent. I have the greatest respect for this important discovery, not as a solution of the cholera question, but only as a very promising field for pathological, not epidemiological, inquiry. It must be remembered that cholera was already prevalent in the neighbourhood of the water tank from which Koch obtained the bacillus. Now, this tank was used not only for drinking purposes, but also for bathing the person and washing clothes, as Koch himself admits. According to my view the comma bacillus must have been present in the water. It had not been shown, however, that the bacillus was in the water before the outbreak of cholera. Koch is of opinion that all the bacilli in the water tank could not have come from the washing of clothes of cholera patients, but must have partly been derived from multiplication, yet he forgets that, as he himself has shown, the meat broth in which the bacilli grow must not be too dilute. It would have been interesting if Koch had estimated the strength of the nutritive material in the water tank. But what chiefly contradicts the doctrines of the contagionists is the simultaneous disappearance of the cholera on land and the cholera bacillus in the water-tank. If it were really true that every case of cholera, the first as well as the last in an epidemic, had the same infective material in its intestinal discharge, and that the epidemic only ceased because the susceptibility of man had passed away, then the bacillus would continue to exist in the tank, always supposing that there was sufficient pabulum for it. And thus it is most probable that the bacillus gets into the tank from man, and not *vice versâ*. Whilst Koch was in Calcutta the English physicians there imbued him with their views on cholera and drinking water. The English had been brought up on the drinking water theory of typhoid fever and cholera, and could only lay it aside with difficulty. But a few of those English physicians who had studied widespread epidemics had renounced their original ideas. Dr. Bryden (the chief of the Statistical Department), Dr. J. M. Cuningham (the sanitary commissioner), Dr. John Macpherson (the Inspector-General of the Bengal Army), Dr. Lewis, and Dr. Douglas Cunningham were all disbelievers in the drinking-water theory. Koch was further strengthened in his views, in opposition to the few Englishmen just named, from the fact that after Fort William in Calcutta was supplied with pure water no more cases of cholera occurred there, although it had formerly been ravaged by the disease. The gentlemen in Calcutta had not, however, told Koch the whole truth. For it was a fact that cholera had begun to decrease in Fort William since 1863, and yet the fresh water-supply was introduced as late as March 25th, 1873 Moreover, it was not true that the only improvement then effected was a change in the water-supply, for many other changes were carried out, the fortress being made a model of cleanliness. Alterations in the drainage of the soil were effected in and around the foundations of the building, which before this was nothing more than a morass during the rainy season; so that, inasmuch as the nature of the soil, as well as the drinking water, was changed, the case of Fort William affords an argument as much in favour of the localists as it does for the contagionists. I may here call to mind an episode which was much commented on at the time, and which is perhaps of the nature of an experiment. Macnamara writes, in his work on Cholera: "In connexion with this position I may narrate a case which happened in another part of the country, but for which the facts can be vouched. Some dejecta from a case of cholera found their way into a jug of drinking water, and the mixture was exposed to the heat of the sun for the day. Early the next morning a small quantity of this water was drunk by nineteen individuals. Nothing was noticed, either in the appearance or taste of the water, by those who had partaken of it. All remained well during the first day. On the following morning one man was seized with cholera as he awoke; the others remained well till the second day had passed, when two more cases of cholera occurred, and the day after that two other cases were observed. The rest of the party remained well till sunset of the third day, when again two were seized with illness. These were the last cases, and the other fourteen persons continued to enjoy immunity from diarrhœa, cholera, or any disturbance of health." This case is, etiologically, not worth much. Where was the original case from which the infection was supposed to have come? Was it not possible for the nineteen persons to be brought under the same circumstances as those under which the original case had become affected? Were the nineteen in a place which was as a rule free from cholera, and could they only be affected through the drinking water? Several cases in India are known to me where guests at a banquet having drunk no water were yet the victims of cholera. For instance, at a baptismal feast which a sergeant gave a gallon and a half (six litres and three-quarters) of rum was supplied. Twelve persons, including the man and his wife, sat down to the banquet, and on the following evening the whole of the group, except the baby which still lives in Calcutta, were in their graves. At this feast there was no question of a mixture of anything with the stools of cholera.

When I ask myself how it is that men usually astute can place such implicit reliance on the drinking-water theory, which entails such ambiguity and contradiction, I can only think of two reasons. Partly, no doubt, there exists the belief that on general hygienic grounds no stone should be left unturned in order to procure a good supply of water where it had previously been bad, and thus the fear of death and the devil proves stronger than the love of truth and God. Again, the drinking-water doctrine appears to many to be the lesser evil as compared with the threatening local and periodical predisposition, which implies a more mysterious and less definable conception. They imagine that the, to them, uncomfortable facts of time and place may be explained on the drinking-water doctrine. The places where the cholera excreta can contaminate the drinking water have a local disposition, and the times at which even cholera prevails, and excreta may contaminate springs and watercourses, have to do with periodical dispositions, and thus they escape from explaining the subtle influences of soil and ground water. But anyone who thoroughly investigates the local and periodical factors in epidemics of cholera must reject such an explanation. A study of the tables previously given from Brauser places great obstacles in the way of accepting these doctrines. The constant periodicity of cholera in Calcutta or Madras cannot thus be cleared up. In the same way it is impossible to understand on this doctrine how it is that the hot dry season, which must be destructive to the bacilli, is the period during which cholera is most prevalent, and how it is that in the hot and wet season, which is favourable to the growth of bacilli, cholera is at its lowest ebb. That cholera and typhoid fever are more flourishing when the ground water is sinking than when it is rising has been explained by the drinking-water theorists on the view that when the ground water is falling it becomes more concentrated, thicker, and therefore more dangerous. Now, the prolonged researches of Wegner, Aubry, and Port have proved the direct opposite. When the ground water is low it is always purer than when high. Dr. Port has studied for a number of years the state of the water in the garrisons of Munich with a view of watching its relations with the movement of typhoid fever, and he has found that when the water began to be impure then a falling off in the disease might be predicted. Why this should be so has received an experimental explanation from Dr. Franz Hoffmann. Great and numerous are the objections to the explanation of the local disposition to cholera by means of the drinking-water doctrine. Lyons was until the year 1858 supplied with water from superficial wells. The analyses of the waters from a number of the wells prior to the introduction of a better supply would astonish anyone. The contagionists get out of their difficulties by merely asserting that though it is always the water which transmits cholera, yet there are a thousand ways in which this may be accomplished. But we have already shown that severe epidemics may occur without

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drinking water being implicated, and consequently it is questionable whether, in those epidemics where the water may have been a factor, other causes did not play a more important part in the development of the malady. It is for the contagionists to prove why the infection by drinking water can only be verified in certain cases. The most popular argument of the contagionists is the proposition that cholera spreads by human intercourse, a fact which I unhesitatingly accept. But the interpretation which the contagionists put upon the fact is nullified by the fact itself, as is shown by a closer study of all the influences of intercommunication, whether by land or sea.

In many regions there are main streets running in watered valleys in the direction of the stream, and yet other principal streets having a direction at right angles to that of the stream. In these streets, as is well known, at short intervals there exist sites which may be dotted on a special map where the frequency of cholera may be investigated, just as I had done for the epidemic of 1854 in Bavaria. It transpired that the sites of the epidemic preferred to spread in the length of those streets in the valleys which followed the course of the stream. When, however, one investigated the epidemic spots in streets which cross valleys between which hills or tablelands lie, it was found that the cholera attacks those sites which lie in a valley which crosses the streets, and the places which are situate on the heights between two valleys are spared. In the valleys, however, which are only crossed by one principal road, the epidemic spreads itself in places which lie in the valley upwards and downwards in the direction of the river, although the intercommunication may be very slight and the river not navigable. In Central India for a long time the great rivers were the principal means of communication, and the cholera spread by preference along these routes. When in recent times the Indian railways were started, it was thought that cholera would forsake the old routes and travel along the railway. But such was found by Cornish not to be the case. Of course the same statement holds good in Europe. Saxony is perhaps as thickly peopled and as much overrun with railways as any State in Germany. Since 1836 cholera prevailed in Saxony on no less than eleven different years; but, as Reinhard and Günther have proved, its propagation was not in any way directed by the developing network of railways. Certain places in Saxony always were the centres for cholera, and so remained despite the railways. Freiberg, in Saxony, was never visited by cholera either before or after the railway was completed, whilst certain parts of the Mulde and Pleisse Thal were regularly visited. As often as an epidemic of cholera broke out in North or South Germany, cases were observed in Saxony; but for an epidemic to develop in Saxony always required time. Every year in Saxony which was marked by a heavy death-rate from cholera was preceded by a year during which the mortality was comparatively slight. Thus, in 1849 there were 488 deaths; in 1850, 1551; in 1865, 358; and in 1866 as many as 6731; again, only 4 cases in 1872, but 365 in 1873.

If the cholera can be brought by sufferers direct from India to Toulon, where the sea-passage lasts only three weeks, then if the disease prevail in North Germany it must always spread to South and West Germany, and inversely, since we have nothing but cholera on the one hand and healthy people on the other. But whoever studies the history of cholera will find nothing but contradictions of this postulate of the contagionists. In 1854 Berlin took no cholera from Munich, and in 1866 Munich received no cholera from Berlin, notwithstanding extensive intercommunication during the Industrial Exhibition and despite the war.

(To be continued.)

THE HOSPITALS ASSOCIATION.—At the general meetings of this Association to be held during the winter, papers on the following subjects, amongst others, will be discussed: On Hospital Ships, by Dr. P. Murray Braidwood; Rediscussion of the Out-patients Question, by Dr. J. S. Bristowe; on Horse Ambulances in connexion with Hospitals, by Captain William Joynson, chairman of the Northern Hospital, Liverpool; Relation of the Provident Dispensary to the Hospital, by Mr. C. J. Radley. The opening meeting will be on Dec. 6th, but it will take the form of a *soirée*, and will be held at the rooms of the Medical Society of London, No. 11, Chandos-street, Cavendish-square, when the members will be received by the Council of the Association.

CHRONIC CATARRHAL LARYNGITIS:

ITS VARIETIES, WITH THEIR ETIOLOGY, PATHOLOGY, AND CLINICAL RELATIONS.

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(Concluded from p. 868.)

III. GLANDULAR LARYNGITIS.

Semeiology.—Subjectively considered, the symptoms of this malady have a decided character as regards voice and local sensations, and are even distinct from those of the two affections already described with respect to cough and expectoration. (*a*) Under ordinary circumstances the patient does not suffer from hoarseness, except in cases of a rarely aggravated type; but in a majority of instances the complaint of not being able to emit high or acute vocal tones is made. This symptom, it will be seen, is an etiological one, as it is not likely to be noticed or dwelt on unless by professional speakers or singers. (*b*) A sensation in the throat of heat and pricking or stinging usually accompanies this disease, and in the more pronounced instances has a very troublesome and persistent character. In addition, dryness of the throat, provoking frequent efforts of swallowing, in order to gain the moistening influence of the saliva, is very constantly present. (*c*) Hacking efforts, so common in the two former kinds of catarrhal laryngitis, and involuntary cough, scarcely exist in this malady. (*d*) Expectoration also is conspicuous by its absence. The condition of the larynx, being one of abnormal dryness demanding extra deglutitory acts for the sake of moisture, does not favour the development of this and the last symptom. Small shreds of partly dried mucus are, however, sometimes raised by voluntary coughing. (*e*) As regards dysphagia, pain, spontaneous or on external pressure, and constitutional symptoms, they are rarely if ever present, and in uncomplicated cases can never attain to any marked degree.

The *objective* sign of this malady is a granular condition of the mucous membrane in those positions where the racemose glands or follicles[1] are most numerous. This phenomenon must, therefore, be especially looked for over and along the sides of the arytenoid cartilages, chiefly towards their front aspects. Such is the most constant site of the granulations, but they may occur to a lesser extent in other places, particularly on the cushion of the epiglottis. In slight cases the elevations are few, but in advanced examples they may be so numerous and closely packed that the affected surface has the appearance of a fine shagreen. In the early stages they present a red or congested colour, but after they have been in existence for many months this hue is gradually lost, and finally replaced by a dirty white or greyish tint, most evident at the centre of the summit of each granulation. The patches or filaments of white concretion or exudation, so constantly seen in granular pharynx, are seldom or never observed in this, the analogous condition of the larynx. In the most developed and persistent cases, however, the top of each elevation may become the seat of a minute ragged opening, to some extent to be considered as a small perforating ulcer. The ordinary state of the mucous membrane generally is one of slight congestion and dryness; but, in the milder cases it may be comparatively healthy outside the granulations, whilst in the worst type of the malady it has a markedly dry, dusky, and thickened appearance. In pathological, or at least etiological, association with follicular laryngitis elevations, seemingly of a dense and indolent hypertrophic character, are occasionally met with on the vocal bands, especially on their free edges. This is the con-

[1] Coyne's (*op. cit.*) discoveries are briefly:—(1) The bed adjacent to the epithelium consists of a reticulated lymphoid tissue, such as is found in similar relationship in the small intestine. (2) Closed follicles, similar to those of the small intestine, exist in the superficial part of the mucous derma, estimated at thirty to forty in number. (3) On the free edge of the vocal bands papillæ are found, "certainly vascular and probably nervous": they are best developed anteriorly. Kölliker, Rauchfuss, &c., had denied the existence of follicles in the larynx. In 1863 Rüdinger (loc. cit.) had said: "The laryngeal mucous membrane, as is unanimously proved, possesses nowhere a trace of a papillary body." In 1873, however, Luschka (Der Kehlkopf, &c., p. 140) asserted the existence of papillæ, though few in number, in some parts of the larynx. These, according to Coyne, were merely folds of the mucous membrane.

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dition named "chorditis tuberosa" by Türck.[2] It is rare to find more than a single tuber or node in any given instance. A more extended disease of the kind is spoken of by Türck as trachoma of the vocal bands, in which a more general thickening or mammillated condition of the ligaments is observed.

Pathogenesis.—The leading cause of this disease is excessive use of the voice in public speaking or singing, but those who suffer probably always have a constitutional predisposition in the form of some cachexia, either strumous or the so-called "herpetic diathesis" of the French pathologists.[3] But the direct subsidiary cause is persistent overwork of the racemose glands and follicles of the laryngeal mucous membrane, and the affection has a perfect etiological analogy with the skin disease named lichen tropicus, or "prickly heat," in which a continued and exaggerated demand on the cutaneous sweat glands urges them into a state of subacute hyperæmia and inflammation.

The most detailed and reasoned description of follicular laryngitis has been given by Krishaber and Peter;[4] their conception of the process by which the malady is brought about in professional voice users is well worthy of reproduction in their own words: "In these cases the mucous membrane is brought every instant in contact with air rapidly inspired, which has not passed through the nose and its channels, so as to be there warmed and moistened, and which consequently arrives in abundant quantity, cold and dry, in the pharynx and larynx. To combat the aridity which parches it, the mucous membrane secretes sufficiently for the lubricating of its surface. With this object all the pharyngo-nasal and laryngeal glands combine their action. Now all repeatedly exaggerated secretion is a cause for hypertrophy of the organ at work; hence then is hypertrophy of the pharyngeal and laryngeal glands. As to the pharyngeal glands, however, we have only a physiological act in response to a necessity; they secrete merely because solicited by the cold air. But we shall see that the glands of the larynx not only obey this same solicitation, but that a wholly mechanical cause intervenes to exaggerate their secretion. This mechanical cause is none other than the proper and multiple movements of the larynx, in which the mucous membrane is found to be compressed, elongated, thrown into vibration—in a word, influenced by the essential mechanism of function." Hence as the parts of the larynx most rich in glands—viz., the arytenoid cartilages and the interarytenoid fold,—are also the principal seat of the intrinsic motions of the organ, the site of glandular laryngitis agrees practically with the coincidence of the anatomical and functional causes. These observations apply in a lesser degree to the base of the epiglottis, which is the second seat of motion. The difficulty of producing high notes is also well explained by Krishaber and Peter. It clearly depends on the thickening of the tissues over and between the arytenoid cartilages, which being thus hampered in their action cannot close the glottis tightly, especially at the intercartilaginous portion. Hence the fixity and tension of the vocal bands necessary in the upper register of the voice are insufficiently attainable. This symptom would of course arise in any form of laryngeal disease accompanied by thickening in the same position, and is only particularly associated with glandular laryngitis on account of the frequency of this affection amongst the members of voice using professions. Apart from excessive vocal exercise, glandular laryngitis arises sometimes from the more ordinary sources of throat irritation—i.e., abuse of alcohol, inhalation of acrid vapours or powders, smoking in excess, &c. Under the circumstances, however, it is rarely primary in the larynx, but is an extension of a previous pharyngeal attack. With respect to age and sex, the disease is almost peculiar to the early years of adult life, and is considerably more common in the male sex. Statistics have not yet been collected to ascertain definitely these points. In twenty-one well-recognised cases of my own all occurred between eighteen and thirty-three; seven were females. In nine instances, however, the chief seat of disease was the pharynx.

Pathological anatomy.—Autopsies and other investigations by Lewin,[5] Rüdin,[6] Türck,[7] Rindfleisch,[8] De Mussy,[9] and Rheiner[10] are in evidence to determine this part of the subject. The first step of the morbid process appears to be a dilatation with catarrhal proliferation of epithelium of the orifices of the racemose glands. Gradually the whole interior of the glands becomes similarly involved, they pass into a state of persistent hyperæmia, whence a weak but long-continued hyperplasia, and eventually a permanent hypertrophy of their whole substance. The manifest swelling of the glands, however, which gives rise to the granular condition of the mucous membrane is chiefly the result of distension of the cavities by undischarged secretion. This complication is the immediate result of the diseased action at their aperture and in their ducts. At first these become blocked, and afterwards their walls partially agglutinate through imperfect plastic efforts at repair. Later on the pent-up secretion forces its way outwards, and compels the reopening of the ducts, which henceforth are in an irregular and eroded condition, especially at their external apertures. Hence originates the appearance of minute but deep ulcers, few of which have the superficial area of an ordinary pin's head. Such parts of the mucous membrane as do not contain diseased glands are generally free from morbid changes except in contiguity with the granulations, where as a rule a state of simple chronic catarrh prevails. In typical and long-standing cases there may be a general hypertrophy of epithelium, and it occasionally happens that the chronic hyperplasia fixes itself on the dermoid layer of the mucous membrane, which becomes hypertrophied and exhibits papillæ like those of the skin; a class of bodies which are very rare, and until Coyne's researches were thought to be entirely absent from the normal larynx. This latter condition is that first described and named by Förster[11] "dermoid metamorphosis." Such, doubtless, is the nature of the lesion which, when affecting the vocal bands in an irregular manner, gives to the nodular thickening before mentioned as trachoma or chorditis tuberosa.

Diagnosis.—The history of the case, and the etiological inferences therefrom, will often lead us to surmise the existence of glandular laryngitis; and when the pharynx is in a granular state, with subjective symptoms emanating from the larynx, there will be little room for doubt as to the precise pathological condition of the latter organ. But the elevation caused by the diseased glands must be seen with the laryngoscope before a final decision can be arrived at. A better illumination of the larynx is required for these cases than usually suffices for the recognition of other lesions of this part. In the earlier stages of the malady scattered red points will be seen, and later on elevations, mostly in well-defined groups, in the sites of predilection already described.

Prognosis.—As the lesions in this disease extend too deeply to be easily influenced by the ordinary surface applications, the treatment is often protracted; but when the affection clearly springs from excessive vocal exercise, it will get well spontaneously on removal of the cause as readily as lichen tropicus disappears on changing to a temperate climate. Careful local treatment, with preventive measures, will nearly always effect a permanent cure.

Treatment.—As there is generally a constitutional taint, strumous or otherwise, appropriate remedies for its removal, such as cod-liver oil, iron, and other suitable tonics, will have to be administered. Occasionally there is no evidence of any but local disease, and in such instances it will be unadvisable to subject the patient to any general treatment. When the malady occurs in professional speakers and singers the practitioner should impress on the patient the importance of replenishing the breath as much as possible through the nose. The best teachers of elocution have generally counselled a strict adherence to nasal inspiration in public speaking, and considered that this simple measure has a most potent influence in guarding the health of the vocal organs. We even find that in the last century the knowledge of this hygienic fact, then only recognised by experts, was believed to be of such value that it was [illegible] sold for a large sum under a pledge of secrecy.[12] In singing, however, the necessity of keeping exact time often precludes rapid inspiration through the mouth; but [illegible] there are natural pauses in every melody, which [illegible] advantage of to refill the lungs through the nose.

As regards *local* treatment, warm [illegible] of steam medicated with benzoin, [illegible]

[2] Op. cit., p. 98, &c.

[3] Op. cit., p. 98, &c. [illegible] on by Sappey and Rollet.

[4] Loc. cit.

[5] Virchow's Archiv, Bd. 70.

[6] Inaug. Diss. Basel.

[7] Op. cit.

[8] Op. cit.

[9] Op. cit.

[10] Op. cit.

[11] Handb. d. path. [illegible]

[12] See Plumptre, King's College Lectures, on Elocution, [illegible]

be most useful as palliatives when there is much heat and irritative sensation. Astringent lozenges of kino, rhatany, tannic acid, &c., will often much lessen hyperæmia, and daily applications of solutions of perchloride of iron (two drachms to the ounce), sulphate of copper (twenty grains to the ounce), or chloride of zinc (thirty grains to the ounce), simultaneously, may banish this symptom entirely from the surface. Such measures will sometimes suffice to effect a cure in mild and incipient cases. In more obstinate instances insufflation of astringent powders (alum, gallic acid, borax, powdered catechu, &c.), two grains at a time, through a curved tube brought close to the larynx, will be found effective. At the same time the patient may use the astringent solutions of half or quarter strength in the form of spray inhalation, two or three times a day for five minutes at a time. In the long-standing and fully developed examples, however, when the granulations are present in considerable number, an application of more causticity is absolutely necessary, so as to destroy gradually the substance of each elevation. For this purpose nitrate of silver is the only safe and convenient salt. It must be used in the solid form, the end of a curved sound or probe being coated with it (as originated by Lewin), daily, or on alternate days; the caustic must be pressed closely to each granulation or group of the same, by the aid of the laryngeal mirror; and the process must be continued until the elevations are brought down to the level of the normal mucous membrane.

Finsbury-square, E.C.

INTESTINAL RESECTION.

BY C. EGERTON JENNINGS, M.S., F.R.C.S ENG.,
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THE following experiments were performed, at the suggestion of Sir Spencer Wells, to test the value of a method for removing portions of intestine. Afterwards, the edges of the intestine, above and below the part removed, would be adapted, a cylinder having been previously introduced within the gut to facilitate the application of the sutures. Cylinders, hollowed into tubes with stout walls, conical at either end, have been cast for me in cocoa butter in eight different sizes, the smallest cylinder being of a size suitable for the small intestine of a child, the largest appropriate for the colon of an adult. After the operation the cylinder would be melted by the heat of the body, and the fluid would pass harmlessly along the interior of the intestine. Sir Spencer Wells suggested that perhaps gelatine would be the best substance for the composition of the hollow or tubular cylinders. So prepared they are slightly flexible, a very important advantage where it is impossible to withdraw much of the intestine from the abdomen during the operation. The cylinders are made by Probyn and Company.

Experiment 1.—Performed on a black-and-tan bitch, weighing 16·3 lb. July 18th, 4.20 P.M.: Subcutaneous injection of a grain and a half of morphine and one-fifty-sixth of a grain of atropine. 5.30: Ether, mixed with a little ammonia, was administered, that the fluidity of the blood might be well maintained during the operation, and every bleeding point secured. Listerian precautions, save the spray, were taken. After the abdomen had been opened in the linea alba to the extent of 3½ in., a piece of the small intestine was withdrawn, but at once returned into the abdomen, since the smallest cylinders which had been provided were of considerably larger size than the ileum of this animal. The sigmoid flexure was therefore withdrawn and isolated from the abdominal cavity by being passed through a small aperture made in the centre of a sheet of carbolised gutta-percha tissue. A piece of the gut about 2 in. in length was separated, from the remainder of the knuckle, by two ligatures. A triangular portion of the mesentery was excised, the base of the triangle corresponding with the part of the bowel included between the ligatures. All bleeding points having been secured—the hæmorrhage was very great,—the intestine was cut through with scissors above the upper and below the lower ligature. A cocoa-butter cylinder having been inserted, the edges of the bowel were united at a point diametrically opposite to the mesenteric border by an interrupted Lembert's suture of fine carbolised silk. By means of two continuous sutures, which included the peritoneal and muscular tunics, the remainder of the circumference was closed. The divided edges of the mesentery were coapted by chromicised gut ligatures. The intestine (with the cylinder within it) was returned into the abdominal cavity, and the wound in the linea alba was united with interrupted silk sutures. After the experiment the animal was rather collapsed. 19th, 10 A.M.: This morning the dog awoke apparently quite well, and even ran about. The cocoa butter had evidently dissolved during the night, for some of it had escaped per anum. The wound looked healthy and smelt sweet. Redressed; no signs of peritonitis. Hypodermic injection of a grain of morphia and $\frac{1}{128}$ of a grain of atropia. The dog passed a small dark stool immediately after this injection. Slept well till 8 P.M. Given milk only to drink. 20th, 10 A.M.: Unfortunately during the night another dog, tied up in the same room, slipped its collar, and bit through the cord which secured the subject of the experiment. The dressings were found removed, and both the dogs had been running about the room. Now the animal lay on its side; the abdomen was tympanitic, and very painful to the touch. Respiration 60 per minute. A subcutaneous injection of a grain of morphia and one-eighty-fourth of a grain of atropia was at once given to relieve pain and promote the euthanasia. Death occurred at 11.45 A.M. Dr. D. van Duyse kindly made an autopsy forty-eight hours after death. There was general peritonitis. The intestinal sutures had given way, so that the interior of the intestine communicated with the peritoneal cavity by an aperture about equivalent to a third of the circumference of the gut; therefore the fæces escaped freely. It seemed quite probable that the ends of the gut, which had been united by the sutures, were torn apart, during the night previous to death, by the movements of the dog. On inspecting the interior of the gut, one point of the suture had pierced the mucous membrane and had ulcerated through it.

Experiment 2.—Performed on a bitch weighing 16 3 lb. July 21st, 3 P.M.: Subcutaneous injection of one grain and a half of morphia and one-fifty-sixth of a grain of atropine. 4 P.M.: Injection repeated and chloroform administered. An incision 3½ in. in length was made obliquely through the abdominal wall, parallel and internal to the position of the sigmoid flexure. Two inches of the intestine (the upper part of the rectum and the lower part of the sigmoid flexure), were removed. A triangular piece of the mesentery was first excised, and the cut edges were adapted with a chromicised catgut suture. The intestine was divided a little obliquely in order that after union the line of junction should be of rather greater length than the normal circumference of the gut. A little fæcal matter escaped into the peritoneal cavity during the insertion of the cylinder into the ends of the intestine, but it was sponged away carefully. Continuous and interrupted silk sutures, exceedingly numerous, were used, to maintain the peritoneal surfaces in accurate contact. The greater part of the abdominal wound was closed with a continuous catgut suture, the remainder, the lower part, was closed with interrupted sutures. The animal being collapsed after the operation half a drachm of brandy with water was injected subcutaneously. 22nd, 9 A.M.: The bitch looked very well; dressings displaced; fæces had passed naturally during the night; the tail, anus, and pudenda were covered with fæces and cocoa butter; incontinence of urine. The parts were thoroughly cleansed immediately and the dressings were reapplied. The wound appeared aseptic. Subcutaneous injection of half a grain of morphine with $\frac{1}{128}$th of a grain of atropine. The animal was found dead at 12 30 P.M. An autopsy demonstrated recent peritonitis of a local character. The intestinal sutures were all properly in place, but on forcing water with a syringe through the piece of gut, after its removal, there was a slight leakage noticed at the seat of resection. The sutures were numerous and very closely set, but apparently not close enough just at the point of attachment of the mesentery. This seems to be the part to which attention should be specially directed during the operation.

Experiment 3.—A black dog, weight 47·35 lb. July 22nd, 3 P.M.: The operation was performed under chloroform, four grains of morphia having been previously injected. A piece of the small intestine was withdrawn from the abdomen, through an incision three inches in length, made in the linea alba. A triangular piece of the mesentery was excised, and the edges adapted with a continuous chromicised suture, as in the last experiment. A cylinder of rather larger size than the calibre of the gut was selected, so that after the removal of about two inches of the intestine, the ends of the

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gut were distended by the insertion of the cylinder. The ends of the gut were united by two rows of fine silk sutures, an inner row joining the edges of the peritoneum and muscularis, and an outer row of Lembert's sutures. These stitches were exceedingly closely set, and after the cylinder had melted they would lie still closer together, for the intestine would then contract to its normal calibre. The operation was concluded in the ordinary manner. 23rd, 10 A.M.: The dog looked quite well. It drank milk-and-water. It had tossed about a good deal during the night, and had displaced the dressings. Wound redressed; it appeared aseptic. Two grains of morphia injected subcutaneously. Vomiting immediately followed the injection. Somnolence. 12.30 P.M.: The dog was not asleep. It looked quite comfortable, lying on the abdomen, with the head resting between the fore-paws. Subcutaneous injection of a grain of morphia and one-sixty-fourth of a grain of atropine. No vomiting. Asleep. The dog died during the night. 24th: The autopsy was made by Dr. van Imschoot. The abdominal wound had closed. There was peritonitis, radiating from the seat of resection as a centre. A piece of omentum had adhered to the abdominal wall and had compressed the gut just below the resection. Great tension was thus put on the line of suture, which gave way, to a small extent, at the convexity. The remainder of the intestinal wound had united satisfactorily.

Remarks.—The employment of hollow or tubular cylinders undoubtedly facilitates the performance of intestinal resection, and therefore considerably shortens the operation. It appears a great advantage to make the section of the abdominal wall directly over the part of the intestine to be removed. The application of the sutures is clearly the most important point for consideration. Braided silk is to be preferred, for it will not kink. Continuous sutures can be applied more speedily than interrupted ones, but if one point of the continuous suture gives way, the entire suture loosens. Doubtless the last dog perished from a complication which could hardly be anticipated. And I believe the other dogs would have survived had they been kept in a state of perfect quiescence after the operations; a thing very difficult to accomplish with dogs, but very easy with mankind. Sir Spencer Wells advises that the legs of the dogs should be tied together after the experiments. This plan would certainly be more effectual than the use of morphia, unless the injections are very frequently repeated, for the action of this medicament on dogs is but transient. To Prof. Boddaert van Custem, of Ghent, I am exceedingly indebted for the kind assistance he rendered me in conducting these experiments.

Park-street, Park-lane, W.

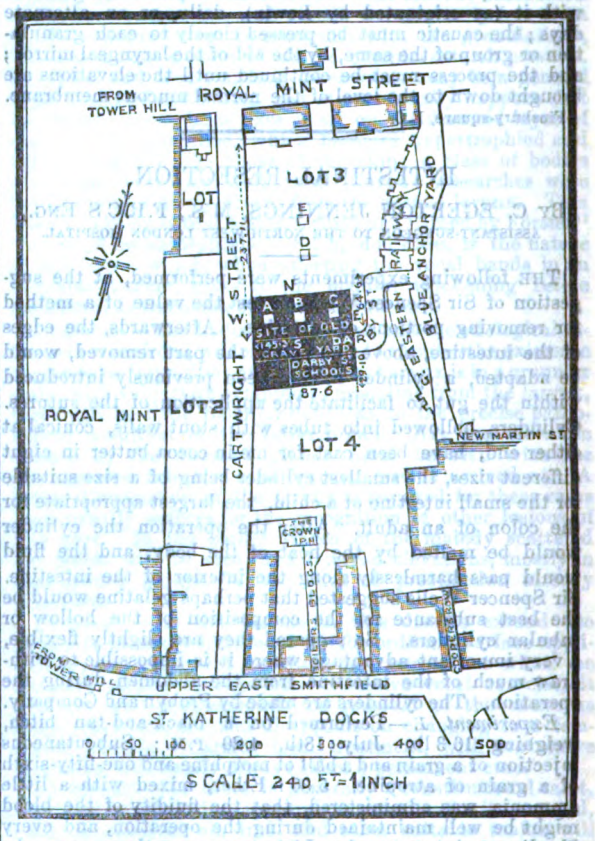
ON THE

"DISCOVERY OF ONE OF THE 'SEITES' SET APART (IN WHITECHAPEL) FOR A PEST-GROUND IN 1349, *TEMP.* EDWARD III."

By ROBT. FOWLER, M.D., M.R.C.P.E.,
PRESIDENT OF THE HUNTERIAN SOCIETY.

In July last I was instructed by the Metropolitan Board of Works to examine a site of ground in Cartwright-street, Whitechapel, and to report as to whether there were any sanitary conditions preventing the utilisation of the ground for building purposes, and generally as to the condition of the human remains lying therein. The locality of the site is well indicated in the subjoined plan (Lot 3). This site in 1875 formed a portion of an area of about six acres or thereabouts, which comprised some courts and alleys of the most wretched description, inhabited by a population of some 3750 persons. The entire area, according to the then medical officer of health of the district, afforded upon an average 8·2 square yards, but in some of the courts only 3·4 square yards, to each person, the average number of persons to a house in the entire area being 8·3.

On July 27th, 1875, the medical officer of health made an official representation of the unhealthiness of this area to the Metropolitan Board of Works, and used this strong language in his report:—"I desire to represent to your board that by reason of the closeness, narrowness, and bad arrangement, as well as by reason of the bad condition, of the courts and houses within such area, diseases indicating a generally low condition of health amongst the population have been from time to time prevalent; and the death-rate of such population has been excessive, such excess being more than 50 per cent. above the ordinary rate of the district of Whitechapel, of which it forms a part. I further desire to represent that the evils connected with such houses, courts, and alleys, and the sanitary defects in such area, cannot be effectually remedied otherwise than by an improvement scheme for the rearrangement and reconstruction of the streets and houses within such area, or some of such streets and houses." The ground was cleared in 1881; and in consequence of the recent discovery of "human remains lying therein," I was consulted accordingly. Three trenches, about 6 ft. square each, and of varying depths, were dug for my inspection. These trenches are marked respectively A, B, and C on the accompanying plan. A was exceedingly shallow, and, so far as I could observe, contained no human remains whatever. B was about 9 ft. deep, and was literally teeming on all sides with human bones. The skeletons were packed closely,



one upon the other, from within 2 ft. of the surface to the very bottom of the trench. C was about 4 ft. deep, and also contained many human bones. Here and there were distinctly visible the remains of decayed (possibly coffin) wood around and between the skeletons. In this trench, about 2 ft. from the surface (having apparently dry ground intervening), was a patch of about half a yard square of somewhat humid, sodden, greasy earth. It is very possible this was simply the result of rain percolation; at all events, in no other part of the excavated ground were similar appearances to be found. I was thus firmly convinced that the spot had been an old burial-ground, and being desirous to establish—first, its extent, I had two trenches dug respectively 50 and 100 ft. to the north of the former trenches. In neither of these two northernmost trenches (respectively marked D and E on the plan), although each was of the depth of at least 11 ft., in fact down to the sand or gravel, were there found any human bones whatever. The excavated earth contained simply some few bones and horns of certain of the lower animals. It would therefore appear that the human remains were confined to so much only of the site of ground I had to examine as was comprised within about 120 ft. by 60 ft. of

[1] Read before the Hunterian Society on Wednesday, Oct. 8th, 1884.

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its southernmost boundary. That this was but a portion of an old burial-ground, which extended further southwards under the present Darby-street, and certain cottages and schools on the south side of this street, is conclusively shown by a reference to Roque's map of Ancient London, dated 1746, wherein the whole plot delineated on my plan is called "Aldgate churchyard," and what is now Cartwright-street is named "Churchyard-alley." In the next place, it was very important for me to determine, if possible, the age of this burial-ground; or, in other words, the latest period when interments were made therein.

I deduced this from the following data:—(*a*) Omitting the slight exceptional condition existent in Trench C, the whole of the human remains I examined were in a dry, and, so far as exhalations are concerned, comparatively inert condition. They were simply old and dried bones. Dr. Navier, of Chalons, in 1775,[2] states that after twenty years' burial a body has been found "covered with flesh, and in a state of putrefaction." (*b*) Walker's work on graveyards was published in 1839. It was the work which led to the abolition of intramural burials, and to the establishment of the present cemeteries. This ground in Cartwright-street is in no way alluded to by Walker, although he speaks of Aldgate Churchyard in the High street as "truly alarming,"[3] and of the burial-ground of St. Mary's, Whitechapel, as "extremely disgusting."[4] (*c*) No burial-ground has existed in Cartwright-street within living memory. The former owner built, in 1852, the houses upon this very ground, which was then called the "Ruins." He distinctly remembers human bones being turned up whilst the foundations were being put in. These foundations were laid at a depth of about 4 ft. from the true surface of the ground, and after 4 ft. of super-accumulated soil had been previously removed. As a matter of fact, in Trench B the foundations rest in some places immediately upon human skeletons, and in other places human bones are interspersed amongst the brickwork. The memory of this gentleman goes back to 1832, when the Asiatic cholera was exceedingly fatal amongst the inhabitants of the old houses built upon the adjoining land. He tells me that a nonagenarian friend of his died a few years ago, and that in repeated conversations this old man said he never remembered the place as a burial-ground, but had been told that an old "brewery" once stood there. (*d*) The former owner of these houses assures me that he never remembers any subsidence whatever of the walls of the houses during the thirty years of their existence. This assertion is fully confirmed by the present stable appearance of the schools on the south of Darby-street, and of the adjoining cottages which were part of the said owner's block. (*e*) In the second edition of Richard Horwood's Map of London, 1809, the whole adjoining land appears covered with houses, and the courts and alleys have the same names as when they were cleared in 1881 by the Metropolitan Board of Works. Cartwright-street appears on this map; but the burial-ground shown on Roque's map of 1746 is not named in Horwood's map; a blank space, however, not covered with houses, corresponds with the actual site. This was doubtless, even at that time, the "Ruins." No burial-ground existed in Cartwright-street at the commencement of this century. (*f*) John Noorthouck, in 1773,[5] wrote these words:—"At the south end of the Minories the street opens upon East Smithfield and Tower Hill; and between both these plots of ground once stood a religious foundation called by the several names of the New Abbey, the Abbey of Grace, and East Minster. This house was founded by King Edward III. upon the seite of the pest-ground, ... and called the Churchyard of the Holy Trinity; and upon the seite of that abbey is built the King's Victualling Office, which stands on the upper part of Little Tower Hill, near the end of King-street. This building contains ..... (*inter alia*) a brewhouse." This quotation fully corroborates the statement of the nonagenarian friend of the former owner that an old "brewery" once stood there. This fact of the concession of the religious house is also alluded to in similar language by Stow.[6] He says:—"This house (the monastery) at the late general suppression was valued at £546 10*d.* yearly. It was surrendered in the year 1539, the 30th of Henry VIII., since the which time, the said monastery being cleane pulled down by Sir Arthur Darcy Knight and other; of late time (in place thereof) is builded a large store house for victual, and convenient ovens are builded there for baking of bisket to serve his Majesties shippes. The grounds adjoining and belonging to the said abby are imployed in building of small tenements." Furthermore:—(*g*) In the map by Ralph Aggas (1562) of "Ancient London in the early part of Queen Elizabeth," the Eastminster is shown to have been then located on this very spot, now covered by the Royal Mint,[7] with the ground behind and to the east of it. The Royal Mint, as it is to-day, was completed in 1811. Ground adjoining thereto is still called "Victualling Office-square." I am thus led irresistibly to the conclusion that the plot of ground I was instructed to examine in Cartwright-street was no other than one of the "seites" set apart for a pest-ground in 1349. Under this date, *temp.* Edward III., Noorthouck[8] says:—"A great plague which first appeared in the northern parts of Asia now spread over Europe, ... At length it reached London, where the common cemeteries were not capacious enough to receive the vast number of bodies; so that several well-disposed persons were induced to purchase ground to supply that defect.....There was also another piece of ground purchased at the east end of the city, just without the wall, by one John Corey, a clergyman, for the same use; on which spot was afterwards in this reign [in 1359][9] founded the Abbey of St. Mary of Grace, for Cistertian monks; it is now covered by the Victualling-office and adjoining houses. It was asserted that not one in ten escaped this calamity, and that not less than 100,000 persons died in the whole." Other old writers[10] allude more or less in detail to the above facts. This horrible pestilence was no other than the so-called "black death," or "great mortality," which, probably originating in China, entered the western countries of Asia, and was brought to Constantinople from the northern coast of the Black Sea. It devastated Europe from 1347 to 1351. Hecker[11] assumes that Europe lost during the "black death" 25,000,000 inhabitants, a fourth part of the then estimated population of this continent. We know from Noorthouck,[12] and also from other authorities,[13] that the great plague in 1665, after devastating the western parts of London, became very violent in Stepney and Whitechapel. It is therefore just possible that the "seite," which had previously been used as a "pest-ground" when the plague visited London in 1349, and which site had also since then formed part of one of the religious houses, would be again utilised for the disposal of some of the dead amongst the plague-smitten of Whitechapel in 1665, and that during this year occurred the last interments of human bodies in this said ground. The mode of burial of the bodies indicates that the last interments were hurried, and not always conducted in a strictly orthodox way. Some of the skeletons, especially in Trench B, lie with the feet to the east, and others immediately below them with the feet to the west; and this is observed where the skeletons are apparently undisturbed far beneath the remaining foundations of the houses.

The result of the recommendations I made to the Metropolitan Board of Works is that the Board have decided not to build on the site of the graveyard. The "Disused Burial Grounds Act" passed this year will thus be complied with. The advice I gave the Board was not in the least influenced by any idea that these subjacent old dry bones had anything whatever to do with the necessity for clearing the ground. That the "low condition of health," and the "excessive mortality" of the inhabitants of this condemned area were due exclusively to the visible insanitary state of certain of the "houses, courts, and alleys," is pretty well proved by one great fact—viz., that all the houses built over and upon the burial-ground itself, with its substratum of decaying human remains, were of so healthy a character that in the first instance they were, for this reason alone, actually excluded from the improvement scheme; and the aid of the Home Secretary had to be invoked by the owner, on the plea of

[2] Walker's Gatherings from Graveyards, 1839, p. 99.
[3] Op. cit., p. 167. [4] Op. cit., p. 168.
[5] History of London, 1773, p. 665.
[6] Survey of London, 1633, p. 117 (Portsoken Ward).

[7] The identity of the site of the Abbey with that on which the Royal Mint now stands is conclusively shown by the very clear map facing p. 120 of Loftie's History of London, 1883.
[8] History of London, 1773, p. 70.
[9] The History of Edward III., by Joshua Barnes, B.D., Cambridge, 1688, p. 437.
[10] Stow, op. cit., p. 117; Barnes, op. cit., p. 437; Maitland's History of London, 1772, vol. i., p. 128, vol. ii., p. 1022.
[11] Epidemics of the Middle Ages, Sydenham Society's Edition, 1844, pp. 26–30. [12] Op. cit., p. 123.
[13] Hancock on Researches into the Law and Phenomena of Pestilence, &c., 1821, pp. 52–55.

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deterioration of property, to compel the Board also to purchase this spot, or oasis of health, in the midst of its wretched insanitary surroundings.

Old Burlington-street, W.

FRACTURE OF THE BASE, FOLLOWED BY ENCEPHALITIS, ATAXIA, AND APHASIA; RECOVERY.

BY M. J. MOLONY, L.R.C.P., L.R.C.S. ED.,
ASSISTANT SURGEON, TREDEGAR IRONWORKS.

ON the night of April 11th, 1883, I was called to see W. W——, aged thirty-four, who had been found lying insensible in the street. He was ordinarily a strong healthy man. The following was the condition of affairs: Profound insensibility, pallor and coldness, copious hæmorrhage from left ear, slight epistaxis, pupils inactive and unequal, pulse intermittent, respiration slow and feeble. I noticed that there had been recent hæmatemesis. The blood vomited was of the dark peculiar colour which Sir Prescott Hewett describes when he speaks of fracture of the base, and which he attributes to the action of the gastric juice. Behind the left ear was an extensive contusion, best marked over the mastoid region, but also including the occipital and posterior cervical areas. There was no history as to how the injury had been received, nor has any clue been since discovered. The patient was of a rather bibulous and pugnacious disposition at times. The extent of the hæmorrhage from the ear, and the subsequent draining away of cerebro-spinal fluid, indicated beyond doubt a fracture of the base. How was the fracture caused? There was nothing whatever which pointed to either a fall or blow on the vault of the skull. The most careful examination revealed nothing. However, as we know that fracture by *contre-coup* may be produced without an external mark, the mere absence of injury at the vertex would of itself be of but little value. There was, however, the positive evidence of direct violence, applied if not actually at the base, at least in close proximity to it. I refer to the contusion at the mastoid and occipital regions.

No doubt Sir Prescott Hewett, in his article on Injuries of the Skull, lays some stress on the fact that discolouration may occur from the oozing of blood through the fracture, and the consequent infiltration of the cervical cellular tissue. But in this case the discolouration was most marked exactly in the region corresponding to the mastoid portion of the temporal bone, and presented all the appearance of a contusion in so pronounced a form as hardly to admit of a doubt as to its origin by direct violence. Moreover, the short period which had elapsed between the discovery of the man and my arrival—a quarter of an hour—would scarcely account for so extensive an infiltration. That the patient was found almost immediately after the injury there can be little doubt, as there were still many people in the streets. Thus I believe we have evidence of fracture of the base, caused in a manner by no means usual, or at least not commonly described. The treatment at this stage consisted in measures calculated to restore the heat of the body and to avert collapse. The application of warmth to the feet and sinapisms to the calves produced the desired effect. During the three or four days succeeding the injury the symptoms were such as one might expect to follow severe concussion, with probable contusion and laceration of brain substance. The pupils were still inactive and unequal; the pulse grew perceptibly stronger; the patient was semi-conscious and restless. He complained of headache and intolerance of light, and was, particularly towards evening, violent and delirious. Soon, however, he began to improve to the extent of recognising his attendants, and partially realising his position. The treatment now consisted in the application of cold to the head, purgation, and the administration of bromide of potassium. Morphia was also found useful in controlling the violent delirium. The case was now progressing favourably. The patient's faculties were gradually approaching the normal; the condition of the pupils was decidedly better; the delirium was less frequent and much less violent. About this time a remarkable symptom manifested itself, and pointed, I believe, to cerebellar mischief. This was a tendency to roll over repeatedly, and further, to roll continuously from side to side. This exercise was indulged in to an almost incredible extent, and was most distressing to the observer. Against any attempt to control the motion the patient protested most violently. Such symptoms are described by physiologists as occurring in animals whose crura cerebelli have been divided; and cases in which similar movements occurred in man have been recorded by MM. Seres and Belhomme, and by Dr. Paget. This phenomenon gradually disappeared, and on April 20th the patient, despite all efforts to prevent him, rose from his bed, dressed, and was with difficulty dissuaded from going out. Though less violent than hitherto, his condition seemed by no means favourable. His mind wandered; he was at times perfectly oblivious; his speech was jerky and incoherent; and his gait was distinctly ataxic. Between the 20th and 25th there was little or no alteration. On the 26th, and a few days afterwards, a distinctly new train of symptoms revealed themselves, and indicated beyond doubt inflammation of the brain: intolerable headache, rigors, quick pulse, pyrexia, intense photophobia; and subsequently strabismus, violent delirium, and convulsions. I applied ice to the head, purged freely, and gave aconite. Chloral and bromide were also useful. In the course of a few days the fever had subsided, the headache and other symptoms had considerably abated, and the condition of affairs was entirely satisfactory. Recovery now progressed steadily; and on May 5th the patient was allowed to sit up, but without leaving his room. He was now very good-humoured and tractable, and laughed heartily on hearing the tale of his previous performances. His condition at this period and for some time after, looked at from a physiological point of view, was of the most interesting character. The following symptoms were more or less constant: Headache, deafness, tinnitus aurium, strabismus, double vision, ataxia, jerky articulation, loss of memory, and aphasia. The strabismus, which was external and accompanied by other signs of paralysis of the third nerve, including ptosis and dilated pupil, disappeared in the course of a few weeks. The ataxia was well marked. The patient was unable to stand erect with his eyes closed. The movements of both upper and lower extremities were clumsy; the "muscular sense" was impaired. Westphal's symptom was also present, the "patellar reflex" being much diminished. The above motor derangement depended presumably on some cerebellar trouble, the earlier effects of which had already manifested themselves in the manner previously described. Loss of memory was a striking feature. While the patient's recollection of remote events was good, he utterly failed to remember recent ones. He called to mind without effort incidents of the Franco-Prussian War, yet he was unable to tell where he had been or what he had been doing three weeks before his illness. His memory for names of places seemed a complete blank. However, as he suffered from aphasia, it was of course a matter of great difficulty to decide when his failure arose from loss of memory pure and simple, and when it arose from aphasia, amnesic or otherwise. The aphasia was of a pronounced and complicated nature. I believe I was able to distinguish the amnesic, agraphic, and ataxic varieties, although to draw a hard-and-fast line where one variety began and another ended I soon discovered to be a hopeless task. Thus, for instance, on being asked his name he was unable to pronounce or write it. On hearing it he recognised it at once, and repeated, but failed to write, it. Then, again, on other matters he expressed himself correctly on paper where words of mouth absolutely failed him. On being asked his age he could not tell, but on being handed a pencil and paper he readily expressed it in figures. When he spoke for a little time his inability to coördinate the complex movements of articulation (ataxic aphasia) made itself apparent. During this latter stage a mild mercurial course, blistering, and iodide of potassium seemed beneficial.

As time wore on the above symptoms steadily disappeared, and in six months from the time I first saw him my patient was enjoying excellent health, in full possession of all his faculties and quite capable of attending to business. Deafness of the ear, from which the cerebro-spinal discharge occurred, was persistent.

The case, I believe, presents the following points of interest:—The somewhat unusual manner in which the fracture must have been produced; the distinct evidence of cerebellar mischief, the encephalitis supervening, as I ought to have mentioned, synchronously with the suppression of the cerebro-spinal discharge, the ataxic phenomena obviously depending on injury to the cerebellum; and, lastly, the loss of memory and aphasia.

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THE EFFECT OF COCAINE UPON THE EYE.

BY LUCIEN HOWE, M.R.C.S.,
PROFESSOR OF OPHTHALMOLOGY IN THE UNIVERSITY OF BUFFALO, NEW YORK.

THE readers of English medical journals[1] may remember that about ten years ago attention was called to the leaves of the erythroxylon coca, and considerable interest manifested in their real or supposed effects. Of late notice has again been attracted to the plant by a brief communication made by Dr. Carl Koller of Vienna at the last meeting of the Heidelberg Ophthalmological Congress. From the number of those who are at work in the same direction it is probable that the literature of the subject will grow rapidly, and it therefore seems to me worth while to record briefly some of the conclusions arrived at, especially those based on experiments with animals. The practical bearing of the matter will be apparent when it is stated, without any fear of exaggeration, that the proper use of cocaine, before operations involving the conjunctiva, cornea, or iris, lessens the pain of the patient, and thus facilitates the manipulations of the operator, without producing any irritation or serious inconvenience. These deductions are drawn from the experiments mentioned, and upon an observation of the effect of cocaine in thirty-eight cases in the clinics of Professors Schoeler and Schweigger. To these gentlemen acknowledgments are due for the clinical material placed at my disposal. In a study of the subject we are led to consider the degree of anæsthesia produced. It is by no means easy to estimate this from the varying statements of patients. In order to obtain some measure, therefore, at least approximately, of the amount of pain in one eye as compared with another, it seemed possible to make use of the physiological fact that every irritant to a sensitive nerve is accompanied by a corresponding increase of blood pressure. Accordingly, by means of a mercurial kymograph, in the laboratory of Professor Zuntz, I have noted the effect upon the blood pressure when the same irritant was applied successively to each eye, and have made 124 such observations in various ways upon several rabbits. There were 104 of these tests, or 52 in pairs, which could be fairly compared; and, in addition, I have used occasionally guinea-pigs and cats when a verification of the experiment was deemed essential. The conclusions thus far may be briefly stated as follows:—

I. The effect of the same irritant upon the blood pressure, other circumstances being the same, is invariably less in the eye with cocaine than in the normal eye.

II. The degree of difference varies (1) with the amount of the dose, (2) with the time when the dose is given, and (3) with the part of the eye which is irritated.

1. *As to the amount.*—Two drops of a ·02 per cent. solution is sufficient to produce a noticeable difference in the size of the pupil, but at least twice that quantity is the minimum which will effect the sensibility materially. If a 2 per cent. solution be used, the effect at the end of about fifteen minutes does not differ materially from that which follows the use of the same quantity of a 4 or 5 per cent. solution. Certainly, the intensity of the effect in the latter case is not twice as great as in the first.

2. *As to the time required for its action.*—From two to six minutes after a full dose some anæsthesia of the conjunctiva appears. The maximum effect is reached in about fifteen minutes, and in thirty or forty minutes commences to subside. When the cocaine has been once applied, subsequent applications apparently act with more rapidity than at first. When the dose is sufficient to produce a well-marked anæsthetic effect, this precedes the dilatation of the pupil. The latter, however, continues for some hours after the former has disappeared.

3. *As to the different parts of the eye.*—The anæsthesia is shown, first, in the conjunctiva and cornea, afterwards in the iris. Its degree is also much greater in these external portions than in the iris. It reaches the latter by passing into the anterior chamber, as can be shown by drawing out from an eye already treated with cocaine the aqueous humour, and dropping that into a normal eye. If a 2 per cent. solution be injected into the anterior chamber, comparatively little irritation is produced, but the degree of anæsthesia, especially in the iris, is not apparently greater than when the same quantity is dropped upon the conjunctiva.

Second in importance to the anæsthetic effect of cocaine is its action as a narcotic. In many of the acute inflammations of the cornea or iris, in abrasions of the conjunctiva from foreign bodies, and in the pain following the use of silver nitrate or cupric sulphate, its influence in this respect is very decided. In the third place, it should be remarked that it acts as a mydriatic. Reference has already been made to this fact. It must be conceded, however, that atropine possesses this quality to a greater extent. Intimately connected with the mydriasis is the paralysis of accommodation. The comparatively slight degree of this, together with the short duration of the mydriasis, is of evident advantage in ophthalmoscopic examinations. Fourthly, the mydriasis is accompanied by a perceptible increase of intraocular tension, as shown by the double manometer of Graser. Fifthly, a slight anæmia of the conjunctiva and enlargement of the palpebral fissure are noticeable within five minutes after the use of a 2 per cent. solution. Sixthly, it does not retard the healing of wounds. Seventhly, watery solutions so complete as to hold no particles in suspension do not irritate the eye. Although not relating immediately to its effects upon the eye, it may be worthy to note, eighthly, that stronger solutions, those of about 5 per cent. and upwards, delay the putrefactive changes in an extract of meat. Ninthly, when cocaine enters the circulation rapidly, the kymograph shows an immediate lessening of the blood pressure, the animal dying with paralytic condition of the heart as one of the chief symptoms.

It is probable that future experience may modify some of the conclusions thus far reached. In the first trials of an apparently useful drug the judgment is apt to be warped by ardent enthusiasm. A fair consideration, however, of facts already well established seems to justify the belief that cocaine is destined to rank as one of the most valuable agents in ophthalmic surgery.

[1] Vide THE LANCET, 1876, vol. I., pp. 631, 664; Brit. Med. Jour., 1874, vol. i. pp. 234, 272, 305, 414; 1876, vol. i. pp. 524, 581, 750; 1877, vol. i. p. 291; Med. Times and Gazette, 1871, vol. ii. p. 407; Edin. Med. Jour., 1878, pp. 323, 841.

BRIEF NOTES OF

PAINLESS EYE SURGERY BY THE USE OF COCAINE.

BY C. BADER,
CONSULTING OPHTHALMIC SURGEON TO GUY'S HOSPITAL.

CASE 1.—Lady, aged twenty-two. Burnt both corneæ with acetic acid; exhibited extreme intolerance of light and suffered great pain. An ointment composed of chrisma (one ounce) with 2 per cent. of muriate of cocaine was ordered. Immediate relief and rapid recovery followed.

CASES 2, 3.—Aged sixty and sixty-five respectively. Slitting of lower tear puncta and canaliculi. Five, three, and one minute before operating a drop of a 2 per cent. solution of cocaine was applied to the inner surface of the lower eyelids. The patients did not complain during the operation.

CASES 4, 5, 6.—These cases were young ladies with convergent strabismus. The 4 per cent. solution of cocaine was used in one case only to one eye, to note the difference as to pain, which was most striking.

CASE 7.—Tumour removed from upper eyelid. A 2 per cent. solution of cocaine was applied five, three, and two minutes before the operation. No pain was complained of when making the incision, but the patient experienced some pain while I was crushing the tumour.

CASE 8.—Double iridectomy. A 4 per cent. cocaine solution was applied four times in six minutes. No pain whatever at the corneal incision, but the patient felt some pain while the iris was excised.

CASES 9, 10, 11.—Aged forty-five, seventy-five, and eighty respectively. Extraction of cataract by corneal flap without iridectomy; left eye in all. Large hard cataract in the two latter cases. One week after operation the incision was healed; central clear pupil. One case will illustrate the proceedings adopted in the others. I arrived at the patient's house at 3 P.M., and immediately put a drop of a 4 per cent. solution of muriate of cocaine on the inner surface of the left lower eyelid three times in six minutes. At the seventh minute no sensation was experienced by the patient when

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touching the cornea. The operation was performed in the old-fashioned way, no speculum or fixing forceps being used; central clear pupil; both eyes were bound.

The patient stated that he felt no pain, and seemed much pleased and astonished.

The above cases occurred from October 16th to Nov. 10th. The muriate of cocaine was prepared by Messrs. Allen and Hanburys, 37, Lombard-street, E.C. A fair dilatation of the pupil indicates a more profound insensibility. I believe the future of cocaine to equal that of eserine. In cases of intolerance of light it acts like magic. Its action on the sensitive nerves of the iris must render it valuable to the physiologist. Dr. Koller of Vienna first brought the cocaine before the Ophthalmological Congress at Heidelberg on September 15th, 1884.

London.

COCAINE AS A LOCAL ANÆSTHETIC IN INTRA-LARYNGEAL OPERATIONS.

BY FELIX SEMON, M.D., M.R.C.P. LOND.,
ASSISTANT-PHYSICIAN IN CHARGE OF THE THROAT DEPARTMENT OF ST. THOMAS'S HOSPITAL.

COCAINE has lately been highly recommended as a local anæsthetic in operations upon the eye and throat. Having on my first trial of this new remedy for operations upon the larynx met with very signal success, I think it my duty to record the fact at once for the benefit of others.

I have under my care at the present time a lady with the largest papillomata of the larynx I have ever seen in an adult. The prolonged interference with respiration has so lowered the patient's vitality that on each of the seven occasions on which I have removed masses of the growth by forceps, the mere introduction of the instrument has caused alarming shock. Recently I painted the interior of her larynx with a 20 per cent. solution of muriate of cocaine once, and after waiting five minutes I was able to introduce the forceps four times and remove each time considerable portions of the tumours without the patient experiencing any pain at the moment or subsequent shock. She described the sensations caused by the cocaine as, first, a slight feeling of constriction, followed by a sensation of burning, which quickly passed away.

Welbeck-street.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF HYDROPHOBIA.

(Under the care of Dr. POORE.)

FOR the notes of the following case we are largely indebted to Mr. J. H. Brock, house-physician.

Mary Anne R——, aged thirty, was admitted on Sept. 8th, 1884. It was stated that about a year before the patient had been bitten by a dog on the index and middle fingers of the left hand. About six months later the left index finger had also been bitten by a cat. These wounds healed without difficulty, and soon ceased to attract the patient's attention. It was further alleged that the dog subsequently bit a boy on the shoulder and was destroyed, but there was no distinct evidence that the animal suffered from rabies. Similar evidence was wanting in respect of the cat. The patient and her husband had both been hop-picking and had been indulging freely in drink, and there was a history that on or about the 4th of September the patient was frightened by a dog jumping upon her, but this animal inflicted no bite. On that day (the 4th) the patient complained of some pain in the jaws, and found that they were stiff. On the 6th there was some difficulty in swallowing, and this increased on the 7th, especially when attempts were made to swallow water, and the patient became at times violent and delirious. On the 8th she was seen by Mr. Ingledew, of Woolwich, who, recognising the nature of the case, transferred her to the hospital.

When first seen by Dr. Poore at 4 P.M., about an hour after admission, the patient was sitting up in bed. The face was red and somewhat suffused, and there were superficial abrasions on the cheeks. The colour of the face was partly attributable to exposure to the sun, but the abrasions were caused by the patient trying to allay the irritation of the face by rubbing it with her hands. The expression exhibited considerable excitement mingled with terror, strikingly like that of a hunted animal. The eyes were wide open, and the pupils of medium size and equal. The patient answered questions and appeared sensible, excepting for the fact that she talked almost incessantly, and seemed possessed at times by vague and unreasoning terror. She manifested the greatest unwillingness to make even an attempt to swallow, and positively refused to take a drop of croton oil on butter which was offered to her. On trying to swallow a teaspoonful of milk, which she carried hurriedly and nervously to her mouth, she was seized with a violent spasm of the faucial muscles, which was accompanied by great distress. Whenever the attempt was made to swallow, the same phenomena were observed. Bowels constipated. Tongue somewhat coated. No paralysis or spasm of the limbs or trunk. Temperature 101·4°; respiration 28; pulse 150. It was noted that the knee-jerk was absent in both legs, but that the superficial reflexes were normal.

The patient continued to get more excited and delirious. Her language was extremely obscene, and she constantly stated that she saw various objects, dogs, cats, and human beings, which were all provocative of fear. Towards night she became violent and quarrelsome. At 1 A.M. on the morning of the 9th she asked for water to wash, but at the sight of it she became very excited, and on dipping her hands into it she was seized with a pharyngeal spasm. She gradually got weaker, and at 5.30 A.M. she complained of pain in the legs which prevented her from standing. During the night the urine was passed into the bed. It was noted that while the pulse steadily increased in frequency, the rate of respiration decreased, and at 10 A.M. the temperature was 102·4°, the respiration was only 12, while the pulse was too rapid to be counted. The suffusion of the face steadily increased. At 12.10 P.M. on the 9th the patient had a severe pharyngeal and respiratory spasm, fell back on the pillow and died.

The treatment consisted in the maintenance of surroundings as absolutely quiet as was compatible with the due care of the patient. In addition to this an enema containing sixty grains of bromide of potassium was administered soon after admission, and three hypodermic injections, each of one-third of a grain of morphia, were given at intervals. These had the effect of producing quiet, and affording a little sleep.

The post-mortem examination was made within two hours of death. No change was detectable by the naked eye with the exception of general venous engorgement due to the impaired respiratory power and the mode of death. The necropsy was made as soon as possible in order that "cultivation experiments" might be carried on. It is known that Pasteur has not as yet succeeded in detecting any micro-organism having a definite relationship with hydrophobia. Mr. J. Lister, the assistant of Mr. Watson Cheyne in the biological laboratory of the Health Exhibition, attended the post-mortem, bringing with him a supply of sterilised tubes filled with gelatinised meat infusion. These tubes were inoculated with minute portions of the medulla, the salivary glands, and kidney. Some "growth" has taken place in several of these tubes, but as to the nature of this growth (whether specific or otherwise) no conclusions have as yet been arrived at.

LIVERPOOL NORTHERN HOSPITAL.

EPITHELIOMA OF PENIS; COMPLETE AMPUTATION, WITH FORMATION OF PERINEAL URETHRA; RECOVERY; REMARKS.

(Under the care of Mr. CHAUNCY PUZEY.)

J. H——, aged seventy, was admitted on May 2nd, 1884, suffering from epithelioma of the penis, said to be of only six months' duration. A considerable portion of the glans penis had disappeared, and the body of the organ was evidently involved in the disease, suspicious induration extending as far as the scrotum. The patient's general

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condition was not very promising; his vessels were very atheromatous, his circulation feeble, and his face injected and dusky in hue; but as he was suffering much from pain and irritation, and as the condition of the inguinal glands was fairly satisfactory, free removal was recommended to and accepted by the patient.

As the man was subject to bronchitis chloroform was given in preference to ether. Two curved incisions were made, one on each side of the penis, from the pubis into the scrotum, dividing the latter freely. The knife was passed round the body of the penis to completely divide its facial envelopes, which could then be freely detached in a backward direction by the finger; the suspensory ligament was divided with scissors, thus freeing the organ from its attachment to the arch of the pubis but leaving the crura undisturbed. The penis was then pulled forward and its deepest exposed part transfixed with a stout curved needle in handle, and beneath this a whipcord ligature was passed and temporarily tightened; the organ was then cut through bloodlessly, the vessels tied, and the tenaculum and ligature removed. The remaining portion of the urethra was detached from its penile attachments, and the perineum having been transfixed with a scalpel was brought through, and, its under surface having been slit up for about half an inch, was stitched to the perineal skin with several silver sutures. A small drainage-tube was passed into the perineal wound (in front of the newly located urethra) and brought out below the pubes, and the scrotal wound was completely closed with metal sutures. The bladder was drained continuously by a perineal catheter to which was attached a piece of tubing long enough to hang over the bed, and into a porringer containing carbolic solution.

There is little to record regarding the after-progress of the case. The patient suffered very little from the effects of the operation, but an enlarged and tender condition of the prostate gland necessitated the removal of the catheter after a few days, and he suffered slightly from cystitis. However, he made a good recovery and left the hospital on June 10th. The wound was then soundly healed, no trace of the penis being left except a slightly depressed cicatrix. He had complete control over his bladder and there was no difficulty in keeping the perineal meatus open.

Remarks by Mr. PUZEY.—I have not seen this patient since he returned to his home in Wales, therefore am unable to report as to his present condition. But last May I had the satisfaction of seeing a patient upon whom I performed a similar operation nearly two years and a half previously, and who is now in perfect health and comfort, in excellent spirits and quite free from any trace of disease.[1] In his case the disease was more extensive, and necessitated the removal of about half the scrotum; the patient was exhausted by loss of blood, by profuse fetid discharge, and by the effects of prolonged retention of urine with enormous distension of bladder, and I certainly did not anticipate such a successful result. In that case the scrotum was divided completely through the line of the raphé, and the incision continued along the perineum; but in that just recorded, the scrotal structures being very lax and the wound therefore distensible, it was found possible to complete the operation in the manner described, the result being less hæmorrhage, probably less shock, and less subsequent call upon the healing powers of nature.

THE NATIVE HOSPITAL, BUTTERWORTH, TRANSKIE, SOUTH AFRICA.

CASE OF A MORPHIA HABITUÉ, SAID TO HAVE TAKEN DAILY FORTY GRAINS OF MORPHIA HYPODERMICALLY; TEMPORARY ABSTENTION; RELAPSE; DEATH.

(Under the care of Mr. J. H. NANKIVELL.)

W. M——, an officer in the Colonial Commissariat Department, aged thirty-eight. About five years ago, when living at the Diamond Fields, he had flying attacks of articular rheumatism followed by severe pain in the left thigh bone about two inches and a half above the knee. Medical treatment proved of no avail and the bone was trephined for supposed abscess without any good result following. After leaving hospital he suffered such agony that on more than one occasion, according to his own account, he drank two bottles of raw brandy before noon. Having been at one time for nearly ten days without sleep he went to a medical man, who gave him a morphia injection. From this time he used morphia subcutaneously in gradually increasing doses, and he stated that during the past eight months his daily allowance has been 480 minims, 12 minims containing 1 grain of the hydrochlorate, or 40 grains a day. Thirty-five minims is the smallest quantity which has at present the desired effect on him. He would sometimes go for nearly a fortnight without a motion of the bowels, as he was much troubled with piles, and then the hard fæces gave him great pain. Shortly before admission he had taken to alcohol drinking, and had at the same time been deprived by accident of his stock of morphia. Mr. Nankivell refused him his favourite drug, put a stop on his supply of alcohol, and admitted him into hospital. For the two days before admission his stomach had rejected every form of nourishment.

On admission, on October 19th, 1882, he was very thin, of a sunken, sallow, muddy complexion, and in a state of great nervous debility and physical exhaustion. Upon the front of the arms, forearms, thighs, and legs were cicatricial spots, as large as the palm of the hand, formed by the constant insertion of the needle. The bowels had not been open for five days. He cried and threatened alternately, and begged constantly for sleep and relief from a cold sensation across the chest. Pulse 54; temperature 98°. No albumen in the urine. Ordered a mixture of subnitrate of bismuth, acacia powder, and spirit of chloroform—a dose just before taking food. During the afternoon he retained two cups of beef-tea and an ounce of brandy, but vomited frequently, bringing up bile, mucus, and a little blood. At night he had thirty grains of chloral hydrate, ten drops of solution of morphia hydrochlorate in chloroform water.

20th.—No sleep all night; very restless and troublesome all day. To have no sleeping draught unless he eats well. Vomited four times, each time bringing up a little blood. Retained a little beef-tea and milk. Bowels opened freely; Stools hard, black, and round, causing in their passage great pain and a good deal of bleeding. Towards night he got into a most abject and pitiable state. At 7 P.M. the draught was repeated.

21st.—About two hours' sleep towards morning; very noisy and troublesome all night. He was told that unless he ate well he should have no more medicine. He took nourishment every hour during the day and vomited twice only. One motion of the bowels, the fæces returning to their natural colour. Ointment of gallic and opium for the piles, which bled freely. At 7 P.M. sleeping draught repeated.

22nd.—A good night's rest. From this time he recovered rapidly, eating well and sleeping fairly with the help of opiates, which were gradually weakened. He left hospital and returned to his work on the 26th, a watch being kept on him that he obtained no more morphia.

Possession was previously obtained of his apparatus, which included four new syringes and a box of needles. On Nov. 24th he handed over four ounces of hypodermic solution of morphia and four ounces of hydrochlorate of morphia, which he had ordered six weeks previously. Four months later he gave way first to drink and then to morphia, from the effects of which he died last year in hospital at Grahamstown.

[1] The case was reported in THE LANCET of July 8th, 1882.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Fatal Hæmoptysis from Bronchial Ulceration.—Ulcerative Endocarditis.—Carcinoma of Stomach in a Girl.—Uterine and Ovarian Disease in Animals.—Hydronephrosis removed by Lateral Abdominal Section.—Bones of Tabes Dorsalis.

AN ordinary meeting of this Society was held on Tuesday last, Mr. J. Whitaker Hulke, F.R.S., President, in the chair. The attendance was numerous.

Dr. PERCY KIDD showed specimens from a case of Fatal Hæmoptysis due to Bronchial Ulceration. The patient was a girl aged fifteen, who had died suddenly from profuse hæmoptysis in the waiting-room of the Hospital for Consumption, Brompton, while under the care of Dr. Mitchell Bruce as an out-patient. The post-mortem examination showed that the air-passages contained blood throughout. Both lungs were marked by patches of inhaled blood, and were studded with small hard nodules. The left apex contained a large cavity, and there were a few small cavities

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in the lower part of the upper lobe; the small bronchi were generally thickened and slightly dilated. A large firm post-mortem clot filled the main bronchus and the secondary bronchi on the left side. The bronchus leading to the upper lobe had been perforated about half an inch beyond the origin from the main bronchus by ulceration, which also implicated the main bronchus. The ulceration of the bronchus had extended into a secondary branch of the pulmonary artery, causing a perforation as large as a hempseed. A little below and internal to this point there was another perforation of the bronchial wall leading into an irregular space containing a crumbling cretaceous gland. The bronchial ulceration was soft and ragged, and had some of the ordinary characters of scrofulous or tubercular ulceration. The other lung contained no cavities. The bronchial glands were generally cretaceous and slightly enlarged. The stomach contained two pints of blood, but was healthy. The intestines showed slight scrofulous ulceration, the mesenteric glands were enlarged and calcareous, and the liver was slightly amyloid; the other organs were normal. The hæmorrhage in this case was clearly due to perforation of the pulmonary artery by the bronchial ulceration, which in its turn was set up by the presence of an enlarged calcareous gland. The case was an extremely rare one.

Dr. CARRINGTON read a paper on a remarkable case of Ulcerative Endocarditis. The patient was a male, aged twenty-three, who was admitted into Guy's Hospital on April 30th, suffering from acute rheumatism. He had been ill for the previous three months. There was a blowing systolic murmur which suddenly became intensified and harsh on June 11th. The urine, though free from albumen, became and continued to be albuminous and bloody on May 30th, and the temperature ranged between 100° and 103°. At the autopsy there was extreme ulcerative affection of the mitral valve with rupture of many of the chordæ tendineæ. The spleen weighed twelve ounces and a half, contained infarcts, one of which was sloughing. The kidneys were in a condition of acute nephritis and contained many infarcts. Pushing inwards the posterior wall of the stomach at the cardiac end was a hemispherical mass two inches and a half in diameter. This was found to be a false aneurysm, into which the splenic artery opened by its entire calibre. The aneurysm was filled by firm laminated clot. An ulcer without a trace of induration, having for its floor the firm aneurysmal clot occupied the summit of the mass. Recent clot was found round the circumference of the ulcer between the gastric wall and the aneurysmal contents. The stomach contained fifteen ounces of clot. A smaller superficial ulcer was found half an inch off, but not communicating with the aneurysm. In the duodenum a small clot the size of a horsebean was discovered between the mucous and muscular coats bulging the mucous membrane, which was not ulcerated. The case was interesting, for ulceration of the stomach in cardiac disease is rare; and although this fact was undoubtedly a strong argument against the embolic theory of gastric ulcer, the present case might illustrate one mode of formation of gastric ulcer. The three stages seemed to be indicated by the condition of the duodenum without ulceration, and the superficial and deep ulcers in the stomach. Probably the pressure of the effused blood caused local anæmia and allowed of solution of the gastric tissues. Another point of clinical interest which had been dwelt upon by Dr. Goodhart, was that an aneurysm although seemingly cured might bleed between the wall of the sac and its contents. The sudden increase in intensity of the cardiac bruit had enabled a surmise of rupture of the chordæ tendineæ to be made.

Dr. NORMAN MOORE read notes of a case of Carcinoma of the Stomach in a child. The patient was a girl, aged thirteen years, who was under his care in St. Bartholomew's Hospital during March and April, 1884. She was brought to the hospital in a condition of extreme anæmia, with puffiness of the face and œdema of the legs and arms. She was so short of breath that she could scarcely walk. The heart's action was feeble, and there was a loud systolic murmur, best heard at the left base, and accompanied at the apex by a well-marked systolic thrill. There was no albuminuria, and the chief symptom was the recurrence of cardiac distress. She never vomited blood, but two days before death complained of pain in the abdomen, and had several attacks of vomiting. An enlargement of the spleen could be felt. She died five weeks after admission. The autopsy revealed a new growth at the cardiac end of the stomach, close to the œsophagus. The mass measured about three inches in diameter. The peripheral parts arose from the mucous membrane, and were of the same colour, but the central parts were ragged, dark-coloured, and very dense. On section it was seen to be red, with paler stripes. The outer part of the growth was adherent to the liver, but did not penetrate it. There were signs of slight recent peritonitis, apparently due to a tear at the periphery of the growth. No glands and no other organ were infiltrated. There was a very old, perhaps congenital, dislocation of the right hip-joint. The heart was greatly dilated, and contained several adherent, softened, ante-mortem clots, and there was an adherent thrombus in the left jugular vein. This was the earliest example of cancer of the stomach (determined microscopically) on record. It was less dense than such new growths in the gastric wall usually are, but it agreed with them in the absence of secondary deposits. The microscopic characters of the growth were those of a carcinoma with somewhat wide trabeculæ and extensive mucoid degeneration, with hæmorrhages into several parts of the growth. Three distinct stages were visible in the growth. In the least degenerate numerous cells of an epithelial type were collected in large alveoli. In another advanced mucoid changes were observable in the epithelial cells, and in some cells the nuclei had disappeared. In the most degenerate parts almost all the nuclei had disappeared, leaving a mass of mucoid material intersected by traces of the cell boundaries. Having heard from the child's mother that its paternal grandmother had died of cancer at the age of fifty-three, Dr. Moore wrote to Dr. E. D. Wallis, of Leiston, in Suffolk, who informed him that he had made a post-mortem examination on the grandmother in May, 1878, and found a tumour which had obstructed the descending colon. There were no secondary deposits. This growth was probably a true carcinoma, and the early age at which carcinoma of the stomach occurred in his case may be regarded as an example of the well-established law as to the tendency of hereditary peculiarities to appear at an earlier age in the progeny than in the ancestor.—Mr. HENRY MORRIS spoke of a fatal case of cancer of the breast in a woman, whose mother died of cancer many years after her.—Mr. FREDERICK EVE said that the cells in adenoid cancer were generally cylindrical, whilst the cells of Dr. Moore's case were spheroidal.—Mr. HARRISON CRIPPS disbelieved in the hereditary theory of cancer.—Mr. JONATHAN HUTCHINSON said that in his experience whenever cancer occurred at unusually early periods he had found the strongest hereditary history of cancer. In two cases of carcinoma of the testis, occurring in children under the age of one year, he had obtained the strongest evidence of cancer in the family.—Mr. W. HULKE spoke of a case in a lady aged seventy-four, whose elder sister also became cancerous still later in life, whilst their parents died of cancer in early life.—Mr. BUTLIN said that as the grandmother was the only relative known of, there but a slender history of cancer in Dr. Moore's case.—Dr. NORMAN MOORE thought it was well established that some varieties of structure were transmitted to the offspring at an earlier age.

Mr. J. BLAND SUTTON read a paper on Uterine and Ovarian Disease in Amphibia, Aves, and Mammalia. He exhibited a series of specimens which served to show that flexions of the uterus are not confined to the human race. The first was an example of retroflexion in a macaque monkey; the second specimen showed acute anteflexion in a bonnet monkey; the third, acute lateral flexion of the uterus to the right side, also in a monkey. In the last two specimens, the pelvis was considerably distorted, as a result of rickets. Two other specimens, illustrating anteflexion of the uterus, were taken from deer: one from a hyomoschus, which had, a short time previous to its death, given birth to a young one; the other from a molucca deer. The pressure of the anteflexed fundus in the last case had caused atrophy of the anterior wall of the uterus. The uterus of a kangaroo was shown, in which both Fallopian tubes had become greatly distended on account of the accumulation of caseous material in their interior, due to some obstruction of their openings into the uterine cavity. Some of the contents of the tubes had probably leaked into the peritoneal cavity, and had given rise to fatal peritonitis. Mr. Sutton stated that ovarian disease was not uncommon in animals born in confinement, but seemed to be very rare in "wild animals." He observed that it had long been shown that some cysts in the broad ligament frequently arose from abnormal distension of the tubules forming the "organ of Rosenmüller" (the parovarium). He had made an investigation with a view to determine how far the notion of cystic dilatation of tubules

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having no functions held good. The results, briefly stated, were that male toads possess the remains of Müller's ducts in a well-marked degree; and it was no uncommon thing to find these ducts, which in the male toad had no function, dilated in their lower third into cysts, some very small indeed, but others of considerable size, and affording indisputable testimony to the origin of cysts from pre-existing ducts. About 250 frogs and toads were examined to test the point, and about ten well-marked examples of the cyst were found; they were, as a rule, arranged symmetrically. In birds, as in frogs and toads, upon the Müllerian ducts devolved the duty of conveying the ova from the abdomen to the outer world. In the embryo chick there were normally two oviducts; but the left duct alone persisted, whilst the right one usually disappeared, though now and then a small rudiment of the lower end, from a quarter of an inch to an inch long, remained attached to the cloaca. It might become the seat of cystic change, and in some cases assumed considerable proportions. The occurrence of these cysts was by no means unfrequent; and their presence was injurious, for a cyst might become detached, and set up fatal peritonitis. A curious fact, first pointed out by Hunter, was occasionally noticed; a hen bird would lay aside the sober plumage of her sex, and take on that of the cock. This fact had been attested by several naturalists of eminence; and Mr. Sutton exhibited a drawing of a hen golden pheasant now living in the Zoological Society's Gardens. Two years ago she assumed the resplendent dress of the male bird, the only difference being that there was no white rim to the pupil, and no spurs. She lived quite happily with her mate, and they did not fight. This singular change was always associated with disease of the ovaries or the oviduct. In mares, cysts in the mesosalpinx were so frequently found that in fifty old mares, taken at random, two-thirds possessed cystic ovaries, the cysts varying in size from a grape to an orange, and in number from three or four to a dozen. Careful examination of these cysts had convinced him that they arose by dilatation of the tubules of the parovarium, brought about by the increased blood-supply to the ovary in old age, due to the dilatation of the ovarian veins, much as was seen in the prostate of men advanced in life. Among other animals, he had met with cystic ovaries in a tiger that was born in this country and lived in confinement for twelve years. The cysts were small, numerous, and pedunculated, resembling the incipient cysts so frequently seen about the ovary and Fallopian tubes in virgins. Cystic tumours were also shown from a cat, a goat, and a tree-porcupine. He had brought these facts before the Society, not as mere curiosities of disease occurring in animals, nor as interesting in that they illustrated truths which might *a priori* have been anticipated, but because they demonstrated, unquestionably, that there was a strong tendency for ducts having no function to dilate into cysts.—Mr. ALBAN DORAN observed that in the human female atrophy or removal of both ovaries was not invariably followed by loss of the attributes of femininity. In examining the hypertrophied broad ligament attached to ovarian tumours he had observed that large or small thin-walled cysts were often developed between the layers of the broad ligament far from the parovarium and even above the Fallopian tube. Yet such cysts were certainly developed, in other cases, from the extremity of the horizontal duct of the parovarium. Cysts of the vertical tubes of that structure of the hilum of the ovary and of Gärtner's duct always appeared to contain papillomatous growths. There was no doubt that the parovarium existed in woman as a part of the Wolffian body, that Gärtner's duct was generally persistent though impervious, and that the duct ran into the walls of the uterus, passing through the cervix, and then entering the cellular tissue of the vagina, where it ended in a blind extremity. Sometimes it made a turn on itself and ended in the same manner in the cervix, not reaching the vagina; this variation depended upon the extent to which the lower part of the fused Müllerian ducts developed into uterine, at the expense of vaginal structures. The pair of tubes in the walls of the human female urethra lead to ducts and have probably nothing to do with Gärtner's ducts. These "Skene's tubes" were subject to catarrhal affections.—Dr. DAWTREY DREWITT referred to the acquisition of male characteristics by female birds in whom there was disease of the ovaries or oviducts.—Mr. FREDERICK EVE spoke of large tumours formed at the expense of persistent Müllerian ducts. The hydatid of Morgagni about the epididymis was generally believed to be the dilated upper extremity of Müller's duct. Many encysted hydroceles of the testicle were derived from the organ of Giraldès.—Mr. SUTTON, in reply, said the cysts contained clear coagulable fluid but no papillomata. The remains of the Wolffian bodies in the hilum of the ovary might be the source of origin of papillomatous growths. Gärtner's duct might develop a cystic growth about its termination near the vagina.

Mr. KNOWSLEY THORNTON showed a specimen of Hydronephrosis due to Calculus, removed by Langenbuch's operation. The patient was a single woman aged thirty-two, who when first seen had an abdominal cystic tumour; she had enjoyed fairly good health till about two months before October, when the abdomen was found to be much enlarged and tender; an exploratory operation was made and the diagnosis arrived at. She had had pain in the right loin since eight years of age, and renal colic accompanied by sharp hæmorrhage occurred nine years ago. The urine was passed in normal quantity, was clear, pale, acid, and of a specific gravity of 1020, but contained no albumen. On Oct. 8th the lateral operation was performed and the ureter drawn out at the lower angle of the wound. Before removal of the kidney three pints of urine were drawn off, which contained a trace of albumen, had a specific gravity of 1015, and was slightly cloudy; an oval brown calculus was found on a bed of papillomatous tissue obstructing the ureter. The renal tissue was almost entirely destroyed over the whole of the renal cyst. This was the ninth successive case in which the abdominal operation had been successfully performed. The specimens of the tenth and eleventh cases were also shown. No cause could be assigned for the eleventh case. In the ninth case the left kidney was felt to be much enlarged along the side of the lumbar spine.

Mr. J. HOPKINS showed specimens of Bones from two cases of Tabes Dorsalis. Of the first case the upper end of a femur with old fracture of the neck presented changes identical with rheumatic arthritis. The patient had well-marked signs of tabes; the movements of the right hip-joint were too extensive, and gave rise to no pain; the right knee-joint was distended with fluid. During the three years the case was under treatment there were lightning pains and daily vomiting, but no gastric crises; the use of morphia aggravated the symptoms and caused vivid illusions, which later in the case became a marked feature. Muscular tremor and general wasting, together with bulbar symptoms, set in towards the close of the case. There was optic neuritis in the left eye, with concentric loss of vision. Of the second case the femur and articular ends of bones forming the knee and ankle-joint presented irregular cartilaginous surfaces, due to past ulceration and wearing down of cartilage. A ring of new cartilage, partly ulcerated, was to be seen round the head of the femur. There was a well-united fracture of the femur. The patient had suffered from lightning pains, but never vomiting. Bulbar symptoms were observed from time to time during three years. There was effusion into the right ankle-joint, which lasted six months; a spontaneous fracture of the left femur remained ununited after being kept in splints for three months. The patient had had optic neuritis of the right eye. There were well-marked symptoms of disease of the bulb at the time of death.

The following card specimens were shown:—Dr. Hebb: Sarcoma of Spinal Cord and Bacilli in Primary Cancer of Liver. Dr. Turner: Laceration of Kidney, with Aneurysm of the Renal Artery. Dr. Edmunds: Hypertrophy of Tibia. Mr. K. Thornton: Cystic Kidney and Scrofulous Kidney removed by Abdominal Operation. Mr. Arbuthnot Lane: Fracture of Sternum. Mr. Hutchinson: Diffuse Morphœa of Hand with Gangrene of Finger.

The following recent specimens were exhibited:—Mr. Rickman Godlee: Fracture of Skull with Effusion of Serum. Dr. Hale White: Primary Encephaloid Cancer of Liver; Ulceration of Trachea from Tracheotomy Tube.

Mr. Davies Colley showed a living specimen of Spondylitis Deformans of Dorsal Region.

CLINICAL SOCIETY OF LONDON.

Dysentery treated by Voluminous Injections of Nitrate of Silver.—Charcot's Disease.

AN ordinary meeting of this Society took place on Nov. 14th, Sir Andrew Clark, Bart., President, in the chair. The discussion on Mr. Morrant Baker's paper was adjourned till the next meeting.

DR. STEPHEN MACKENZIE read a paper on Cases of

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Chronic Dysentery treated by Voluminous Enemata of Nitrate of Silver. The author alluded to a former series of cases he had brought before another Society, and stated that extended experience had strengthened his belief in the value of large enemata of nitrate of silver in the treatment of cases of chronic dysentery or dysenteric diarrhœa. The mode of procedure he adopted was as follows:—The quantity of nitrate of silver to be used was dissolved in three pints of tepid water in a Leiter's irrigating funnel, which was connected by indiarubber tubing with an œsophageal tube with lateral openings. The patient was brought to the edge of the bed and made to lie on his left side with his hips well raised by a hard pillow. The terminal tube, well oiled, was passed about eight or ten inches into the rectum, and the fluid allowed to force its way into the bowel by gravitation. The injection rarely caused much pain, and often none. It usually promptly returned, but when long retained it was advisable to inject chloride of sodium to prevent absorption of the silver salt. Various strengths had been used, from thirty to ninety grains to three pints of water, but usually one drachm of nitrate of silver was employed. The treatment was based on the view that, whatever the nature of dysentery, whether constitutional or local in the first instance, the later effects were due to inflammation or ulceration of the colon, which was most effectually treated, as similar conditions elsewhere, by topical measures. Sometimes one injection was required and sometimes two, and in some cases numerous injections were necessary; but in all the cases thus treated, many of which had been unsuccessfully treated in other ways previously, the disease had been cured. In most cases other treatment was suspended, but in some Dover's powder or perchloride of iron, which had been previously administered, was continued or subsequently prescribed. Six cases were narrated. In the first the disease had lasted several years off and on; two injections were used and the case was cured in six weeks. The second case was a second attack of dysentery of uncertain duration; four injections were used, and the case got well at the end of five weeks. The third case had lasted two months; two injections were used, and the case was cured in three weeks and a half. The duration of the fourth case was five years; one injection was used, and the disease was at an end in three weeks. The fifth case lasted eighteen months; two injections were used; the dysenteric symptoms disappeared, but the patient remained under treatment for diabetes. The duration of the sixth case was fourteen months; one injection was used, and a cure was effected in seven weeks. The treatment, which laid no claim to novelty, was brought forward to elicit the experience of others who had tried it, or to induce others to employ it in suitable cases.—Dr. CARRINGTON doubted whether on further experience such favourable results would be repeated. At the Seamen's Hospital he had much experience of dysentery. He supposed that it was the voluminous nature of the injection for which the value of the treatment was claimed. He had employed injections of one pint without any marked effect on the disease. To him it seemed incredible that the severe lesions of dysentery could be cured by such a moderate amount of treatment. Moreover, it was probable that as much as six pints would be required to fill the colon.—The PRESIDENT said that the use of voluminous injections was known to the ancients. Dr. Mackenzie had clearly shown that the use of voluminous injections of nitrate of silver was of great value under certain circumstances.—Dr. CULLIMORE asked whether the treatment advocated by Dr. Mackenzie had any advantages over other methods of treatment; were the cases cured in a shorter space of time? He considered that perfect rest, a proper dietary, and removal from their former mode of life, were the most important matters to attend to in the treatment. He referred to one case in which the injection of a solution of nitrate of silver caused a considerable amount of pain along the course of the colon. He had seen a case which led him to believe that starvation might be sufficient to cause the disease. Injections of iodoform were used, but opium and tincture of krameria did far more good.—Dr. DYCE DUCKWORTH said that he had treated but one case, and in this the results were not very remarkable. The case was a moderately severe one, involving the colon and sigmoid flexure. He could not but think that cases which were called dysentery varied much in etiology and pathology. The influence of temperament and diathesis in tropical diseases was one which required to be a good deal more recognised than was at present the case.—Dr. BERNARD O'CONNOR asked how long a time had elapsed since the above results had been obtained. He had known hot water injections to cure the disease.—The PRESIDENT asked the author to state the mode in which the injections were used, and to describe the character of the stools before the treatment was begun.—Dr. STEPHEN MACKENZIE, in reply, said that the account in his paper would answer most of the questions. Many times in his paper he used the terms chronic dysentery or dysenteric diarrhœa. These names related to a condition which those who had had acute dysentery at some time might suffer from. The patients were greatly emaciated, and there was much anæmia, with dryness of all the mucous membranes. In cases of slighter ulceration, he believed that this method of treatment would be found to be far more effectual than other modes. He had noticed that the same class of cases came to the London Hospital as went to the Seamen's Hospital at Greenwich; amongst them were cases of various degrees of chronicity and severity. He had seen a single injection cure a case of dysentery which was complicated with cbyluria. It was impossible for him to speak as to the permanency of the cure in the class of patients who were under his care: He ventured to think that distension of the colon was not required, and might be dangerous; three pints was a good quantity to inject, and seemed to effect all that was necessary.

Mr. MORRANT BAKER read a paper on three cases of Joint Disease in connexion with Locomotor Ataxy. The paper was illustrated by casts and specimens. The patients were two males, aged respectively forty-six and fifty-six; and a female, aged fifty-four. In all, the symptoms of locomotor ataxy were well marked, the disease having existed in one case for about two years, in another for a few months, and in the third for twenty years. In the two men the joint chiefly affected was the right knee-joint; in the female the right elbow-joint and both hip-joints, with incipient disease of the left elbow-joint, were the diseased parts. In all the cases the disease of the joints was apparently a typical example of the affection usually termed Charcot's disease. The joints were much enlarged, the articular surfaces greatly misshapen, and the ligaments weakened or destroyed. There had been very considerable wearing away of the articular ends of the bones—one or other condyle and a large portion of the head of the tibia in the case of the knee-joints, and apparently nearly complete disappearance of the heads of the femora in the case of the hip-joints. The joints were loose and flail-like; although in the case of the diseased elbow-joint, and in those of the knee-joints, the patients retained considerable power of voluntary movement. Mr. Baker remarked that he had brought the cases before the Society chiefly in order to add to the record of facts regarding a rare and not well-understood disease; but he thought a discussion might well be raised in connexion with them on the following points:—(1) Whether the disease is actually new? (2) What are its alliances, if any, with rheumatoid arthritis? (3) If connected with the last-named disease, is its occurrence in conjunction with locomotor ataxy a mere coincidence? or do these stand in the relation, one to the other, of cause and effect; and (4) if connected pathologically both with rheumatoid arthritis and with locomotor ataxy, should not all cases of rheumatoid arthritis be considered of neurotic origin, whether accompanied or not by symptoms of locomotor ataxy? There is still another theory possible, even if Charcot's disease and locomotor ataxy and rheumatoid arthritis are all connected in pathological origin. It is conceivable that all arise from some antecedent diseased condition of which the result is expressed in pathological changes, sometimes in the cerebro-spinal nervous system, sometimes in the joints, and sometimes in both.—Mr. ARTHUR E. BARKER related the case of a man aged thirty-eight, a railway porter, who came to him suffering from urinary troubles, the chief of which was increased frequency of micturition; the disturbance of the act of micturition was most evident when the bowels were loaded. Much nausea with curious feelings, and even vomiting with pain in the epigastrium and a feeling of distension about the abdomen, were complained of. Numbness in the feet and attacks of "rheumatic" pain in the limbs were experienced sometimes. The first symptoms began in January, 1881, and later a perforating ulcer appeared in the sole of the right foot, but, with the above exceptions, there were no other symptoms of ataxy, as Drs. Gowers and Barlow testified on different occasions. A second ulcer on another part of the sole of the foot appeared a few months after the first. Both these ulcers were benefited by treatment, and the patient was

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lost sight of for a time. When next seen gastric symptoms were again dominant, and the ulcers on the right foot had taken on fresh action; it was also noticed that the foot was much worse after the gastric attacks. With a variable course the case went slowly on, when at the beginning of the present year complaints of shooting pains in the left thigh and quivering of the muscles were recorded. A feeling of sudden weakness was from time to time experienced. Soon one of the knee-joints underwent complete disorganisation. The tibia was dislocated inwards and a little backwards. Yet all through this time, and up till the present date, the knee jerks were present; there were no ocular phenomena, and none of the ordinary objective phenomena of tabes dorsalis.—Dr. DYCE DUCKWORTH implied that the view which referred the joint disease to the class of ordinary rheumatic arthritis was not accepted by him. He believed that Charcot's disease was a definite form of joint-disease distinctly associated with disease of the nervous system. Clinically, the course of the two diseases above mentioned was very different. If we remembered that in the course of a few weeks an amount of destruction existed such as was not seen in ordinary cases of rheumatic arthritis after the lapse of twenty years, he did not perceive how confusion between the two diseases could arise. He was of opinion that an acute observer of such long experience as Charcot was hardly likely to fall into error on this question. The joint change was not due to injury and was not like an ordinary arthritic affection. Referring to pathological appearances, he said that if there were one creed in medicine which was more axiomatic than another, it was that which believed that identity of lesion was by no means a proof of identity of process which had led to it.—Dr. HALE WHITE said there must be something radically wrong if an acute observer like Moxon could assert that out of thirty cases of tabes dorsalis there did not happen to be one of joint disease, when it was recollected that one in every ten was the proportion given by Charcot. He referred to a case which he had discovered in the post-mortem room where the temporo-maxillary articulation presented changes perfectly indistinguishable from those ascribed to Charcot's disease, whilst all the other points were unmistakably examples of rheumatic arthritis. He thought there were many points in common between the two maladies; examples of the two cases were mixed up, and there were so many connecting links between the two that the opinion that Charcot's disease was rheumatic arthritis modified by the special conditions of the disease was probably the correct one.—Dr. BUZZARD thought that although we had no proof, yet the probability was that the disease was not new. He had searched through Graves' work, which antedated Romberg's or Duchenne's account of tabes dorsalis, and there discovered an account of a case characterised by typical gastric crises which was without doubt one of locomotor ataxy; and this occurred as long ago as 1823. Further, it must be remembered that cases were so little recorded in earlier times, that an enormous increase of population had occurred, and that till within the past fifty years or less there were no out-patients to our hospitals, and so it was not strange that we should come across many more cases in proportion than would have been met with many years ago. It was in 1868 that Charcot described a case of joint affection alone, and it was five years later when a case with disease of several joints and with spontaneous fractures of the long bones was published by him. That observer believed that the osseous tissues were primordially involved in these cases, and that the joint disease was a part of the osseous alteration. Lionville investigated the subject by comparing a case of arthropathy associated with tabes dorsalis and a case of spontaneous fracture of the bones occurring in locomotor ataxy. He found that the same changes pertained in each instance. There was dilatation of the Haversian canals, with remarkable thinning and erosion of the bones. Regnard investigated the bones from a chemical standpoint, and found that the mineral substance was reduced from 48 to 11 per cent., and that the fat rose from 5 parts to 37. Dr. Buzzard suggested that surgeons should measure the specific gravity of the bones entering into the formation of the diseased joint with a view to possibly distinguishing between Charcot's disease and rheumatic arthritis; the specific gravity would probably be found to be greatly diminished in the former. In Dr. Adams' classical work on Rheumatic Arthritis no mention is made of such changes. It was to the surgeons that cases of joint disease naturally went, and though he had seen some hundreds of cases of tabes dorsalis, yet he could almost count on the fingers of his hands the number of cases of joint disease which had come to consult him amongst the sufferers from tabes dorsalis. He opined that a suddenly occurring painless swelling of a joint would not lead its possessor to go to a physician. Dr. Charcot's opportunities at the Salpêtrière were different from those of a physician to an English hospital. The patients included such as are found in our workhouse infirmaries, and they remained for years under observation. These considerations afforded a complete explanation of Dr. Moxon's experience. Having had to do with a large number of cases of nervous disease in the out-patients, as well as in the in-patients, of a hospital devoted to nervous diseases, it was not strange that he (Dr. Buzzard) should have met with several cases of associated joint disease, and yet in every such association the nervous disease was found to be tabes dorsalis. On the other hand, he had watched cases of rheumatic arthritis for years, and they never developed the symptoms of tabes dorsalis. He had investigated a great many cases of rheumatoid arthritis in English infirmaries, and, except where the mechanical conditions prevented him from testing it, he found the knee-jerks always present and the ocular phenomena natural. He considered that Charcot's disease contrasted clinically in the strongest manner with rheumatic arthritis.

The following living specimens were shown before the meeting:—Mr. Malcolm Morris: A case of Favus from Lisson-grove. Dr. Radcliffe Crocker: Atrophy of the Scalp from Favus of long standing. Mr. A. E. Barker: Intra-uterine Constrictions of Lower Limbs. Mr. Morrant Baker: Charcot's Disease. Mr. Anthony Bowlby: Joint Disease and Locomotor Ataxy. Mr. R. W. Parker: Two cases of Spina Bifida. Dr. Charlwood Turner: Charcot's Disease. Dr. Donkin: Muscular Atrophy and Osseous Disease.

MEDICAL SOCIETY OF LONDON.

Koumiss.—Conduction of Physical Signs.

AN ordinary meeting of this Society took place on Monday last, Mr. Arthur E. Durham, President, in the chair.

Mr. NOBLE SMITH exhibited a case of cured Meningocele of the Occipital Region, treated by iodo-glycerine (Morton's fluid), in a child aged eleven months.

Dr. CARRICK read a paper on Koumiss. He drew attention to the similarity between asses' milk, mare's milk, and human milk. A table contrasting the cow's milk with woman's, mare's, and asses' milk was drawn up, from which it was shown that the reaction of the larger group was always alkaline, whilst the cow's milk was neutral or slightly acid. The casein of the larger group occurred in thin flakes; that of cow's milk in thick, compact, lumpy masses. When dried the casein of the larger group was granular and soluble in water and coagulable by neutral salts—e. g., sodium chloride; casein from cow's milk when dry was horny and almost insoluble in water and not coagulable by sodium chloride. Cow's milk could be churned into butter, but this was not the case with the milk of the larger group. The subjective symptoms due to a diet of koumiss were described in detail, and the effect of such a diet on the chemistry of the body was entered into. Koumiss was of much value in all diseases associated with wasting and in many kinds of ulceration of the bowels. Its powerful diuretic action might prove of use in cases of renal disease. In cardiac disease koumiss was most valuable. But consumption was the disease *par excellence* in which koumiss effected so much good.—Dr. JAGIELSKI had introduced koumiss into this country fifteen years ago. Clinical experience led him to believe that koumiss made from cow's milk was as good as that made from mare's milk. It was necessary to remove part of the casein and part of the fat and to regulate the amount of sugar.—Dr. THEODORE WILLIAMS said that Dr. Burdon Sanderson had not formed a very good opinion of the use of koumiss in consumption. He had tried it in many diseases associated with vomiting with marked benefit.—Dr. CULLIMORE thought the climatic conditions had much effect in the koumiss cure in the steppes of Russia.—Dr. EDMUNDS understood that the author only claimed koumiss to be a nutritive agent of extraordinary power. New milk was known to be more digestible than milk that had stood for some time.—Dr. CARRICK said that koumiss was fermented mare's milk and not fermented cow's milk.

Dr. MARKHAM SKERRITT (Clifton) read a paper on the

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Conduction of Physical Signs in Diseases of the Lungs. It was universally recognised that the lung tissue acted as a conducting medium for physical signs in heart disease, but it was not so fully appreciated that the physical signs of lesions of the lungs themselves might be detected at a distance from their source. It might be stated (1) that physical signs due to disease of a limited portion of lung were liable to be conducted by the adjacent tissue so as to be recognised at a distance from the site of the lesion—as in front when the disease was at the back, or on the sound lung when one lung only was affected; (2) that it was therefore as important to trace to their origin the physical signs dependent upon lung disease as it was to follow out those of a cardiac lesion. Instances were adduced of the adoption by a consolidated lung of the signs of pneumothorax derived from the opposite side: the transmission to the sound side of the tubular breathing of pneumonia, the interchange of physical signs between the affected side and the unaffected in pleuritic effusion, the conduction of the physical signs of phthisis, from one apex to the other, and the conveyance throughout the pulmonary region of sounds having a strictly localised origin. The physical signs most liable to conduction were those of auscultation; and of these, chiefly rales and altered breathing. In the localisation of a conducted sign in lung disease the process was the same as in the case of a cardiac lesion. In conduction a physical sign (1) retained its special quality; (2) lost in quantity in proportion to the distance from its source. The readiness with which a physical sign was conducted was also of value as an indication of the state of the transmitting tissue. The subject of the paper was one of considerable practical importance, as instances had been met with where error had resulted from the want of a due appreciation of the facts adduced.—Dr. THEODORE WILLIAMS remembered several instances in which it had been difficult to arrive at a correct diagnosis from physical signs being conducted away from the place at which they originated.—Dr. DE HAVILLAND HALL thought that the auscultatory signs over the lung ought to be checked by palpation, percussion, and auscultation of the vocal sounds. He referred to the possibility of conduction by means of a thickened pleura or enlarged mediastinal glands.—Dr. COUPLAND thought there was some novelty in the belief that the physical signs of phthisis might be conducted to the healthy lung, and related a case of asthma bearing on the subject.—Dr. KINGSTON FOWLER said it was very common to find that the physical signs of a cavity at one apex of the lungs were conducted to the opposite apex. It was necessary to verify the auscultatory signs by other methods of physical examination.—Dr. SKERRITT briefly replied.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of the above Society was held on Wednesday, Nov. 5th, Henry Gervis, M.D., President, in the chair.

The following specimens were shown:—Mr. Sydney Jones for Mr. Lawson Tait: Tubal Fœtation. Mr. Thornton: Fibroid Uterus, with two Cystic Ovaries, removed by operation. Dr. Aveling: Fibroid of Uterus, with Cystic Degeneration, removed by operation. Mr. Walter Griffith: Retroverted and Adherent Uterus, with two Prolapsed and Adherent Ovaries. Dr. Bantock: Hagedorn's Surgical Needles and Holder. Dr. W. Duncan: Double Intra-uterine Tube. Dr. Godson: Greenhalgh's Spring Pessary, with Glycerine Pad.

A plea was raised for the revival of Toughened Glass Specula by Dr. Heywood Smith.

A paper was read on the Severe, or so-called "Uncontrollable," Vomiting of Pregnancy, by Dr. GRAILY HEWITT. Although many theories of the cause of the severe, or so-called "uncontrollable," vomiting of pregnancy have been put forward, the profession has not adopted any of them. The author's object in the present paper is to investigate the question as to the influence of morbid conditions of the uterus in giving rise to the disease. The facts and cases published and available for discussion of this question are now arranged, and tabulated, and analysed. The first series of cases are thirty-two in number, and include all cases the author has been able to collect in which the condition of the body of the uterus was noted and observed in cases of severe vomiting in pregnancy. In a second series of cases, thirteen in number, the condition of the os and cervix uteri was particularly noted and described. These two series of cases constitute the clinical data available for use in the discussion of the question as to the influence of the condition of the uterus itself in causing the vomiting, and they include 10 cases observed by Prof. Horwitz of St. Petersburg, 8 recorded by the author, 7 by Dr. Copeman, 2 by Stoltz, 2 by Dance, and single cases recorded by other authorities. In the series of 32 cases there are 28 cases of a very typical description, in which sickness of an intense degree of severity was present in the course of the first half of pregnancy. In the majority of these 28 cases the vomiting was so severe that the question of artificial abortion arose. In 23 of these cases the uterus was in a state of decided anteversion or anteflexion, and in 12 of these 23 cases there was impaction of the anteverted or anteflexed uterus in the pelvis. In one case the uterus was anteverted slightly, but had been considerably anteflexed shortly before the pregnancy occurred. In 4 of the 28 cases the uterus was retroverted. It thus appears that out of the 28 cases in question the uterus was decidedly altered in shape and position in 27 cases, and in the one case remaining was anteverted slightly. The cervix was thickened and unduly hard in 3 out of the 32 cases, and much thickened in 6 cases. In the other series of 13 cases the cervix was described as very hard in 4 cases. In 2 cases (of the 32 series) pus was found between the uterus and decidua after death. There was excessive sensitiveness of the uterus in most of Horwitz's cases, and in 4 or 5 what Horwitz terms parenchymatous inflammation. The remarkable feature in the series of 32 cases is that in all the cases where attempts were made to raise the uterus from its displaced position, and when that attempt was successful, the vomiting ceased, whereas when the attempt failed the vomiting continued and the patient died, the exceptions being those in which artificial abortion was induced, and one in which abortion occurred naturally. In some of the cases artificial abortion was had recourse to as a primary procedure. Of the 32 cases, 11 died, 20 recovered, and in 1 the result was not known. The 20 recoveries include 6 after induction of artificial abortion, 1 natural abortion, 7 after manipulative treatment and replacement of the uterus, and 6 following positional treatment, rest, anti-inflammatory remedies, &c. The second series of 13 cases were, with one exception, cases in which the new treatment suggested by Copeman was carried out, and in which no record is given as to the state of the body of the uterus. In these 13 cases recovery took place. The author concludes: (1) That the cases in which the disease is due to some other organ than the uterus are so few in number (only 1 in the series of 32) that they may be almost excluded from consideration. (2) That in the large majority of cases the disease presents itself during the first half of pregnancy. (3) That the evidence points to interference with the normal expansion and growth of the gravid uterus as the condition of the production of this dangerous affection, and that this is most frequently brought about by or in connexion with detention of the bulk of the uterus in the bony pelvis, in 88 per cent. the uterus being anteflexed or anteverted, and in 12 per cent. in a state of retroversion; the other conditions met with being hardness, resistance, or unusual rigidity of the os and tissues of the cervix. (4) There appear to be two factors to be considered capable of interfering with the expansion of the uterus: (*a*) incarceration with flexion or version; (*b*) undue hardness and rigidity of the os and cervix; these may be conjoined in a given case. It appears to be borne out by the facts recorded that the incarceration is the more important of the two factors as a rule at least. The facts appear to point to the occurrence of embarrassment in the expansion of the uterus very early in the pregnancy, such as might be expected to be occasioned by a previously flexed state of the uterus, or to a congested indurated state of the cervix, or to the two conditions combined. As the pregnancy advances the congestion and swelling are intensified and the resistance to expansion thus increased. It appears probable that the particular cause of the sickness observed is the compression of the nerves situated in the tissues which are especially exposed to compression—viz., those around the cervix uteri and especially those near the internal os. Copeman's success in the treatment of severe sickness by dilating the internal os is evidence in this direction. The importance of the flexion element has been denied, one principal objection being that sickness is not always present when the uterus is flexed. But the case is the same in the non-gravid uterus; severe sickness is not seldom due to flexion of the non-gravid uterus, while flexions are observed without sickness. Corroboration of the author's views are contained in Gebrung's

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recent paper. As a rule severe sickness is limited to the first half of pregnancy, in a very few cases it persists longer; in these rare cases the cause may be rigidity of the tissues round the internal os, persisting to a late period. As regards treatment the first indication is to secure the normal upward movement of the fundus uteri, to relieve the incarceration of the uterus when present, if that be possible, and to prevent its occurrence by a properly arranged method of treatment. Absolute rest in the supine position if anteversion be present, or on the face or side if retroversion be present, and the use of the knee-elbow position will be required. These measures suffice in many cases. If the uterus be fixed gentle continuous pressure must be applied internally by the fingers or by an air-ball and the position maintained by a suitable pessary. These measures failing, Copeman's procedure of dilating the cervix should be employed. The last alternative, induction of artificial abortion, will, it is believed, be rendered unnecessary if the other less severe measures are applied sufficiently early.—The discussion, which was adjourned soon after its commencement, will be given in the notice of the next meeting.

ABERNETHIAN SOCIETY.

AT the meeting held on Thursday, Nov. 13th, Mr. O. LANKESTER and Mr. STEPHEN PAGET read short papers on Infantile Diarrhœa and Abdominal Abscesses respectively. Mr. Lankester's paper treated of simple diarrhœa, unconnected with organic disease of the intestine. He divided the subject into the four varieties of (1) non-inflammatory, (2) inflammatory, (3) choleraic, and (4) dysenteric. Of these four, he discussed only the first two varieties. He mentioned cold, bad feeding, dentition, and worms as the chief causes, and sketched out the diet of infants. He mentioned the complications of diarrhœa—as blood in the stools and prolapse of the rectum; and spoke of the use of opium in the latter complaint. Mr. Lankester next alluded to the uncertainty of diagnosis in cases of diarrhœa caused by dentition. With regard to the inflammatory diarrhœa, the causes may be the same as those of simple; also bad smells. In considering the question of diet, he spoke of the necessity of avoiding milk, and advised the substitution of broth; also white wine whey in cases where collapse is present. He alluded to the use of mustard baths and brandy, to the antiseptic treatment, washing out the stomach, and administering small doses of benzoate of soda frequently. In chronic forms of inflammatory diarrhœa, the utmost attention should be paid to diet, and pepsin and raw meat were very useful in such cases.

Mr. STEPHEN PAGET, in discussing Abdominal Abscesses, divided the subject according to the causes. 1. Injury or disease of the wall itself: (*a*) contusion; (*b*) tracking of discharge from a non-penetrating wound; (*c*) injury or disease of bones or muscles; (*d*) inflammation of the connective tissue between the muscles. 2. Inflammation of the sub-peritoneal connective tissue. 3. Injury or disease of internal organs. 4. Deep-seated cancer. Mr. Paget mentioned some extraordinary cases which have been recorded from time to time, and also the frequency of abscesses following necrosis of a rib from scrofula or typhoid fever. He next discussed the nature and appearance of phlegmonous inflammation of the connective tissue, and cases were cited showing its causes, and also its course under treatment.

Mr. PAGET brought forward three cases of Pelvic Abscesses in young women which were treated by puncture or incision through the abdominal wall, and also three cases of Deep-seated Abscesses of the Subperitoneal Connective Tissue incised above the pubes and drained. Lastly, six cases were given of Abscesses of the Abdominal Wall due to Deep-seated Cancer. In conclusion, Mr. Paget urged the necessity of treating all acute abscesses of the abdominal wall as soon as possible and by incision rather than by puncture, and impressed upon his hearers the fact that in elderly people the cause is frequently cancer.

GLASGOW UNIVERSITY MEDICO-CHIRURGICAL SOCIETY.

Address by Professor Gairdner.

THIS Society, established and maintained by the students of the university for the purpose of mutual improvement and the reading of papers and discussions during the session, met on the 14th inst. to hear the address of the annual honorary president, Professor W. T. Gairdner, M.D., LL.D. Dr. Joseph Coats, the retiring honorary president, took the chair, and was supported by Dr. Rutherford, the acting president; Mr. John M'Phail, vice-president; and other office-bearers, together with Dr. Lindsay Steven, a former president. Dr. Gairdner's address, as announced, was on "The Self-Education of the Medical Student." On this subject he said that the purpose of the address, which, he feared, must after all be very unequal to his intentions and to his hearer's goodwill, was to make a few reflections or suggestions as to what he had termed "self-education"—meaning thereby something outside the regular discipline of the curriculum, and yet not so entirely removed from professional work as to be even apparently foreign to, and apart from, it; in other words, not the more general—moral, religious, ethical—discipline which is usually implied in "self-culture," as, for example, it has been admirably treated in a little book by his friend Professor Blackie. Professor Gairdner's aim was to show that, even in the midst of the medical education, so called, which is laid down in the curriculum, and which is therefore compulsory, and may be even felt by some as a bondage, there is a good deal over and above which is really and truly a part of medical education, and which a student can only do effectually for himself. It was impossible, however one might try it, altogether to sterilise the human mind. The mind of man, from babyhood upwards, presents a fruitful soil on which one may grow almost anything, provided only that the thing in question is alive, or has the potency of life in it. The true distinction between education, properly so called, and what is termed mere erudition, or cramming, is that the latter consists of putting into the mind lifeless or comparatively inert matter, not necessarily useless, inasmuch as it may make a good manure, but not seminal, and therefore not capable of growth; while the former consists in a process of inoculation or insemination of the mind with principles which, being alive and fitted for growth, and finding there a fitting soil, inevitably tend to grow and develop into organisms. This being the essential nature of all education, that it is a growth as of a seed into a plant within the mind, there may be, nay, there must be, a bad education possible as well as a good. The principles of evil will grow in that fruitful soil of the human mind just as well as the principles of good, in some cases, perhaps, still more actively and irrepressibly. The one point in both instances which makes it an education is that it is a growth; that in the act of developing into an organism the seminal principle implanted or inoculated alters the very constitution of the mind itself as effectually as the yeast fungus changes the nature of a saccharine solution, or the septic organism disintegrates the nitrogenous elements in which it becomes developed. Continuing the analogy, Professor Gairdner stated that this education, or insemination, of the mind for good or for evil was, in reference to other minds, of the nature of a contagion or infection. A small, often an infinitesimal, inoculation of the results of education in one mind was sufficient so to influence another, or even a multitude of other minds, as to give rise to a similar growth in them to an extent practically limitless, so that a single truth in science, a single principle of working in an art, a thought that breathes, a word that burns, may spread its influence through a family, a school, a profession, or a nation, it may be, as surely as the torula cerevisiæ will multiply in any number of saccharine solutions, or as the germs of anthrax, or of small-pox, or of cholera will spread through any number of flocks and herds, or of human beings, all over the world, if only they find a fitting, and, still more, an unexhausted or virgin soil for their development. If one does not implant, or inoculate, the right kind of germs, or educational influences, in sufficient abundance, or if one does not place them in the necessary conditions for their growth, other influences will certainly occupy the field, and will grow there in spite of all efforts, till the mind becomes, like the world in the eyes of the Prince of Denmark—

> "An unweeded garden,
> That grows to seed: things rank, and gross in nature
> Possess it merely."

THE late Mr. Jonathan Barlow by his will directed that the residue of the pure personalty be handed over to the vestry of St. George's, Hanover-square, or the vestries of any of the adjoining parishes, at the discretion of his trustees, for the maintenance of public waterclosets and urinals and their proper inspection, so that the public may have free use from the public thoroughfare.

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Reviews and Notices of Books.

On Sclerosis of the Spinal Cord. By JULIUS ALTHAUS, M.D., M.R.C.P. Pp. 385, with nine engravings. London: Longmans and Co. 1885.—The first 323 pages of this volume are chiefly occupied with the morbid anatomy, pathogenesis, etiology, symptoms, diagnosis, prognosis, and treatment of so-called tabes dorsalis. There can be but little question that "locomotor ataxy" deserves all the attention which it has received at Dr. Althaus' hands. The work is strongest on the clinical side; that department, in fact, in which the author has had the most experience. Chapter 6, on the symptoms of "tabes spinalis," is a very careful and accurate study of the disease. In the first or pre-ataxic stage of the malady the author makes twenty-one divisions, not to count the subdivisions. The process of division is not carried too far. A glance at the table of contents relating to symptomatology perhaps does more towards giving one an idea of the protean nature of the pre-ataxic stage of locomotor ataxy than any amount of continuous reading would do. The whole work is highly commendable. A characteristic feature is the introduction of a large number of clinical cases gathered from the author's wide experience. In the departments which are not devoted to the symptoms and treatment of the disease, Dr. Althaus presents his readers with the best results of other authors. Recent researches receive proper recognition in their appropriate places. This work cannot be reviewed in other than a favourable strain. In phraseology a few peculiarities may be found. We do not appreciate the phrase "reflectory rigidity of the pupil" as a descriptive one for the "Argyll-Robertson pupil." Dr. Althaus speaks favourably of the use of antisyphilitic treatment in the first stage of "tabes dorsalis." "As far as electricity is concerned, however, we must look to the constant current as our sheet-anchor in these cases. The constant current is not able to restore central nerve tubes which have been destroyed, but it has the tendency, by its catalytic and stimulating effects, to improve the nutrition of those which are beginning to be diseased, to strengthen the remainder, and also to some extent to call into play the law of substitution, thus causing healthy fibres in neighbouring strands to perform the work of others which have perished." It is perhaps too much to believe that the constant current exerts all the properties which are here attributed to it.

Transactions of the Academy of Medicine in Ireland. Vol. II. London: Baillière, Tindall, and Cox. 1884.—This second large volume is a very good continuation of the new series. Want of space forbids our giving it the full recognition it deserves. The subjects of which it treats are both numerous and varied. The articles in the Pathological Section are exceptionally good. Mr. Benson's investigations into the nature of jequirity inflammations constitute a new chapter in the progress of the pathology of inflammations caused by the drug. Dr. Nixon's papers on brachial monoplegia and reflex paralysis are of much interest and Mr. Story's articles on cases of disease of the nervous system must also be mentioned. Mr. Stokes' case of ossifying sarcoma of the skull is accompanied by an excellent illustration. Nine other illustrations give the volume an additional value.

The National Dispensatory. By ALFRED STILLÉ, M.D., LL.D., and JOHN M. MAISCH, Phar.D. Third Edition. London: J. and A. Churchill. 1884.—We have much pleasure in recording the appearance of a third edition of this excellent work of reference. It is an admirable abstract of all that relates to chemistry, pharmacy, materia medica, pharmacology, and therapeutics. It may be regarded as embodying the Pharmacopœias of the civilised nations of the world, all being brought up to date, with the exception of our own, which, from its antiquity, is useless for all practical purposes. The work, as a rule, has been very well done, a large number of extra-pharmacopœial remedies having been added to those mentioned in previous editions. The only fault to be found is with the paucity of references to pharmacological papers. It would be easy to give examples, but it will suffice to instance the subject of nitrite of sodium, the literature of which appears to have escaped the notice of the authors.

Life in the Soudan. By Dr. JOSIAH WILLIAMS, F.R.G.S. London: Remmington and Co. 1884.—At a time when our thoughts are largely concentrated on the Soudan, this work by Dr. Josiah Williams will prove acceptable to a considerable section of the reading public. Dr. Williams has travelled a good deal, and has seen something of military life as a surgeon in the Turkish Army. In 1881 he accompanied a party of gentlemen, who were visiting the Soudan for sporting purposes, and the book before us is his diary extending from the winter of 1881 to the spring of 1882. Dr. Williams is a lively writer, and has an eye for detail which is always pleasant in a book of travels. He gives the history of the journeyings of the caravan day by day from December to March, and a perusal of it affords a capital insight into the camp life of the sportsman, and some of the manners and customs of the tribes of Upper Egypt and on the borders of Abyssinia.

The Asclepiad. By Dr. B. W. RICHARDSON. London: Eade and Canlfield.—The October number of this quarterly maintains the high standard of its predecessors. An essay on the mental phenomena of typhoid fever is full of suggestions; the author believes that every definite physical disorder has associated with it its own equally well-defined mental phenomena. Typhus is marked by short, delirious, broken dreams; remittent fever by long, dolorous, painful dreams; scarlet fever by realistic dreams; and so forth. A spontaneous cure of extreme portal congestion by copious accidental hæmorrhage is a carefully related clinical study. A coloured plate of perfect definition accompanies the description of disease due to bichromate of potassa. "Schools of Physic, Past and Present," is a very readable article. The article on a "Great Medical Reformer" has already received notice at our hands.

Christmas and New Year Cards.—Messrs. HILDESHEIMER and FAULKNER have forwarded to us packets of their leading designs in Christmas cards for the present season; also specimens of illustrated books. Many of these works of art are very beautiful. Our space will not allow of an enumeration of the specimens which have most excited our admiration, but the cards as a whole are of such excellence that no surprise can be felt that the above-named firm were successful in securing the gold medal (highest award) at the late International Exhibition.

THE University of London Lodge of Freemasons No. 2033, held a meeting on Thursday last, under the presidency of Mr. F. A. Philbrick, B.A., Q.C., when the following resolution was moved by the chairman, seconded by Dr. Alfred Meadows, J.P., and unanimously carried: "That this Lodge desires to place on record the expression of its sincere regret at the decease of one of its first members, the late Bro. Havers, F.R.C.S.E., and to express its sense of the great loss which English Freemasonry has sustained by the removal of one of its most able and zealous supporters." At the close of the meeting Professor J. Curnow, M.D., called attention to the circumstances attending the sad death of the late Dr. Rabbeth, a distinguished graduate of the University, through his self-devotion in endeavouring to save the life of a child patient, and the members present made a substantial addition to the fund now being raised for the purpose of establishing in the University a gold medal in honour of his heroism, and to perpetuate his memory.

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Abstracts
OF
INTRODUCTORY ADDRESSES
DELIVERED AT THE
DUBLIN HOSPITALS & MEDICAL SCHOOLS
AT THE
Opening of the Session 1884-85.

ROYAL COLLEGE OF SURGEONS MEDICAL SCHOOL.

MR. STACK pointed out the attractions that Dublin possessed, in a scenic point of view, over other centres of learning, but there were, however, more solid grounds for preference. First of all he would mention the admirable clinical training that was given, far superior in every way to that provided in some of the best London hospitals. The lecturer then enumerated the various branches of knowledge which the students on entering would have to take up—anatomy, physiology, chemistry, materia medica, toxicology, and mechanics—and having dwelt upon the amount of general knowledge that should be brought to the study of each of these subjects, he pointed out how essential a thorough grasp of them was to a comprehensive knowledge of the requirements of the profession. Mr. Stack next referred to the particular branch with which he was connected. A truer knowledge of dentistry, he said, was now being diffused; great progress had been made in it in the medical schools throughout the United Kingdom, and the Council of the Royal College of Surgeons of Ireland had introduced into their schools all the most recent appliances in connexion with this long-neglected study. With the aid of some diagrams he next explained the structure of the teeth, and the various methods that had been adopted for arresting their decay. The use of plates was being gradually superseded, but it was evident that for a long time yet they would have to be used. He remarked upon the advantage it was to a dentist to have a knowledge of chemistry; in fact, of all the branches he had already referred to as entering their curriculum. He concluded by exhorting the students to apply themselves to their studies in such a way that they should hereafter become a credit to their College and ornaments to the noble profession they were now entering.

ST. VINCENT'S HOSPITAL.

DR. QUINLAN, after some prefatory remarks, referred to the results of the recent Copenhagen Congress and to the scientific work done there. Speaking generally, it might be said that the Copenhagen meeting showed that the most wonderful progress had been made in the last seventeen years, during which the profession of the whole civilised world had worked as one harmonious body, and had met periodically for international discussion. No other human avocation or calling presented the spectacle of several thousand scientific investigators from every part of the globe meeting together for a week in some selected rendezvous, listening and discussing, generally through the medium of some artificially acquired language, and the flitting to their distant homes enlightened and improved. There they heard and saw those famous celebrities who would otherwise be to them simply names. To enter into details would be impossible, but he would single out the great discovery of M. Pasteur, who appeared to have found out a method of extinguishing hydrophobia. M. Pasteur succeeded in attenuating the hydrophobia poison, and inoculated dogs with this enfeebled virus. The animals sickened but got well, and having gone through this process were found to be protected against hydrophobia even more effectually than ordinarily inoculated human beings are against small-pox. The next most important address was that of Tommasi Crudeli, of Rome, upon malaria. The debate on pulmonary consumption and tubercle was a remarkable one, notwithstanding the absence of Prof. Koch, who was not there to defend his bacillus. It was enlivened by the declaration of Prof. Jaccoud of Paris, that the bacillus discovery was almost sterile for clinical purposes, nor will any practical physician deny this. The infective character of consumption was admitted, but while there is no doubt that in Southern Europe there is an actual danger, in our colder latitudes the occurrence is exceptional. He would earnestly recommend his young audience to cultivate such an acquaintance with French and German as would enable them to at least understand these languages when spoken or read. The next meeting would be held in New York in 1887, and the following one in 1890 and probably in Constantinople. There was great and noble work to be done, and let them hope that their great cosmopolitan profession would approach it with intelligence, patience, and energy; with no political, religious, or personal object to serve, but looking solely to the advancement of science and the benefit of their common humanity.

MATER MISERICORDIÆ HOSPITAL.

MR. M. A. BOYD, after recommending his hearers to seek to obtain degrees in arts as well as medical degrees, and expressing his opinion that the prospects of scientific education never looked brighter than they do to-day, said that our knowledge of therapeutic science, or the physiological action of medicines based on scientific experiment, was every day being added to, and the action of remedies both new and old more thoroughly understood, and our knowledge of them rendered more accurate. In this particular branch he would instance the use of a number of new antipyretics or remedies that abate undue heat of body by lowering arterial tension, and regulate the action of the heart and blood-vessels through the nerves that govern them. It was seventeen years since the revision of the Pharmacopœia, and since then a number of new drugs had been introduced. During this time operative surgery had been revolutionised by the antiseptic treatment of wounds; dermatology by the use of petroleum ointments, and therapeutics swelled by the introduction of many important drugs and definite chemical remedies. The student of to-day had not to cudgel his brains as to what was the direct specific for this disease or that; his more exact knowledge of disease as affecting different organs, and the pathological changes taking place therein, consequent on their alteration or arrest of function, enabled him now to meet disease with remedies whose physiological action was in direct antagonism to the morbid alterations he had to treat. In this he could not fail to observe how the knowledge of the physiology of drugs simplified his art, and brought medicine day by day nearer to the goal it must ultimately attain of being an exact science. What would be the surprise of a practitioner of the old therapeutic school if he could rise from his tomb and see his most cherished remedies, his Lares and Penates, shattered and broken, the iconoclasts rushing in on all sides and from every country to share in the work of demolition. Still more would he be astonished to see a joint or an abdominal cavity laid open fearlessly by the surgeon of to-day, under an antiseptic atmosphere, or a chest tapped by aspiration, and fluid that pressed injuriously upon the lungs or heart withdrawn, with none of the untoward results of a bygone surgical time, when such operations would be looked on as certain to lead to a fatal result. The lecturer concluded by urging on students the cultivation of the senses in the investigation of disease, as well as of a wholesome scepticism in the value of vaunted remedies; also of patient courtesy in meeting the whims and petulance of those who might come under their medical care.

MEATH HOSPITAL.

THE lecture introductory to the session was delivered on the 3rd inst. by Professor RAWDON MACNAMARA. Speaking of medical students in general he said that as a class they came to them for the first time free from restraint, fresh from school, young, full of animal spirits, and perfectly unaccustomed to the temptations of a city life. Rough, selfish, thoughtless, unsympathetic, they might appear to be on their first entrance within the wards. Yet after a time, let occasion arise, who so gentle, who so thoughtful, who so sympathetic, who so self-denying, who so tender hearted. What a wonderful transformation! a transformation only, as he believed, to be seen in their ranks, and only to be accounted for, reverentially let it be said, by the Divine afflatus breathed upon their class through the person of the patron of their order, St. Luke the Evangelist.

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As to the manner in which they should approach the discharge of their duties, he might be permitted to say a word. The regulations of their several licensing boards left nothing for him to say as to their preparatory studies beyond this, that in the majority of instances such regulations look upon such studies as being final. A more unhappy result could not be well conceived. He could well conceive a test examination as to whether the young man was fit at all to commence medical study—this of an elementary character, necessarily so; but of a final character, no; and he could not too strongly express his view that the only true way to establish their profession on a solid basis was to require some such academic position as would be evinced by an equivalent at all events to a degree in Arts, as conditional to admission within their portals. It might be utopian to look forward to this outcome of medical legislation, but nevertheless it was that for which they should agitate in the true interests of their profession. It had been well asserted that the gateways of knowledge were five in number—"seeing, hearing, tasting, feeling, and smelling." In pursuit of the study of their profession each of those gateways must be successfully stormed if they would be successful practitioners. Individually each one or other of these might be misleading, collectively they were proof strong as Holy Writ. The lecturer proceeded to bring forward arguments in favour of vaccination, and expressed his belief in the germ theory, but would not advocate the use of the carbolic acid spray. He concluded as follows:—"My idea is that to constitute a perfect physician a rare combination is essential—wisdom and experience. A man might be very wise, yet, lacking experience, will be but a poor practitioner; in like manner he may have great experience, yet, wanting wisdom, he never will carve for himself a niche in the temple of science. Inseparable from wisdom is truth. Without truth all is vain in science; for in it lies the foundation of all science. The grand characteristic of truth is its capability of enduring the test of universal experience, and of coming unchanged out of every possible form of fair discussion. Experience and wisdom, walking hand in hand, alone can add to our stock of medical knowledge. Wisdom will suggest that which experience will test, and the outcome is knowledge. But, gentlemen, above all things and before all things, bear in mind that "the fear of God is the beginning of all wisdom."

THE INTERNATIONAL HEALTH EXHIBITION.

MISCELLANEOUS FOREIGN EXHIBITS.

AMONG the exhibits grouped near the French and German courts there were many objects that suggest wide and as yet undeveloped sources of food-supply. Not that all these exhibits were worthy of encouragement, indeed some of them should not have been admitted. For instance, we do not understand why the Danes should have devoted so much space to exhibiting false colouring material for cheese and butter, and we protest against the huge stand which, like an altar, was raised in honour of butterine. If butter cannot always be obtained there is an ample supply of oil, notably the pure olive oil exhibited close at hand by Signor Carlo Gassi. Of the Scandinavian exhibits, the Swedish arrack punch has found much favour, particularly when combined with pine-apple; while the very delicate hurtle-berry preserves (*lingon vaccinium vitis idæa*), gathered in the mountainous districts of Sweden, were found most useful in arctic expeditions as a preventive against scurvy.

In the Swiss section were shown Mauchain convertible tables from Geneva, ingeniously contrived to prevent stooping; Souchard's chocolate mixed with iron—an agreeable means of taking a nutritious sweetmeat and a tonic combined; Chevallier's flexible capsules, easily swallowed, though the size of a pigeon's egg; and Dennler's Alpine bitters and iron, familiar and welcome tonics to the mountaineer. Forming part, apparently, of the Swiss section, though in no way connected with it, was the exhibit of Madeira wines by Wm. Gibson, and which are known as Blandy's Madeira. Some of these wines, especially the rich old "Bual," may prove useful for therapeutic purposes. Claiming to be equally useful for invalids is the "selected grapes" champagne of Messrs. Dupuy et Fils, Epernay. This wine is remarkably dry and free from the unpleasant after-effects which too often are found in champagne. The Amontillado from Wilson and Parker's vineyards at Xerez, imported by Messrs. C. Buswell and Co., is also a notable wine for dryness and flavour. The American Sea Foam wafer biscuits will bring out the flavour of these wines, which, with this light support, will constitute a pleasant and safe stimulant. The importers of the biscuit just mentioned, Messrs. A. W. Latham and Co., were also exhibitors of some admirably preserved fruits from California, where orchards of European origin were planted many years ago by monks. In spite of the long journey they retain their original flavour, and will supply a wholesome winter dessert. But the pine-apples from Singapore are a still greater delicacy. Instead of being preserved in sugar, they float in the juice extracted from those fruit that was too ripe for exportation; their flavour is consequently greatly intensified. Californian honey may also be recommended for its purity and admirable condition of preservation.

One or two more foreign exhibits remain on our list meriting notice, though quite disconnected with each other. The first among these were the boots shown by M. Méliès, who seeks to combine elegance of appearance with regard for the anatomical requirements of the foot. While avoiding exaggeration in shape, we nevertheless have the low flat heel, the broad sole, and room enough for the spread of the toes. Studying closely nature, it will be observed that the sole of the foot is not flat, and that treading on a hard even surface forces the foot upwards against the boot. Therefore M. Méliès has indentations on the inner surface of the sole within the boot, so that the foot retains its natural contour, and thus a high degree of comfort is secured. Again, if the boot causes pain, we lean or walk on the side furthest from the sore point; and bootmakers generally enlarge the boot on the tender side. This, says M. Méliès, is a mistake; relief should be given on the opposite side. Due observance of these principles has won for this firm medals at all the Exhibitions and the highest consideration in the trade.

Close by the exhibits of Rimmel, "whose very name smells sweet," as the late Mr. Blanchard Jerrold once remarked in one of his essays on French life, and who has contrived to perfume even coal tar soap, we found a unique display of sponges. The Greek sponges imported by Messrs. Henry Marks and Sons have taken some twenty-five years to collect. The rarity of shape and the fineness of texture constitute in certain of these sponges virtues which connoisseurs estimate at fabulously high prices, and this is not perhaps surprising, as one of the sponges in question cost the lives of two men before it could be snatched from its bed deep in the sea. When the Emperor of Germany was shot, his physicians sent all over Europe for some specially fine, cup-shaped sponges to dress his wounds, and only found what they desired among the rare collection of this firm. The bleaching of the sponge is a rather elaborate process. After immersion in muriatic acid, the sponge is soaked in a solution of permanganate of potash till it becomes almost black; but after this lime-water gives it the bright-yellow colour now in vogue. It will be seen that the process must remove all impurities.

WASHINGTON NAVAL MUSEUM OF HYGIENE.—During the past two years a museum of hygiene, organised under the Bureau of Medicine and Surgery of the Navy Department of the United States, has been in course of formation. The collection, which is extremely interesting and valuable, is in charge of Dr. J. M. Browne, Medical Director of the United States Navy. The library of the museum contains 7150 books, and also plans and drawings illustrating house and hospital construction, photographs of food and medicinal plants, and diagrams showing movements of disease. Attached to the museum is an experimental laboratory, equipped with the best apparatus for chemical, microscopical, physical, and physiological investigation, in which three hundred examinations have been made during the past year. The Bureau of Medicine and Surgery has ordered the purchase of several exhibits from the International Health Exhibition, London, among which are Mr. Francis Galton's apparatus for anthropometrical examinations, and Mr. Minnaert-Depunt's display of *sabots*.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 22, 1884.

THERE can be no greater mistake than to treat lightly the complaints of English students of medicine in regard to the hardship of compelling them to go out of their own division of the kingdom for degrees, medical or other. The desire to possess a medical degree may be wise or not. We cannot stop to argue that point here. Suffice it to say that the desire exists, and is becoming felt year by year by an increasing number of men, and that there is nothing in medical graduation but what is creditable to the individual and for the public good. So long as the terms of graduation are honourable, and the universities granting degrees are ready to give satisfactory public guarantees of their work, so long, it appears to us, should students be encouraged to graduate. At the present time in England, as compared with Scotland and Ireland, medical graduation is cruelly discouraged. The universities of Scotland, on the other hand, are said to make medical graduation too easy. Those who say so, including the great majority of London teachers of medicine, aver that graduation in Scotland is not more difficult, and does not imply the expenditure of more labour or money, than passing the two London Colleges. Professor TURNER, speaking before the Select Committee of the House of Commons, gave a very strong answer, at least so far as the University of Edinburgh is concerned, to those who so lightly disparage the present system of Scotch medical graduation. He gave particulars of the enormous sums of money that have been spent in university buildings, including chemical and physiological laboratories, of the curriculum of study, and of the nature of the examinations for medical degrees, which should at least be pondered by those who despise Scottish degrees. Professor TURNER'S evidence was the more effective on this point as he spoke from experience as an examiner in the University of London as well as from the point of view of a prosperous Scotch professor. We must leave the advocates of Scotch graduation and its assailants to fight this out, freely admitting that the Scotch universities in their recent action, under the fatal and misleading guidance of Sir LYON PLAYFAIR, have given too much reason to their enemies to say that they are afraid of public tests, and jealous for the pecuniary rather than the scientific and intellectual interests of their institutions. Whatever the truth on this subject, there can be no doubt of the fact that London, with its unrivalled field for clinical study, is placed at a great disadvantage in having no teaching university from which a degree on honourable terms can be obtained by English students, and that, in these circumstances, nothing remains but for them to go elsewhere. The act that this metropolis, with its four millions of inhabitants, the centre of commerce, and the home of the principal learned and scientific Societies of Britain, should not have a teaching university, is one that only needs to be stated to excite dissatisfaction and almost indignation. The like of it cannot be found in any other country known to civilisation. It is so unreasonable and anomalous that it cannot be suffered to continue. Now, when Liverpool, Manchester, and Newcastle are to be brought under academic influence, London must assert her transcendent claim to consideration. We speak from a medical standpoint with extreme responsibility. The study of medicine in this metropolis is conducted in a way that commands the respect of every foreign nation. There is no field comparable with that of London for the purposes of clinical and scientific medicine. And from this field our students are driven, often just at the very time when they most need its advantages. Their reason for going is the desire to graduate in universities where residence is a condition of graduation, and where, too, they imagine that they will best secure their ends by studying the crotchets of the professors by whom they have finally and chiefly, though not exclusively, to be examined. This is unfair to medical students, and it is grossly unfair to medical teachers, who are thus often deprived of the legitimate credit of conducting the final steps in the education and graduation of their best students. It is also unfair to the cause of medicine itself, in London, the pursuit of which would be stimulated by the creation of a teaching university controlling general and medical education, and giving proper form to the process of medical graduation. It is gratifying to find that these views, already foreshadowed in this journal, are taking practical shape and commending themselves to men of different character and calling, men so various and yet so influential as Lord REAY, Lord Justice BOWEN, Mr. FREDERICK POLLOCK, Mr. BRYCE, M.P., Sir FARRER HERSCHELL, Professor HUXLEY, Sir JAMES PAGET, Sir JOSEPH LISTER, Sir GEORGE YOUNG, Mr. ERICHSEN, Dr. PYE SMITH, Mr. MARSHALL, Dr. ORD, Professor CROOM ROBERTSON, Dr. WAGE, and others. In this list of names the existing University of London is powerfully represented. That university, to hear some speak, would seem to be hopelessly crystallised into its present form as a mere forcing and examining board, whose regulations are like the laws of the Medes and Persians, unalterable. The absolute self-satisfaction attributed to the London University is not shared by many of its most honoured medical graduates. At any rate, it is not the note of a wise and living institution capable of doing the most good and leading the academic life of London in present circumstances. We are unwilling to believe that the university is so hopelessly conceited as not to be able to meet the demand now pressed from so many sides, and even from its own graduates; it is still less credible that the medical schools and corporations of London will throw difficulties in the way of establishing a great teaching university in the metropolis. Under a well-appointed scheme, most, if not all, of these institutions would acquire new and higher functions, without being deprived of those they already possess.

A PATHOLOGICAL and clinical study which promises to exercise the best minds of the present generation for some years to come is the question of the nature of CHARCOT'S joint disease. It is mainly a question whether or not the morbid process implied by this name ought or ought not to be dethroned from the peculiar position which it at present

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occupies and into which it was placed by the researches of the renowned physician whose name the disease bears. It was in the year 1868 that the arthritic disease first received public consideration. CHARCOT then published a case of joint disease alone, and it remained a question whether it was truly arthritic or merely osteoid in anatomical basis. Five years later descriptions of specimens were recorded where spontaneous fractures of the shaft of the long bones and joint mischief coexisted. By a careful study of the microscopical appearances LIOUVILLE arrived at the conclusion that the fractures and the arthritic changes were primarily due to a rarefying disease of the osseous tissues. It cannot but lead to the elucidation of truth if in the present state of affairs an attitude of scientific scepticism be adopted by all who take part in the consideration of arthritic and osseous changes occurring in patients the subject of tabes dorsalis. Whether the joint disease be merely the result of an injury in an individual who is the subject of tabes dorsalis; whether the arthritic mischief be an example of rheumatoid arthritis modified by the special conditions of the sufferer; whether the arthritic disorder be an idiopathic inflammatory process associated as a coincidence with tabes dorsalis; or whether the joint disease be as special as the name which it at present enjoys indicates—are questions which may be usefully discussed. We confess that the arguments which were urged by Dr. BUZZARD in favour of CHARCOT'S original contention seem very cogent and powerful. It is nothing to the point to argue that some physicians—e.g., Dr. MOXON—have never met with an instance of the disease in a certain number of cases of tabes dorsalis. It is to the point to assert that cases of joint mischief have occurred in which some of the joints showed changes unmistakably identified as those of rheumatic arthritis, whilst another articulation presented alterations which were equally certain, like those conditions met with in CHARCOT'S joint disease. We say it is to the point, though the interpretation put upon the facts by Dr. HALE WHITE and others may not have been arrived at by a conclusive form of argument. We cannot deny the truth of the axiom that many morbid processes may lead up to the same anatomical alterations; and dead-house experience is unable to settle the case in point. In the discussion at the Clinical Society, Dr. BUZZARD was at most pains to prove that the joint disease was not the same as rheumatoid arthritis. The rarefaction of bone with associated widening of the Haversian canals, which become largely occupied by fatty material, may be taken as the typical change which occurs in CHARCOT'S joint disease. Dr. BUZZARD suggested that some method of determining the specific gravity of the bones entering into the formation of the diseased joint might prove of value to surgeons, as helping to arrive at a diagnosis of the nature of the arthritic disease.

Suppose it were granted that CHARCOT'S disease is a specific malady and due to damage of the nervous tissues, it is by no means settled where the lesion is located. CHARCOT himself thought that the seat of the lesion was in the nerve cells of the anterior cornua, and in some cases which had lasted a long time CHARCOT and JOFFROY found that the anterior horns of grey matter were remarkably atrophied, and a considerable number of the large ganglion cells, especially those of the postero-lateral group, were atrophied or completely destroyed. In unilateral articular affections these changes were limited to the corresponding side of the spinal cord; and when the shoulder-joint was alone affected, the disease was detected only in the cervical region, and similarly, when the knee was involved, the alterations were discovered only in the lumbar region. But TALAMON failed to discover the change in recent cases of CHARCOT'S disease.

Some authors have believed that rheumatoid arthritis owned a neural cause, and certainly the muscular atrophy which attends many of these cases is very remarkable. Nevertheless, we must not forget that changes may occur secondarily in the nervous tissues as the result of damage to disease of joint, bone, and muscle. The changes which have been met with in the cord in cases of pseudo-hypertrophic paralysis have been regarded by GOWERS and others as of a secondary nature. BUZZARD has framed a hypothesis on the frequent association of gastric crises with arthropathies to the effect that some centre exists about the vagus nucleus which controls the nutrition of the osseous system. PITRÈS and VAILLARD have discovered inflammatory alterations in the peripheral nerves in cases of trophoneurosis associated with locomotor ataxy. PIERRET has recorded cases of locomotor ataxy in which no discoverable change existed in the spinal cord. It will thus be seen that many hypotheses may be framed to explain the occurrence of the joint disease which is believed to be special to tabes dorsalis.

AS will be seen from a report which appears in another column, the Council of the Royal College of Surgeons of England held an extraordinary meeting on Wednesday to consider two very important matters—namely, first, Mr. CHRISTOPHER HEATH'S motion on the mode of electing the President and Vice-presidents; and second, the Recommendations of the Association of Fellows. Mr. HEATH'S motion, which was divided into two parts, did not aim at any more than a slight change of custom. Heretofore it has been the custom of the Council to elect annually the senior vice-president to the office of President. The two vice-presidents in their turn are chosen by rotation from among the senior members of the Council, and each usually holds office for two consecutive years. The first part of Mr. HEATH'S motion sought to make the office of Vice-president tenable for one year only. The second part of the motion did not involve any alteration in principle, inasmuch as there is nothing to prevent the Council if it choose to re-elect the same member of Council to the office of President for any number of times. Hitherto the Council has not chosen to exercise the power, but has followed the easy, convenient, and amiable practice of making the election by rotation. Even if the second part of the motion had been adopted, there would have been no guarantee that the custom hitherto followed would be departed from. On the other hand, the amendment proposed by Mr. CADGE involved an important and acceptable change of principle. It recommended that the President of the College should be elected by the Fellows. Apart from the reasonableness of this proposal, it has the further advantage of coinciding with one of the Recommendations of the Association of Fellows, and we are willing to believe that this was the only reason against its immediate adoption by the Council. It was wisely referred to the committee on Charters and Bye-laws,

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to which all the Recommendations of the Association of Fellows were subsequently referred.

We shall await with interest the report of this committee on the Recommendations of the Fellows. It is scarcely credible that the Committee of the Council will again be guilty of the unwisdom of deliberately ignoring the wishes of the most active, and, we believe, the most intelligent section of the Fellows. The Recommendations of the Association may require some modification to make them workable, but it cannot be questioned that as regards their general scope and character they are calculated to promote the efficiency and the welfare of the College. There is nothing revolutionary or chimerical or Quixotic in hem. They impose no hardships on the Council, and certainly imply no degradation. They simply make the proper and reasonable demand that the eighteen thousand Fellows and Members shall share with the twenty-four Members of the Council the responsibility of managing the largest medical corporation in the world. If the Council has the political sagacity to allow the claims of the Fellows and Members, the College must acquire increased influence, importance, and stability.

There is little in the Recommendations of the Association of Fellows that has not at some time and in some form been proposed and recommended by some of the most enlightened men who have sat in the Council. Their fulfilment cannot be longer postponed. Time, circumstance, and temper are all alike propitious to a prompt, liberal, and efficient settlement.

THE Committee of Comparative Pathology, which was formed by the Pathological Society at the instigation of Mr. HUTCHINSON when President, is fortunate in having amongst its members so industrious a worker as Mr. J. B. SUTTON. The contributions which that gentleman is making to our knowledge of disease in animals show how wide is the field open for inquiry, and also throw much light upon the nature of morbid changes in man. The communication made by him to the Society at its last meeting covered a quite novel ground, for hitherto little or no attention has been paid to uterine and ovarian disease except among the domestic animals. Mr. SUTTON'S research went much beyond this, for he has examined amphibia and birds as well as mammals, and has thereby succeeded in tracing the origin of such aberrant formations as parovarian cysts low down in the scale of animal life. He demonstrated in frogs and toads the frequent occurrence of cysts connected with the Müllerian duct of the male animal—structures mostly overlooked,—and proved the homology of these cysts with like formations connected with the rudimentary right oviduct of birds and the parovarium of the human female. From this arose the generalisation of the tendency to cystic disease in structures that persist as rudiments of fœtal formations. The occurrence of such disease in birds led to an incidental reference to the connexion in birds between the assumption of male plumage by the female and the derangement of the generative organs. Amongst many points of interest were the descriptions of uterine flexions in monkeys and deer, and the explanation given of the occurrence of these deformities in some cases. The Society appreciated the shrewd remark that such flexions produced no symptoms "probably because the animals were not cognisant of their possession of a uterus." The not infrequent occurrence of fatal peritonitis in the kangaroo received an explanation from the greater liability in that animal to a form of metritis from retained secretions owing to the peculiar structure of the uterine cavity. The frequent occurrence of cystic disease of the ovary in the mare, and its relation to the rich vascular supply, was another of the matters which has been investigated with so much care, and with remarkable assiduity, by Mr. SUTTON. We regard the prosecution of this line of research as being one of the most important that the Society could well undertake. Human anatomy and morphology depend largely for their true interpretation upon the facts of comparative anatomy; and what is true of normal structure is doubtless also true of morbid, so that we may hope to learn very much in the future as to the real nature of disease in man by the scientific prosecution of comparative pathology.

Annotations.

"Ne quid nimis."

THE HEALTH OF LONDON.

THE health of London, judged by its mortality statistics, has been unprecedentedly satisfactory during the past seven weeks. It appears from the Registrar-General's weekly returns that the annual death-rate from all causes in Registration London, with its estimated population of more than 4,000,000 of persons, did not exceed 18·9 per 1000 during the seven weeks ending November 15th. The nearest approach to so low a death-rate in the corresponding period of recent years was last year, when the rate was 19·3. With regard to the mendacious report of a portion of the Paris press that cholera is epidemic in London, it may be noted that the only death during these seven weeks from disease of a choleraic character was one of an infant, aged one year, certified to have died from "choleraic diarrhœa." The total deaths in London during this period of seven weeks from all forms of diarrhœal disease were 265, which were but 15 above the average number from these causes in the corresponding period of the ten years 1874–83, after correction for increase of population. The deaths from all the principal zymotic diseases in London since the beginning of October have been, with the exception of small-pox, considerably below the average. The recrudescence of small-pox prevalence is, in fact, the only unsatisfactory feature of the recent mortality statistics in London.

PHYSICAL SCIENCE IN EDUCATION.

THE education of the mind is guided by the use of letters or words. Words are the clothing of thought, and thought, at least in its primary and purest forms, is born and bred of association with nature. Led by these considerations, one can trace the pedigree of mental training and of language to its origin as a branch of the study of physical science. Even a formed language is flexible or apt in expression in proportion to the fidelity with which it follows its first aim, which is to give true and clear voice to intellectual ideas founded on observation. Most of us will, therefore, be prepared to agree with the teaching of a pamphlet by Mr. George Greswell of Rondebosch College, South Africa, that in all school programmes the cultivation of natural science should hold a place in keeping with its relation to other studies. There can be no accurate conception of the force of words in common use even, unless the process of selection which has

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been gone through in their formation—the results of careful observation of nature, its forms, their relation and analogies, out of which all speech has grown—be understood. The study of language thus carefully conducted, on the other hand, repays the learner with facility, vigour, and correctness of speech which could not otherwise be attained. The pupil may be very early initiated in the habit of observation and in the elements of natural sciences, and this need not interfere with his progress in the mastery of studies of a less immediately comprehensible kind, such as dead or foreign tongues, which have their own advantages. The truly rational understanding of even these is not lost sight of, because it is necessarily postponed to a comparatively late period of the educational course.

OVER-PRESSURE.

ON mature reflection public opinion is coming round to the conviction that Dr. Crichton Browne was right and that his traducers were wrong. We are the more assured of this, because knowing people and influential people in places of prominence and trust are striving to "burk" evidence in support of Dr. Crichton Browne, while they are apparently anxious to give all the publicity in their power to the most pitiful pleadings against him, and in destruction of the case he has set up, and, as we think, conclusively proved. It is always an excellent sign when the opposition take to suppressing evidence. *The Times* is just now doing this with great energy, and we hail the fact as a token of conscious weakness on the part of the side the leading journal has taken in this controversy. Meanwhile the oracles of skilled opinion outside the purely official circle are, with one accord, declaring in favour of Dr. Crichton Browne, and endorsing his statements. We fail to see how there can possibly be two opinions on the subject. The facts are so very clear. Without laying any particular stress on individual "cases" of injury to brain or life from over-pressure, we find more than enough evidence to place beyond the range of doubts and questionings the fact that the "code" and the "cramming" in use at the schools of compulsory national education are weapons of injury which should be taken out of the hands of officials who have shown themselves careless or incompetent in the use of them. There must be an inquiry, and it is well that there are indications of an intelligent, if not altogether willing, submission to the force of circumstances on the part of the School Board. It is to be regretted that similar sagacity—the instinct of self-protection—has not yet dawned on the consciousness of the Council of Education.

RAPID RECOVERY AFTER WOUND OF STOMACH AND PROTRUSION OF VISCERA.

A REMARKABLE case of recovery, after severe abdominal injury, is reported in the *Gazzetta degli Ospitali* (12th inst.) by Dr. Iginio Tansini. P. G——, aged forty-six, a peasant of Lodi, was admitted into the local hospital on the 10th of Aug. in a state of drunkenness, with an extensive wound in the left hypochondriac region. Through it protruded the stomach, the transverse colon, and a large part of the great omentum. On the anterior surface of the stomach was a wound an inch and a quarter long, through which the lining mucous membrane bulged, so as to fill it. That wound was closed with two fine catgut sutures. After cleaning the displaced viscera with cotton pledgets dipped in a two and a half per cent. solution of carbolic acid, reduction was attempted, but the tightness of the edges prevented it. As the wound reached upwards to the costal margin, it was extended an inch downwards, and the viscera replaced. The parietal wound was then found to measure three and a half inches. A considerable amount of blood having accumulated in the abdominal cavity, the toilette of the peritoneum was very carefully performed, with carbolised gauze soaked in warm carbolised water. The first pledgets brought away blood; and others were introduced amongst the coils of intestine, and into the pelvis, until they came away quite clean. After inserting a thick drainage-tube into the lower angle of the wound, this was closed with four deep and four superficial sutures of carbolised silk; a broad antiseptic dressing followed. Progress was uninterrupted; no fever supervened. In the first three days much bloody fluid was carried off by the drainage-tube, which was gradually shortened and definitely removed the eighth day. On September 5th, the twenty-sixth day after admission, the patient left the hospital perfectly cured.

DR. TOMMASI CRUDELI AND SOIL RECLAMATION.

PROJECTED by Caius Julius, but first set on foot by Claudius Cæsar, the desiccation of the Lake of Fucino has for centuries been at once a necessary and a difficult undertaking. The basin has no natural outlet sufficient for the surplus waters which in the rainy season and on the melting of snow descend from the mountain sides to overflow its margin and do infinite damage to the neighbourhood. Deputation after deputation from the lacustrine townships came up to Rome imploring the Senate, Republican or Imperial, to avert these devastating floods, but not until A.D. 52 did the Emperor Claudius, after eleven years' labour and the employment of 30,000 men, succeed in tapping the lake and draining it through an *emissarium* into the valley of the Liris. The ruins of this colossal work are still the admiration of the traveller, but no adequate attempt was made to restore it, much as the neighbourhood suffered in consequence, till within the last hundred years, when efforts were again and again renewed to reopen the choked-up *emissarium*. In 1852 a Swiss company obtained a concession of the lake, entitling them, if they tapped it, to all the land thus reclaimed; but the undertaking was too much for them, so their rights were purchased by Prince Torlonia, who at the cost of about £1,400,000, and with the aid of the Swiss engineer De Montricher (the constructor of the aqueduct of the Durance to Marseilles), made a more perfect *emissarium* and reduced the circumference of the lake to half an hour's walk. Even with the Prince's immense resources the work cost the lives of so many surveyors and *employés*—all of them victims to fever—that the country people used to say, "O Torlonia secca il fucino, o il fucino secca Torlonia" (Either Torlonia will dry up the fucino, or the fucino will dry up Torlonia). Some 15,000 hectares of the reclaimed land are now under cultivation and yield a good return to the farmer, but the place is haunted with malaria—a result which, according to Mr. Hare and other lovers of the picturesque, must deter the application of similar draining processes to the beautiful lakes of Thrasymene and Bolsena. With the view of studying the effects of the desiccation of the Lago di Fucino from a hygienic point of view, a commission, headed by Dr. Tommasi Crudeli and the Commendatore Simeoni, is now on the spot, and from the skill with which the first named pathologist has already conducted investigations of the same kind, the report embodying his conclusions is awaited with much interest.

THE CASE OF CASSAN v. FYFE.

OUR readers will remember that (THE LANCET, August 9th, 1884) we gave an outline of this case, in which the plaintiff complained of certain statements alleged to have been made by the defendant in reference to the treatment of a patient suffering from retention of urine and stricture. We need not here repeat the particulars. The case ended, as so many lawsuits are apt to do, somewhat tamely. The judge ruled that the statements attributed to

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Dr. Fyfe had not been proved, except perhaps those made to the representatives of the committee of the club, which, being in the form of answers to questions, were to be regarded as "privileged." On these views of the law, the learned judge directed the jury to find for the defendant, but granted leave for an appeal. Mr. Cassan, having already suffered much loss of money by his attempts to get legal redress, is resolved not to spend any more over the costly and very uncertain remedy of law. Perhaps he is well advised; the more so, as the club whose medical man he is, and to which the patient whose case gave rise to this action belonged, have passed a resolution virtually confirming him in his appointment, and expressing the opinion that the charges against him were not substantiated. We congratulate Mr. Cassan on the continuance of the confidence of the club, to which we think he is well entitled, and he may be assured of the sympathy of the profession.

KUSSMAUL'S COMA.

AT a meeting of the Midland Medical Society, held at the Birmingham Medical Institute on Wednesday, Nov. 19th, Dr. Robert Saundby read a paper based on two cases of Kussmaul's coma, and pointed out that while this peculiar condition was originally described as occurring in diabetes, it is now known to exist in many other diseases, especially where there is profound blood disorder — e.g., pernicious anæmia, Bright's disease with anæmia, and in cachectic states. He discussed the etiology of the condition, rejecting as untenable the various views which ascribed the symptoms to anatomical changes, whether of the nature of coarse disease or in the shape of fat emboli, and maintained that it is most probably due to some at present undetermined form of toxæmia. With reference to this point he referred to the recent suggestion of Minkowski, that the symptoms are caused by the dealkalisation of the blood and tissues, from the constant over-production of an acid (β. oxybutyric acid) in the circulation. Dr. Saundby also pointed out the fallacies attending the ferric chloride test, as an indication of the presence of acetone, and showed a new and beautiful reaction discovered by Le Nobel, a rose-violet colour gradually developed on adding nitro-prusside of sodium and ammonia to a urine containing acetone.

THE "P. & O." COMPANY AND THEIR SURGEONS.

THE Peninsular and Oriental Steam Navigation Company on Nov. 1st issued a circular to the commanders of their ships containing certain regulations which, if persisted in, will in the long run inevitably lower the status of its medical staff. We have no fault to find with the first paragraph of the circular, which declares that "under no circumstances whatever is a surgeon to ask for a fee." It is reasonable that passengers should claim their right to professional services during the voyage for which they have contracted, so long as it does not entail degradation or injustice on the medical officers. But to the second and third paragraphs, which run as under, we enter our emphatic protest: "A passenger ..... is entitled to ask for and obtain a copy of any prescription for any medicine which the surgeon has administered to him." "It does happen that passengers in delicate health or subject to occasional attacks of illness will desire to obtain medicines which have been prescribed for them by previous medical advisers. It is our wish that every facility should be given by the surgeon to gratify this natural desire; and surgeons are requested to dispense any prescription which a passenger may ask them to make up, if they have the medicines required, so long as the prescription does not direct the employment of any powerful medicine in an unusual dose, and the passenger is not seriously ill." Conditions more derogatory than these it is difficult to conceive. Is it the wish of the company to treat a number of legally qualified members of a learned profession as though they were dispensing chemists and errand-boys? do they consider it necessary for the success of a commercial enterprise that their superior officers should be made instruments to satisfy every passing whim or fanciful ailment of voyagers? Fortunately for those most concerned, the four corners of the above-mentioned circular are within the limits of their discretionary power, and it will be easy for them to evade the provisions of such ill-advised resolutions. At the same time it is practically certain that friction will arise between the directors and passengers on the one hand and the doctors on the other; and there can be no question as to who will be the greater losers in the long run. We sincerely trust that the company will at once recognise their mistake and take steps for removing a certain cause of peril to their undertaking.

THE MICROCOCCUS OF GONORRHŒA.

THAT gonorrhœal pus contains numerous micrococci, and that inoculation of the healthy urethra with these organisms can excite a specific urethritis, are statements accepted by many since the researches of Neisser, Bockhart, and others. But according to Dr. Sternberg, of the United States army, whose bacteriological work is so well known, the evidence in support of the specific character of the "gonococcus" is inconclusive. Writing recently upon the subject, to which he has before given attention, he declares that morphologically the micrococci of gonorrhœal pus are not distinctive, but he rightly assumes that this does not imply that they have no specific qualities. One cannot but be reminded of the cholera bacillus in reading the following sentence of Dr. Sternberg's. He says that he "has repeatedly insisted upon the fact that these lowly plants often cannot be distinguished one from another by their form alone, and that specific differences may exist, as shown by a constant difference in colour, as in the chromogenes, or in physiological reaction, as in the case of pathogenic micrococci, when the most skilful microscopist can distinguish no difference in form, dimensions, or mode of grouping which would serve to distinguish one species from the other." The constancy with which micrococci are found in gonorrhœal pus suggests a relation between them and the infective virulence of the disease; but hitherto neither Dr. Sternberg nor his associates have succeeded in exciting gonorrhœa in healthy persons by inoculation of the urethra with cultures of these micrococci, which he is inclined to believe are usually harmless, but that they may acquire specific pathogenic properties under special conditions; a view, he thinks, in harmony with the successful inoculation obtained by Bockhart from cultures of the *fourth* generation, whereas his own experiments showed that inoculation of the tenth or twentieth culture is harmless. He has, however, repeated the experiment, with the ninth and eleventh cultures derived from gonorrhœal pus. The method employed was to introduce into the meatus a pledget of cotton saturated with the fluid culture, and to retain it there for two hours. The subjects of this experiment were the author, Dr. Keirle, and Mr. Wegefarth of Baltimore, and in each instance (repeated in the author's case) the result was negative. But Dr. Sternberg points out that there are always to be found at the urethral orifice, and other exposed mucous surfaces, bacterial organisms and micrococci, which are "morphologically identical" with Neisser's "gonococcus," the micrococci being far less numerous than the bacteria. "It would be well," he adds, "for every surgeon to make this demonstration for himself"; as it may well be that these organisms are septic, and liable to be introduced into the bladder by catheterism or into the wound produced by forcible dilatation of a stricture.

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SUMMER DIARRHŒA IN 1884.

SUMMER diarrhœa, mainly infantile, was nearly twice as fatal in England during the three months ending September last as in the corresponding period either of 1882 or 1883. The annual death-rate from this cause last summer in England and Wales was 2·7 per 1000. In the twenty-eight largest towns it was 3·9, in fifty other great towns it was 3·2, and in the rest of England and Wales it was 2·0. It may be pointed out that the excess of mortality from this cause last quarter, compared with that which prevailed in the summers of 1882 and 1883, was greater in the small towns and rural districts than in the seventy-eight large towns. In the twenty-eight largest towns the diarrhœa rate ranged from 1·6 and 1·7 in Halifax and Huddersfield, to 6·2 in Norwich, 6·5 in Nottingham, 8·3 in Preston, and 9·1 in Leicester. Thus Leicester is again notorious for showing the greatest waste of infant life from diarrhœa last summer. Infant mortality from all causes in that town last quarter was equal to 424 per 1000, whereas the mean proportion in the twenty-eight towns did not exceed 242, the lowest rates being 161 in Bristol, 184 in Huddersfield, and 185 in Plymouth. In the fifty smaller towns the range of diarrhœal mortality was fully as wide. The rate from this disease was but 0·6 in Bath and 0·8 both in Swansea and Merthyr Tydfil, while it ranged upwards to 5·7 in Stockport, 5·8 in St. Helen's, 7·0 in Ipswich, and 8·4 in Northampton. A comparison with the rates prevailing in recent summer quarters shows still more remarkable and unaccountable variations. In Bath, Gloucester, and Merthyr Tydfil the death-rate from diarrhœa was actually lower last quarter than in the summer of 1883; whereas the rate was eight times higher in Northampton, and five times higher in Dover, Burton-on-Trent, and Ashton-under-Lyne. One of the other varying incidents of diarrhœa fatality in our large towns is the date of the greatest mortality in different towns. During last quarter, for instance, the highest death-rate from diarrhœa occurred in London in the week ending July 19th, in Leicester and Derby in the following week, in the greater number of towns in the week ending August 23rd, and in Halifax not until the second week of September. It may be hoped that the long expected report upon the causation of summer diarrhœa, which has been so long under investigation by the Local Government Board, may throw new light upon some of these now unaccountable variations in the incidence of this disease.

CONDUCTION OF PULMONARY PHYSICAL SIGNS.

A CLINICAL question which certainly deserves more attention than has hitherto fallen to its lot is the conduction of abnormal sounds produced in the lungs. The want of fuller study of this point has led, and no doubt will lead, to mistakes in topographical diagnosis; and the paper by Dr. Markham Skerritt, read at the last meeting of the Medical Society of London, will therefore be useful. The matter lies within a small compass, and ordinary care is generally sufficient to prevent mistakes. The abnormal sounds produced in a lung consolidated by pneumonia, or compressed by air or fluid, may be heard on the side of the chest opposite to that in which they originate. The same applies to physical signs of phthisis at one apex, where it not unfrequently happens that the altered quality of breathing and the râles may be distinctly heard at the other apex, which post-mortem examination reveals to be healthy. Other examples of this conduction of physical signs have been recorded, but the above-mentioned are the commonest forms. Attention to information derived from palpation, percussion, and auscultation of the vocal sounds should prevent gross error.

A WORD TO THE ENGLISH CHOLERA COMMISSION.

THE statement made by a Calcutta correspondent last week, to the effect that Drs. Klein and Gibbes were shortly about to return home after having "exploded" to their own satisfaction the views of Dr. Koch upon cholera, will be read with regret, unless they are able to produce before the world of pathological science results of a more positive character than we have yet heard of. If their instructions were limited to an inquiry into the alleged specificity of the comma-bacillus, there was no need for their being sent to India at all. Material in abundance has been unhappily too rich during the past few months much nearer home. But if, as we would fain believe, the English Commission were instructed to inquire fully into the whole subject of the origin and dissemination of cholera, to discover its real nature, and to adduce facts drawn from the largest possible area in support of the truth of their views, then we fail to see that these objects can have been attained in the comparatively brief period of their sojourn in Bombay. We are jealous of the honour of British science in this matter. If the inquiry is to issue merely in the contradiction of the bacillar doctrine, but little will have been gained, and something indeed lost to the credit of our country. In the absence of any official statements it is of course useless to argue on this point; and we would not do injustice to these gentlemen, whom we are sure will have done their work thoroughly and well so far as it may have gone. Yet we fear very much that, unless they can show that their observations have been as extensive and thorough as those of the German Commission, they will receive less attention than they deserve, and may even place a bar upon progress in the direction of cholera research.

"MORBID RELIGIOUS AFFECTION."

ATTENTION is again directed to this subject, and a protest by the vicar of St. Mary's, West Kensington, against the insidious introduction of the confessional under cover of "missions" is a timely act of watchmanlike vigilance. We reproduce from Mr. Macnaught's manifesto a passage he quotes from Bishop Wilberforce: "If sisterhoods cannot be maintained except upon a semi-Romanist scheme, with its *direction*, with its development of self-consciousness and morbid religious affection, with its exaltation of a contemplative life, its perpetual confession, and its un-English tone, I am perfectly convinced that we had better have no sisterhoods." The "development of self-consciousness and morbid religious affection" in the lives of Sisters and their proselytes is a very serious matter indeed. Looked at from the medico-psychological point, the mischief in progress among unmarried women of emotional temperament and unstable nervous centres is the cause of grave anxiety to physicians, and already they are recognising clear evidence of the propagation of morbid disturbance from nurse to patient in the hospitals. Proselytising in hospitals is by no means a process of sober conviction. What Bishop Wilberforce characterised in his letter as "the soft influence of women's souls"—if he had been a physiologist he would have said "nervous systems,"—and against which he warned his clergy, is exerting a most injurious influence on brains which are constitutionally disposed to the irregular distribution and capricious discharges of nervous force. "Morbid religious feeling" is a distinct malady. It begins either with intense emotion, rising to ecstacy, as under the excitation of the nerve centres through the ear or the eye by music or pageantry, or it may be induced by that morbid, or even vicious, mental contemplation into which the minds of women, either very young or about the age of forty, are prone to fall while gazing at the crucifix. Parents and clergymen

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who have a care for the moral purity of the women under their protection should interdict the use of the crucifix peremptorily and universally. It is necessary to speak plainly on this subject, and we cannot hesitate, in the interests of mental health, to ask the heads of families and all who have influence with the female part of the community to enter earnestly into its consideration. We write thus with a feeling of responsibility and under the pressure of strong conviction.

MARKETS OVER SEWER GRATINGS.

WHAT with being compelled to breathe and gasp with his head pressed down over the open mouth of a pipe communicating directly with the sewers while he is having his head shampooed, and being in divers other ways deliberately and, as it would seem, carefully poisoned with deleterious matter from the system of closed drains of which the sanitary engineers are so proud, it would appear to be needless to feed the British householder, his wife and children and servants, on vegetables elaborately fumigated with sewer gas. This superfluous attention is, however, bestowed on the propagation of disease and bad health. As Mr. Bolton King, honorary secretary of the Whitechapel Sanitary Aid Committee, points out, "Trucks of fruit and vegetables may be often seen standing directly over these (street level) ventilators, the foul air from the sewers rising freely to contaminate food which may perhaps be served up on a West-end dinner-table." The possible destination being a *West-end* dinner-table of course makes the matter more interesting. Lives are, as we all know, much more valuable to their possessors in the West than in the East, and the only way to bring a question of reform home to anyone is to show that it affects his own personality.

ATMOSPHERIC DISSEMINATION OF SMALL-POX.

MR. POWER, in his report on the spread of small-pox in the vicinity of the Fulham Small-pox Hospital, points out that the atmospheric condition preceding the outbreak that he specially investigated was favourable for the accumulation and deposition of particulate matter in that locality. This condition he describes as damp, still, and foggy. This view is contrary to the generally received opinion, which is, if the poison is conveyed at all by air, it is carried by strong currents of wind. It is interesting, therefore, to find that Mr. Power's observations with regard to the meteorological condition most favourable to the spread of the small-pox poison has also been recorded by some of the older writers on this disease. The most remarkable instance is that mentioned by Dr. Waterhouse, Professor of Medicine at Harvard College, in which the small-pox attacked simultaneously ten persons working in the same yard at Charlestown, which yard was opposite two houses at Boston, on the other side of the river, at a distance of 1500 feet, in which were cases of small-pox. The day on which the infection took place was "one of those dull foggy days (such as commonly produce a dark day in London) when there was scarcely wind enough to blow the smoke from the tops of the chimneys; yet what wind was stirring wafted it across the river to Charlestown." Another instance, too, is recorded in which "the atmosphere was for many days loaded with aqueous vapours," there being little or no wind; yet, in spite of the prevention by a military guard of all possible communication between the small-pox hospital and the neighbourhood, the disease was conveyed a distance of "several hundred roods" from the hospital. In this case the disease must either have been conveyed through the air or by the visiting physician; yet this official before entering the building covered his head with a cap and his body with a linen gown, reaching from his neck to his ankles; he even changed his shoes; whilst on leaving he was thoroughly fumigated, &c. The question raised by Mr. Power's report as to the possibility of the aerial dissemination of small-pox to a distance considerably further than has hitherto been supposed possible, is of great importance to the community; and with a view to the possible risk thus run, we think more attention ought to be paid to methods of disinfection, which would ensure the absolute destruction of particulate matter rather than the continuance of turning the infected air of these hospitals into the general atmosphere, under the idea that dilution is sufficient to render the poison innocuous.

THEATRES.

SIR WILLIAM HARCOURT is satisfied; what more can reasonably be asked? There are theatres in London which might be burned down in about twenty minutes—so far as the auditorium is concerned—and which have not sufficiently capacious or easily accessible ways of egress. These are facts within the knowledge of everybody except the Home Secretary and the Lord Chamberlain, and other officials; but facts are not simply stubborn, they are tiresome, unpleasant things, and it is discreet sometimes to ignore them. We do not urge further measures in the matter of legislation. By all means let matters go on as they are for awhile. There will be a great catastrophe in London by-and-by, and then it will be time to adopt effective means of safety. For the moment the subject had better drop. Members of the House of Commons should spare the Secretary of State further trouble in the business. Let the Home Office rest. There will be plenty for that department to do when the holocaust begins. Some day when there are eight thousand persons assembled in Covent-garden Theatre, and a fire, with the regulation panic, *happens*, it will be a consolation to know that the particular theatre in question does not open its doors under the annual licence of the Lord Chamberlain, but under a patent of Charles II. This will probably be a sufficient answer to any allegation of neglect. For ourselves, we think it will be quite as good as the plea that the Lord Chamberlain has done and is doing all he can with the inadequate staff of executive officers under his control. The proposal to place the Lord Chamberlain's office on a footing of efficiency, or else to abolish it altogether, is one of those schemes that must needs originate below the gangway, and therefore could not for a single instant be entertained by any Government possessing an atom of self-respect.

AN ILL-ADVISED PROSECUTION.

A CORRESPONDENT writes:—Dr. Whamond of Jarrow, a practitioner of standing and repute, had this week to undergo the annoyance of appearing at the local police-court to answer a summons of the Corporation for having, under the new Improvement Act, neglected to send in to the local sanitary authority a certificate stating the nature of a disease from which a patient of his was suffering. Dr. Whamond, it was admitted, had duly sent in a certificate which described the disease as "infectious," but with a mark of interrogation after the word infectious, signifying that it was of doubtful nature; the prosecution, however, maintained that he ought to have written the exact name of the disease. Evidence was given by the medical officers of health of Jarrow and a neighbouring borough to show that the case was one of typhoid fever; but in cross-examination both witnesses admitted that it was sometimes extremely difficult to distinguish between typhoid fever and other diseases. After a long hearing, the magistrates dismissed the case on the ground "that the evidence did not show that Dr. Whamond had wilfully disregarded the Act."

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It is quite evident that Dr. Whamond followed the spirit, if not the letter, of the law, and that his certificate was a truthful one, and possibly said as much as he was justified in saying of the case at the time he issued it. Every practitioner knows that even a very few hours may clear up much that is obscure as to the nature of a case of continued fever. Therefore there can be but little doubt that the Jarrow Corporation was ill-advised in setting the machinery of the law in motion in Dr. Whamond's case, and that such prosecutions, even in the interests of sanitary progress, are to be much deprecated.

CLINICAL SOCIETY OF LONDON.

THE members of the Clinical Society had good reason to congratulate themselves on their last meeting. In point of numbers the occasion was almost unprecedented, a circumstance which cannot be accounted for by any very special reason. It is true that the number and interest of living specimens may have been an additional attraction. But it must be confessed that the meetings of the Society have of late been very well attended; so that we are inclined to believe that the plenitude of the recent gathering was but a further expression of the popularity of this important Society. Elsewhere will be found a full report of the proceedings, and an article bearing on the subject which perhaps most interested the members assembled. Dr. Stephen Mackenzie's paper was discussed with a fulness warranted by its value. A large specimen of spina bifida in a girl aged nineteen was exhibited by Mr. R. W. Parker for Dr. McLean of Portland.

CONGENITAL DISLOCATION OF THE HIP.

THE address at the opening meeting of the Surgical Section of the Academy of Medicine in Ireland, held last week, was delivered by Mr. Bennett, President of the Section. His discourse mainly turned on the subject of congenital dislocation of the hip-joint, and he referred to the various theories put forward to explain the cause of the deformity. He proved from the history of a specimen exhibited to the members that attributing the dislocation to a result of abnormal labour, as laid down in one of our most modern text-books, was erroneous. As regards treatment, he was of opinion that the only chance of doing any good was in the first few years after birth, as afterwards the changes which took place in the structures involved were such as to prevent a successful result from any operative measures that might be adopted.

SPIKED WIRE FENCES.

A CORRESPONDENT of *Land and Water* calls attention to the fact that farmers are putting up "miles of wire fencing, of which the top wire is studded with sharp spikes," and complains of the injury likely to result therefrom to man and beast. We can add to this testimony that in some cases not only the top but all the wires are spiked; surely a most discreditable and indefensible precaution. That people should be prevented from trespassing or punished for so doing is quite right and proper, but there can be no justification for part of that punishment taking the form of immediate personal injury. The possibility too, or rather probability, of the infliction of utterly wanton and needless injury and pain on such unconscious trespassers as dogs, sheep, horses, &c., is dreadful to contemplate. This barbed fencing is most aggressive, objectionable, and unnecessary; its aggressiveness is amply demonstrated by the fact of a lady finding it impossible to use a stile placed for foot passengers without getting her dress torn to rags. There is no good reason whatever why property should be enclosed by means of such a *chevaux de frise*. We trust, therefore, that owners of land will find means of replacing this dangerous fencing, or at all events of removing the unwarrantable spikes, which should be relegated to the limbo of spring guns and other man-traps.

THE PACINI MEMORIAL.

ON the 14th inst., in the Reale Arcispedale di Santa Maria Nuova, in Florence, a committee for the purpose of commemorating the life and labours of the late Dr. Filippo Pacini held its first meeting. The president was the Commendatore Professor Giorgio Pellizzari; the secretaries, Dr. Stacchini and Signor Squarcialupi; and the treasurer, Cavaliere Cosimo Franceschi, superintendent of the hospital. It was resolved to issue an appeal to the country; while a vote of thanks was conveyed to the Society of Hygiene for having initiated the project, and to his Excellency the Minister of Public Instruction for placing at the committee's disposal the sum of 500 lire (£20) *ad hoc*.

ACTION FOR MEDICAL ATTENDANCE.

IN the action Cass *v.* Fitzgerald, in which the plaintiff, a medical practitioner, sought to recover £96 for medicine and attendance upon a lady who, it was said, was at the time living with the defendant as his wife, the jury were unable to agree upon a verdict. They added, however, that they were quite unanimous that there was no imputation whatever upon the character of Mr. Cass.

THE ÆSCULAPIAN SOCIETY.

THIS North London Society has been in existence since 1880, and has now issued a small volume giving briefly an account of the proceedings of the monthly meetings. A glance through the pages of the volume shows the number and variety of subjects discussed, as well as the interest which the several papers evoked.

HAVING carefully looked through the drawings of the new additional buildings about to be erected at the St. Pancras Workhouse, the specifications to be observed in the construction of the floors, and the providing and fitting of the water-supply and fire extinguishing arrangements, Captain Shaw has issued a report, addressed to Mr. Bridgman, F.R.I.B.A., the architect, in which he states that he notes with pleasure the evident care and attention that have been bestowed upon the smallest details likely to assist in securing to the building an immunity from fire, or, in the event of fire occurring, preventing it extending to serious dimensions, together with the ample measures provided for its extinction.

WE are sorry to announce the death of Mr. Henry Renshaw, for so many years known as one of the leading medical publishers. Mr. Renshaw was one of the first to see the utility of publishing a condensed form of practical information for medical students and busy practitioners, in which enterprise he met a large success. Among the valuable series of manuals he published, perhaps Druitt's Surgery was the best known. Tanner's Practice of Medicine, Fox on Skin Disease, Clarke's Surgery, and Green's Pathology are only a few of the many popular works he brought out. Mr. Renshaw had been ailing for some months past, and finally succumbed to an attack of angina pectoris on Nov. 18th, in his seventy-ninth year.

THE Tasmanian Parliament has agreed to a motion declaring that some steps should be taken to provide for the proper education of midwives.

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IN a paper recently read before the Paris Academy, M. A. Hureau de Villeneuve urged the importance of the use of distilled water for drinking purposes, and suggested that the price might be greatly reduced by obtaining it from steam engines at work in mills. He considers it is neither unpalatable nor difficult to digest; that it generally contains a sufficient quantity of air, and that the absence of calcareous salts is rather an advantage than a drawback.

ON Monday evening next, Sir Andrew Clark, Bart., M.D., will give a "Medical Talk" to young men in the Lecture Hall of the Young Men's Christian Association. The Earl of Aberdeen will take the chair at eight o'clock. The subject will be "Considerations respecting the Constitution of Man, and its Relation to Health, Knowledge, and Religion."

THE subject of Nephrectomy will be brought before the Royal Medical and Chirurgical Society on Tuesday next, Nov. 25th, by a paper from Mr. Henry Morris. An interesting discussion is expected to follow, in which, besides others, Sir Andrew Clark, Sir Henry Thompson, Mr. Savory, Mr. Bryant, and Mr. Hulke will probably take part.

IT is reported from Dongola that eight cases of small-pox have occurred among the troops forming the Nile Expedition. Every precaution against the spread of the disease has been taken, and the camping grounds where it first appeared have been changed.

DR. PARSONS, Local Government Board Inspector, has recently paid another visit to Kidderminster to supplement his previous inquiries regarding the typhoid epidemic. The number of deaths from the fever has exceeded ninety, and fresh cases continue to occur.

MR. JAMES WYLD, of Charing-cross, has issued a new map of Egypt, the Nile, and the Soudan, which will be found useful for reference in tracing the movements of the British forces sent for the relief of General Gordon.

IN consequence of the epidemic of measles in the city the Aberdeen School Board has decided upon the closure for a fortnight of the infant departments of all the elementary schools.

AT the meeting of the Medical Society of London on Monday next an important and interesting discussion on Anæsthetics is anticipated.

M. PASTEUR is reported to be about to proceed to Rio Janeiro in order to study the yellow fever.

DR. HUMPHRY has been re-elected representative of Cambridge University on the General Medical Council.

IRISH POPULATION STATISTICS.—From a supplement recently issued to the seventeenth report of the Registrar-General for Ireland we learn that the total number of births during the ten years 1871-80 was 1,402,277, the annual average being 140,228, or at the rate of 26·5 per 1000. The total deaths registered during the same period was 966,745, or at the average annual rate of 18·3. The total number of emigrants who left Ireland in the decade was 623,933, being an average of 62,393, or 11·7 per 1000 of the population per annum. A decrease, therefore, of 188,401 took place during the ten years, the real decrease up to the date of the last census (April, 1881) being 237,541.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN extraordinary meeting of the Council was held on Wednesday last to consider, first, Mr. Heath's motion respecting the election of the President and Vice-Presidents, and, next, the Recommendations of the Association of Fellows.

In the unavoidable absence of Mr. Heath the first part of this gentleman's motion was moved by Mr. Thomas Smith, and seconded by Mr. Allingham—viz.: "That the office of vice-president be for the future held for one year only by the same person."

It was put to the vote, when six voted for and fourteen against. The names having been taken, it was found that the supporters of the motion were Messrs. Holmes, Cadge, Smith, Sir William Mac Cormac, and Messrs. Allingham and Lawson, while those who voted against it were Mr. Erichsen, Sir Spencer Wells, Messrs. Marshall, Savory, Lund, Wood, Power, and Hutchinson, Sir Joseph Lister, and Messrs. Bryant, Hulke, Croft, Hill, and Durham. The President did not vote; Sir James Paget and Messrs. Heath and Sydney Jones were absent.

The second part of Mr. Heath's motion was moved by Sir William Mac Cormac, and seconded by Mr. Lawson—viz.: "That the president be elected annually by the Council from among its members, and that no president hold office for more than five consecutive years."

To this Mr. Cadge moved and Mr. Holmes seconded an amendment—viz.: "That the president be elected annually by the Fellows in a manner hereafter to be agreed on by the Council." Upon this the original motion was withdrawn and the amendment put as a substantive motion, whereupon Mr. Marshall moved and Mr. Wood seconded an amendment—viz.: "That the subject of the election of president be referred to the Committee on Charters and Bye-laws, to report thereon to the Council." This was ultimately carried.

After some discussion, it was resolved, on the motion of Mr. Marshall, seconded by Mr. Holmes, "That the communication of the Association of Fellows and the accompanying Recommendations be referred to the Committee on Charters and Bye-laws to report thereon to the Council." This Committee, it may be stated, consists of Sir James Paget, Mr. Erichsen, Sir Spencer Wells, Messrs. Marshall, Forster (President), Savory (senior Vice-President), Holmes (junior Vice-President), Lund, Cadge, and Smith.

ENTERIC FEVER AND MILK INFECTION AT ST. ALBANS.

THE report on this epidemic is made to the Local Government Board by Mr. Shirley Murphy, one of the officials of the Board in connexion with the Calf Vaccine Station. The population of the city is estimated by Dr. Saunders, medical officer of health, as 11,326; of 2500 inhabited houses 1890 are supplied by the St. Albans Water Company from deep wells, some two-thirds having a constant and the remainder an intermitting service, the same supply being delivered to all alike; the remaining 610 houses have private wells. St. Albans has a new system of sewers, and out of the 2500 houses, 1230 were connected with them at the beginning of the outbreak, the proportion of houses so connected to those unconnected being much the same in all the twelve portions into which the town is divided for sewering purposes. In the ten years 1874-83 only ten enteric fever deaths were registered in the city. Including for the purposes of the inquiry some 60 houses outside the borough with those in the city, it appears that on the whole area eight cases of enteric fever occurred during the first three months of the year, one of them taking place at a farm to be referred to. During May 86 cases occurred within the city boundary and 7 without the boundary; the number of houses infected during the same period being 58 and 4 respectively. In June 34 cases occurred within and 4 without the city, in 24 and 4 houses respectively. As regards any connexion between the disease

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and the sewers, it appears that 34 of the affected houses or 2·7 per cent. were connected with the sewers, and that 48 or 3·7 per cent. were not so connected, and it was otherwise ascertained that the fever could not be related to any special condition of house drainage. Of the 82 houses, 74 had the company's water, 7 were supplied from wells, and the supply used by the remaining one is not known—that is to say, of the houses having the company's water 3·9 per cent. were attacked, and of those resorting to wells 1·1 per cent. But owing to the preponderance of one or another supply in different parts of the town it was soon seen that the difference between 3·9 and 1·1 had no particular importance in so far as the cause of the disease was concerned.

Dr. Saunders had at an early stage identified the disease with a certain milk-supply. The milk from the suspected farm was distributed by the dairyman himself and by seven different milk-vendors; and the customers of these various persons having been ascertained, it appeared that of 396 houses in and out of the city 86, or 21·7 per cent., were invaded during May or June; and during the same period there were but 4 houses out of the 90 invaded concerning which it could not be definitely stated that the milk came from the source in question; and as regards two of these the milk was admitted to have come from "various sources." In the city itself 21·1 of the houses supplied from this dairy farm were affected, and only 0·14 of the remainder. After dealing in detail with the seven vendors who sold this dairy farmer's milk, Mr. Murphy states that a maidservant who came to the farm in October, 1883, and who remained there till Jan. 24th, 1883, sickened with enteric fever two days after leaving. Another maid came on May 26th, and she sickened on June 10th. Some thirty visitors had also been at the farm, and of 25 inquiry as to illness was made, the result being that 2 were ascertained to have been attacked; but one of these drank milk at the farm in May, and the other received milk from there at about the same date. Some of the milk was also sent to London; but in the hands of one vender it was so used that it could not be identified and traced to customers; in those of another, six cases of enteric fever were heard of. Besides which an undue prevalence of the same disease was traced amongst persons in St. Pancras who were receiving their milk from the same source. In Islington, too, 15 per cent. of the houses supplied with this milk were attacked, whilst all others in the area which was subjected to investigation escaped. In short, both in and around St. Albans, and in London, there was a special incidence of enteric fever upon the consumers of this milk.

What gives such special interest to this epidemic is the fact that it was milk from the same farm that was the vehicle of distributing the infection of enteric fever during the serious outbreak of that disease which occurred in North London in 1883. It therefore became very important to learn, if possible, if any conditions about the farm could have led to it. Under these circumstances, the healthiness of every cow that had been milked for months past, the quality of their food and water, the health of *employés* both permanent and temporary, were investigated with much minuteness, but no clue to the disease could be obtained. After the 1883 epidemic a dangerous relationship between a well 100 ft. deep and a cesspit was brought under notice, the roots of a sycamore tree having been found to travel from one to the other. The cesspit had since been cleaned out and filled in, and on digging a trench about the privy no indication of soakage towards the well could be discovered. The inquiry, exhaustive and complete as it was, failed both in Mr. Murphy's and in Dr. Saunders' hands, in discovering any fresh source of contagium to account for the 1884 outbreak. But typhoid fever had not been thoroughly absent from St. Albans since the 1883 outbreak. During the closing months of the year five houses were invaded, four of which received their milk from this farm. Then, again, all the cases in the four houses attacked during the first quarter of this year, as also the servant girl at the farm itself, used this milk; and these facts, taken together with the 1883 epidemic on the one hand and the epidemic of May to June, 1884, on the other, go to point to some undiscovered source of infection which remained comparatively quiescent during some eight or nine months, and then, to use Mr. Murphy's words, gave rise to an intenser infectiveness, of which the outbreak in May and June was the result. Mr. Murphy's closing words repeat in effect what we have on several occasions strongly urged; and, written as they are in connexion with another fatal outbreak due to milk infection, they deserve to be specially noted. "Seeing that an infective quality can reside in milk produced under circumstances of reasonable cleanliness and healthiness, it comes to be of importance that English people should adopt, as their invariable rule in the use of milk, the custom, usual among Continental nations, of boiling all milk as soon as they receive it into their houses." Mr. Murphy's report deserves careful perusal, and we are glad to note that it is placed on sale as an official publication.

THE PROGRESS OF CHOLERA.

BETWEEN November 4th, when the first official announcement of the existence of cholera in Paris was made, and the 17th, the number of persons attacked concerning whom information had been obtained was about 1250, and the deaths during the same period numbered 617. Probably the returns as to non-fatal cases are very untrustworthy, otherwise the rate of mortality would be heavy, and this it has been asserted is not the case. Since November 10th, on which day the deaths numbered 98, there has been a diminution in the mortality, which has gradually fallen to about 30 a day, and the proportion of deaths to attacks has also undergone a very considerable reduction. That such a result should take place at an early stage of an epidemic appears to indicate that a further abatement is in prospect, and that the epidemic may be extinguished before long. It is sincerely to be hoped that, whether this is the case or not, no efforts will be spared, either in Paris or in other places that have been infected, to secure the removal of all conditions favouring nuisance in connexion with sewers, drains, cesspools, and accumulations of refuse, for it is these conditions that tend to favour the retention of the contagium, and which will enable it again to assume an active state when the warmer weather returns.

Rumours of cholera come also from other localities. In Algeria it is certainly not extinguished; odd cases appear to recur in the south of France; and news also comes of suspicious deaths in the provinces of Valencia and Toledo, and of the establishment of a cordon of Spanish troops round a town in the former province. Further statements have been made as to cholera in the Channel Islands, and even in London, but these are absolutely without foundation. As regards our own country, it is satisfactory to find from the recent speech of the President of the Local Government Board in Parliament that further measures are intended by his department with respect to the preparedness of ports to deal with imported cases. Our system of inspection and isolation requires for its efficient working that all sanitary authorities shall have the means of regular inspection and of isolation available, and as regards the port sanitary areas this is of importance.

OFFICIAL RETURN OF CHOLERA DEATHS IN PARIS.

The official weekly return on the statistics of the Paris municipality for the week ending the 12th inst. reports that 375 deaths from cholera were recorded in that period, raising the annual death-rate of the city to 32·8 per 1000, from 23·4 in the previous week. It is stated that the epidemic broke out on the 4th inst. simultaneously in two arrondissements, and afterwards spread in such a manner, that during last week only one of the twenty arrondissements escaped without a death. It is pointed out that the fatality of the disease has in the main been confined to the dirtiest streets and to the most uncleanly and poverty stricken of the population. With regard to some of the localities that are now suffering, it is stated that they have invariably suffered in previous epidemics, and that many of the worst streets are still in much the same condition as they were in at the beginning of the century. An especially severe outbreak occurred in an asylum for the aged, under the charge of a religious order, in the Avenue de Breteuil. Many of the other streets attacked have long been known as the hotbed of other zymotic diseases. In order to prove the slight individual risk of being attacked, the return gives a little table to show that only 14 per 100,000 of the Paris population died last week from cholera. The force of the epidemic may be better appreciated by us from the following facts:—The 375 deaths from cholera in Paris last week were equal to an annual rate of 8·6 per 1000 of the popula-

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tion, and an equal rate of mortality in London would have there given 660 deaths. As regards the ages of the cholera victims, the small proportion of fatal cases among children is especially noteworthy; only 35 deaths occurred under fifteen years of age, 80 between fifteen and thirty-five years, 172 between thirty-five and sixty, and 88 among persons aged upwards of sixty years. The disease was far more fatal among men than among women; the deaths of males being 235, while those of females were only 140, or 17 males to 10 females. In the more recent cholera epidemics in England, in 1854 and 1866, the deaths of females exceeded those of males. The excess of males and of elderly persons among those dying from cholera in Paris last week was probably due in a great measure to the fatality of the disease in the asylum referred to above.

THE SMALL-POX HOSPITAL CASE.

THE action brought by Mr. Fleet, a property owner at Darenth, against the Metropolitan Asylums District Board to enforce the closure of the Darenth Small-pox Convalescent Camp, on the ground that there was danger of infection being carried from the camp to the plaintiff's property, has been concluded, and judgment has been delivered for the defendants. Mr. Justice Pearson, before whom the action was heard, in delivering judgment, said, assuming for the purposes of the judgment that it was possible that infection could be conveyed through the air, that was not a sufficient reason to grant an injunction in this case. He must, to do that, go much further, and come to the conclusion that it was probable that it could be so conveyed, and he was not able to arrive at that result. He said it had been argued that upon the balance of evidence it must be concluded that small-pox hospitals are the centres of infection, and because that was so in the case of the London hospitals it was so with this hospital; but the probable causes why in London there should be such danger did not apply to a hospital situated and managed as this was. In an early issue we shall take an opportunity of noticing this case at greater length.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Oldham Urban District.—Dr. Bryden Hill speaks with satisfaction of the reduction of the general death-rate, and also of the zymotic rate, during 1883, the former being 21·9, and the latter 1·5 per 1000 inhabitants, and he points out that the great efforts which have been made by the sanitary authority are now bearing fruit in the saving of many lives. Thus, compared with the average for the past ten years, there was in 1883, in a population of about 119,000, a saving of 500 lives, and this number includes no less than 333 lives which would otherwise have been sacrificed to zymotic disease. As regards this latter class of disease, much of the result is attributable to the joint working of the compulsory notification of infectious diseases and the isolation arrangements provided at the Westhulme Hospital. But there is great reason for regret that so large an infant mortality still reigns in the borough. Out of every 100 deaths 40 were of children under five years of age, and 25·5 under one year. Or, to put the case otherwise, out of every 1000 children born alive 159 were removed by death before attaining the age of twelve months. Such a mortality is certainly in part preventable, and the various conditions bearing upon it are considered in the report. Notably, reference is made to the neglect due to mothers working at mills, the consequent improper feeding, the conveyance of children through the streets early on frosty mornings when they have only just left their warm beds; and the need of the crèche system is strongly urged, in order to cope with some of the evils. Sanitary work progresses satisfactorily; and as regards infectious diseases, it is worth noting that 5317 articles were either disinfected or destroyed, that 1072 rooms and 358 houses were cleansed and disinfected, and that 135 cases were admitted into the Westhulme Sanitary Hospital during the year.

Runcorn Rural District.—The death-rate was 17·5 per 1000 during 1883. Certain instances of choleraic diarrhœa led to a careful examination of the sanitary circumstances of this district, which lies so near to the port of Liverpool, and to a report on the filthy state of the Kingsley brook, which, it is believed, is sometimes resorted to for drinking purposes. Certain preparations were also made as to the mooring of any infected vessels, and it was resolved to purchase an iron hospital to be put up in case of need. The removal of cases of typhoid to the workhouse hospital, and the spread of scarlet fever, show that this need has long since arisen, and it is to be hoped that if the iron hospital has been purchased a site has also been obtained for it, for more than once such temporary hospitals have failed at a critical moment for lack of a site.

Birkenhead Urban District.—This borough, with an estimated population of 88,700, had in 1883 a birth-rate of 35·45 and a death-rate of 19·95 per 1000. The latter is calculated without corrections for deaths at sea &c.; and only seven of the cities and boroughs quoted by the Registrar-General had a lower rate. The rate of infant mortality was 155 under one year per 1000 births. Under the section of the Local Act of 1881, relating to the notification of infectious diseases, 874 cases were notified to the sanitary authority; 789 cases were notified by medical practitioners, 69 by school attendance officers, 6 by occupiers, and 10 by the registrars. But having regard to the relation which these numbers bear to the registered mortality from the causes specified, Mr. Vacher says that there is no avoiding the conclusion that a certain residuum of cases still escape unreported. On the whole, the zymotic death-rate was 1·28 less in 1883 than the mean of the zymotic death-rate during the five preceding years, and this included an outbreak of typhus which was checked by isolation and disinfection; and to the working of compulsory notification is attributed in part both this result and the lowering of the zymotic mortality. In view of the increasing demand for isolation in hospital, the villa hospital, which was one of the first established, has been found inadequate. A site capable of containing two pavilions of ten beds each has been appropriated. One pavilion is already erected, and it is hoped that the other may soon be put up. In view of this anticipation we would point out how in some respects the second pavilion may be made an improvement on the first. Two of the end beds in the existing building are in a corner, the beds touching the wall. Corners in infectious wards should always be lighted by a window, and every bed should stand in a wall-space between two windows. Besides which, in calculating floor area per bed, the amount of wall space is the most important element, for no excess of space down the centre of the ward can possibly compensate for diminution of the area where the patients' heads lie, and where they hence take in the greater part of the air they breathe. Every bed should stand in the centre of its own 12 ft. of wall space. Then again, a single fireplace for a ward measuring nearly 50 ft. in length must produce very unequal heating, and if it succeeds in adequately warming the distant end of the ward it must certainly give out an excessive heat near the fireplace. There are few modern infectious hospitals where some 25 ft. have not been regarded as the maximum length of ward for a single fireplace; and if two open fireplaces are not provided, one at either extremity, a central stove having two open fireplaces facing either end of the ward is, as a rule, provided. The solid wall, which is shown in the diagram between the two waterclosets, implies a partition, which prevents cross ventilation by means of the two closet windows. As a rule, a wooden partition, some 7 ft. high and not touching the ground, is preferred with a view of securing the requisite cross current. In the main the hospital is well designed, and will serve a useful purpose.

St. George, Hanover-square.—There is a continually decreasing death-rate in this parish, and the rate for 1883 was only 15·7 per 1000—that is to say, it was less than in any of the large towns of England. It must be remembered, however, that the district contains a specially selected population, and hence, forming as it does a picked portion of a large city, it can hardly be compared with any town or city as a whole. A large portion of the report is merely statistical, and apart from a summary supplied by the inspector of nuisances, it contains but little information of the sanitary circumstances of the district.

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St. Mary, Newington.—Dr. Iliff's annual report forms a part of a general report on the proceedings of the vestry. In 1883 the death-rate on 110,000 people in this parish was 23·1 per 1000, but the conditions leading to preventable death amongst this large population are only very incidentally referred to. There is some information as to certain drain defects, a summary of hints issued in anticipation of cholera, a reference to legislation which was proposed last session, and some general statements as to the housing of the poor; but, like many other London reports, this one but very imperfectly resembles the excellent annual reports which come from many of our other populous cities and boroughs.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5850 births and 3505 deaths were registered during the week ending the 15th inst. The annual death-rate in these towns, which had been equal to 20·6 and 21·3 per 1000 in the two preceding weeks, declined again last week to 20·9. During the first seven weeks of the current quarter the death-rate in these towns averaged 20·7 per 1000, against 21·3 and 20·5 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 14·0 in Huddersfield, 14·8 in Brighton, 17·9 in Derby, and 18·4 in Bradford. The rates in the other towns ranged upwards to 27·8 in Bolton, 27·8 in Preston, 28·6 in Newcastle-upon-Tyne, and 30·0 in Wolverhampton. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 379 and 392 in the two preceding weeks, declined last week to 369, and were fewer than in any previous week of this year; they included 73 from scarlet fever, 63 from measles, 57 from "fever" (principally enteric), 56 from diarrhœa, 52 from whooping-cough, 39 from small-pox, and 29 from diphtheria. No death from any of these principal zymotic diseases was recorded last week either in Brighton, Plymouth, or Wolverhampton; whereas they caused the highest death-rates in Newcastle-upon-Tyne, Bolton, and Cardiff. The greatest mortality from scarlet fever was recorded in Sheffield and Newcastle-upon-Tyne, from measles in Bolton and Cardiff, from "fever" in Leeds, Preston, Portsmouth, and Derby, and from whooping-cough in Oldham and Sunderland. The 29 deaths from diphtheria in the twenty-eight towns included 17 in London, 4 in Liverpool, and 2 both in Norwich and in Newcastle-upon-Tyne. Small-pox caused 56 deaths in London and its suburban districts, 2 in Birkenhead, and 2 in Sunderland. The number of small-pox patients in the metropolitan asylum hospitals, hospital ships, and convalescent camps, which had been 580 and 669 on the two preceding Saturdays, further rose to 749 at the end of last week; 199 new cases were admitted to these hospitals during last week, against 101 and 233 in the two previous weeks. The Highgate Small-pox Hospital contained 41 patients on Saturday last, 20 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had increased in the eight preceding weeks from 159 to 357, further rose last week to 370, but were 85 below the corrected weekly average. The causes of 79, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Bradford, and in six smaller towns. The largest proportions of uncertified deaths were recorded in Halifax, Oldham, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 21·3 to 22·6 per 1000 in the four preceding weeks, declined to 22·3 in the week ending the 15th inst.; this rate was, however, 1·4 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 14·8 and 16·8 in Leith and Aberdeen, to 23·6 in Greenock and 25·7 in Glasgow. The deaths in the eight towns included 103 which were referred to the principal zymotic diseases, against 116 and 93 in the two previous weeks; 23 resulted from measles, 22 from diarrhœal diseases, 19 from scarlet fever, 16 from whooping-cough, 13 from diphtheria, 10 from "fever" (typhus, enteric, or simple), and not one from small-pox. The rates from these diseases in the Scotch towns last week ranged from 0·0 in Perth and 2·8 in Dundee, to 4·7 in Leith and Aberdeen and 6·8 in Glasgow. The 23 deaths from measles showed a further increase upon recent weekly numbers, and included 12 in Glasgow and 9 in Aberdeen. The 22 deaths attributed to diarrhœal diseases all but corresponded with the numbers in recent weeks, and exceeded by 8 the number returned in the corresponding week of last year. Twelve of the 19 deaths from scarlet fever occurred in Glasgow. The fatal cases of diphtheria showed a decline, while those of whooping-cough were more numerous. The 10 deaths from "fever" exceeded the number in the previous week by 4, 7 occurring in Glasgow and 3 in Edinburgh. The 101 deaths referred to acute diseases of the respiratory organs in the eight towns showed an increase of 3 upon the low number in the previous week, but were 47 below the number returned in the corresponding week of last year. The causes of 73, or nearly 14 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 24·7 and 25·3 per 1000 in the two previous weeks, further rose to 30·0 in the week ending the 15th inst. During the first seven weeks of the current quarter the death-rate in the city averaged 27·4 per 1000, whereas it did not exceed 18·9 in London and 18·4 in Edinburgh during the same period. The 202 deaths in Dublin last week showed a further increase of 32 upon the number in the two previous weeks, and included 25 which were referred to the principal zymotic diseases, against 29, 25, and 18 in the three previous weeks; 10 resulted from scarlet fever, 9 from "fever" (typhus, enteric, or simple), 3 from whooping-cough, 2 from diarrhœa, 1 from measles, and not one either from small-pox or diphtheria; these 25 deaths were equal to a zymotic death-rate of 3·7 per 1000, the rate from the same diseases not exceeding 2·2 in London and 3·2 in Edinburgh. The deaths from scarlet fever in Dublin, which had been 12, 10, and 8 in the three previous weeks, rose again to 10 last week. The fatal cases of "fever," and of whooping-cough, also showed a considerable increase upon the numbers returned in the previous week. Eight deaths were referred to violence, and 51 deaths were recorded in public institutions. The deaths both of infants and of elderly persons showed a marked increase upon recent weekly numbers. The causes of 33, or more than 16 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

WAR OFFICE.—Grenadier Guards: Surgeon Albert Luis Fernandes retires from the service, receiving a gratuity.

ADMIRALTY.—Deputy Inspector-General of Hospitals and Fleets Thomas John Breen has been placed on the retired list, with permission to assume the rank and title of Inspector-General of Hospitals and Fleets.

Staff Surgeon Fleetwood Buckle has been appointed to the *Alexandra*, additional, for Marines at Suakin.

RIFLE VOLUNTEERS.—1st Wiltshire: Surgeon Thomas Jarvis Bennett, M.D., is granted the honorary rank of Surgeon-Major.—2nd Volunteer Battalion, the South Staffordshire Regiment: Surgeon James Clark, M.D., is granted the honorary rank of Surgeon-Major.

SOCIAL SCIENCE ASSOCIATION.—At a meeting of the Council of this Association held on the 13th inst., the following resolutions were unanimously carried—1. "That this Council learns with satisfaction that a proposal has been submitted for the consideration of his Royal Highness the President, and the Executive Council, for employing the surplus which may be found to exist on the closing of the accounts of the International Health Exhibition for the purpose of maintaining and continuing the biological health laboratories and the library as essentials to the study and teaching of correct sanitary work." 2. "That in the opinion of the Council of this Association the opportunity is a favourable one for establishing closer relations between the various organisations which at present exist for the diffusion of sanitary knowledge and the application of sanitary science."

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Correspondence.

"Audi alteram partem."

THE APPOINTMENT OF SURGEON-GENERAL OF THE PUNJAB.

To the Editor of THE LANCET.

SIR,—I venture to think that a knowledge of all the facts of the case will lead you to modify the opinion you expressed in THE LANCET of Nov. 15th on the selection of Dr. Dallas for the appointment of Surgeon-General of the Punjab. You are doubtless not aware that for the long period of eighteen years Dr. Dallas performed all the duties which now devolve on the Surgeon-General without getting a sixpence of remuneration for doing so, but such is the fact. In 1862 he was appointed Inspector-General of Prisons, an office to which was attached the supplementary duty of inspecting the dispensaries and civil hospitals of the province. At that early period of British rule in the Punjab the work was light, as the dispensaries were few in number; but under Dr. Dallas's administration they increased rapidly, and after a few years the number of patients attending them were counted by tens of thousands, and the capital operations performed, including about 500 lithotomies, amounted to several thousands a year. The financial as well as the medical administration of these institutions was carried on entirely by Dr. Dallas, in addition to his own proper work—namely, the inspection and administration of the prisons of a province of seventeen millions of inhabitants, and for this extra work he did not receive a shilling of extra pay. By 1874 the civil hospital work had become so heavy that the Punjab Government felt that it was not reasonable to ask the Inspector-General of Prisons to attend to it any longer, and they requested the Government of India to constitute the administration of the civil hospitals an independent charge. For reasons of economy this request was not complied with till 1880, when the office of Surgeon-General was created with a salary considerably higher than that which Dr. Dallas had enjoyed for the performance of the duties now devolved on the Surgeon-General in addition to those of Inspector-General of Prisons. I think, Sir, you will admit that under these circumstances Dr. Dallas might fairly have expected the new appointment as some acknowledgment of his many years of unremunerated toil, and the Punjab Government at the time earnestly pressed his claims on the Government of India, but without success. The claims of seniority prevailed. Dr. Dallas, relieved of the administration of the civil hospitals, was charged only with the duties of the Inspector-General of Prisons, and thereafter two officers were allotted for work which he had done alone for the long period of eighteen years. Since 1880 there have been two Surgeons-General in the province, and when the second vacancy occurred last month the Punjab Government, finding doubtless that such frequent changes were not conducive to the public interest, very properly, as I think, renewed their application for the appointment of Dr. Dallas, and the Government of India acceded to their request. Dr. Dallas had for many years carried on the work with conspicuous success and zeal, and with such patient modesty that neither the Government nor the public had any correct idea of the valuable services he was rendering.

I cannot conclude without mentioning another strong claim Dr. Dallas has to special consideration. It is that to him belongs the merit of having first demonstrated the practicability and advantage of establishing a system of vital statistics in India. In 1864 he prepared a scheme for the registration of deaths in the Punjab, which was at once brought into operation. Nothing of the kind had ever been previously attempted in any other province. The scheme was at first ridiculed as impracticable and useless, but the result has shown that this opinion was entirely wrong, and Dr. Dallas's method of procedure has been found so sound and so well adapted to the circumstances of the country that it has been adopted, with slight modifications, in all the other provinces of the Indian Empire. As it devolved on me to take up this branch of his work when I was appointed Sanitary Commissioner in 1868, I feel I have some right to speak of the value of his services in the matter. For many years he was the referee of the Government in all sanitary questions, and while he only received the salary of one office he did the work of three—namely, that of Inspector-General of Prisons, Surgeon-General, and Sanitary Commissioner. I have only, in conclusion, to express my firm assurance that Dr. Dallas's appointment as Surgeon-General is fully justified on the grounds of the public interest and the recognition due on the part of the Government for his most valuable services.—Your obedient servant,

A. C. C. DE RENZY,
November, 1884. Surgeon-General.

*** Though Dr. De Renzy makes out a very good case for Dr. Dallas's promotion, we are scarcely prepared to admit that it justifies the course followed, for a second time in the Indian service, of giving two steps in such rapid succession, and over the heads of so many seniors, some of whom have also been distinguished for zealous and efficient service.—ED. L.

CHARCOT'S JOINT DISEASE.

To the Editor of THE LANCET.

SIR,—May we, through you, draw the attention of your London readers to the fact that an adjourned discussion on Charcot's Joint Disease will take place at the Clinical Society's meeting on Nov. 28th. There will be the usual opportunity for exhibiting living specimens at 8 P.M.; and the Society will be grateful to any of its members who can show illustrative cases, more especially examples of typical rheumatoid arthritis, combined with ataxia, or typical Charcot's arthropathy without ataxia.

We may add that Professor Charcot has promised to send over for the occasion a series of preparations from his own private collection, to illustrate the disorder and its specific characters.—We are, Sir, yours faithfully,

SIDNEY COUPLAND, } Hon. Secs.
R. J. GODLEE, }

Clinical Society of London, Berners-st., Nov. 18th, 1884.

"DEATH DURING THE ADMINISTRATION OF METHYLENE."

To the Editor of THE LANCET.

SIR,—After reading Dr. Buchan's letter in your last issue on Death during the Administration of Methylene, I am led to ask: "What is methylene?" Dr. Buchan says "that a sample of the methylene used was tested and found to be pure." I suppose therefore that he will be able to give some account of it, and of the tests he employed. Some years ago I had occasion to point out that the so-called chloride of methylene was simply impure chloroform, and that methylene chloride, CH_2Cl_2, could not be prepared except at a cost which would place it entirely beyond reach for ordinary use as an anæsthetic. If the article which is now being sold as methylene or methylene chloride be, as I suspect, nothing more than impure chloroform prepared from methylated spirit, it is more than probable that it contains chlorinated derivatives of acetone, which are likely to be anything but harmless. I have no hesitation in affirming that all chloroform for anæsthetic purposes should be prepared from pure alcohol alone.

I am, Sir, yours truly,

Granville-park, S.E., Nov. 18th, 1884. HENRY E. ARMSTRONG.

THE CONJOINT EXAMINATION SCHEME.

To the Editor of THE LANCET.

SIR,—I fear the new examination scheme of the English Colleges of Physicians and Surgeons will, unless modified, tend to perpetuate one of the weak points of ordinary English medical education. In almost every other country instruction in science precedes instruction in subjects purely medical, and in our universities the examinations are so arranged that the student is encouraged to acquire a knowledge of chemistry before he commences to study physiology. But it appears that in the new scheme the student's first examination is to include chemistry as well as anatomy, physiology, and materia medica, and he will thus be led to attend lectures on the first three of these subjects simultaneously, as heretofore. This combination is objectionable on several grounds. An average first year's student cannot

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give due attention to all these subjects at once, and chemistry is habitually neglected, as most lecturers at medical schools know only too well. Again, some knowledge of chemistry is essential to the due comprehension of lectures on physiology; but how can this knowledge be secured if instruction in the two subjects commences simultaneously? Lastly, the combination of chemistry with anatomy and physiology leads students to enter a medical school at an earlier age than they would if attendance on chemistry were made to precede studies purely medical. Education is hardly advanced enough in England for all the examining boards to insist on such preliminary instruction in science as is required abroad; but surely a movement in the right direction may now be initiated by *allowing* students to pass the examination in chemistry and chemical physics before entering on their medical studies. They would thus be encouraged to work at purely scientific subjects in the year preceding their attendance on anatomy and physiology. If the present combination of subjects is made compulsory, students who do this will be placed at a disadvantage, since the examination in chemistry will be separated from the antecedent course of instruction by more than twelve months.

I am, Sir, yours truly,

Owens College, Manchester, Nov. 17th, 1884. D. J. LEECH.

THE RECENT ESCAPE FROM BROOKWOOD ASYLUM.

To the Editor of THE LANCET.

SIR,—As it would appear, from the sensational statements in various newspapers, that the patient who escaped from this asylum on the 10th inst. was not a fit case for detention here, I venture to send you the following facts:—The patient in question has been insane for many years, and previous to his admission here had been in two asylums in America, from one of which he escaped, and eventually made his way to England. He is a quiet and harmless man, but the subject of well-marked delusions. He has been in the habit for some time past of going out with the attendant who posts the mid-day letters, and on the afternoon of the 10th gave the attendant the slip, concealed himself until dark in the woods, and eventually walked to London. He presented himself to the American Consul the next day, asserting that he was perfectly sane and illegally detained here. Mr. Lowell promised to investigate his case, and prevailed upon him to return to the asylum, which he did, after an absence of forty-eight hours. This man's mental condition is well known to the Commissioners in Lunacy, and to the Visiting Justices of the asylum, and they concur in my opinion that he is a fit case for asylum care.

Yours faithfully,

JAS. E. BARTON,
Medical Superintendent.

Surrey County Asylum, Brookwood, Woking, Nov. 18th, 1884.

THE NEW ANÆSTHETIC—CUCAIN.

To the Editor of THE LANCET.

SIR,—For some time several laryngologists have been employing a salt of cucain for the purpose of producing local anæsthesia. At the recent Ophthalmic Congress its value was demonstrated, and many surgeons have since used it in operations on the eye and other parts. A weak solution of the muriate (2 or 4 per cent.) produces anæsthesia of mucous membranes sufficient to enable operations to be performed without pain. A stronger solution is sometimes required. It is only necessary to paint the part with a camel-hair brush once, twice, or thrice, at intervals of three to five minutes, when local anæsthesia is produced, lasting from fifteen to twenty minutes, sometimes half an hour. The value of such an agent is manifest, for it gives no pain whatever. Painless operations for cataract, squint, &c., have been done after a couple of such instillations. I have had repeated success with this anæsthetic in depriving the fauces of sensibility, in removing excessive irritability of these parts for operative purposes, and to-day it has furnished me great assistance in the intra-laryngeal manipulations of an unusually difficult case of growth in the larynx.

I have spoken of the alkaloid as cucain. It is the active principle of cuca erythroxylon, more often called coca. Sir R. Christison proposed to spell it cuca, and as that represents the pronunciation of the natives, and serves to distinguish it more completely from other substances, it is to be hoped his suggestion may be more generally followed than hitherto.

I am, Sir, yours truly,

Dean-street, Park-lane, Nov. 18th, 1884. PROSSER JAMES.

SURGICAL ERYTHEMA.

To the Editor of THE LANCET.

SIR,—*A propos* of Dr. de Havilland Hall's interesting communication to the Medical Society on Scarlet Fever in Surgical Cases, I have now under my care a child about three years old suffering from an injury to the head, resulting in abscess beneath the scalp and general erysipelas of the face. Before the latter had subsided a scarlet rash appeared over the trunk and thighs, resembling the efflorescence of scarlet fever, but presenting to the touch the feeling of grains of sand; there was no perceptible exacerbation of pyrexia, or increase of temperature. The following day the rash had nearly disappeared, leaving patches of deep red papillæ on the thighs. There has been no subsequent desquamation. If I may venture to offer an opinion on Dr. Hall's case, I should think the child had been subjected unknowingly to the infection of scarlet fever either previous to the operation or soon after, proclivity to the disease being increased by the depressing effect of an operation. Desquamation is certainly a pretty conclusive proof of the nature of the attack.

I am, Sir, yours obediently,

Queen's-park-terrace, W., Nov., 1884. J. HAWKES, M.D.

LIVERPOOL.

(From our own Correspondent.)

THE CITY CORONER'S COURT.

IN the last annual report of the head constable is a table (No. 31) giving a return of all inquests held before the city coroner from the 30th September, 1883, to the 29th September, 1884. The following are details extracted from it. There were in all 1584 deaths referred to the coroner. In 855 he decided that an inquest was not required, and in 729 inquests were held. Of this number 486 were on the bodies of males, 243 on females, 168 were infants under one year, of whom 150 were legitimate, 18 illegitimate. The findings of the jury were—murder 10 cases, manslaughter 7, suicide 38, accidental death 402, of which 260 were those of males, 142 females; injuries (cause unknown) 47; found dead 57; excessive drinking—males 47, females 26; disease aggravated by neglect 3, from want, cold and exposure, &c. 4; other causes 88. The total cost of these 729 inquests was £2357 13*s.* The present coroner, Mr. Clarke Aspinall, J.P., has held office since 1867. He is a solicitor, paid by salary, which has been gradually raised up to its present amount of £1500 per annum. He does not practise, devoting his whole time to the duties of his office, and to assisting the stipendiary magistrate. With the exception of the borough gaol, which, though situated in the district of the county coroner, is by a local Act included in the borough coroner's district, all inquests are held at the coroner's court, situated within the police buildings, in which are also the magistrates' courts, the head constable's and detective offices, &c.

THE LADIES' CHARITY AND LYING-IN HOSPITAL.

With the exception of the Royal Infirmary the Ladies Charity is the oldest of the medical charities of Liverpool, having been established nearly a century ago as a maternity charity for attendance on poor married women at their own homes. It was amalgamated with the Lying-in Hospital in 1869. Lately a new hospital has been erected on Brownlow-hill, a central and convenient thoroughfare. It will be for the reception of labour cases, and is to be opened to-day by the Countess of Sefton. Fuller details will be forwarded in a future letter.

THE WINTER ASSIZES.

Mr. Justice Day has been sitting since the 13th inst., trying the prisoners in what is rather a heavy calendar. There are four cases of murder, and many where the knife and brutal violence have been used. In all cases where he has power to do so Justice Day sentences those charged with

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robbery accompanied by violence to short terms of imprisonment and the infliction of the lash. In a very large proportion of cases drink has been the cause of the crime.

Liverpool, Nov. 19th, 1884.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE-ON-TYNE.

THE returns of infectious diseases for the last fortnight ending November 8th, and notified to the medical officer of health for the city by practitioners, show a total of 130 cases; of these 106 are put down to scarlet fever, which shows, when taken with the death-rate, that this disease has taken a rather serious epidemic form. The House Committee of the Infirmary announced at their late meeting that His Royal Highness the Prince of Wales had consented to become the patron of the infirmary, an office which has not hitherto existed in association with the institution. His Royal Highness at the same time enclosed a donation of fifty guineas. The city engineer and the medical officer of health, Mr. H. E. Armstrong, have just presented to the City Council a report on the water-supply of Newcastle-on-Tyne and district, which may indeed be said to be opportune, exhaustive, and suggestive. The report is accompanied by tables of analyses, maps of the gathering grounds for the water, and also diagrams showing its distribution. The report may be said to have sprung out of a letter by Dr. Huntley, sent to the Town Council in January last, and complaining of the sewage contamination of the water-supply. The city engineer and the health officer were requested to inquire into the causes of complaint, which they have done in a very able manner, and have likewise presented a mass of facts elicited in their inquiry likely to prove of great value as to the storage, conveyance, and distribution of water. The total area from which the supply is derived is about 22,000 acres, of which fully nine-tenths are pasture and moorland. The number of inhabitants is small, being about 1820, or 0·06 per acre. The number of stock is of course considerable, and is estimated at about 11,000 on the average, or 0·50 per acre. While, therefore, it is by no means an ideal gathering ground, it will bear favourable comparison with those of many larger and more important cities. The amount of water delivered each day averages 13,000,000 gallons. The population to be supplied, or that has yet to be supplied, by the water company amounts to 370,000, and gives a consumption per head for all purposes of 38½ gallons. The medical officer of health of course enters very fully into the question of purity, and it is satisfactory to us to know that, although the water is not what it should be, or indeed might be, yet upon the whole a range of tests and examinations shows it to be fairly good and wholesome. Mr. H. E. Armstrong, however, points out many defects, and makes suggestions for their removal; and there can be no doubt that if his recommendations and those of the engineer are attended to we shall have a water-supply in point of quality and quantity little, if at all, inferior to any city in the kingdom.

THE HUDSON BEQUEST TO SUNDERLAND.

This munificent bequest, although somewhat limited in its operation by the terms of the will, is likely very soon to prove a great blessing to many in the borough. The trustees have now been appointed, and they have advertised for a superintendent to begin the operations of the charity. It appears that, so far, after calling in all the late Mr. Hudson's effects, there will remain the handsome sum of at least £160,000, available to support, clothe, and educate the orphan children of pilots and of others connected with the sea. No part of the funds, it is expressly laid down, is to be devoted to the erection and purchase of any building. Orphans are defined to be children whose fathers are dead or paralysed.

SMALL-POX IN DURHAM CITY.

In view of the continuance and spread of small-pox in the city of Durham application has been made to the authorities for the use of the Durham militia barracks as a temporary hospital, and this has been granted under certain conditions, so that at last the city is provided with an infectious diseases hospital. The local papers are full of letters from dissatisfied writers as to the choice made by the sanitary authority of the barracks; but in fact there was no choice, and the barrack appears to be the only available building for the purpose. It certainly is dangerously near some of the dwellings of the poorer classes; and unless an infectious hospital be erected in a very isolated situation, it must always be looked upon as a disagreeable neighbour.

CARBOLIC ACID POISONING AT MORPETH.

An inquest has been held in the board-room of the Morpeth workhouse on the body of an inmate who died after swallowing a quantity of carbolic acid. It came out in evidence that he had been an engine-fitter, was in his seventy-second year, and had been a patient in a lunatic asylum. He confessed to another inmate, about two hours before he died, that he had taken the carbolic acid from the workhouse scullery, where it was open to anyone.

LEAD-POISONING AT SOUTH SHIELDS.

At a late meeting of the South Shields Board of Guardians Dr. Drummond reported a fatal case of lead-poisoning which had occurred in the Westoe district. The person had been employed at the Hebburn works.

Newcastle-on-Tyne, Nov. 19th.

PARIS.

(From our own Correspondent.)

THE CHOLERA EPIDEMIC.

The cholera epidemic is of course the all-absorbing topic of the day. I am glad to be able to say that the disease is not extending; but, on the contrary, it is limited to the quarters where it originated; and if one may judge from the number of the fresh cases that occur, and which are diminishing daily, one may predict a short life for the epidemic. The number of cures is also greater, and the mortality considerably less in proportion to what it was at the commencement of the epidemic. For instance, on the first day of the outbreak—that is, on the 4th inst.—there were 2 deaths, and on the 16th there were 92 in and out of the hospitals. Taking the hospitals alone, the official report for the 16th and 17th inst. shows that the number of admissions on the 16th was 34 (25 men and 9 women), against 70 of the previous day. The number of deaths fell from 49 on the 15th to 33 (20 men and 13 women) on the 16th. Thirteen patients left the hospitals cured, which, added to the cases that left on the 14th and 15th, make a total of 52. On the 17th the admissions were 37 (24 men and 13 women) and the number of deaths 25 (16 men and 9 women). The number cured amounted to 34. The total number under treatment in the hospitals on that day amounted to 348. The number of cases affected with the disease in Paris from the 4th to the 17th inst. amounts to 1500, and the number of deaths to 695, which, compared with the population, which is estimated at 2,239,000, is considered a small proportion. From the provinces likewise the reports are more favourable. At Ypert two deaths were reported on the 18th inst. At Nantes there were 3 fresh cases on that day, and 39 under treatment. No new cases have been reported within the last two or three days from Toulon.

A DANGEROUS EXPERIMENT.

Dr. Bochefontaine, chef of Professor Vulpian's laboratory, lately tried some experiments on himself with the view of proving the inefficiency of the comma bacillus to produce cholera, and that cholera dejecta are neither infectious nor contagious. He swallowed pills composed of four cubic centimetres of diarrhœic fluid from a patient, a woman of thirty-five, who died in Professor Vulpian's ward with the characteristic symptoms of cholera. No effect was produced on the day of experiment, but on the following day the venturesome physician was seized with symptoms of malaise, expressed by a feeling of feverishness, fulness of the head, and rumbling of the bowels, unaccompanied, however, with diarrhœa; there was some fulness of the stomach with nausea. It must also be noted that slight dysuria also manifested itself, but on the next day he was quite well again. This experiment, however, far from proving the innocuity of the pills that the doctor swallowed, is in

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my opinion rather confirmatory of Dr. Koch's theory of the pathology of cholera, for the symptoms he experienced were evidently those of the incipient stage of the disease, and I do not believe he would be so foolhardy as to try such a dangerous experiment on himself again, especially as those tried on two guinea-pigs and a dog with the same fluid injected subcutaneously were sufficiently conclusive, both the animals dying with symptoms of cholera.

Paris, Nov. 19th.

MEDICAL NOTES IN PARLIAMENT.

Alleged Lunatics.

IN the House of Commons on Friday, the 14th inst., the Lord Advocate, in reply to Dr. Cameron, who asked a number of questions relative to the case of Thomas Harrison, who escaped from Cheadle Lunatic Asylum, Manchester, and made his way to Glasgow to have his sanity investigated under the safeguards of the Scotch law, stated that if Harrison was still in Scotland he would have the same protection as any other citizen and the same legal remedies.

In reply to Mr. Corbett, who asked the Home Secretary whether his attention had been called to a report in the newspapers of the escape of an American gentleman named Bruce from the Brookwood Lunatic Asylum, Sir William Harcourt stated that he had no knowledge whatever of the case, but it would be inquired into.

Dublin Hospitals.

In reply to Mr. Power, who asked whether it was the fact that there was no duly qualified compounder of medicine in the Rotunda Hospital, the Coombe Hospital, or the Pitt-street Institute, Dublin, Mr. Campbell-Bannerman stated that the two hospitals alluded to had an arrangement with an eminent firm of dispensing chemists for the compounding and dispensing of medicines, and that in the few intern cases at the Rotunda Hospital where medicines are necessary they are made up under the supervision of the master and the assistant physician. Regarding the Pitt-street Institute, he could supply no information.

Cholera Preparations.

On Monday, replying to Mr. Moore, Sir C. Dilke stated that the Local Government Board have caused inspection to be made by Dr. Blaxall and Dr. de Chaumont of the sanitary condition of the principal English ports, particularly with reference to their preparedness against cholera, and that recently a conference took place between representatives of the Metropolitan Asylums managers and members of the medical staff of the Local Government Board to consider the question of arrangements in the event of an outbreak in London.

Over-pressure in Board Schools.

In reply to Mr. Stanley Leighton, Mr. Mundella stated that he could not admit the accuracy of the fact that the National Union of Elementary Teachers, representing 13,000 teachers, had endorsed the conclusions of Dr. Crichton Browne and condemned the report of Mr. Fitch; indeed, he was daily in receipt of evidence from teachers, many of whom are members of the National Union, entirely dissenting from the views set forth in Mr. Heller's letter. Seeing that the London School Board had the whole matter under their consideration, he could not reconsider his refusal to institute an inquiry by impartial medical men into the grievances complained of.

Surgeons-Major in the Army.

In reply to Colonel Walrond, the Marquis of Hartington stated that it is distinctly laid down in the Royal Warrant that surgeons-major are to be selected for promotion to the higher ranks of the medical staff. Under such a system, therefore, promotion is not necessarily the rejection of an incompetent officer, but the selection of the most competent officer; and he was not prepared to admit that that officer is passed over who does not happen to be selected for advancement, nor did he see that such officer is entitled to have notification made to him of his non-selection.

Accommodation in Lunatic Asylums.

In reply to Mr. A. O'Connor, Sir William Harcourt stated that his attention had been called to the case of the woman who had been sent to a private lunatic asylum by the Paddington guardians, in consequence of there being no accommodation in the three county asylums of Hanwell, Colney Hatch, and Banstead. The inadequate accommodation in the county asylums had been several times brought to the attention of the justices by the Lunacy Commissioners, and he would do everything in his power to secure proper accommodation being provided. In the particular case in question, the husband of the lunatic would pay no more than if his wife had been placed in a public asylum.

Examinations for the Army Medical Department.

On Thursday, Mr. Sheil asked the Secretary for War whether he would lay upon the table a return of the marks made by candidates at the last two examinations for the Army Medical Department; whether the vacancies have, in all cases, been filled by those candidates who obtained the highest marks in the competitive examination; why information as to the number of marks gained by unsuccessful candidates in the examination for the Army Medical Department is refused; and whether he is aware that this information is supplied to candidates for the Navy Medical Department. The Marquis of Hartington, in reply, said he could not undertake to give a return of marks at the last two examinations for the Army Medical Department. The marks of the successful candidates have already been published; but for obvious reasons it is not the practice in any examination to give the marks of unsuccessful candidates, unless they can be designated by numbers. In the examinations for the Medical Staff the candidates are examined by name, and no numbers are assigned to them. The vacancies have in all cases been filled by those candidates who obtained the highest aggregate of marks in the compulsory subjects without failing to reach the standard in any of them. This was in accordance with the published terms of the competition. Marks in the voluntary subjects have only a value in determining the place of the candidate on the list of those successful in virtue of their marks in the compulsory subjects. He understood that information as to the number of marks gained by unsuccessful candidates was refused in consequence of the wish of the examiners, but he saw no sufficient reason why a candidate should not, on his application, be informed of the marks he gained, and he would give directions accordingly. He understood that similar information was afforded in the case of the Naval Medical Department.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.B. Examination:—

FIRST DIVISION.

Anderson, George Elliott Caldwell, Guy's Hospital.
Bennett, Fred. William, Owens College and Manchester Royal Infirmary.
Bowes, William Henry, Guy's Hospital.
Cockey, Edmund Percival, St. Mary's Hospital.
Crookshank, Edgar March, King's College.
Day, John Roberson, University College.
Dent, Harry Lord Richards, King's College.
Glover, John Philip, St. Thomas's Hospital.
Gostling, William Ayton, B.Sc., University College.
Green, Charles David, St. Thomas's Hospital.
Gross, Charles, Guy's Hospital.
Irvin, Frederic David, University College.
Jones, Frederick William Caton, St. Bartholomew's Hospital.
Jones, John Hervey, Owens College and Manchester Royal Infirmary.
Lewers, Arthur Hamilton Nicholson, University College.
Mumby, Langton Philip, Westminster Hospital.
Penrose, Francis George, University College.
Powell, John Joseph, University College.
Prideaux, Frances Helen, London School of Medicine for Women and Royal Free Hospital.
Purslow, Charles Edwin, Birmingham School of Medicine.
Reynolds, Ernest Septimus, Owens College and Manchester Royal Infirmary.
Rouse, Rolla Edward, St. Thomas's Hospital.
Rushworth, Frank, St. Bartholomew's Hospital.
Spencer, Herbert Ritchie, University College.
Thorburn, William, B.Sc., Owens College and Manchester Royal Infirmary.
Turner, Alfred Jefferis, University College.
Vince, John Foster, Queen's College and Hospital, Birmingham.
Womack, Frederick, B.Sc., St. Bartholomew's Hospital.
Woolbert, Henry Robert, University College.

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SECOND DIVISION.

Adie, Joseph Rosamond, University College.
Anderson Daniel Elie, B.A., B.Sc., University College.
Beevor, Hugh Reeve, King's College.
Bernard, Letitia Caroline, London School of Medicine for Women and Royal Free Hospital.
Bigger, Samuel Ferguson, University College.
Brown, James Grierson, Liverpool Royal Infirmary.
Cooper, George Frederick, St. Thomas's Hospital.
Dobson, Joseph, Leeds School of Medicine.
Evans, William Arnold, Owens College and Manchester Royal Infirmary.
Floyer, William Wadham, Guy's Hospital.
Lynam, Robert Garner, King's College.
Marriner, William Herbert Lister, St. Thomas's Hospital.
Parkinson, Charles Joseph, Owens College and Manchester Royal Infirmary.
Thomas, John Raglan, St. Bartholomew's Hospital.
Thomson, Theodore, Universities of Aberdeen and Edinburgh.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 13th:—

Darlington, Alfred Naylor, Queen's College, Birmingham.
Davis, David, King's College.
Dickinson, Joseph Jewitt, Cambridge and London Hospital.
Edginton, Alfred Dudley, St. Bartholomew's Hospital.
Foster, Albert Ernest, Leeds School of Medicine.
Humphry, Ernest, St. Bartholomew's Hospital.

THE sum of £500 has been bequeathed to the Walsall Cottage Hospital by the late Mr. Edmund Burke.

ROYAL COLLEGE OF SURGEONS.—Mr. William Scovell Savory, F.R.S., Vice-President of the College, will deliver the annual "Bradshawe Lecture," on Thursday, the 4th proximo.

THE Corporation of London have thrown open to the public, for the purposes of recreation, the disused burial-ground known as Bunhill-fields, City-road.

MEDICAL MAYOR.—The following name was inadvertently omitted from the list given in THE LANCET of last week: J. E. Brooks, L.R.C.P.Ed., M.R.C.S., Ludlow.

DR. JONATHAN ATKINSON HARRISON, Hazlewood, Haslingden, has been placed on the Commission of the Peace for the county of Lancaster.

BEQUESTS.—The late Mr. James Lindsay has bequeathed £500 to the Belfast Royal Hospital, £500 to the Society for Providing Nurses for the Sick Poor, and £500 to the Belfast Charitable Society.

SAMUEL HOLMES, an unqualified assistant, who was tried at York on Wednesday for having caused, by improper treatment, the death of a woman whom he attended in her confinement, has been acquitted.

ON the 15th inst., Mr. Rowe, a student of St. Thomas's Hospital, fell dead in the football field. Mr. Rowe was twenty-three years of age, and one of the senior students.

DEATH FROM FRIGHT.—A child has recently died at Rye from shock to the nervous system, caused by fright at seeing a boy wearing a mask. She lost her reason the first day after the occurrence.

THE UNIVERSITY OF ADELAIDE.—The Council of this University are inviting applications for a Professorship of Anatomy. Full particulars are to be obtained of the Agent-General for South Australia, Sir Arthur Blyth, K.C.M.G., 8, Victoria Chambers, Westminster.

ON the 17th inst. the Queen attended the funeral of Willie Blair, "Her Majesty's Highland fiddler," who died last week at the venerable age of ninety years. The remains were interred at the churchyard of Crathie, where a monument will be raised by command of the Queen.

THE VACCINATION ACTS.—Sir Charles Dilke, in answer to a memorial from Leicester as to the prosecution of 3000 defaulters under the Compulsory Vaccination Acts, has replied to the effect that he must decline to receive a deputation on the subject. He adds that the law must be carried out and that he cannot interfere with its enforcement.

CAMBRIDGE PHILOSOPHICAL SOCIETY.—The following elections were made at the annual meeting of the Society on Monday last: Professor Michael Foster, president; Professor Stokes, Lord Rayleigh, and Prof. Liveing, vice-presidents; Mr. J. W. Clark (Trinity), treasurer; Mr. Coutts Trotter (Trinity), Mr. Glazbrook (Trinity) and Mr. S. H. Vines (Christ's), secretaries.

PENNY MEALS.—The Exhibition in Humphreys' Hall, Knightsbridge, under the auspices of the Bread Reform League, will be opened to-day (Saturday). An evening *fête* will be held on Wednesday, the 26th inst., in order to raise a fund for providing wholesome and satisfying breakfasts and dinners for poor school children in London at the cost of one penny per meal.

SUICIDE OF A SURGEON.—An inquest was held on the 15th inst., at Cheltenham, on the body of Mr. W. A. Moseley, late resident surgeon at the branch dispensary in connexion with the Cheltenham General Hospital, who died on the previous day from the effects of a dose of prussic acid. A verdict of suicide whilst in a state of unsound mind was returned. Singularly enough, Mr. Moseley's predecessor met with his death in a similar way in the same house two years ago.

QUEEN'S COLLEGE, CORK.—The following scholarships and exhibitions have been awarded in the Faculty of Medicine:—Fourth year: Physiology, Anatomy, and Surgery, James Bradley; Medicine, Midwifery, and Medical Jurisprudence, Cornelius Bradley; Exhibitioners, Daniel J. Lane and William A. Whitelegge. Third year: John Ambrose Keogh (first), and J. R. T. Connor (second); Exhibitioner, Charles R. Leader. Second year: Edward R. Hennessy (first), and Robert J. Duffin (second).

UNIVERSITY OF CAMBRIDGE.—The number of freshmen intending to study medicine who have this term entered at Cambridge University is 111. A few more may have to be added in December after the result of the previous examination is known; this examination serving for many as the examination preliminary to registration by the General Medical Council. The freshmen are variously distributed over all the colleges and public hostels, one college only excepted. A small number are entered as non-collegiate students.

SPEAKING at Devonport on the 19th inst., Admiral Sir W. Houston Stewart, commanding the western district, said that his prediction that the repeal of the compulsory clauses of the Contagious Diseases Act would be a disastrous step had been more than justified. On board the flagship the number of cases had doubled, and out of a draft of fifteen men sent on board a ship under orders for China, thirteen had to be sent back. He regretted that his position as Commander-in-Chief prevented him from commenting as he would like on this false step.

ANTHROPOLOGICAL INSTITUTE.—At the meeting on the 11th inst., Mr. Francis Galton described the object, method, and appliances of the late Anthropometric Laboratory at the International Health Exhibition, reserving the statistical results, which were not yet fully worked out, for another occasion. The result showed that 9344 persons passed through the Laboratory, each of them being measured in seventeen distinct particulars for the sum of 3*d.* in a compartment only six feet wide and thirty-six feet long. Mr. H. O. Forbes read a paper on the People of the Island of Barn.

ROYAL SOCIETY MEDALS.—The Council of the Royal Society have made the following award of medals:—The Copley Medal to Professor Carl Ludwig of Leipzic, foreign member of the Royal Society, for his investigations in physiology and the great services he has rendered to physiological science; the Rumford Medal to Professor Tobias Robertus Thalé of Upsala, for his spectroscopic researches; a Royal Medal to Professor G. H. Darwin, F.R.S., for his mathematical investigations on the rigidity of the earth, and on tides; a Royal Medal to Professor Daniel Oliver, F.R.S., for his investigations in the classification of plants and for the great services which he has rendered to taxonomic botany; the Davy Medal to Prof. A. W. H. Kolbe of Leipzig, foreign member of the Royal Society, for his researches in the isomerism of alcohols.

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WYCOMBE COTTAGE HOSPITAL.—At the recent annual meeting of the supporters of this institution it was stated that during the year ending Sept. 30th 112 patients had been admitted. Towards the enlargement of the men's accident ward and the cost of furnishing £320 had been contributed, and after paying for everything a balance of £60 remained in the treasurer's hands. Although the charges for maintenance had increased on account of the larger number of patients, the financial condition of the hostpial had been satisfactory.

TYPHUS FEVER AT CHORLTON.—At the weekly meeting of the Chorlton Board of Guardians on the 14th inst., it was stated that with the exception of ten or twelve beds the hospital at Monsall was full. Fresh cases of typhus had occurred during the week, and the condition of the houses in the district where the fever most prevailed was described as disgraceful. It was suggested that a deputation from the guardians should be appointed to see the Health Committee on the subject; but as it was understood that the Corporation were taking some steps in the matter, the motion was not pressed.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BACK, HERBERT HATFIELD, M.B.Lond., has been appointed Medical Officer of Health for the Rural Sanitary District of the Blofield Union, vice F. Cufande, resigned.

BLUETT, GEORGE MALLACK, M.R.C.S., has been appointed Assistant House-Surgeon to the London Temperance Hospital, Hampstead-road, N.W.

CHADWICK, ALFRED, M.D.Brux., L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Heap District of the Bury Union, vice Worsley.

CUFANDE, FRANK, M.R.C.S., has been appointed Medical Officer for the Acle District of the Blofield Union, vice W. H. Cufande, deceased.

EAST, C. H., L.S.A.Lond., has been appointed Assistant House-Physician to King's College Hospital.

GILPIN, GEORGE LUCK, M.R.C.S., has been appointed Assistant Medical Officer and Dispenser for the Central London Sick Asylum District.

HASELL, E. S., L.S.A.Lond., has been appointed Physician-Accoucheur's Assistant to King's College Hospital.

HILL, M., M.D., has been appointed Honorary Physician to the Bootle Borough Hospital, vice G. C. Walker, M.D., resigned.

HODGES, HERBERT CHAMNEY, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Hertford Union, vice H. B. Hodges.

HODGSON, G. G., M.R.C.S., L.S.A.Lond., has been appointed Physician's Assistant to King's College Hospital.

HOUGHTON, LAMBERT, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Amersham Rural Sanitary District, vice Hosegood, whose appointment has expired.

HUGHES, EDGAR A., M.R.C.S., L.S.A.Lond., has been appointed Assistant House-Accoucheur to King's College Hospital.

HUTCHINSON, S. J., M.R.C.S., L.D.S., has been appointed Lecturer on Dental Surgery and Pathology at the London School of Dental Surgery, vice Alfred Coleman, F.R.C.S., L.D.S., L.R.C.P., resigned.

JACOMB-HOOD, C., M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to King's College Hospital.

JONES, R. NELSON, L.R.C.P.Lond., M.R.C.S., has been appointed House-Surgeon to the Swansea Hospital, vice W. Carr Humphreys, M.R.C.S. &c., resigned.

LANE, ALEXANDER, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Presteigne District of the Knighton Union, vice Harding.

MCGEAGH, JAMES PAUL, M.D., M.Ch.Q.U.I., has been appointed Resident Medical Superintendent to the West Derby Union Infirmary, Mill-road, Everton, Liverpool.

MACLEHOSE, NORMAN M., M.B., C.M., has been appointed Resident Medical Officer to the Sick Children's Hospital, Glasgow, vice Mr. W. S. H. Walker, whose term of office has expired.

PENNY, FRANCIS, M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to King's College Hospital.

PRIESTLEY, JOSEPH, B.A., M.B., M.R.C.S., has been appointed Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, Brompton.

NEWSHOLME, ARTHUR, M.D.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Clapham District.

REID, FRANK, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Sixth District of St. Saviour's Union.

ROBINSON, HUGH SHAFTER, M.R.C.S., L.R.C.P.Ed., has been elected an Honorary Surgeon to the Monkwearmouth Dispensary and Accident Home.

ROSE, J., M.R.C.S. &c., has been appointed Honorary Ophthalm Surgeon to the Bootle Borough Hospital.

RUNDLE, EDMUND, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Sithney District of the Helston Union.

RUSSELL, A. W., M.B., C.M.Aber., has been appointed Medical Superintendent to the Western Infirmary, Glasgow.

SLATER, DRUCE J., M.B.Lond., M.R.C.S., has been appointed Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, Brompton.

TRIMMER, H. BEESLEY, M.D. St. And., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Third District of St. Neots Union, vice Walker.

TUKE, J. BATTY, jun., has been appointed Deputy Medical Superintendent of the Saughton Hall Institution for the Cure and Care of the Insane.

TURNER, N. H., M.R.C.S., has been appointed House-Surgeon to King's College Hospital.

WALKER, G. C., M.D. &c., has been appointed Honorary Consulting Physician to the Bootle Borough Hospital.

WILLIAMSON, J., M.B., C.M.Ed., has been appointed Junior Resident Medical Officer to the Great Northern Central Hospital, Caledonian-road, London, N.

Births, Marriages, and Deaths.

BIRTHS.

DOUGLAS.—At 1, Marshall-place, Perth, N.B., the wife of T. Kennedy Douglas, M.B., C.M., &c. (late of Tapanui, New Zealand), of a daughter.

GILLESPIE.—On the 12th inst., at Upper Belgrave-road, Clifton, the wife of W. H. Gillespie, L.R.C.S.I., L.K.Q.C.P.I., of Castle Cary, Somerset, of a son.

HEAD.—On the 15th inst., at Morton House, Weymouth, the wife of Philip Alexander Dewar Head, M.R.C.S., of a son.

HUTCHINSON.—On the 9th inst., at Neasden, the wife of S. J. Hutchinson, L.D.S., M.R.C.S., of Brook-street, W., and The Grange, Neasden, N.W., of a daughter.

RUTTLEDGE.—On the 24th ult., at Jaunpur, N.W.P. India, the wife of Surgeon-Major E. B. Ruttledge, Bengal Medical Service, of a son.

STEIN.—On the 12th inst., at Grove House, Warsop, Nottinghamshire, the wife of Charles Guthrie Stein, M.R.C.S.E., & M.B., C.M.Ed., of a daughter.

MARRIAGES.

BAILEY—ASPINALL.—On the 19th inst., at the Parish Church, Lee, by the Rev. E. Snowdon Smith, Rector of St. Mary's, Waverтree (cousin of the bride), assisted by the Rev. W. B. Bucke, Vicar of Holy Trinity, Lee, Henry Frederick Bailey, M.R.C.S. &c., of The Hollies, Lee-terrace, Blackheath, to Charlotte Hannah (Lota), only daughter of J. Aspinall, of Blackheath.

FORD—WAINWRIGHT.—On the 12th inst., at St. Jude's, Southsea, Richard William Ford, Army Medical Department, youngest son of R. W. Ford, Esq., of Portsmouth, and the Manor House, Wymering, to Mary Augusta, youngest daughter of the late Rear-Admiral J. F. B. Wainwright.

FRASER—RUSSELL.—On the 12th inst., at Skelmorlie Church, N.B., James Fraser, M.D., Deputy Surgeon-General, to Annie Jane, daughter of the late John Russell, of Kew-terrace, Glasgow.

DEATHS.

BLASSON.—On the 10th inst., at Epsom, suddenly, Thomas Hereward, the beloved eldest son of Thomas and Louie Blasson, of Billingboro', deeply lamented, aged 11 years. Friends will kindly receive this intimation.

BOWMAN.—On the 13th inst., at Windsor-terrace, Newcastle-upon-Tyne, Hugh Torrington Bowman, M.D., aged 40.

CARROLL.—On the 8th inst., at his residence, Lady-lane, Waterford, William Carroll, M.D., aged 81.

JONES.—On the 3rd inst., at Llanfyllin, North Wales, John Jones, L.S.A.Lond., in his 65th year.

LANGSTAFF.—On the 9th inst., at Havre, France, Charles Langstaff, M.D., of Bassett, near Southampton, aged 51.

MOSELEY.—On the 14th inst., at Cheltenham, William Arthur Moseley, M.D., fourth son of E. C. Moseley, Esq., of Nassau, Bahamas, aged 32.

RAINEY.—On the 16th inst., George Rainey, M.R.C.S., of St. Thomas's Hospital and Brixton, in his 84th year.

SALL.—On the 15th inst., at Munster-terrace, Fulham, William Sall, M.D., Deputy Inspector of Army Hospitals and Medical Officer to H.M. Female Convict Prison at Fulham, aged 73.

SEWELL.—On the 10th inst., at Guy's Hospital, from phlegmonous inflammation about the larynx, Joseph James Sewell, M.R.C.S. and L.R.C.P. Edin., only son of the late Mr. Joseph Sewell, Halstead, Essex.

WILSON.—On the 13th inst., at Lonsdale, Newton Abbot, suddenly, John Wilson, Surgeon-General, Madras Army (Retired), aged 66.

WRIGHT.—On the 17th inst., at St. Margaret's-terrace, Cheltenham, Dr. Thomas Wright, F.R.S., aged 75.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, November 20th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia. in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Nov. 14	30·49	E.	42	40	..	48	40	..	Foggy
,, 15	30·47	E.	40	38	..	45	36	..	Foggy
,, 16	30·40	E.	41	39	..	43	29	..	Overcast
,, 17	30·34	N.E.	40	37	..	45	33	..	Overcast
,, 18	30 32	N.E.	42	40	..	46	36	..	Overcast
,, 19	30·48	N.E.	40	39	..	46	37	·04	Cloudy
,, 20	30·30	N.W.	40	38	..	46	37	..	Overcast

Medical Diary for the ensuing Week.

Monday, November 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M
LONDON HOSPITAL MEDICAL COLLEGE.—3 P.M. Mr. Jonathan Hutchinson: The Art of Note-taking and other Matters.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Discussion on Anæsthetics. Paper by Mr. Woodhouse Braine. The discussion to be opened by Mr. G. H. Bailey.

Tuesday, November 25.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Dr. J. G. Garson: Exhibition of a Prehistoric Skull from the Island of Antiparos.—Dr. W. H. Coffin: Note on the Abnormal Dentition of a Hairy Boy from Russia.—Miss A. W. Buckland: Fact Suggestive of Prehistoric Intercourse between East and West.—Mr. Horatio Hale: Some Doubtful or Intermediate Articulations.—Mrs. Erminie A. Smith: Remarks on the Customs and Language of the Iroquois.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. Henry Morris: A Successful Case of Lumbar Nephrectomy for Renal Calculus.

Wednesday, November 26.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL MEDICAL COLLEGE.—3 P.M. Mr. Jonathan Hutchinson: The Surgery of the Receiving Room.
HUNTERIAN SOCIETY.—8 P.M. Dr. Goodhart: Water on the Brain.—Dr. Herman: The Number of Persons who Suffer from Headaches.—Mr. Charters J. Symonds: The Spontaneous Disappearance of Nævi.

Thursday, November 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
PARKES MUSEUM.—Dr. Alfred Carpenter: Progress and Co-operation in Sanitary Work.

Friday, November 28.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL MEDICAL SOCIETY.—Mr. John Marriott: The Pathology of Tubercle.
QUEKETT MICROSCOPICAL CLUB.—8 P.M. Mr. F. Bates: The Supposed Sexual Threads in Zygnemaceæ.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Adjourned Discussion on Mr. Morrant Baker's Paper on Charcot's Joint Disease. Living Specimens will be exhibited at 8 P.M., as well as some illustrative specimens sent by Professor Charcot. If time permit, a case of Tumour of the Frontal Lobe with Few Symptoms, by Dr. Hale White, will also be read.

Saturday, November 29.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

VACCINATION FROM CALF LYMPH.

To the Editor of THE LANCET.

SIR,—In his address before the Islington Medical Society, Mr. Shirley Murphy stated (THE LANCET, May 31st, 1884) that it was too soon as yet to speak positively of the protection afforded by vaccination with the calf lymph of the Government Institution in Lambs-conduit-street. The following case shows, I think, as far as any isolated case can do, that it is similar in this respect to human lymph.

One son out of a family of eight was attacked with small-pox, which, when first seen, on Oct. 2nd, had already proved fatal, the rash being then fully developed and thickly covering the body. The boy was nursed by his mother, who had a baby at the breast, which was therefore constantly in the room, but had never been vaccinated. On Oct. 3rd the baby was vaccinated with calf lymph, obtained from the Government Institution. By the 18th only one place had taken; but the child was very fretful, and a papular rash appeared sparingly over the body and face, developing into the characteristic umbilicated vesicles of small-pox, which were, however, very small, and died away almost before coming pustular, the total duration being about a week.

There can, I think, be no doubt that this was an extremely mild attack of small-pox; for the rash did not appear simultaneously with the vaccination vesicle, but several days later, and fresh spots kept coming out for two or three days. The probabilities are strong that its course was so modified by the vaccination; for most authorities agree that the prognosis in infancy is extremely unfavourable, the mortality, according to Curschmann (Ziemssen's Cyclopædia of Medicine), being as high as 58 per cent. for children under ten. Of the remaining six children in this family two had never been vaccinated, and had had small-pox; another unvaccinated child had died some years ago from that disease; while the remaining four, who had been vaccinated as infants, all escaped, though they had been twice exposed to the infection, showing a great tendency in the family to contract the disease unless protected by vaccination.—I am, Sir, yours truly,

Nov. 10th, 1884. R. W. GREENISH, F.R.C.S.

Mr. Blaney.—The Rev. Alex. J. D. D'Orsey, Prince's-square, W., or Dr. Altschul, Old Bond-street, W., might be applied to.

Mr. Gerrard.—Next week.

"THE LIBRARY OF THE COLLEGE OF SURGEONS."

To the Editor of THE LANCET.

SIR,—I should like to endorse the sentiments contained in the letter of "A Member" in your last issue respecting the closure of the College of Surgeons library. But I would extend my complaint much further, and ask why not only the library, but the museum also, should be closed at 4 P.M. on ordinary days and earlier on Saturdays? There must be many juniors, like myself, in London engaged either in study, literary work, or tuition, who are practically debarred from making use of these institutions at all by their absurdly prohibitive regulations in respect of closing. Most men have settled occupation during the daytime, which keeps them fixtures in some particular locality; the evening alone remains to them to engage in literary research, or to take their pupils over such excellent dissections as may be found in the College of Surgeons Museum.—I am, Sir, yours faithfully,

Austin Friars, E.C., Nov. 17th, 1884. KENNETH MILLICAN.

A NEW-BORN INFANT OF EXTRAORDINARY SIZE.

To the Editor of THE LANCET.

SIR,—Yesterday I attended a woman who was delivered of a male child of extraordinary size, weighing 20 lb. 2 oz, and measuring twenty-three inches in length, and fourteen inches and a half round the chest at the level of the nipples; it was well developed and quite healthy. These particulars were verified in the presence of two medical gentlemen I asked to be kind enough to check my statements, as they have such an incredible appearance.—I am, Sir, yours truly,

Crewe, Nov. 13th, 1884. GEORGE EDDOWES.

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MICROSCOPIC OBJECTIVES.

To the Editor of THE LANCET.

SIR,—As your correspondent, "A Student," appealed to me by name in your issue of the 8th inst. I willingly reply, but, with your permission, I must enter into some detail, as the subject is not always well understood even by those who have had some experience in microscopy.

Of course, the prime essential in any glass is the quality termed "definition," which means that clear lines or contours should be sharply rendered, whilst the whole image should also be presented free from distortion. This depends on the perfection of the corrections. If a flat object, as a page of print, is viewed through a single lens, only the central part will be seen truthfully magnified and distinct, all the marginal portions being blurred and distorted, while any straight lines near the edge will be strongly curved outward, and bordered with fringes of colour. This arises from spherical and chromatic aberrations in the glass, and these are corrected by the successive lenses required for the due amplification, some of which are of flint and others of crown-glass. These have different dispersive power, and they are so carefully adjusted that the error of the one exactly neutralises that of the other. The compound lens, which we call an objective, is thus enabled to give a flat field of view, or one in which the object is focused all over and without any spurious colour. The finely ruled lines of a stage micrometer should appear equally distinct and straight to the edge of the field, while such objects as a balsam-mounted tracheal vessel of insects should show no colour in its closely set rings. A severer test of perfectness of correction is the using a high eyepiece. A very inferior foreign glass may, under a low ocular, seem to be nearly as good as a choice one, but put on an ocular one or two numbers higher, and it will break down into mist, while the definition of the better glass remains but little impaired. With fine glasses the second, or B, eyepiece may be habitually employed with advantage, while good work can be done under oculars up to E, thus giving a wide range of powers with only two or three objectives.

When several objectives of the same power are offered at different prices, as your correspondent remarks, it will be observed that the "angle of aperture," as it is called, varies accordingly. This expresses in degrees (360 to the circle) the diameter of the cone of rays which the front lens can take in. The wider this is the more difficult it becomes to render the corrections perfect, hence the price rises in proportion. But the enlargement of aperture only improves the glass for certain purposes, while it may even deteriorate it for general use. Every degree added increases the "resolving power" (the corrections being equally well made), but this is only needed for a special class of objects. It is not synonymous with definition in the broader sense, or only represents one restricted phase of it—namely, the displaying delicate surface-markings, as on the more difficult diatoms. It is the almost exclusive use of these as tests which has led our opticians to enlarge the angular aperture at any sacrifice. One serious drawback is the "shallowness" of view which it causes. It is true that in theory a glass should only focus sharply one single true plane, but such a glass would be practically useless, as very few objects are absolutely flat. The artificial eye, like the real one, should have more or less adaptability for distance; should show fairly a certain depth of an object, or it cannot give any useful view of it. For example, let us examine an injection, or dry stellated leaf, with a half-inch of 30°, and we may find that only bits here and there, which happen to be in precisely the same plane, will be focused, while all the rest is in fog. If we replace this half-inch by another of only half its angle, or 40°, the whole will be usefully seen in fair perspective view. At the same time no one part will show with the same exquisite sharpness as when actually focused before. Hence for determining difficult and delicate points of structure, glasses of high angle become invaluable on occasion, even to the histologist, though for general use on the ordinary run of objects they are inferior to those of only moderate aperture. In fact, the lower the angle the greater is the penetrative power, so that for very uneven objects the lowest angled glass should give the most complete view. But the dimness of the object, from the lesser amount of light received into the glass, imposes a limit in this direction and compels us to a compromise. An example will illustrate this. Wray makes no less than three one-inch of the same power, and only differing in their angles of aperture, which are respectively 16°, 22°, and 27°. By repeated close scrutiny I have found that all three are perfectly corrected, so that, in its own way, the first is as fine a glass as the last, which is double the price. It will give an even better view of rounded and uneven natural objects, as seeds, micro-fungi, insect eggs, foraminifera, &c., of which the last glass will have a far less comprehensive grasp. On the other hand, the latter would show minute structural details, especially of surface, more clearly and sharply defined. Were it not for the cost, a microscopist might usefully have all the three one-inch, though their power is alike, one displaying best certain objects, another certain others; but where only one can be had the medium angle is the most generally useful. Thus for the histologist the one-inch of 23° and quarter-inch of 90° would be preferable to either the more expensive ones or those of 16° and 70°, though I must add that the latter of Wray's are fully adequate for the student, and will be found far superior to foreign glasses at the same price. They are so perfectly corrected as to work well under E ocular.

Having thus endeavoured to give a practical, and I trust intelligible, reply to your correspondent's query, I must pause. I might have added some impartial data from my experience of various glasses and makers, which I should be willing to do at a future time, if desired.

I am, Sir, yours obediently,

FREDERICK W. GRIFFIN, Ph.D.

Bristol School of Chemistry, Nov. 10th, 1884.

THE following lines, from an esteemed Prelate, will be read with gratification by the profession, not only for their own sake, but for the fact that they proceed from one of another calling, whose wise estimate of medical heroism and kindness will tend to correct narrower views which are held too often by those of whom better things might have been expected.

UNTITLED HEROISM.

PART I.

Lay him in his quiet grave,
With no marble token;
There his deeds so simply brave
No words need be spoken.

Such man need no epitaph,
Nor the sculptured glory;
Flowers are best, for deaths like theirs
Are sweet as Nature's story.

You think that doctors have no hearts,
So passionless their features
As calm they stand with knife in hand
Over living creatures!

But true compassion grows in man
When pity's soft emotion
Becomes a principle of life,
As tide within the ocean.

And he whose nerve is well controll'd,
Whose hand is strong and steady,
May, more than sobbing, frighten'd girl,
Have pity, aye and ready.

Those calm, clear eyes will quickly see,
But wince not at the danger;
Those quick, firm hands will skilful work,
Unjudging, for a stranger.

PART II.

A little child was brought in here,
The death-grasp round its throat;
The poison fast was wasting there
Its filmy, murd'rous coat.

One moment more! Another way
Is made for the deadly stream;
Tender and merciful in touch,
The knife, with its rapid gleam!

But slow to move is the loathsome thing.
There is danger in delay!
But firm, brave lips are pressing there,
To draw the death away.

The peril he knows; but he bravely drinks
The poison draught he filled,
To give another day of life
To the little stranger child!

No ardour of battle urges him,
No fame or title's won,
No loud applause, no trumpet blows;
But calmly the deed is done.

And now he is dead; for the poison flood
Hath drained his life away.
And could a hero in battle
Do more than this, I pray!

We shall build our solid, sumptuous tombs
For those who our foes have slain;
But no marble tells of life laid down
For our people in death and pain.

Yet, leave him in his mossy grave,
And let us our home-way take;
But hold henceforth a doctor's work
More high for the dead man's sake.

And I, who have had given me
Christ's gospel in charge to preach,
Hold nobler for the gospel-lived
More eloquent than speech.

Dr. Percy Boulton.—We are sorry to be obliged, from want of space, to omit from our columns many communications which we would, if we had room, gladly publish.

A. B.—Such a mode of advertising would be decidedly unprofessional.

INTERMITTENT IRITIS.

To the Editor of THE LANCET.

SIR,—The following case may interest your readers, and I shall be glad of any hints as to treatment and prophylaxis.

A. B——, aged forty, a tall, well-developed man, of temperate habits, has frequent attacks of gouty iritis. He is a retired military man, and amuses himself by composing music and chess, and it is noticed that an attack always follows a chess match. The attacks at first occurred at intervals of two years. During the past year he has had three attacks in February and April when at Hyères, and now in October, each attack lasts about three weeks. They at first yielded to half-drachm doses of iodide of potassium, bicarbonate of potash, and colchicum. Now, one drachm doses of iodide of potassium do not control them, although the soft palate and pharynx are quite turgescent, except in rendering the pain less acute. The pupil is always kept dilated with atropine, the diet moderate, and a small quantity of whisky allowed. Excessive nocturnal pain is treated with one grain of opium.

I am, Sir, yours truly,

Nov. 11th, 1884. VIATOR.

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THE COST OF A SMALL-POX EPIDEMIC.

By accident an error crept into the calculations in our sub-leader of the 15th inst. The total actual cost of 2040 cases of small-pox to the State of Illinois amounted to over $281,000 00 (or £81,000 dollars), and the constructive loss to over $3,339,600 00 (or 3,339,600 dollars), and the expenses to the State during the period of the epidemic to close upon $1,404,000 00 (or 4,404,000 dollars).

"IRRITATION OF THE SKIN FOLLOWING THE APPLICATION OF VASELINE AS A SURGICAL DRESSING."

To the Editor of THE LANCET.

SIR,—In your issue of Nov. 8th you publish a communication from A. W. Mayo Robson, F.R.C.S., of the Leeds General Infirmary, entitled "Irritation of the Skin following the Application of Vaseline as a Surgical Dressing." Immediately after reading the same, we sent Mr. Robson the following letter:—

"Nov. 12th, 1884.

"Dear Sir,—The last issue of THE LANCET (Nov. 8th) contains a communication from you in which you state that 'severe inflammation of the skin has been set up by the application of "vaseline" as an ointment, and you go on to give several cases in which you have observed this effect.' As the word 'vaseline' is the registered trade mark of this company and can be applied only to goods of our manufacture, your statement is a grave injury to us and a reflection upon the quality of vaseline, which has received the unanimous commendation of the highest medical, chemical, pharmaceutical, and scientific authorities during the past twelve years, and it becomes a matter of the greatest importance to determine whether you really used vaseline or some imitation fraudulently sold under that name. Will you be good enough therefore to more particularly describe the article you used, and say, where it was procured?

"Awaiting your reply, we are, very truly yours,

"CHESEBROUGH MANUFACTURING COMPANY."

To A. W. Mayo Robson, F.R.C.S., Leeds General Infirmary."

To this we have his reply:—

"Hillary-place, Leeds, Nov. 17th, 1884.

"Dear Sirs,—The vaseline used at the infirmary may be manufactured by someone else, but you can easily get the information you require through Mr. Whiteley, the dispenser, or through Mr. Blair, the manager. The vaseline I used in private was made by yourselves, or at all events was sent out with your name affixed. I am sorry if injury to your trade should occur by my paper, but my experience is not solitary. I fancy some skins will be irritated with vaseline, however pure.

"Yours faithfully,

"A. W. MAYO ROBSON."

During last June our representative visited the Leeds General Infirmary and ascertained that they were using a common grease, which the dispenser called "mineral fat," and which in no way resembled vaseline. As price seemed to be the primary object, and not quality, he suggested a trial of our ordinary red, or veterinary, vaseline, which we sell for use on animals only. Since then we have supplied the hospital with three lots of this article—viz., June 27th, 50 lb.; July 19th, 200 lb.; Sept. 15th, 200 lb.; and we are to-day in receipt of a further order for 200 lb.

Mr. Robson states in his communication that he used "vaseline of a greenish colour." This is not the colour of vaseline, and leads us to suppose that he employed the mineral fat in the cases referred to. In any event, we have supplied the hospital only with our inferior grade, made for use on beasts; and no one acquainted with the difference between the two could expect the same beneficial results from the application of this article to the delicate skins of human beings as from the application of the refined product made especially for the purpose. But the fact that the veterinary has been used so long in such quantity by so prominent an institution as the Leeds Infirmary speaks well for the quality even of that article. As for Mr. Robson's opinion that he fancies that "some skins will be irritated with vaseline, however pure," we think we can safely leave it to the profession to decide whether, on his own showing, he has had sufficient experience with the pure vaseline to justify his statement.

We rely upon your spirit of fair play to give this letter an equally prominent position in your journal which you accorded to Mr. Robson's communication.—We are, Sir, yours faithfully,

CHESEBROUGH MANUFACTURING COMPANY.

Holborn-viaduct, London, E.C., Nov. 17th, 1884.

To the Editor of THE LANCET.

SIR,—In reference to the experiences of Mr. A. W. Mayo Robson and Dr. H. Stowers on the above subject, perhaps the following case may be of interest.

I had been treating a female patient, aged about forty years, who was suffering from lupus exedens of the nose and left cheek. After the more vigorous treatment, I with decided benefit had recourse to a mild mercurial oxide ointment, the body of which was composed of vaseline and olive oil in equal parts, with sufficient white wax to give it the proper consistency. Not having some of this ointment with me, I sent the patient some vaseline *pro tem.* The next morning when I called I found her suffering from a considerable amount of inflammation of the skin around the nose. After a few days I returned to the use of the previous ointment, which suited admirably. Subsequently I again used the vaseline, to try its effect, when it produced the "dermatitis" as before, and I dared not try it again.

In this case it is apparent that although the patient could not tolerate vaseline alone, yet when used in combination, or diluted with other emollients, it had lost its irritating effect.—Yours faithfully,

J. MICHAEL NICHOLLS, L.R.C.P. Lond., &c.

St. Ives, Cornwall, Nov. 17th, 1884.

Mr. E. F. Yeates.—Heads of tapeworms can be well displayed and preserved in glycerine or in glycerine jelly, but probably Dean's preservative gelatine is the best medium. Whatever medium is employed care must be taken to soak the specimen in it for several days before finally mounting. Great improvements have of late been introduced, but for the beginner Davies' little book, price 2*s.* 6*d.*, on the "Preparation and Mounting Microscopic Objects," is perhaps the best. Mr. Dean's preservative fluid is described in Dr. Beale's book, "How to Work with the Microscope," fifth edition, p. 67.

Mr. D. Gulland.—It is undoubtedly injurious.

THE WANT OF PRACTICAL TEACHING IN MIDWIFERY.

To the Editor of THE LANCET.

SIR,—My attention has been drawn to the statement made by Dr. Haughton, on Oct. 10th, in the General Council of Medical Education, respecting the incomplete manner in which newly qualified men were turned out by the medical schools of Dublin fifteen or sixteen years ago with regard to their practical knowledge of midwifery. I am very much afraid that this statement is just as applicable to the present time as to the past—at least, so far as my experience leads me. I have met with men possessing the M.D. of Dublin, also the L.K.Q.C.P. and the L.R.C.S., who have practically no knowledge whatever of midwifery. In my own practice, within the last twelve months, I have been called in to assist two of them in ordinary cases of version, and in neither case did they know how to proceed. The first of the two cases was a very simple one, and was over in twenty minutes. In the second case the arm was protruding, and the highly qualified man, with honours, had not even digitally examined, but was satisfied, by *looking*, that he could do nothing. I have also had men from the Irish schools acting for me as locum tenens, and when I have afterwards heard of the cases they attended, it has been that the midwife did the work for them, one (a L.K.Q.C.P.) leaving the afterbirth. Surely, these are not the class of men to do credit to the profession. For my part, I prefer a man who has either served an apprenticeship or been an unqualified assistant before taking his degrees than one who is all theory and no practice. The former has learnt while unqualified that, for his own reputation, he must be careful; but the latter go out upon the world, armed with their wonderful diplomas, to kill or cure—and, sad to say, it is the former in very many instances—before the owners of such diplomas have learned their practical work. Would it not, in fairness to the future qualified men, be more to their interest to insist upon them actually conducting fifty cases, of which twenty should be under the direction of some medical man. Surely, twenty cases, as at present required, are not enough to give a man an insight into the hundred and one different things which at any moment crop up in actual practice. Until our universities and medical schools can see their way to teach midwifery differently than by lectures, I am afraid the qualified men of the future will not shine as obstetricians.

I am, Sir, yours truly,

Nov. 10th, 1884. MEMBER BRIT. MED. ASSOC.

Constant Reader.—We have already noticed the offensive announcement, and we believe the attention of the Colleges whose diplomas are thus disgraced has been called to the matter.

"M.B. PASS EXAMINATION, UNIVERSITY OF LONDON."

To the Editor of THE LANCET.

SIR,—A gentleman who read my letter in your last issue has just pointed out to me that "unilateral hæmatokolpos" is mentioned in Quain's Dictionary under the head "Vagina." Allow me, therefore, to correct the inaccuracy.

As you have allowed a correspondent to ask whether that question could be "the crux of a dyspeptic examiner," you may perhaps permit me to call attention to another paper at the same examination. The following is one of the six prescriptions set by the examiners in medicine, and required to be "written in Latin, without abbreviations, with directions for administration":—"Order mustard poultices to be applied to the calves of the legs for a given time." I should like to ask these gentlemen, who are hospital physicians, whether they have ever considered the classical Latin in which they would direct a nurse, or even a dresser or house-surgeon, to have sinapisms applied to a patient's calves? If so, have they ever, either in hospital or private practice, ordered a nurse or other attendant to do so in Latin; and, in that case, whether their directions were understood and carried out?

A University which allows its graduates to be ignorant of Greek may perhaps be excused for expecting them to talk dog-Latin to nurses, &c.

I am, Sir, yours truly,

Nov. 17th, 1884. A LONDON TEACHER.

A Candidate of Twenty-Six Years' Service.—We have not inserted our correspondent's letter, because we understand that steps have already been taken to meet the difficulty of which he complains.

MEDICAL PRACTICE IN CANADA.

To the Editor of THE LANCET.

SIR,—If any of the readers of THE LANCET could give me any information in reference to practice in Canadian towns, I should esteem it a favour. I am desirous of learning the amount of fees usually paid, also whether it is difficult to obtain a practice, and the amount of the premium required in relation to the annual cash receipts.

I am, Sir, yours truly,

Nov. 12th, 1884. GENERAL PRACTITIONER.

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Mr. J. H. G. Drummond.—The course of cholera is too uncertain to enable us to advise in individual cases; but so far as the intentions of the German Government have been disclosed, they are not in favour of such regulations as would prevent anyone in Germany from returning to this country, even if cholera did break out.

H. E. T.—We are unable to supply the information.

THE INCOME-TAX.

To the Editor of THE LANCET.

SIR,—It may be a help to your correspondent "In Morsu Diaboli," whose letter complaining of his assessment under the income-tax appeared in last Saturday's LANCET, to know that I found myself three weeks ago in the same plight that he complains of—that is to say, I received a notice of assessment to an amount that nearly equalled the total of my gross receipts, notwithstanding that I had duly returned some months previously a schedule showing that I was only liable for a sum somewhat less than half that now claimed. I at once wrote to the surveyor of taxes announcing my intention of appealing against the assessment. I also forwarded to him a statement of my expenses and receipts for the year, as requested on the notice. In reply, the surveyor wrote to say that if I would call upon him he could probably arrange matters without troubling me to appeal before the Commissioners. I called upon him, with the result that, after a slight contention as to the amount of one of the items I had deducted in the way of expenditure, he reduced the assessment to within a few pounds of the amount I had originally claimed to be assessed upon, and told me he should advise the Commissioners to assess me accordingly.

I may add that the following items are recognised as working expenses, and are allowed to be deducted from the gross receipts to obtain the amount of profits upon which the tax is payable—viz., half or third of amount of rent of dwelling house, if a portion of it be used for professional purposes; whole rent of branch surgery or consulting-rooms in another street or district, if used solely for professional purposes; rent of stables, &c., if rented separately from house; cost of drugs, instruments, and surgery requisites, and wages of surgery boy and assistant; keep and expense of horse or horses; coachman's wages. These items were furnished me by a surveyor of income-tax, and I have always found them allowed.

I am, Sir, yours faithfully,

Nov. 18th, 1884. L.R.C.P. LOND.

To the Editor of THE LANCET.

SIR,—Allow me to wish your income-tax correspondent well out of the "Morsus Diaboli." "Diaboli" is the correct name for Income-tax Commissioners. I have always fought them, and always successfully.

In appealing, a surgeon must give the details and amounts of his receipts for the three previous years on one side, and all his professional expenses for the same years on the other; deduct the one from the other and divide the remainder by three, and this will give the amount he will have to pay on; he can deduct life insurance premiums if he produce the receipts to be properly endorsed. Let him demand to be put on his oath as to the truth of his statements.

As to policy! Remember that the diaboli gossip with themselves and others; the diaboli do not regard their obligation to secrecy. Do the diaboli number any of his present or prospective patients among their number? If so, is it wise to say I am not so prosperous as you think? Many surgeons, I know, think it is not wise, and pay on their gross, and more than their gross, receipts, and think they are rewarded for their lie. Do the diaboli number any medical neighbours among them? If so, is it worth the money and deceit to hoodwink them? I am inclined to say, as a matter of policy, Do not follow my example, but act a lie and humbug the diaboli. I am, Sir, yours faithfully,

Framlingham, Nov., 1884. GEO. E. JEAFFRESON.

M.D.—No; penalty attaches to the assumption by an unregistered person of any name or title implying registration.

M.R.C.S.—Any corset maker will carry out instructions for the manufacture of the apparatus.

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The "Bowman" Lecture

ON THE

RELATION OF CERTAIN DISEASES OF THE EYE TO GOUT.

Delivered before the Ophthalmological Society of the United Kingdom, Nov. 13th, 1884, by

JONATHAN HUTCHINSON, F.R.S.

(*Concluded from p. 903.*)

Insidious and Destructive Iritis from Inherited Gout.—I must now enter upon one of the most important topics of my lecture. It is the attempt to prove that there is a very peculiar form of destructive iritis, occurring for the most part in young persons, which stands in all cases in direct relation with the inheritance of a gouty constitution. It does not occur to those who themselves suffer from attacks of gout, but to their descendants.

It was in 1863 that I first saw, at Moorfields, a girl named M——. She was then about eighteen, tall, well-formed, and florid. She was too florid, and the circumscribed areas of colour in her cheeks varied in tint from bright-red to slightly livid, according to the coldness of the day. She was the subject at the same time of a most peculiar form of arthritis of the last joints of all her fingers, and of double iritis. Her right eye was lost and painful, and I accordingly excised it. Her left was saved only by repeated iridectomies and finally by extraction of the lens. After the last operation she continued for five years to enjoy good sight and was free from relapses. Her fingers also got well. At the age of twenty-six she became the subject of phthisis, and died, I believe, at about thirty. I showed this patient at the Hunterian Society, and drew attention to the unusual features of her disease. Some one present, looking at her hands, remarked, "Surely this is gout." I took the hint, inquired into her family history, and found that in all probability it was gout. Her father had suffered repeatedly from that malady in an unequivocal form, and he had tophi in his ears. I show you drawings of the state of the girl's fingers. In order to ascertain whether there were urate deposits in connexion with the swellings, I cut into one of the largest and obtained only a soft jelly-like substance. When after some years the swelling subsided the terminal joints were all left disorganised and the last phalanges were more or less displaced. There appeared reason to believe that a feeble state of the circulation combined in this case with the gout inheritance.

I have repeatedly mentioned M——'s case in public, and with it others which came under my notice subsequently, and I must content myself on the present occasion with a short summary of the facts. In 1872 I gave a lecture at Moorfields on this disease, and was able to cite four well-marked examples of it. In 1880 I gave at the London Hospital a second lecture, in which I adduced seven additional cases, making eleven in all. Of these eleven patients, four were females and seven males, but it happened that the most typical and severe forms of disease occurred in females, a fact which my subsequent experience has fully confirmed. In all cases both eyes ultimately suffered, but only in one were both affected simultaneously. In three instances last-joint arthritis—that is to say, destructive inflammation of the last joints of the digits—occurred. In all the cases vitreous opacities as well as iritic adhesions were developed. In most of the cases the eye which was last attacked suffered most, and a decided tendency was shown for the disease to come to an end as the patient advanced in life. In several cases the eye was saved by repeated iridectomies, and in one or two change of climate seemed to be very beneficial.

In all the cases but one the family history of gout was clear and strong, and in the exception the patient was the son of a brewer's man, and his father had died early, so that it was very possible that his proclivities had not declared themselves. In several of the cases the patient had been reduced almost to blindness. In three one eye had been excised, and in one both were quite lost. In all excepting two the disease had begun between puberty and the age of twenty-five; and it would appear to be a fact that the earlier it begins the more severe it is. Such, then, was the state of my facts in 1882, when I put my last lecture into print. I think you will allow that I was justified in avowing a strong belief that inherited gout was the real cause of this peculiar form of iritis.

That I may add a little more colour to my picture I will ask your permission to state briefly the facts of three cases which have come under my notice since the date referred to. They are all cases of great interest; and two of them illustrate a fact which I had previously only once or twice noticed—namely, that there is a tendency to the formation of cataract.

The last case which I have seen is that of a Miss D——, aged thirty, the daughter of a surgeon in the country. She was brought to me with the left eye quite destroyed and the right nearly so. In the left an opaque lens had undergone spontaneous absorption, and the iris was everywhere adherent to the opaque capsule. In the other the lens was half opaque, and the iris extensively adherent. I was told that I had myself seen this patient ten years before and had then recognised only commencing cataract in both. The patient's father, an intelligent medical man, was astonished when I told him that there had been extensive iritis, and assured me that his daughter had never had any attacks of inflammation. The patient herself said that she had never noticed more than that the eyes had sometimes been red and hot, and would prick a little. We have here, then, a good instance of the very insidious course of the disease. In the left eye there was no perception of light, and very probably the vitreous was affected. I found on inquiry that in Miss D——'s family there had been much gout. She herself appeared to be in good health.

Mrs. O—— is a young married lady who has borne three children, and during lactation in each instance suffered from a chronic form of almost painless iritis. Both pupils are almost excluded. Her father has suffered gout, and several other near relatives. She is of feeble circulation and liable to chilblains.

I have kept one of my best cases to the last. Miss L——, aged twenty-two, is the youngest of a family of eight, and was born after the death of her father, who had suffered much from "chalk gout." Her eldest brother has had both gout and rheumatism, and there is rheumatism also on her mother's side. Miss L—— began to suffer in her eyes at the age of twelve, and at first it was simply redness and irritability with "black specks," "balls," and mist. At the age of fourteen she had a severe attack in both and was several months under Mr. L——'s care, being almost blind. From this she recovered, but at eighteen a surgeon in Liverpool performed an iridectomy on the left on account of exclusion of the pupil. A little later Mr. C—— did an iridectomy in the right. Neither of these operations resulted in any improvement of sight. In 1880 a surgeon in Leeds removed a soft cataract. The eye was lost and Mr. C—— excised it a few months later. Miss L——'s present condition is that with the one remaining eye she can just puzzle out $\frac{1}{200}$. Could I possibly produce before you a more marked example of an insidious destructive disease, progressing in spite of the most highly skilled assistance to its melancholy end? Yet it is only a fair example of about half those included in my series.

Relapsing Cyclitis.—There is a peculiar form of chronic inflammation of certain parts of the eyeball which clinical observers have recognised under the name of "relaping cyclitis." It is a cyclo-kerato-iritis involving the ciliary region of the sclerotic, the adjacent part of the cornea, and the iris. Sometimes one of these structures suffers more than another, but usually all are involved. It seldom damages the pupil itself much, seldom invades the centre of the cornea, or only very late in the disease, and it does not show much tendency to involve the choroid or vitreous. It usually begins in one eye and only affects the other after a long interval, and to the last one usually suffers more severely than the other. It may begin in early life, but often does not do so till middle periods. When once it has begun it never wholly leaves its victim, but continues either to persist with slow chronicity, or recurs over and over again after intervals of health. It causes scars in the ciliary part of the cornea, thinning and discolouration of the ciliary region of the sclerotic, and ends either by inducing staphyloma or by making the whole cornea dull. It may occasionally become needful to excise the eyeball on account of the persisting irritability combined with great impairment. It affects, I think,

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women more frequently than men. It is a very peculiar type of disease, and it would not be difficult to place side by side a group of examples of it all exactly alike. I know of no treatment short of a complete change of climate which does much to benefit it. In this respect it is much like the form of iritis which I have been striving to prove to be a direct result of inherited gout. Yet I am by no means in a position to produce before you respecting relapsing cyclitis such evidence in reference to its gout origin as that which we have been discussing. I dare not, indeed, do more than suggest that it is very probable that in some cases the constitutional cause of this destructive and persisting disease may be gout. I have found a gout history in some of my cases, but in others it has been absent. The last case which I have seen has been the one in which this suspicion was the strongest.

Miss D—— is the daughter of a medical friend. She is now forty, and she has suffered all her life from her eyes. She was treated when two years old by Mr. McMurdo for what was then called strumous ophthalmia, and which proved very intractable. Since then she has had numberless relapses, and in both eyes the cornea at its edges has become extensively opaque. Her left eye is the worse, and has recently been so troublesome that I was inclined to recommend its excision. It is by no means a blind eye, but the cornea is so hazy that it is of little use. Now, say that we have here a case in which strumous ophthalmia has persisted through life, let us ask what is the constitutional peculiarity which has conduced to this exceptional result. The lady has been well cared for all her life, she shows no other signs of struma, nor are such present in any of her relatives. Her father is a robust man. Mark that both eyes have suffered, and that in both it is the peripheral parts of the cornea which have been chiefly involved. Now, this lady's maternal grandfather and two of her maternal uncles suffered severely from gout, her mother had an attack in her great toe, and even she herself has on one occasion had an attack of it. This strong gout history is certainly by far the most definite fact which I can obtain as explaining the peculiarities of her eye disease.

Can Gout cause Neuritis?—Although from time to time strong suspicions have been expressed as to the occurrence of gouty affections of the nervous system, I believe the question has seldom been definitely put, "Does gout cause neuritis?" We know that gout can cause the tissue of a joint to inflame, and that œdematous effusion with cell proliferation, in fact, the ordinary phenomena of inflammation, are its results. I shall be much disappointed also if it is not regarded as proved that it can cause the tissue of the iris to inflame in a precisely similar manner and with like results. Can it attack any of the structures of which the nervous system is composed? Can it cause inflammation of ganglia, of nerve trunks or of their investments, or may it indeed attack the central organs? Without venturing to suggest that any of these occurrences are common, it is yet difficult to deny a possibility or even probability in exceptional cases. We can understand the influences that are likely to localise gout; its exciting causes may come into play far less frequently in reference to the nervous system than to the joints; or even to such an apparently exposed part of the organism as the eye. Still, if we admit that in the gouty condition inflammations may attack the cellular tissue in any part of the body, it is difficult to suppose that the cell elements which enter into the formation of nerve trunks, for instance, will always escape. I am glad to note in the progress of neuro-pathology of the last few years that there seems an increasing tendency to recognise the possibility that not a few nervous affections may be due, not to central disease, but to primary inflammation of the connecting trunks, or of the peripheral organs. We know for certain that chronic neuritis, probably beginning peripherally, is a part of leprosy. It is highly probable that it is often a part of syphilis, and quite possible that it occurs also in locomotor ataxy. How else explain many of the transitory forms of ptosis, &c., which occur in the two latter diseases?

Gouty Neuritis of the Optic Nerve.—The question which I now wish to put definitely is, Are there any cases of inflammation of the optic nerve, or of any of the motor nerve trunks of the eyeballs, the direct cause of which is the existence of a gouty constitution? The decision is of importance not only in reference to diseases of the eye, but because it would throw much light on certain other obscure affections met with in this disease. Is sciatica really a neuritis of the sciatic trunk or its sheath? Are any of the forms of gouty neuralgia really produced by gouty neuritis? If the optic nerve can inflame from gout, why not the pneumogastric or the phrenic? I am sorry to say that I have exceedingly little evidence to bring forward in answer to these important questions. I will mention briefly one or two facts which are suggestive, and which I hope will prove sufficiently so to induce a more careful investigation of the subject. In two or three cases I have attended young ladies, of families in which gout had been prevalent, who suffered from attacks of ptosis, with the other group of symptoms referable to paralysis of the third nerve, for which I could find no other more plausible explanation than that they were caused by gouty neuritis. In one of these the attacks were transitory and recurrent, several having occurred within a period of a few years. I must not venture to trouble you with details of these cases, but feel myself obliged to speak rather more at length concerning one in which the optic nerve itself was inflamed, there being, I think, fair reason to suspect that the cause was inherited gout. A young lady, aged sixteen, was brought to me from Ipswich, on account of blindness of one eye, in July, 1879. She had no other symptoms whatever, was florid, and appeared to be in good health. The ophthalmoscope showed nothing but what was quite normal, and had it not been that her pupil dilated more widely when the other was covered, I might have suspected that she was feigning. A week later the changes were conspicuous, the disc being much swollen and its margin concealed. Under treatment by mercury combined with quinine, in the course of a few weeks the attack had passed away, but the disc was left pale. Four years later I saw this patient again with similar symptoms in the other eye, and I was now told that she had several times suffered from transitory attacks which always occurred during spring. Her health remained perfect. There was a strong history of gout in the family, both her parents having suffered repeatedly. It seems to me not at all improbable that these recurrent attacks of transitory neuritis were really of a gouty type. In saying this I have regard to the entire absence of the more ordinary causes and concomitants of optic neuritis, to the recurrent nature of the affection, its want of symmetry, and the exceptionally strong family history, both parents and many other near relatives having suffered. I cannot call to mind any other case of recurring optic neuritis, with gout history, which I could at all fairly place side by side with this one. I have, however, several times seen optic neuritis occur in women who were of gouty family without any of its ordinary accompaniments, and clear away entirely under treatment. In none of the cases of which I am thinking did any recurrence take place, and in most of them both eyes were simultaneously attacked.

Other forms of Gouty Neuritis.—Before quite taking leave of this important question as to the possible occurrence of gouty neuritis, I must trouble you with yet one other case. A lady, of fifty-six, came under my observation in whom for several weeks the left facial nerve had been quite paralysed. I observed at once that she had had two large iridectomies done downwards and outwards, and on inquiry found that she was nearly blind. It was twenty-three years since she had first noticed cobwebs before her sight, and fifteen since she had last been able to read. The iridectomies had been done six years, with what object I do not know, for although she said that she had once had rheumatic inflammation of her eyes, there did not appear to be any adhesions. In each eye the lens was partially opaque, and in each there were extensive choroido-retinal changes with pigment deposits and waxy atrophy of the discs (a peculiar form of retinitis pigmentosa). Mrs. H—— told me that she had a sister who also had "amaurosis." I persuaded her to bring her sister, and may now state the family history which belongs to them both. One of their brothers suffers not unfrequently from attacks of unequivocal gout, and a sister is crippled by rheumatism, but their parents died aged, and are not known to have suffered. The elder of the sisters, aged sixty-nine, has herself had gout, and describes her great toes graphically as having been swollen and red like tomatoes. This sister, after her first confinement, aged twenty-seven, had an attack in her eyes which lasted several years, attended by great pain and intolerance of light. Her recovery from it was very gradual, but finally it was almost perfect, and I could now find no material changes. For several years she has been very deaf, and she has suffered severely from neuralgia and chronic arthritis of wrists and fingers. Once she was told, by Mr. Critchett, that she had

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"gout in the eyes." The younger sister describes ten years ago an attack of shoulder neuralgia attended by torticollis, which kept her in bed six weeks and was accompanied by agonising pain, as if her arm were in the fire. She also has suffered most severely from neuralgia on many occasions.

Here, then, is a family so definitely gouty that a brother and sister have each had true gout, and several other sisters are crippled by rheumatism; one sister has become almost blind with neuro-retinitis, and has suffered from neuralgia, torticollis, facial paralysis, and an attack which was probably neuritis of the brachial plexus. Another sister is deaf, has been all her life liable to neuralgia, had a several years' attack of pain in her eyes which was called "amaurosis," and in later life one which was named "gout in the eye." It seems highly probable that we have here an instance of gout affecting, at different periods of life in each sister, different parts of the nervous system, and attended by true neuritis of various nerve structures.

Glaucoma in Relation with Gout.—I had intended to have said a good deal as to the nature of glaucoma, and the evidence as to its connexion with gout. The subject is, however, too important to be discussed hurriedly, and I have not time to attempt to do it justice. I must therefore content myself with the mere expression of opinion that in the production of this extraordinary disease a gouty tendency often takes a large share. More particularly would I suggest this in the exceptional cases in which glaucoma shows itself in early life; and I could, if time permitted, bring before you some important cases illustrating this point.

Retinitis Hæmorrhagica and its connexion with Gout.—There is yet another definite and well-characterised affection of the eye which claims conspicuous mention in connexion with our subject. Retinitis hæmorrhagica is very rarely indeed seen excepting in those who are themselves gouty. It is a disease of middle life or of advancing years, and in its more typical forms is never seen in the young. It seldom happens to both eyes at once. It is attended by great swelling of the disc and adjacent parts of retina and by such turgidity of the central vein that I was at one time tempted to believe that it depended primarily upon thrombotic phlebitis of that vessel. It is possible, however, that such is not its true pathology, and that the venous distension and stasis, perhaps in some instances thrombosis, are really secondary to the neuritis. If this be the fact, and neuro-retinitis be the primary condition, then we have in retinitis hæmorrhagica an instance in proof that acquired or humoral gout may become the cause of neuritis. It is not, I think, ever seen in association with the inheritance only of a gouty constitution, but is found with lithæmia in free livers who have usually experienced unequivocal attacks. The case which Jaeger took for his beautiful plate in illustration of the disease was that of a tavern keeper of plethoric habit and liberated appearance. Nothing is said as to gout, but it is fair in such a man to assume that there was a tendency to it. In order to determine statistically, as far as practicable, the association of retinitis hæmorrhagica with gout, I have tabulated twenty-four cases, with the exception of the one of Jaeger's all from my own note-books. In twelve of these, exactly one-half, the patient had suffered definite attacks of gout, and in five others there was strong presumptive evidence of a gouty constitution. In seven there was no proof of gout. This last group comprises two in which diabetes was present, one in which albuminuria existed, and two in which the retinitis was not very well characterised as of the hæmorrhagic group. If I had kept more closely to the type of cases illustrated by Jaeger's portrait, I should have been able to make yet stronger statements as to the almost invariable association of the disease with gout. It may be of interest to state a few other facts deduced from my table. Thirteen of the patients were men and eleven women. The youngest was forty-five. In seventeen cases only one eye was affected, and in seven both. In some cases there were hæmorrhages only, with little, if any, evidence of neuro-retinitis.

Summary.—I must now bring my lecture to a close, and in doing so may, I think, venture to assume that it has been shown to be probable that there are many different forms of inflammation of the eye, or of parts of it, which are in connexion with gout. Some of these are very peculiar and specialised types of disease, and have already been accorded distinctive clinical names; others quite as distinct are not as yet so well known, and of others we may say that they are to be distinguished from other inflammations of the same structures not so much by their features as by their cause. Of all we may assert that they are infrequent; some, if we confine ourselves to well-marked types, are distinctly rare. We have divided these different affections into two groups: (1) those who go with acquired, humoral or renal gout, and (2) those which depend upon the inheritance of structures damaged, or an any rates specialised, by gout in predecessors. It is needless to repeat that in almost all cases of acquired gout there is inheritance also, and that in many in which the disease is chiefly caused by inheritance some modification and increase may have been derived from personal habits. Still, the difference between the two classes of affections is very marked. In the one attacks of a transitory nature are the rule, and these attacks are often acute and attended by much pain. In the second group, although a tendency to temporary recovery and recurrence is often observed, yet there is a great proneness to chronicity and persistence. The invasion is often insidious, but the disease is usually in the end destructive. In the former group we have placed hot eye, sclerotitis, recurrent iritis, and retinitis hæmorrhagica. All these are diseases of adult life. In the second group we have insidious disorganising iritis, relapsing cyclitis, certain forms of soft cataract, and perhaps some of primary optic neuritis. Not only are there clearly marked clinical differences between the two classes of affections, but the difference in treatment is equally marked. In the first the well-known measures against gout must be taken—a restricted regimen, alkalies, colchicum, and aconite, and liberal counter-irritation. In the second we must use tonics, and although counter-irritants are here also often valuable, we cannot trust to any measure as really curative short of complete change of climate.

On the Proofs of Gout.—It may be, perhaps, convenient to say a few words as to the kind of evidence which justifies a diagnosis of gout as the cause of any particular disease of the eye. In the case of humoral or acquired gout there ought to be the history of one or more definite attacks of joint inflammation usually of an acute character, and attended by redness and œdema, and following by peeling; usually the great toe will have been the joint affected. Such patients will often state that they are very susceptible to the influence of beer and wine, and that malt liquor and some wines almost always cause indigestion, and make the urine muddy. These dietetic disturbances, to which as a test of gout attention was, I think, first claimed by Sir James Paget, are very important and valuable. If tophi are present in the ears or elsewhere they are of course conclusive. In a few cases we are justified in assuming the existence of humoral gout, although no paroxysm has ever occurred. If the dyspepsia be there, if the joints ache and prick after beer or wine, and if there be gout in relatives, we may confidently believe that it is present, although not yet declared. As regards the inherited form, we may take it as highly probable whenever parents or grandparents, or any one of them, are known to have suffered definitely. If even uncles, aunts, brothers, or sisters, or cousins have suffered from true gout in early life, the belief that a family taint exists becomes very probable. The evidence must always be carefully sifted. It will not do to take the statement of the patient without first carefully informing him as to the scope of the inquiry. Patients will often confess to gout who do not know what the word means, and a far more numerous class will hastily deny its history, although the facts, when correctly obtained, may be most conclusive. If, however, proper care be taken, and the patient, after being instructed, be allowed time for consideration—above all, if the inquiry be repeated after an interval, or if several relatives be interrogated, then I believe that in most cases truthful data will be obtainable.

It may be inquired as to the value of certain affections which may be considered to belong both to rheumatism and gout, as symptoms of the latter. Permit me very briefly to repeat my creed. I believe that the subjects of gonorrhœal rheumatism are in a very large majority of instances the inheritors of a gouty constitution, and that all the conditions usually classed as rheumatic gout are really, in most instances, dependent in a large degree upon like inheritance. Thus, if a patient has had sciatica or lumbago, if he shows nodi digitorum (osseous, not tophi), if he has suffered from chronic rheumatism affecting the smaller joints, I should think it fair to allow considerable weight to these facts as pointing to a taint of gout. Even the strictly rheumatic disorders, acute rheumatism itself, if it happens to the relatives of those who have had gout, lend support to the

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theory of family tendency to gout. It is an observation as old as the days of Heberden, and confirmed I am sure by daily experience, that the children of the gouty are more liable than others to attacks of rheumatic fever. In this we see another proof of the inheritance of structural proclivities, rather, I think, than of blood disorder or tendency to it.

Conclusion.—And now, gentlemen, as my last word, I do not know whether I have to defend myself in the eyes of any of you from the charge of "seeing gout in everything." I am well aware that this diagnosis is a very easy one, and seductively ready at hand for the idle prescriber. I submit, however, that it has not been exactly in that temper that I have brought before you the statements which I have made this evening. My desire has been to state the issues explicitly, and to keep close to facts. Where statistics were admissible and obtainable I have had recourse to them. I may assert that I have said nothing but what has been based not only upon clinical observation, but upon clinical note-taking, and the subsequent collation of cases. Nor, I contend, have I made any very sweeping statements. So far from my having exceeded the truth, my conviction is that when our clinical pathology shall be more advanced, and diseases more minutely classified, we shall in all probability recognise as gouty yet other maladies, and perhaps not a few beyond what I have claimed. It is a subject upon which scepticism is as irrational as credulity. That the gouty constitution exists, and is very common in our English population, that it is potent in the production of disease, and that it is remarkably hereditary, are facts which no one will doubt. In relation to the multiform diseases of the eye it must have a domain, and that an important one. To discover some of the extensions and limits of that domain has been the object of my best endeavours to-night.

SYPHILIS IN DENMARK.

By HENRY LEE, F.R.C.S.,
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DR. GIERSING has lately published at Copenhagen[1] a most elaborate and exhaustive statistical account of venereal diseases in Denmark. The tables and figures which he has given are taken from the reports to the Royal College of Health which all the medical men in private practice as well as those holding official appointments are obliged to furnish. During the last fifty years Copenhagen has been under very strict police regulation, and since 1854 laws which correspond with our late Contagious Diseases Acts have been rigidly enforced. During the ten years[2] comprising a record of 55,923 cases, there was an increase of blennorrhagia of 37 per cent., a diminution of the local venereal sore of 28 per cent., and an increase of syphilis of 1 per cent. In Copenhagen the number of women known to be diseased had increased from 1358 in the year 1881 to 2352 in the year 1883. In thirteen years, while the population had increased 43 per cent., venereal diseases had increased nearly 100 per cent. The system of police supervision has therefore failed in Copenhagen. In six other towns under police regulation (protected), the results are much more satisfactory. All these with one exception were seaport towns with garrisons. During the same ten years in them blennorrhagia had scarcely increased, the local venereal sore had diminished 51 per cent., and syphilis 60 per cent. Great fluctuations, however, occurred during this period. In three of these towns police regulation has been withdrawn since 1880, probably for the following reasons: In the towns not protected, containing 197,000 inhabitants, blennorrhagia had very slightly increased, the local venereal sore had decreased 43 per cent., and syphilis 35 per cent. during the same time. In proportion to the population the cases of syphilis were 11 per thousand in the protected and 9 per thousand in the unprotected towns, so that, although the diminution of disease in the protected garrison towns is very satisfactory, yet the amount of disease in them is still considerably greater than in the unprotected towns. In the country, out of a population of 1,141,000, there were 11,154 cases of venereal disease during the ten years ending 1880. At this time blennorrhagia had decreased 26 per cent., the local venereal sore 42 per cent., and syphilis 59 per cent. With the exception of the year 1872, there was a gradual decrease of venereal disease during the whole of this period. Altogether there was a decrease of 49 per cent. In the year 1871 there was an increase of syphilis, but since that time it had progressively diminished in nine years 62 per cent. This was without any police supervision. In Copenhagen, during the eight years 1874-81 inclusive, syphilis had increased in the navy 163 per cent., and in the army 36 per cent.

It may be very interesting to compare these statistics with the returns given by our medical officers in the army as set forth in the minutes of evidence taken before the Select Committee of the House of Commons on the Contagious Diseases Acts printed in 1881. Unfortunately, no accurate account either in Denmark or with regard to the English army can be obtained of the relative number of infecting and non-infecting sores. In fact this is not attempted in the army returns. The only way in which any definite conclusions can be arrived at with regard to this subject is to take the number of cases of secondary syphilis which are easily recognised in any particular districts, or under any particular regulations, and to compare them with others. The number of cases of secondary syphilis, treatment and other circumstances being the same, will then give the comparative numbers of cases of primary syphilis.

Now, on comparing the figures submitted to the Select Committee for the year 1866 (before the late Contagious Diseases Act was passed) with those for 1878, secondary affections appear to have increased by 2 per 1000 in the Home Army,[3] and therefore we must conclude that primary syphilis had also increased during that period. From the year 1859 to 1866 inclusive, secondary syphilis diminished in the army from 35·86 to 24·77 per 1000 men. From 1867, when the Contagious Diseases Acts came into operation, to the year 1876, the ratio had increased to 27·4 per 1000. Thus the figures, both with regard to the general population in Denmark and to the army in England, tend to show, as far as they go, that the unprotected districts are rather better off than the protected, as far as true syphilis is concerned.

Savile-row, W.

[1] Statistik over Veneriske Sygdomme i Danmark.
[2] From 1871 to 1880 inclusive.
[3] Report, p. 57.

ON CHOREA IN THE AGED.

By ROBT. SAUNDBY, M.D.EDIN., M.R.C.P.,
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ALTHOUGH the occurrence of chorea in the aged was noticed by Graves, we are indebted to Professor Charcot for awakening general attention to the subject. During the last six years I have met with three cases, two of them hospital out-patients, the other was seen in consultation with Mr. J. W. Taylor of Camp-hill.

CASE 1.—This was a man of intemperate habits, about fifty years of age, suffering from advanced disease of the aortic valves. The chorea affected the left side, and chiefly the left upper extremity. The movements were not without intermission, and were to some extent under voluntary control. They consisted of rapid flexion and rotation of the left arm, which was slipped behind his back. This movement was so constant that he was wearing a smooth patch on his coat over the left scapular region where his hand rubbed each time. There was not the slightest appearance of dementia, though there was marked impairment of general health.

Dr. F. Leslie Phillips, who has succeeded Mr. J. W. Taylor, has kindly furnished me with the following account of the present condition of this patient.

Mr. W——, aged sixty-six, has never had acute rheumatism; he does not attribute his illness to any emotional cause, but he had had worry in his business for the previous twelve months. At the present time he feels weak, but can walk half a mile; he has occasional gouty pains in his joints and in the muscles of his legs. The choreiform movements of the left side have much abated, but there still remain some nervous hasty involuntary movements, especially of the hand and wrist. The grasp of the left hand is distinctly weak, but he has no recollection of anything like a stroke. He has a double aortic murmur, and "a mitral systolic murmur also; there is no sign of cardiac dilatation," and no albuminuria.

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CASE 2.—Dr. Russell[1] has published a short account of a case formerly under my care. This patient was a man aged sixty-eight, who had been ill for eighteen months. He had no cardiac disease, and there was no history of rheumatism. He could assign no cause for his illness. His urine contained a trace of albumen with granular and blood casts, blood-corpuscles, and epithelium. He presented no signs of dementia.

CASE 3.—My third case is that of an old man aged eighty-seven. He is fairly well nourished but anæmic. He has enjoyed good health, and the only illness he can call to mind is an attack of congestion of the lungs four years ago, since which he has been liable to bronchitis, for which he applied for advice. There is no obvious dementia, he answers questions rationally and correctly, but is a little deaf. The tongue is protruded perfectly well. There is no cardiac murmur. The choreic movements are not constant, and chiefly affect the arms, though the head and legs are not free. The muscles which appear to act most violently are those connecting the trunk with the upper extremity, especially the scapular muscles, which jerk his arms till his back aches. The muscular movements are so violent as to throw him about in his chair, if he is standing to make it difficult for him to remain erect, and when sleeping to awaken him. At the present time (June 25th, 1884) the disease has lasted about five weeks. His urine contains a trace of albumen; he has never had acute rheumatism, and has no evidence of valvular disease of the heart, though there is probably some dilatation with atheromatous degeneration of the arteries. He has an enlargement of the head of the first and second metacarpal bones of the right hand, and has suffered from "rheumatism" in all his joints, but never was laid up with it. He attributes this illness to getting wet, which he was very liable to in his work as a gardener. On inquiry, he does not admit that he has had any trouble, and seems of a cheerful disposition. He has never had anything like a fit, or been paralysed. He says he has always been temperate, and I have no reason to doubt his statement. The twitching first came on in his right shoulder. He can pick up a pin fairly well, and says he has no difficulty in buttoning his clothes.

CASE 4.—Dr. Russell[2] has also related the case of a lady, aged seventy-seven, who recovered after an illness of about three months. In this patient the chorea was mainly left-sided. There was no dementia; the heart was normal, and she had never suffered from rheumatism or previously from chorea. The treatment employed was the sulphate of zinc.

CASE 5.—Mr. C. J. Davis[3] has reported a case in a man, aged seventy-nine. The chorea was confined to the left upper extremity and the left side of the face. The patient was demented. There was no cardiac murmur or history of rheumatism. There was a trace of albumen in the urine. He died while under observation after the chorea had lasted a month, but no autopsy was made.

CASES 6 and 7.—Dr. Wharton Sinkler[4] believes this disease is rare, but is mistaken for senile trembling or paralysis agitans. He gives two well-marked cases in a male and female aged eighty-six and eighty-two respectively. One recovered in a few months, the other remained in the same state after two years and a half. Organic heart disease was present in both. There was no dementia in either case.

CASE 8.—Dr. M. Bacon[5] has published a case of chorea in a female suffering from chronic mania and the inmate of an asylum. The disease lasted four years—that is, until her death at the age of sixty-one.

CASES 9 and 10.—Dr. Graves[6] mentions two cases: one an apothecary in Dublin, aged seventy; and another which had been communicated to him by Dr. Patton of Tandragee. Of the former case he gives no details, except that "it was very severe and lasted many months." Of the second, he tells us that it had continued three years at the time of his report; that the patient was a woman aged fifty, who had had family troubles; that the attacks were intermittent, but, when present, did not leave her, even during sleep. Fatigue, anxiety, and the "changing of the moon" were said to aggravate her attacks.

CASES 11 and 12.—Charcot,[7] in his well-known lecture, points out that this condition differs essentially from the senile trembling to which the name "senile chorea" is sometimes improperly given. In the latter the movements are simply oscillatory, and have none of the gesticulatory character of choreic movements; usually, too, the trembling is limited to the head. Both his patients were more or less demented. He regards the chorea as due to emotional causes, and not associated with rheumatism or heart disease. He thinks it is incurable, but does not usually endanger life. Of his two cases one had existed twelve and the other eleven years, both patients being the same age, seventy-one.

To some extent Professor Charcot's views are open to modification in the light of our more extended knowledge of the subject. For example, we must abandon the belief that this disease is always associated with dementia. It is also very dubious if we can attach any high degree of importance to emotional causes in the origin of this affection, while the recovery of Dr. Russell's patient and the great improvement which has taken place in my first case make the prognosis much less absolutely unfavourable than Charcot taught. Its association with heart disease in both of Dr. Sinkler's cases, and in one of mine, must also be allowed to qualify Charcot's statement that no such relation appears to exist, though it may well be that the association has no special significance. Yet from what I have seen of this disease, and from the extreme probability that advanced degeneration of the vascular system was present in all my cases, I am inclined to believe that the pathology of this affection will be found to be some actual structural change, such as small hæmorrhages in the corpus striatum, and that it is not merely a functional disarrangement. In the absence of any post-mortem evidence whatever, such an opinion is of course wholly speculative.

The diagnosis presents no difficulty to any one who is aware of the existence of this form of chorea, the character of the movements is quite typical, and if it is ever confounded with senile trembling, it must be from ignorance of the fact that chorea does occur in advanced life, and consequent unwillingness to accept a view which is thought to be unsupported by authority. My third patient suffered so intermittingly that at his first visit I observed nothing, and was told nothing to direct my attention to anything but the state of the chest, but on his next appearance the movements at once attracted my attention. In Mr. Taylor's patient I noticed a similar indifference on the part of the patient to the movements, which he appeared to regard rather as an awkward habit than as anything for which he needed medical advice.

I regard the disease as rare. The cases seen by Dr. Russell and myself are all I have heard of in this town, and from inquiries I have lately made, there is no case at our workhouse infirmary whose chronic nervous affections of all kinds are to be found. With respect to treatment, I have not much to say that is of value. I have found the bromide of potassium of some use, and in Dr. Russell's case, which recovered, sulphate of zinc was used. In all of my cases the general health has been very bad. For such feeble old people cod-liver oil is one of the best remedies.

Birmingham.

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1 A Case of Senile Chorea, Med. Times and Gaz., 1878, vol. ii., p. 627.
2 Note on a Case of Chorea in an Aged Person, followed by Recovery, Med. Times and Gaz., 1878, vol. i., p. 459.
3 Case of Chorea in the Aged, Med. Times and Gaz., 1879, vol. iii., p. 457.
4 Chorea in the Aged, Journal of Nervous and Mental Diseases, July, 1881.
5 Chorea at an Advanced Period of Life, Journal of Mental Science, July, 1880.
6 Clinical Lectures on the Practice of Medicine, 2nd edit., vol. i., p. 837.
7 On Chorea in Old People, Med. Times and Gaz., 1878, vol. i., p. 245.

TREATMENT OF PERFORATING ULCER OF THE FOOT.

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THE so-called perforating ulcer of the foot, when it appears in association with locomotor ataxy, or the conditions somewhat vaguely known as sclerosis or tabes, is the outcome of certain purely local causes acting upon a part whose condition has been injuriously influenced by a central nerve disturbance. There are reasons for believing that the nutrition of certain parts becomes obscurely perverted in the course of the nerve malady, and that the foot affords one example of such perversion. Moreover, the sensation in the integument of the sole commonly becomes dulled; and if to these conditions be added the effects of pressure upon the skin, it would appear that the chief factors in the production of perforating ulcer are present. Of these the disturbance of nutrition is probably the most important; for the pecu-

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liar ulcer may be seen upon the feet of patients who, although they present certain of the symptoms of locomotor ataxy, do not yet experience any perverted sensation in the limb. It would seem, moreover, that there is nothing peculiar in the pressure to which the part is subjected. It is the pressure incident to standing and movement. The sore is often met with quite early in the course of the cord affection, and at a time when the patient's gait is steady and regular, and when he walks like the normal man.

The clinical history of the ulcer is briefly this. At a spot upon the sole of the foot upon which pressure bears a corn appears. This spot is very commonly over the metatarso-phalangeal joint of the great toe, or over the corresponding joint of the little or on the pulp of the great toe. The corn increases, and, from the pressure that it exercises upon the soft parts beneath it, some inflammation of an insidious type follows. Suppuration then appears beneath the corn, and, spreading in the direction of the least resistance, advances into the soft parts of the sole, moving towards the bone. It may be that the column of soft parts compressed between the corn and the bone beneath which it lies may perish almost *en masse*, as would appear to be the case with the tissues in the acute bedsore of spinal origin. Be this as it may, this at least is evident, that when at last the pus finds an escape through the thickened skin about the corn a sinus is revealed that will be found to extend already to the bone. The patient continues to walk upon the foot, and around the orifice of the sinus or the margins of the ulcer the epithelium continues to heap itself up. This thickening of the skin is always considerable. The sore appears to be set upon a mound of hardened, thickened integument; and it thus happens that the depth of the ulcer or the length of the sinus is greatly increased. Bone may be lying bare at the bottom of the sinus. In the most chronic cases the so-called perforating ulcer becomes simply a persistent intractable sinus, surrounded by an areola of greatly thickened skin, and attended by a varying amount of pain. In such a condition it may prove a great hindrance to locomotion, and be a cause of lameness in cases where an ataxic gait has not yet developed. In other instances the pressure exercised by the thickened skin about the sinus tends to encourage an increase in the sore, or the parts may become the seat of a slough comparable with that met with in bedsore. The progress of the case will vary with the advancement of the nerve symptoms and with the ability of the patient to walk. The ulcer probably causes the most serious inconvenience in the most chronic cases. In such cases it is a source of pain, it impedes locomotion, it interferes with the pursuit of any occupation involving much standing, and is often the only, or at least the main, cause of the patient's lameness. In these instances the ulcer assumes for a while an importance in excess of that attending the nervous phenomena, and for months or years in the course of a given case it may be the only symptom that appears to clamour for treatment. It now remains to consider upon what lines such treatment should be directed.

In the first place, it may be said that these ulcers, except when of unusually severe character, may be healed without other especial treatment than that of absolute rest. The rest, however, must be very prolonged, and will in any case probably extend into several months. It unfortunately happens, moreover, that the ulcer so cured will reappear when the patient discontinues the treatment and once more uses the foot. It would seem to be distinctly unadvisable to enforce prolonged rest upon a patient whose general health is not seriously impaired, especially when such action can afford but temporary relief to the trouble for which he seeks assistance. Many individuals suffering from perforating ulcer are still able to follow an employment, and but for the ulcer many could follow very active and even arduous occupations. Messrs. Savory and Butlin in their valuable monograph upon this affection in the Transactions of the Royal Medical and Chirurgical Society[1] fully recognise this difficulty, and suggest that the patient should use an artificial "bucket leg," so that the foot may be kept from the ground without absolute confinement being necessary. This course, if adopted by patients of the humbler classes, may be a very grave inconvenience, and would, moreover, in those who are actually ataxic, add to the difficulty of progression. Failing relief by means of rest, the advice most generally given by surgeons is that the part of the foot involved in the sore should be forthwith amputated. Mr. Erichsen, in his last edition (1884) of his "Surgery" merely observes, "the treatment consists in amputation of the affected part." Mr. Bryant, in the fourth edition of his manual, endorses Mr. Hancock's conclusions upon this subject: "When once perforating ulcer of the sole of the foot is established and recognised, it is better at once to remove the whole of the metatarsal bones either by Chopart's, Syme's, or Pirogoff's amputation." With regard to this treatment there is, in addition to any objection that may attend amputation generally, the grave disadvantage that after the part has been removed the sore will return in the stump. The conditions that produced the ulcer in the foot are still operating, and by like agencies cause the re-appearance of the disease after the amputation. Messrs. Savory and Butlin well express the therapeutic position of this measure in the following words:—"With regard to treatment, it cannot be said that by any means at present known there is a fair prospect of permanent cure. In too many cases after operation, whether excision of the soft structures affected or of the diseased bone, or amputation of a toe or of a portion of the foot, the disease has gradually returned in some neighbouring parts, so that the extreme measure is at best a doubtful one."

Such being the position of things, I would venture to draw attention to the following plan of treatment, which, in the two cases in which I have as yet tried it, may be considered to have met with a degree of success. On examining these ulcers it is obvious that the dense rigid ring of heaped-up epithelium that surrounds the sore or sinus forms a very grave bar to healing. The ulcer could never heal so long as its margin is set in an annular induration that prevents an approximation of its edges and an opportunity for the display of the healing process. Even if the ulcer were to become filled up with granulations its final closure would still be a matter of considerable difficulty, since the skin, that takes so active a share in the healing of such lesions, would be seriously hampered in its activity. The plan alluded to is this: The patient is confined to bed and the sole of the foot is kept continuously poulticed with linseed meal. This causes the epithelium to soften and swell up, so that at the end of twenty-four hours the ring around the sore appears as a very prominent softish white mound. All this redundant epidermis is then shaved away with a scalpel, and the poultice is reapplied. At the end of another twenty-four hours the deeper layers of epithelium that were not affected by the first poulticing have become swollen and prominent. They are in turn cut away. The poultice is again applied and the scalpel used day by day, until the whole of the epidermic mass has been removed. This object will be effected at the end of about ten or fourteen days. By this time the skin about the ulcer will, as a result of the continued poulticing, have peeled off in a thick white layer, and around the sore will be nothing but thin fresh pink epidermis, looking active and healthy. The ulcer in the meantime will be found to have cleaned, and by the loss of its cutaneous boundary will appear less deep. The poultices are now discontinued, and to the sore is applied a paste, of the consistence of thick cream, composed of salicylic acid and glycerine, to which is added some carbolic acid in the proportion of ten minims to the ounce. This paste is applied on lint, and is quite painless. The ulcer soon heals, and when the patient gets up he is instructed to wear a thick pad of felt plaster over the spot, with a hole in its centre that corresponds to the scar of the recent sore. This plaster should be always worn. As one objection to this measure it may be urged that, although pressure may be taken off one part of the sole, an ulcer may appear at some other spot where pressure has effect. So far as my two cases go, this result has not yet happened; and it is to be noted that, although a large area of the sole is normally exposed to pressure, these ulcers have a tendency to appear only in certain spots. The patients should also be instructed to pay great attention to the cleanliness of the feet, to wear well-fitting woollen stockings and easy boots.

CASE 1.—A man, aged thirty-seven, was admitted into the London Hospital under my care on May 9th, 1884. He had a perforating ulcer of the sole of the usual appearance, over the metatarso-phalangeal joint of the third toe of the right foot. The ulcer extended down to the bone, which was, however, not bare. He had been under the care of my colleague, Dr. Ralfe, for locomotor ataxy. He suffered much from lightning pains in both legs, and there was an absence of patellar reflex on both sides. The ulcer has existed for three years, and has resisted all treatment. He is a cigar maker by trade, but as his employment requires

[1] Vol. lviii., p. 384.

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much standing he had not been able to follow it regularly owing to the pain caused by the ulcer. The treatment by poulticing was commenced on May 12th. By May 28th all the thickened epidermis had been removed, and the salicylic acid paste was applied. On June 11th the patient was discharged with the ulcer entirely healed, and with a disc of felt plaster applied to the part.—Oct. 10th: The patient has regularly followed his employment since his discharge. The ulcer shows no relapse, and there is no indication of corn or ulcer on any other part of the sole. At one time since his discharge the patient left off the felt plaster, but the site of the ulcer became sore, and he was obliged to take to the felt again. The foot is now entirely free from pain, with the exception of the occasional lightning pains above referred to. In this instance an ulcer that had lasted for three years was cured in four weeks.

CASE 2. — The patient is a gasfitter, aged thirty-eight. He was admitted on Aug. 12th, 1884. He had a perforating ulcer of the usual kind on the plantar aspect of the left great toe. It extended down to the bone, which was, however, not bare. The toe was much swollen. There was grating in the metatarso-phalangeal joint. The sore had existed for four years. Eighteen months after its first appearance it had healed under treatment. It soon, however, broke out again, and has existed as a deep discharging ulcer ever since. The patient suffers from lightning pains, and the patellar reflex is entirely absent on both sides. His gait is normal, but he is unable to maintain his equilibrium when his eyes are closed. He is troubled with some incontinence of urine. His pupils are much contracted. They respond to accommodation, but not to light. The treatment was commenced on Aug. 12th. On the 19th the poultices were discontinued and the paste applied. The man was discharged on the 30th with the ulcer entirely healed.—Nov. 15th: The patient has followed an active employment as a gasfitter since his discharge. He has always worn a felt plaster over the site of the ulcer. The ulcer is entirely healed, and the foot has given him no trouble since he left the hospital. Previously to his admission the pain caused by the ulcer had often seriously interfered with his employment. In both this and the previous case there was apparently no loss of sensation in the integuments of the sole. In this instance a sore that had existed, with the exception of one short interval, for four years yielded to treatment at the end of eighteen days.

Gordon-square, W.C.

NOTE ON THE OPERATION OF TRACHEOTOMY IN CASES OF DIPHTHERIA OR CROUP.

BY JOHN W. OGLE, M.D., F.R.C.P. LOND.,
CONSULTING PHYSICIAN TO ST. GEORGE'S HOSPITAL.

IN consequence of the recent and lamentable death of Dr. Rabbeth various contrivances have been recommended as substitutes for the oral suction, which is, at times, and at a moment's notice, necessitated when opening of the larynx or trachea has been resorted to, in diphtheria or croup. I would suggest that such suction would be rendered free from any risk provided that a piece of some very thin, soft, and pliable material, such as extremely delicate cambric or silk (or so-called "grenadine" or "gossamer"[1]), three or four inches square, were laid over the windpipe and so adapted as to form a small pouch or sac over the orifice made therein, which should be received into the mouth of the operator before the suction was practised. The character of the tissue or material would permit of the movements of the lips and tongue, appropriate to the act of sucking; and the diphtheritic stuff would be almost as easily drawn into the sac contained in the mouth as if nothing had been interposed between the windpipe-orifice and the cavity of the operator's mouth. It would doubtless be, also, advantageous if the substance forming the sac or pouch into which the diphtheritic material would be sucked were well moistened by some suitable antiseptic liquid, such as a solution of boracic or salicylic acid, or a spirituous solution of thymol or diluted oil of eucalyptus. By such a procedure as the above described the diphtheritic films and fluids aspired into the mouth would not, in any case, come into direct contact with its lining membrane; and in this way danger to the operator would be entirely obviated.

It has been thought that most likely the evil (and occasionally fatal) results which have occurred to operators after sucking deposits into the mouth have been consequent on some abrasion of the mucous surface. It is, indeed, generally conceded that diphtheria cannot be communicated to any part of the *skin* unless there be some lesion of continuity of the surface; but the details of such remarkable cases as Trousseau[2] and others relate, in which physicians have contracted diphtheria from patients and succumbed to the disease, seem to show, unequivocally, that the entirety of the surface of the mucous membranes does not by any means confer an immunity from contagion. The diphtheritic membrane in the mouth and throat has, from time to time, been dissolved by escharotics, astringents, &c.; and it has been suggested that possibly local agents might be of service in diphtheritic and other false membranes lining the windpipe, but of course the difficulty consists in applying them. If their application were practicable, and there were sufficient time for their action, most likely substances which possess a solvent power over albumen and fibrin, such as acidulated pepsine and lactic acid, would be those selected for the purpose alluded to.

Before closing this note I wish to mention that Dr. Ewart, of St. George's Hospital, has observed to me that probably in cases where diphtheritic and other morbid products have to be sucked into the mouth, the operator, by rinsing out the mouth previously to the process of sucking, would be able to shield the mucous surface from contagion.

Cavendish-square, W.

[1] Possibly some texture like goldbeater's skin.

A NEW NEEDLE-HOLDER.

BY J. WARD COUSINS, M.D. LOND., F.R.C.S.,
SURGEON TO THE ROYAL PORTSMOUTH HOSPITAL.

THE special feature of the instrument consists in the novel device by which the opening, shutting, and fixing movements are accomplished. The blades are surrounded by a triangular collar with rounded angles, fixed just below their points, and under the control of the thumb by means of a lever. When the holder is grasped by the hand, this collar can be easily rotated. In its long axis the blades are released by a recoil spring, but by a slight movement they are securely fixed, and the points are brought into close contact with each other. The holder is represented in the engraving carrying a surgical needle and thread. It is adapted for the introduction of every kind of needle, and it is not liable to get out of order. The pressure at the points can be accurately regulated by the hand of the surgeon, and thus the risk of breaking needles is greatly diminished. The long lever attached to the thumb-plate is intended to facilitate the insertion of deep stitches in plastic operations. The rotatory action of the instrument is the chief element of novelty, and this marks the difference between it and the holders now in general use. By slight movements of the thumb on the lever, complete control is obtained over the needle. Sir Spencer Wells' short scissor-shaped holder is suitable only for the introduction of large needles, and the ordinary spring instrument gives no variation of pressure at the points, except the slender accommodation obtained by covering them with soft metal.



[2] The reader may remember the three cases of malignant diphtheria quoted by Trousseau. First, that of a hospital colleague into whose mouth a small quantity of saliva was spurted by a patient when coughing, and who died in forty-eight hours: secondly, that of another physician, who died, also in forty-eight hours, after applying his mouth to the wound in the windpipe: and, lastly, that of a young medical man who died after an attack of diphtheria of seventy hours' duration, caught whilst sitting up for three nights with a patient.

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SOME NEW FORMS OF

APPARATUS FOR ESTIMATING NITROGEN IN URINE.

By A. W. GERRARD, F.C.S.,

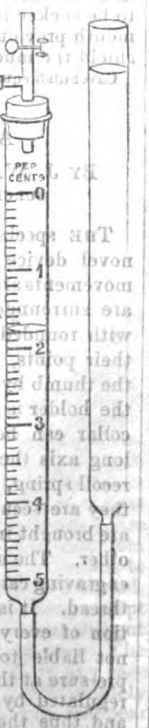
DEMONSTRATOR OF MATERIA MEDICA AND PHARMACY TO UNIVERSITY COLLEGE.

THE apparatus now chiefly employed for estimation of nitrogen in urine analysis is that known as "Dupré's." It consists of an outer glass cylinder, to be filled with water; inside this cylinder is placed a glass tube graduated to show per cents. of urea. Nitrogen is evolved from the urine by an alkaline hypobromite, usually soda, and conveyed by a suitable arrangement to the inner graduated tube, water being displaced; on cooling the gas the inner tube is raised till the water it contains is level with the water in the outer vessel; pressure being thus balanced, the reading may be taken. The above instrument is undoubtedly as accurate as it is possible to make it, but has often impressed me as wanting in simplicity, and, moreover, on account of the delicate construction of some of its parts, is very liable

FIG. 1.



FIG. 2.



to fracture. Again, I have often seen an operator troubled to know when the zero was in its proper place, or levels correctly adjusted, and having to look through two columns of glass the graduations become obscure and the reading is made difficult. The instruments I have devised, and which will be best understood from the illustrations, are the result of a few experiments at simplification, and throughout I have aimed at keeping the highest degree of accuracy. Fig. 1 is a U-tube expanded at the top of one of its arms into a bulb, the bulb being designed to receive water displaced from the graduated arm. At the lower end of the bulb arm is a tubulus fitted with pinchcock for drawing off water. The graduated arm of the tube is marked in per cents. of urea, and fitted with a rubber cork and T-piece, connected with a wide-mouthed rubber corked bottle, to receive the hypobromite of soda. The small bottle inside the larger one is to receive the urine under examination. To work the apparatus the U-tube is filled with water to the zero line, the corks well fitted, and pinchcocks closed. The urine, 5 c.c. in inner bottle, is now upset into the hypobromite, the evolved nitrogen displacing the water in the graduated tube, causing the water to rise in the bulb. The bottle is now placed in cold water to cool the gas; then the pinchcock of the bulk arm is opened, and the water drawn off until it is exactly level in each tube; pressure being thus equalised, the percentage may be read. Fig. 2 is a simpler development of the first, consisting of two tubes communicating at their bases by rubber tubing. The tubes are kept fixed in spring clamps, so that they may be raised and lowered at will. The gas is generated exactly as in the other apparatus, pressing the water from the graduated into the plain tube, after the usual cooling has been effected by raising one tube or lowering the other, the level of the water is attained and pressure corrected. The percentage is now taken. The adoption of the flexible tube does away with the tubulus, and therefore the necessity for drawing off water, besides much cheapening the instrument. Both tubes are firmly fixed on stands, enabling them to be used with safety and facility, an analysis being completed in less than five minutes.

Both instruments are graduated with an allowance for all the usual corrections, so that the operator has simply to read his percentages of urea; in the drawings 5 per cent. only is indicated, but at the suggestion of Mr. Victor Horsley the instruments have been constructed to show 6 per cent. urea.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

A FATAL CASE OF STRANGULATED HERNIA; SAC OPENED; PORTION OF OMENTUM EXCISED; KNUCKLE OF INTESTINE REDUCED; AN UNDESCENDED TESTICLE AND SAC REMOVED; PERSISTENT FÆCAL VOMITING; DEATH; OBSTRUCTION OF KNUCKLE OF INTESTINE BY PEDICLE OF OMENTUM; REMARKS.

(Under the care of Mr. E. S. WEBBER, M.B. Cantab.)

W. P——, aged twenty-one, was admitted about one o'clock on the afternoon of September 4th. He said that he was at work in the morning, and about 10.30 A.M. was lifting a heavy weight when he felt something give way in his abdomen and come down into his scrotum. He could not get it back, and it caused him great pain. He said he had a rupture, but it had not been down for some years.

On examination it was found that a tumour occupied the left half of his scrotum and inguinal canal. It was not very tense, but could not be returned into the abdominal cavity, and the attempt caused him great pain. He was put to bed with an ice-bag over the scrotum, and had twenty minims of laudanum, which, however, he vomited almost immediately, and was sick again two or three times at intervals of about half an hour; the vomit was not stercoraceous. About 9 P.M. he was put under ether, and another attempt at reduction having failed, the sac was cut down and opened. It was full of omentum, and when this was lifted up a knuckle of congested intestine was seen; the omentum had a very thick pedicle, and that, together with the presence of an undescended testicle, seemed to be the sole cause of strangulation. The omentum was ligatured in four pieces and removed, and then the stump was returned into the abdomen. The intestine was easily returned and a finger could be passed up the canal into the abdominal cavity, where everything appeared perfectly free. The neck of the sac and the spermatic cord were next ligatured, and the sac and the testicle removed. Unfortunately the spermatic cord retracted from the ligature, so the wound had to be enlarged upwards, in order to find the cord again. When this was accomplished the edges of the wound were brought together. The operation was done with antiseptic precautions.

Sept. 5th.—The patient was a long time recovering from ether, and was sick several times; pulse good; has no pain and has also lost the anxious expression he had on admission;

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urine drawn off. To take nothing but ice, and to have one grain of opium evey four hours.

6th.—Not sick until this morning, at 6.30, when vomit was stercoraceous; no pain in abdomen; is breathing comfortably; pulse good. Taking ice, and ordered one drachm of Brand's essence every two hours.

7th.—Wound dressed; looks quite healthy; has healed at lower part; slight tenderness and tympanites, but no pain; breathing chiefly thoracic; sick once last night (fæcal) and this morning vomited a little watery fluid; pulse 66 (regular, soft); tongue moist.

8th.—Sick three times (fæcal); feels well; no pain; less tenderness over wound, and less tympanites; tongue clean; pulse good.

9th.—Sick once (fæcal); passed flatus yesterday for the first time; feels well; no pain over abdomen; tympanites very slight; tongue moist; pulse good. He was put on beef-tea.

10th.—Sick twice (fæcal); wound dressed and looking well; there is very slight tenderness over it and at the upper end is a little localised hardness, probably the stump of omentum; the remainder of abdomen quite flaccid, and palpation does not cause any pain; passes flatus; has been ordered some milk and soda-water, which he fancied very much; looks well; pulse good; tongue slightly dry; sleeps well.

11th.—Sick three times yesterday (fæcal); a little pain and tenderness over the upper part of the wound; passes flatus; has a somewhat anxious expression; pulse quick and feeble; tongue dry and brown. The milk was discontinued, and he was ordered to take beef-tea and six ounces of brandy.

12th.—Sick once (fæcal), but a smaller quantity; passing flatus; no pain or tympanites; tongue moist; pulse quick but stronger; feels hungry; sleeps well.

13th.—Sick once (fæcal); passing flatus; tongue furred and moist; pulse good; no pain; feels hungry; sleeps well; wound dressed; lower two-thirds healed; upper third nearly healed, and hardness can still be felt at the upper part.

14th.—Not sick at all; feels better; passes flatus; no pain; no action of the bowels, but feels a desire to have an action; pulse good; tongue furred, moist.

15th.—Not sick; still passes flatus.

16th.—Very sick once (fæcal); enema (soap and water) given yesterday was returned unchanged; tongue moist and clean; pulse good; slept well; says he feels well; passes flatus; no pain; wound nearly healed; antiseptic dressing left off.

17th.—No sickness; passes flatus.

18th.—Sick once (fæcal); opium reduced to two grains a day.

19th.—No sickness.

20th, 21st, and 22nd.—Sick once (fæcal); soap and water enema with an ounce of castor oil given on the 25th, brought away a few scybala.

24th.—Sick twice (fæcal); is looking ill; pulse small and quick; tongue dry; no pain; sleeps well. To be fed with half an ounce of milk every hour by the mouth, and the following nutritive enema every three hours: two ounces of essence of beef, half an egg, half an ounce of brandy, ten drops of tincture of opium and ten grains of pepsin.

25th.—Was fed yesterday with enemata as above; retained them all; was slightly sick this morning (fæcal); passes flatus; tongue clean, a little dry; pulse regular, small.

26th.—Retained all the enemata; was sick three times yesterday (fæcal); milk discontinued; to have nothing by the mouth except a little ice; abdomen since yesterday morning a little swollen and tense; no pain; pulse regular, quick and small; tongue clean and dry; passes flatus. To have one grain of opium every four hours by the mouth, and opium in enema reduced to three minims.

27th.—Retained all the enemata; no sickness; abdomen more distended; no pain; tongue clean and dry; pulse regular, quick (100), small; passes flatus. Taking half an ounce of milk every hour.

28th.—Returned one enema; was sick once yesterday (fæcal); abdomen distended; no pain; passes flatus; pulse still weaker; tongue furred, moister.

29th.—Retained all enemata; no sickness; abdomen very tense; no pain; almost pulseless; hands and feet cold. Gradually sank and died at 12.30 P.M.

Necropsy, twenty-fours after death. — On opening the abdomen, the omentum, devoid of fat, was seen stretched tightly across the intestines, and was attached by the pedicle to the abdominal wall in the situation of the upper angle of the wound made by the operation. On cutting through the omentum, there were some signs of recent peritonitis, the intestines having lost their lustre and a few flakes of lymph being seen, but there was no fluid. Attached to this pedicle of omentum was a tumour the size of a small hen's egg, which corresponded to the patch of hardness felt there during life, and appeared to be a knuckle of intestine bound there by adhesive inflammation. On starting with the rectum and tracing the intestine backwards, the large intestine was found to be fairly normal; but the small intestine collapsed up to the point, a distance of two feet from the ileo-cæcal valve, where it entered the tumour mentioned before, while on emerging from it the remainder was enormously distended. A ligature was put round each portion of the gut emerging from the tumour, the gut cut through, and the tumour removed from the abdominal wall. On examination it was found that the finger passed quite easily down each end of the gut, but could not get past the point where the gut was bent on itself, the angle of curvature being a very acute one. On cutting open the gut, it appeared simply congested. There had been adhesive inflammation going on between the peritoneal surface of the gut and the omentum, and it was difficult to separate them at this point, the omentum covering the gut by about a quarter of an inch in thickness.

Remarks by Mr. WEBBER.—The chief interest in this case lies in the fact that the patient lived for twenty-four days after the operation with almost continuous fæcal vomiting. The necropsy showed that he had obstruction caused by the binding down of a piece of gut with the pedicle of omentum to the external wound, but until then there was no certainty of diagnosis, as up to the last three days of his life the absence of all pain, the cheerful expression of countenance, the flaccidity of the abdomen, and the continual passage of flatus, all pointed to a state of paralysis of the gut rather than anything else. The continuous fæcal vomiting, however, was looked upon with suspicion, and I think in cases where this symptom goes on for more than ten days after an operation for strangulated hernia it should be an indication to open and thoroughly explore the abdomen, as obstruction after that length of time is not probably due to a continuance of paralysis of even an intensely congested piece of gut, and should be attributed to some other cause.

DUNDEE ROYAL INFIRMARY.

ACUTE CHOREA; EXTREME DEGREE OF JERKING; NIGHT SCREAMING; INCONTINENCE OF URINE; CHLOROFORM INHALATION; ADMINISTRATION OF CONIUM JUICE; RECOVERY; REMARKS.

(Under the care of Dr. SINCLAIR.)

FOR the following notes we are indebted to Dr. D. J. Reid, late house-surgeon.

D. F——, aged twelve, was admitted on Aug. 31st, 1883. A year ago he had a mild attack, which lasted three months. The present attack was attributed to a fright from his having been put into a dark hole by some boys. Before the jerks came on he had some pains in his limbs.

There was a decided rheumatic family history, though the father and mother never had rheumatism. A sister, now twenty-five years of age, had acute rheumatism with cardiac lesion when fourteen years old. The paternal grandfather and a paternal uncle had rheumatic fever. The maternal grandmother suffered so much from chronic rheumatism that she had great difficulty in managing her own children. The present attack came on six weeks before admission, and since then he had had no control over his limbs, and his speech has been affected. For nearly six weeks before admission he had been under treatment, and had been taking arsenic and bromide of potassium, but without any improvement.

On admission, and when first seen in bed, he was tossing about and did not seem to be able to lie still for a moment. His upper and lower limbs were in constant movement, especially the latter. The head was at times jerked to the one side and at times to the other, and occasionally backward. The whole body was from time to time bent backward like a bow. If asked to protrude the tongue he jerked it out, sometimes to the one side and sometimes to the other. The muscles of expression also participated in the movements, the eyebrows being raised from time to time, but on the whole the face was placid. There was an auriculo-

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systolic murmur at the apex. Pulse weak. Temperature 99·8°. The patient was ordered a draught containing ten grains of chloral hydrate and fifteen grains of bromide of potassium.

On Sept. 1st four drops of arsenical solution were ordered to be taken four times a day, and, being restless at night, the draught was repeated. Temperature normal. At midnight, the patient having been for some time in a fearful condition, tossing about and screaming at the very pitch of his voice, twelve grains of chloral were given; he, however, spat it all out. Chloroform inhalation was then tried, until he became quiet.

2nd.—After the chloroform inhalation he remained quiet until 2 A.M., when he again began to toss about and scream as before. To-day one drachm of succus conii was ordered to be given four times a day, along with the four-drop dose of arsenical solution. Evening temperature 99·8°.

3rd.—Evening temperature 98·4°. Patient has been a good deal quieter to-day.

4th.—Morning temperature 98·4°; evening temperature 98·4°.

5th.—Has not had a draught since the night of the 2nd. Choreic movements less.

6th.—Nurse states that he has had incontinence of urine since the 3rd. The arsenic was stopped to-day, and he was ordered to have ten drops of tincture of belladonna along with the drachm of succus conii four times a day.

14th.—Choreic movements diminishing. Incontinence continues.

26th.—Jerks almost stopped, but incontinence continues. The dose of belladonna tincture was increased from ten to fifteen drops four times a day.

27th.—Incontinence less.

Oct. 3rd.—No incontinence for the last five days; scarcely any twitching except to a slight extent about the mouth. To get up to-day.

22nd.—No purring tremor over the heart, and no cardiac murmur. The apex beat, however, still displaced downwards; no jerks. Discharged well.

Remarks by Dr. SINCLAIR.—It will be observed that on both the paternal and maternal side, but especially the former, there was a well-marked rheumatic tendency, although the patient himself never suffered from any rheumatic affection beyond the pains in the limbs complained of before the onset of the attack for which he was under my care. This case was without exception the most aggravated attack of acute chorea it has been my lot to see. The poor boy's sufferings were most painful. Arsenic and bromide of potassium in full doses had been tried before I saw him, but without any effect. It will be observed from the clinical record that although he was so ill as to require the administration of chloroform on the day after admission he immediately improved after four one-drachm doses of conium juice, and he continued to improve steadily under its use. It was not found necessary to resort to the enormous doses recommended by some authors, and derided by others. Ten-minim doses of tincture of belladonna appeared to have no effect on the incontinence of urine, which rapidly ceased on the administration of fifteen minim doses four times a day. The cardiac murmur also disappeared under treatment. On October 21st, 1884, the patient's mother stated there had been no return of the disease since the boy left the infirmary.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Lumbar Nephrectomy.

AN ordinary meeting of this Society was held on Tuesday last, Dr. George Johnson, F.R.S., President, in the chair. The discussion on Mr. Morris's paper lasted the whole evening, which was prolonged for half an hour beyond the usual time.

Mr. HENRY MORRIS read a paper on a successful case of Lumbar Nephrectomy for Renal Calculus. A labourer, aged thirty-five, who had suffered from well-marked symptoms of renal calculus of the right side since the end of 1881, and had been under the care of Dr. Douglas Powell at the Middlesex Hospital, came again under treatment in October, 1883. In November, 1882, Mr. Morris had explored the kidney digitally and with the probing needle, but did not detect the stone. On October 24th, 1883, the exploration was repeated, but again failing to detect the stone the kidney was removed through the lumbar incision. The patient made an uninterrupted recovery, and at the present time is at hard work as a charcoal-burner, and "is as well as ever he was in his life, and able to work without the slightest inconvenience." The kidney excised was of normal size and appearance, and the secreting structures were found by Dr. Coupland on microscopical examination to be quite healthy. The organ, however, was harder and tougher than usual, and contained a rounded rough calculus about the size of a marble. Careful daily examination was made of the urine by Mr. Paul, both before the nephrectomy and for more than six weeks after the operation, so that the rapidity and power with which one kidney can take on the whole of the excretory function was shown in a table which formed part of the paper. The results are equivalent to those of a simple physiological experiment, because a healthy kidney (so far as its excreting substance went) was removed, and a healthy one was left behind. A comparison was made between the lumbar and the peritoneal methods of nephrectomy. It was shown that the arguments which have been used in favour of the peritoneal operations were more theoretical than practical, and that if logically followed out they were likely to lead to pernicious results. The conclusion arrived at was that lumbar nephrectomy is, as a rule, the better operation, though there are exceptional circumstances and certain diseased conditions in which the abdominal method is preferable. In nephro-lithotomy the lumbar incision, and that only, ought to be employed. In judging of the condition of the opposite kidney to the one to be removed, we have to depend upon the general symptoms of the case and upon the amount of urea daily excreted. But it is not correct to infer that the kidneys are diseased because they excrete a daily average quantity of urea even less than half the standard quantity. Persons who have long been living an invalid life, and who have lost much flesh, may, with perfectly sound kidneys, only pass from thirty to thirty-five ounces of urine a day, and eliminate not more than from 1 to 1·3 per cent. of urea in this quantity of urine.—The PRESIDENT supposed that the chief points for discussion would be the relative merits of the peritoneal and lumbar methods of nephrectomy.—Mr. THOMAS BRYANT thought the case a valuable addition to the surgery of the kidney, and presented many interesting points for discussion. It was, no doubt, a physiological experiment as to the value of a kidney, and proved that one kidney, if good, would very soon take on the action of both kidneys. The question of diagnosis was very important; careful manipulation and exploration had failed to detect the stone on two separate occasions. In all cases of suspected stone the operation of nephro-lithotomy would be undertaken as one of an exploratory kind before it could be anything more, for the surgeon was perfectly justified in exploring the kidney when the symptoms pointed to a calculus. The suggestion of incising the pelvis of the kidney for the purposes of searching was a good one, and not much harm could come even if incision be practised through the parenchyma of the kidney. He had no doubt whatever that the lumbar operation was certainly *the* operation for nephro-lithotomy, for the reasons that the pelvis of the kidney could be better got at from behind than from the front, and a most thorough investigation could even be carried out at this site. His feeling was greatly in favour of the lumbar incision from all points of view. Where the diseased kidney is greatly enlarged the employment of the peritoneal section was perhaps called for. In a measure the removal of a kidney had been an accident, as in cases where other organs were supposed to have been the cause of the abdominal tumour, for which the abdominal section had been practised. It was a question whether, in pyonephrosis or hydronephrosis removal of the kidney was required. Would not drainage and washing out effect all that was necessary? Would a discharging sinus, continuing for years, justify the operation of nephrectomy? He referred to three cases in which he had respectively removed eighty-eight ounces of pus, one quart of matter, and thirty-six ounces of pus, all of which were in a favourable state, although the ultimate recovery was slow. He had not yet removed a kidney, and doubted whether he ever should do so.—Mr. WHITAKER HULKE said that, like Mr. Bryant, he had not practised nephrectomy, but had some experience of nephro-lithotomy, and cutting into the kidney. He felt sure that the lumbar

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incision was certainly preferable to the peritoneal section. He agreed with Mr. Bryant that if the tumour were large the peritoneal section would be best if it were the intention to remove the whole kidney. But in cases of hydronephrosis and pyonephrosis the lumbar incision and drainage would obviate the necessity of the peritoneal section. In cases of extirpation of the kidney by the abdominal method a perinephritic collection of pus might be met with after removing the kidney from its capsule, the inevitable result would be peritonitis. He referred to cases in which the symptoms pointed to stone, and in which no trace of calculus could be made out by any means or at any time. A boy aged nineteen, who was the subject of frequent attacks apparently of renal colic, had been unable to earn his living, and Mr. Hulke had made an examination of the kidney, adopting the method of a longitudinal incision parallel with the outer border of the quadratus lumborum, but neither by manipulation, nor any method of exploration, either of needling or otherwise, was any certain indication of the presence of a stone made out. He considered that a limited incision into the pelvis of the kidney was not only justifiable, but ought to be made when other methods of exploration had failed.—Mr. KNOWSLEY THORNTON congratulated Mr. Morris on his escape from one of the calamities of surgery, seeing that a kidney so obviously healthy as the one removed had been followed by no evil consequences. He could not but think that so small a calculus might have been removed and the kidney saved. One of the great advantages of the abdominal section was the freedom with which one might incise without any great danger of ill effects ensuing. He noticed that Mr. Morris's patient had been lying in a damp barn, and he questioned how much this sudden chill was one of the most common causes of the formation of stone. He could not agree that the ureter drawn out of the abdominal wound might lead to obstruction of the intestines, and thought that if left untied at the back of the abdomen there was more danger of sloughing and septic inflammation resulting. The urine was ammoniacal and offensive, and the ureter had become more or less sloughy in cases under his care, but he considered that the ureter was equally likely to undergo similar changes if left in the lumbar region. He thought that bringing out and keeping the ureter separate from the other tissues was by no means an useless precaution. He advocated the abdominal method as a means for removing calculi from the kidney, although he was sure that he would be in a minority of one. He narrated a case in which he had removed a calculus by this method. He gave him the advantage of examining the other kidney. Everything hinged upon the fear which surgeons had of wounding the peritoneum. He would just as soon, or rather, wound the peritoneum than any other tissue of the body. He had seen a case with a fistulous opening in the loin getting steadily worse, and only saved his patient by timely nephrectomy by the abdominal method. Incontinence referred to by Mr. Hulke there need not necessarily have been a fatal case; no doubt a perinephritic abscess was a serious complication of the abdominal section, but efficient washing and drainage of the peritoneum might prevent a fatal result. He showed that statistics were in favour of the lumbar incision, and he felt sure that the abdominal section, if fully tried, would give the best results. In many cases the symptoms were no guide to the state of the other kidney. He was of opinion that examination by the abdominal section would give good indications of the state of the kidney. It would have been possible to detect the stone in Mr. Morris's case if the abdominal method had been employed.—Mr. CLEMENT LUCAS agreed with most of the conclusions of the paper, and was glad that Mr. Morris had adopted the method of an oblique combined with a vertical incision, which he (Mr. Lucas) had advocated. It was a misfortune, however, that the kidney should have been removed. He asked whether the peculiar method of manipulation of pressing the kidney further against the psoas muscle, as practised by Dr. Hawes, had been employed. Nephro-lithotomy, followed by nephrectomy, had been the stages employed by him in all cases. The urine was normal throughout, and in every respect in some cases of calculus which had been under his care. In one case the boy, at the age of three years, had been cut for stone in the bladder. Mr. Durham had had a similar experience. These were presumptive evidence in favour of a calculus if the person had been previously cut for stone. In the case of strumous pyelitis he thought that the pus in the urine was rather in excess of the pain, whereas the opposite pertained in cases of calculus. The fact that the substance of the kidney was insensitive was important, and renal colic was due to the presence of foreign material in the pelvis or ureter. We knew that clots of pus and of blood give precisely the same pain as the passage of a calculus. Reference was made to a case under the care of Mr. Thomas Smith in which sudden death had occurred, and the autopsy showed that an enormous stone had blocked each ureter, that there was a calculus in the gall-bladder, and a sarcoma of the wall of the heart. With regard to drainage through the loin, he was not sanguine as to the ultimate result in the great majority of cases. In those instances which he had witnessed a subsequent nephrectomy, though necessary to save the patient, was always, however, successful. He should never adopt the abdominal section except in cases of large solid tumours of the kidney. The treatment of the ureter was by no means a settled question. He referred to a case in which there was blood and pus in the urine with symptoms of a calculus; at an exploratory operation the cellular tissue was adherent at one spot, and here there was fluctuation; aspiration showed it to be a pultaceous abscess the size of a walnut, which was opened and drained.—Mr. W. HULKE said that in the case he had narrated with the exception of the presence of crystals of oxalate of lime the urine was normal.—Mr. R. BARWELL spoke of the occurrence of severe paroxysms of pain without any sign of disease of the kidney being detected by any method of examination. If the kidney had not been removed by Mr. Morris, the man would still have suffered from the pain, and so, in his opinion, the removal was not a misfortune. The case of a woman aged forty-four, who suffered from paroxysms of pain, and who had passed much pus and blood in the urine, was narrated; the kidney was very loose and movable. He made an exploration by the lumbar method, but found no disease; the patient remained free from pain for three weeks, but after the healing of the wound the pain returned, and some time later the kidney was found to have escaped into the subcutaneous tissue, but no pus or blood was passed in the urine, though much pain was still experienced. After he had replaced the kidney in the abdomen the patient grew weary, and went away from the hospital. The ureter, like the ovarian pedicle, might cause obstruction of the bowels. In one of three cases the ureter had sloughed; he considered that there was no great advantage in tying the ureter. That renal tumours of a large size could be removed through the loin he felt sure, though difficulties had been experienced by him recently.—Mr. F. C. LARKIN said that in 1869, owing to a case of renal calculus, and to a case of rupture of the renal artery, where the man had only one kidney, he had undertaken a series of experiments on rabbits to prove that if one kidney were extirpated the other kidney could take on all the renal functions. On Oct. 9th, 1869, he had read a paper on Nephrotomy.—Sir SPENCER WELLS spoke on the question of diagnosis; he referred to one rather easy way of detecting a stone in the kidney, a method advocated by Simon, in which the hand was passed into the rectum with a view to the diagnosis of ovarian tumours and outgrowth from the uterus. In a case which was diagnosed as one in which both ureters were blocked by stones, Sir Spencer Wells had found the tumours to be ovarian. He considered that rectal exploration was a mode of gaining information much more simple than any method requiring incision of important structures. Whether it was better to explore through the loin or by the abdominal method was still a question, and many more accurately recorded cases were needed before the mind could be made up on it.—In reply to Mr. MACNAMARA, Sir Spencer Wells said that he had felt a stone by the rectal method.—Mr. MORRANT BAKER considered that the rectal method involved considerable danger. He had had to do with cases requiring renal exploration on three occasions, but his experience led him to believe that we had not yet facts at our disposal on which we could say which was the better operation, the lumbar or the abdominal. He would not be astonished if there were a reaction in favour of the peritoneal section, although his cases were all operated on by the lumbar method. Another point which deserved consideration was whether the fingers should be passed between the kidney and the capsule rather than between the latter and the peritoneum; it was true that in this modification more ligatures, tearing, and oozing would be expected; but he questioned whether the kidney might not be removed more safely than by any other means. In all his cases previous nephrotomy had been performed, and the cases grew steadily worse, so that nephrectomy was required. The first case was that of a girl, aged ten

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years; and she lived a year after the operation of nephrectomy. He thought that the fact of her having only one kidney might have led to her death, for in an illness it was possible that such patients having but one kidney ran a considerable risk of life.—Mr. ARTHUR E. BARKER considered that we should not lose sight of a distinction which ought to be drawn between the amount of disease of the kidney. He said that everything depended on the state of the kidney. If there were a fistula which constantly discharged a daily quantity of ten to fifteen ounces, great risks of phosphatic deposit which tended to block up the sinus were run, and such obstructions had been known to produce high febrile action; whereas, if the fistulous opening gave but very little discharge, there was far less chance of serious accidents arising.—Mr. MORRIS, in reply, said that no doubt the case was a misfortune from a surgical point of view, though the removal of the kidney was not a misfortune for the patient. With regard to methods of exploration, that of incision into the kidney had at that time not been thought of by him nor suggested to him by his reading. The burden of his paper was to show that such an incision should be employed. With regard to the ureter, he thought that Mr. Thornton's argument was its best refutation, for if sloughing of the ureter did not occur by detaching it from the bed of connective tissue in which it lies, it would be astonishing, seeing that the branches of the parietal arteries, and of the vesical and renal arteries, were its sources of blood-supply. In Dr. White's case the ligatures did set up obstruction and excited an abscess at the site of the pedicle, though the case recovered by the pus draining away through the ureter and bladder, and not by discharging upwards through the abdominal wound. These considerations formed the strongest argument in favour of the lumbar incision. Mr. Morris had not the least fear of the peritoneum, though he had the highest respect for it, and he felt that it was a land on which he had no right to trespass whilst the same conclusion might be arrived at by other means. By compressing the kidney against a table he had been unable to detect the stone. Mr. Bennett May had sent him word of the removal of a scrofulous kidney weighing 14 oz. through the lumbar incision. Four days later the patient died, and the other organ was concealed in fat, and its condition could not be made out at the autopsy until it had been enucleated from its bed of fat, when it was found to be in a caseous state. In this case the patient lived four days without any renal tissue, and up to the time of operation she was secreting less than eighty grains of urea per day. Dr. Goodhart had collected statistics for him, and showed that of 4632 autopsies there was but a single instance of a solitary kidney. It was true that nephrectomy had been performed in a case where there was but one kidney. But what sort of case was this? It was one in which there was deformed external genital apparatus, the vagina and the uterus being absent. He had a gentleman under his care who discharged 10 oz. of urine in the loin, and this gave him no inconvenience, and he doubted not that his patient was in a better condition than if the kidney had been removed. On many occasions he had resorted to rectal examination, but he had considered it to be less valuable than it seemed to be, for the reason that the hand was so cramped. He had seen a case of ruptured rectum due to digital exploration. Replying to Mr. Larkin, he reminded that gentleman that about the beginning of the century Dr. Blundell had shown that a rabbit was able to live without a kidney as well as without a uterus.

MEDICAL SOCIETY OF LONDON.

Anæsthetics.

AN ordinary meeting of this Society was held on Monday last, Mr. Arthur E. Durham, President, in the chair.

A case of Cheiro-pompholyx was shown by Dr. FARDEN.

Mr. BRAINE read a paper on Anæsthetics. He said that for brief operations nitrous oxide gas was the best, and for prolonged operations the gas followed by ether. Many anæsthetics caused death through the circulation; these were chloroform, bichloride of methylene, dichloride of ethydene, ethylic ether, and many other members of the chlorine series. Whereas ether and nitrous acid caused death only through cessation of respiration in the first place; with the larger group death begins at the heart and is instantaneous. In cases where the failure occurs first at the lungs, artificial respiration might produce a good result, although more than a minute had elapsed. With regard to the bichloride of methylene, he would like to know how much vomiting was met with. He considered that vomiting after ether was often caused by flatus. One of the best remedies for hiccough after the administration of anæsthetics was green tea without milk or sugar; dilute solution of hydrocyanic acid was also valuable. Nitrous oxide was said to cause congestion of the face and head, but in his opinion there was no congestion; a careful investigation would show that the vessels diminish in calibre and that the blueness was due to alteration of the blood and not to dilatation of vessels. He thought that the dose of "laughing gas" which was now given afforded an explanation of the want of exhilaration which characterised its present use. He had given gas to partially intoxicated people without producing any excitation; it was important not to allow air to mix with the nitrous oxide. He advised that the room should be kept as quiet as possible, and that no one should speak, even in a whisper, whilst gas was being administered. He was sure that patients recovered the sense of hearing before they recovered the sense of pain, and from experiments on himself he concluded that the auditory perceptions were decidedly altered. Pregnant women could take the gas well even when they were eight months advanced in gestation. "Gas" caused no derangement of lactation. Patients suffering from hemiplegia and chorea were able to take "gas" with impunity. In cases of phthisis the nitrous oxide could be used with safety if the disease were not too extensive, though even then it could be used with the necessary precautions. Great age was no bar to the administration of nitrous oxide; he had anæsthetised a lady aged ninety-four. Patients were found to require less anæsthetic early in the morning than later in the day, as a rule. Faintness must never be allowed to set in, and so attention to matters of diet was necessary. He advocated the examination of the patient prior to the commencement of the administration, with a view to rendering the patient less nervous. Patients should be allowed to keep the eyes open, so as to inspire confidence. Attention to the state of the teeth was of the greatest importance; a whole set of false teeth were the least dangerous. Nasal tubes were not approved of. It was no doubt of great importance never to get in the way of an operator. If the administration were properly carried out struggling should not occur. He had not seen fatal results follow the use of ether in cases of albuminuria, as the Americans asserted. Ether had not produced any ill effects in his hands. In cases of relaxed uvula the sitting posture, with a forward position of the head, was advocated. If there were a free choice in the posture of the patient, he preferred that of lying on the side with the arm drawn under the trunk. The importance of raising the lower end of the bedstead in cases of tendency to failure of the pulse and respiration after the anæsthetic was laid stress upon. Two minutes and forty-five seconds was the time required to completely anæsthetise when gas was used. When bronchitis occurred he believed it was due to exposure to cold draughts of air, and not to the ether. The occurrence of the thick mottled rash about the neck took place with every anæsthetic except nitrous oxide. Nitrite of amyl in capsules was very useful in cases where failure of the circulation was feared during the use of chloroform. A polypus forceps was the best instrument to draw the tongue out. Absolute immobility was essential in warding off vomiting.—Mr. BAILEY thought nitrous oxide was the easiest anæsthetic to administer. The dangers of the administration of the various anæsthetics had not been drawn attention to by Mr. Braine; although "gas" was best for brief operations, yet it might be used for a long time, even forty minutes, though this was not advisable. Bichloride of methylene did not exist, for the mixture which was so named was very unstable. Dichloride of ethydene was a cardiac depressant, and he should not recommend it, although Clover had considered it a good anæsthetic. Artificial respiration was the remedy to be immediately resorted to when the respiration or circulation suddenly failed. He deprecated the strapping of a patient down to the operating table. A process of selection of cases would be very serviceable. The perfection of anæsthesia would be reached when we had separate agencies for preventing motion, abolishing sensation, and producing unconsciousness. The mortality from the administration of bichloride of methylene was about the same as that from chloroform—about 1 in 4000.—Dr. GEORGE EASTES said that he had used chloroform, the A.C.E. mixture, the

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nitrous oxide gas, and ether. From his first experience at Guy's Hospital he was inclined to think chloroform, as roughly used on Skinner's inhalers, as a safe mode of producing anæsthesia. But after having witnessed four deaths from the administration of the vapour of chloroform, he became less and less satisfied with this anæsthetic. M. Paul Bert, some twenty years after Clover had drawn attention to the matter, spoke of a 6 per cent. vapour of chloroform as a safe anæsthetic. But this percentage might give rise to lethal effects in man. He believed that the A.C.E. mixture was equal to most of the emergencies of an anæsthetist's practice. Clover's apparatus was recommended for the administration of ether. The value of nitrite of amyl in bringing a patient to consciousness was very great.—Mr. JENNINGS had made a series of experiments on dogs, in order to obtain a correct estimate of the danger from chloroform inhalation. Death may arise from asphyxia, or be due to paralysis of the heart. In the former mode of death the chief cause at work was the paralysis of the larynx, since if the epiglottis were drawn down like a valve no air could enter. But traction on the tongue draws the epiglottis forwards only a very little, and so he advised the use of an artery forceps for keeping the epiglottis forwards and a pair of curved artery forceps for use on man were exhibited. In dogs it was difficult to know when the heart had stopped; he had brought dogs "round" when the pulse had ceased for some time, and even as long as for eight minutes. In his experience ammonia and atropine were of much value in relieving cardiac depression. The use of morphia and atropine prior to the administration of chloroform was thought desirable.—Mr. WALTER PYE said that we could not argue from dogs to man, as there was really no analogy between the two cases. Chloroform was very fatal to dogs.—Mr. MILLIGAN referred to the possibility of inducing transient anæsthesia by breathing deeply and frequently.—Mr. BARROW considered that the variety of the surgical operation ought to influence the rate of administration of ether. In brief operations he would administer ether more rapidly. For a long operation the patient should be more slowly anæsthetised.—Mr. ADAMS FROST made some remarks on the anæsthetic value of muriate of cocaine; the occurrence of vomiting was frequently fatal to good results in ocular operations. A 4 per cent. solution of cocaine for small operations, such as "needling" the capsule of the lens, was used three times with success, but a narcotic effect ensued, all the patients sleeping for five hours at a stretch.—Dr. FELIX SEMON referred to cocaine as a local anæsthetic in operations on the nose and throat. A 4 per cent. solution had been used, but a very much stronger one, such as a 20 per cent. solution, was much more efficient.—Dr. D. W. BUXTON said that his experience taught him that dogs were peculiarly susceptible to chloroform. With regard to bichloride of methylene, which was a mechanical mixture of chloroform and alcohol, he said it was brought before the public under false colours. He thought that it caused less nausea and less vomiting, but the narcosis produced from it passed very rapidly away. He was inclined to believe that laryngitis and bronchitis were induced by ether. Chloroform was a safer anæsthetic than ether for children. Nitrite of amyl acted like chloroform, and dilated the arterioles.—Dr. RICHARD PARAMORE referred to the dabbling of the public in dangerous anæsthetics.—Mr. BRAINE, in reply, maintained that nitrous oxide was, in inexperienced hands, difficult to give effectively. It was important to render the patient thoroughly insensible before leaving off the nitrous oxide and commencing the ether. Sometimes with nitrous oxide he had not observed any change of colour.

ACADEMY OF MEDICINE IN IRELAND.

THE opening meeting of the Pathological Section for the session 1884-85 was held on Friday, Nov. 7th, Dr. FOOT, President, in the chair.

The PRESIDENT delivered an interesting and suggestive inaugural address on the Cultivation of General Pathology.

Mr. KENDAL FRANKS read a paper on a case of Intussusception of the Small Intestine, which had occurred in a man under his care. Some of the symptoms of that affection were present, but on the whole the diagnosis was most obscure. An exploratory abdominal incision was determined on. An intussusception, measuring eleven inches in length, was found in the right iliac region, and various methods of reduction were attempted, but without success for a considerable time. Part of the gut was almost gangrenous, and the peritoneum had given way in places. These had to be sutured. The patient died a few hours after the operation. The chief points of interest in the specimen exhibited were, in the author's opinion:—(1) The seat of the intussusception in the small intestine, far above the ileo-cæcal valve; (2) the difficulty of diagnosis; (3) the question of operation in reference to adhesions.—The PRESIDENT remarked that perhaps the difficulty of reducing the tumour after it had been exposed was that the natural process of cure had set in and adhesions between the surfaces of the entering and the returning cylinders were being effected. Possibly, if it had been left alone a little longer the natural process of suppuration and sloughing would have ensued.—Dr. H. KENNEDY observed that the cases of intussusception which he had seen had been invariably chronic in adults and acute in children. He had lately had a case which began with extremely acute symptoms, and yet, after five weeks, a post-mortem showed that the intussusception must have been of three or four years' duration. He had seen six cases of the affection, and they all commenced at night, and, as a general rule, the patients had eaten something out of the way for supper—such as cockles with porter, a salt herring with butter-milk, &c. Having regard to the safety with which the once formidable operation of opening the abdomen was now performed, he thought that cases of this sort should be surgically met infinitely more early than they had been.—Professor BENNETT noted that several of the injections were followed by hæmorrhage. He had often dealt with cases of intestinal obstruction and had got them well under by the use of enemata, and he had not known the bleeding to occur after the enema, except in cases where there was an intussusception.—Dr. WALTER SMITH said the diagnosis of intussusception was extremely difficult, and they should be thankful for all the light that they could get on the subject. The author of the communication had stated that he had inferred an obstruction in the small intestine from the occurrence of indican in the urine. If that conclusion were justified it would be a great help to diagnosis; but he did not think their knowledge of physiological chemistry as regards this point was as yet sufficient to establish a definite relation between intestinal obstruction of the small intestine and the formation of indican. Immense quantities of indigo were found in the urine in cases in which there was no intestinal obstruction. He had found it to occur in cases of pleuritis, and in one case of peritonitis which came under his observation.—Mr. FRANKS, in reply, did not think any spontaneous cure had commenced in his case. At the place where the intussusception took place there were no signs of lymph at all, and if sloughing had taken place it would have been only a sign that the patient was a stage nearer the grave. In the two cases of which he had spoken the symptoms were diametrically opposite. The case which turned out to be chronic had the rigidity of the abdominal muscles and peristalsis, while the acute case had the distension of the abdomen and no peristalsis.

Mr. WHEELER exhibited and described a Tumour which occurred in the Hypogastric Region of a female, aged nineteen. She was of a fair and ruddy complexion. The tumour was firmly fixed in the region of the pubes, the superior portion of it being rather movable. There was an enlarged gland in the groove, and on the surface of the tumour was a fungating mass. The tumour had grown within a period of thirteen months, and the patient was admitted into the City of Dublin Hospital in the end of last July. An examination with the sound proved that the uterus was perfectly free, and that perhaps the bladder was free also, although there was not so much certainty as to the latter. There were no constitutional symptoms; she ate well, and her excretions were healthy. The tumour was excised by means of two lateral excisions. Severe hæmorrhage took place, which did not appear to proceed from blood-vessels, but from sinuses within the tumour, which sprang from the pubes and lay on the peritoneum. It weighed 16lb. 6oz. Dr. Abraham had found it to be a spindle-celled sarcoma. Neither the bladder nor the peritoneum was engaged. Such a tumour had not been found before in females. The patient died within four or five weeks after the operation.—Dr. FITZGIBBON said he was present at the operation, and its expediency was concurred in by all who saw it. The process of removal was comparatively easy until the deep attachment of the pubis

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was reached, and then there was considerable difficulty. He believed the hæmorrhage which then occurred was the cause of the subsequent collapse of the patient. Mr. Wheeler removed the tumour without opening the peritoneal cavity or inflicting any necessarily fatal injury on the patient.—DR. EVELYN LITTLE asked how it was that a tumour which, according to Mr. Wheeler's description, started from behind all the muscles of the abdomen, and which only adhered to the front of the pubes, did not perforate the abdominal parietes.—Mr. WHEELER, in reply, said the tumour did not grow from the front of the pubes, but from behind the recti muscles. The gland, when fresh, had a very different appearance from the tumour, being then like a healthy kidney. An Esmarch bandage was applied to the girl's leg. He did not think it was from loss of blood she died.

Mr. LENTAIGNE exhibited a specimen of an Aortic Aneurysm. It was of a small size, and occurred in one of the sinuses, and was taken from the body of a woman who died suddenly in a Turkish bath. The pericardium was intensely distended with blood, and there was a considerable amount of atheroma and some alteration in the walls of the heart. The only lesion was the aneurysm, which was very small, about the size of a hazel nut.

Reviews and Notices of Books.

Elements of Surgical Diagnosis. By A. PEARCE GOULD, M.S., M.B. Lond., F.R.C.S. Eng., Assistant Surgeon to the Middlesex Hospital, &c. Pp. 584. London: Cassell and Company. 1884.

A WORK on surgical diagnosis is of the same use to the clinical student as demonstrations of anatomy are to the anatomical. Systematic text-books are excellent in their way, but for the beginner they are too descriptive and not sufficiently directive. Mr. Gould has supplied a guide to diagnosis which is sure to be immensely popular with students, for in addition to the careful arrangement and skilful comparison of facts, the text is written in good style—a by no means easy task where a large amount of information has to be compressed into a comparatively small space. Some of the pages show traces of what may be termed writing against time, notably those of the first chapter, which treats of the general features and landmarks of surgical cases. There is in consequence a certain want of accuracy and consistency—e.g., at page 19 we read that "the difference between local lividity from obstruction and that from venous hyperæmia without obstruction, such as is seen in the final stages of inflammation ..... is," &c. Such a statement is scarcely on all fours with our knowledge of the vascular changes in inflammation, for it is generally conceded that the type of "hyperæmia with obstruction" is reached "in the final stages of inflammation." Nor can we subscribe to the assertion that "all active hyperæmia is always attended with pain," seeing that the physiological phenomena of blushing, and flushing of secreting glands during activity, are instances of painless fulness of the vessels. Notwithstanding these defects, which in a great measure are inseparable from a first edition, the book is one of conspicuous merit, and will be sure to meet with the support it undeniably deserves.

The text is divided into forty-four chapters. The first four treat of the general diagnosis of wounds, of injuries other than wounds, and of the constitutional effects of operations &c. Chapters V. to XIV. are occupied with an account of injuries of the chief regions of the body. Then comes a carefully detailed description of the more salient features of pulsating, fluctuating, and other swellings. Upwards of two hundred pages are devoted to the elucidation of the problems pertaining to the surgery and pathology of the more important situations, organs, and structures. We do not hesitate to say that Mr. Gould's "Elements" is unique in its excellence.

The Elements of Physiological Physics. By J. M'GREGOR-ROBERTSON, M.A., M.B., C.M., Muirhead Demonstrator of Physiology in the University of Glasgow. Cassell and Co., London, Paris, and New York.

PHYSIOLOGY cannot yet claim to be a science which is concerned solely in applying the principles of physics and chemistry to the life of the organism. Every advance in our knowledge of life tends, however, to show that ultimately this is what physiology will become; and even now it has in most of its branches advanced so far that a preliminary knowledge of these subjects is necessary in order to understand it intelligently. We have long had a distinct branch of physiology called physiological chemistry. Not so with physics; the great majority of medical students enter the physiology lecture-room without even a rudimentary knowledge of that science, and the lecturer has consequently to devote a large amount of his time to lecturing on such subjects as coils and electric currents, on the elementary principles of heat and optics, and so forth; in short, he has to lecture on physics as well as on physiology, or else he runs the risk of being unintelligible to the majority of his listeners. This difficulty will not be wholly overcome until it is a necessity for every medical student to obtain a preliminary acquaintance with physics before beginning to attend lectures on physiology. Mr. M'Gregor-Robertson's book on Physiological Physics somewhat meets this difficulty, though only to a certain extent, for the ordinary student reads as few books as he can, and the addition of a new subject to the curriculum is anything but welcome to him. With him therefore the teacher's difficulty will be as great as before. It seems to us that the book will be chiefly read by the more diligent and advanced students—those who wish to obtain a more intimate acquaintance with the details of apparatus, and with the more difficult problems in physical science on which certain parts of physiology rest.

Mr. M'Gregor-Robertson has done the student the greatest service in collecting together in a handy volume descriptions of the experiments usually performed, and of the apparatus concerned in performing them. He has also throughout the volume given directions by which the student can himself make the simpler forms of apparatus. We could have wished that more of the book had been devoted to this part of the subject, for, after all, a practical acquaintance with physiology is the most valuable kind of knowledge. This would not have much increased the size of the book; moreover, certain other parts might have been well curtailed, the relation of which to physiology is somewhat distant; we may instance the description of the various forms of barometers and thermometers.

The book, however, possesses one very serious fault; although illustrated with 218 wood engravings, the greater number of these are so small, and many so indistinct, that they are almost useless. Figures of complicated apparatus are crowded into the space of one or two square inches; the letters which mark the various objects in the figures are almost microscopic. These are referred to in the text, and the value of the description of the figures that occur there is correspondingly diminished. Mr. M'Gregor Robertson's book undoubtedly supplies a want, and if in a future edition the author sees his way to correct this error, he will still more increase its value.

Materia Medica and Therapeutics. An Introduction to the Rational Treatment of Disease. By J. MITCHELL BRUCE, M.A., M.D., F.R.C.P., Physician and Lecturer on Materia Medica at the Charing-cross Hospital. London: Cassell and Co. 1884.

THIS book, which is chiefly therapeutical in its scope, is intended as a rational guide to the student and practitioner in the treatment of disease. At the same time materia medica has not been neglected; and it has been found feasible, by the adoption of a new and entirely novel arrange-

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ment, to place the chief facts in a form in which they can be quickly appreciated and readily retained. In the compass of some 550 pages the author has succeeded in giving a fairly complete abstract of the present state of our knowledge of the subjects with which he deals. The plan which he adopts of systematically tracing the physiological action and uses of the different drugs in their passage through the body, from their first contact with it locally until they are eliminated from it with the secretions, is excellent. In that part of the manual devoted to General Therapeutics a departure has been made from the ordinary arrangement by discussing the actions and uses of remedies not under the headings of Artificial Groups, but of the physiological systems of the body. The notes have evidently been compiled from trustworthy sources, and no objection can be taken to them on the score of accuracy. The section on Anæsthetics, written with the assistance of Mr. Woodhouse Braine, is especially deserving of notice. Students naturally prefer small books for examination purposes; and we have no doubt that the present work will soon become popular with them.

Surgical Handicraft. A Manual of Surgical Manipulations, Minor Surgery, and other matters connected with the Work of House-Surgeons and Surgical Dressers. By WALTER PYE, F.R.C.S., Surgeon to St. Mary's Hospital and to the Victoria Hospital for Sick Children; Examiner in Surgery in the Glasgow University. London: Henry Kimpton. 1884.

IN this work, consisting of over 500 large octavo pages, Mr. Pye describes in full detail the various surgical manipulations, dressings, and procedures that are likely to be entrusted to house surgeons. No attempt has been made to reduce the size of the book to a small compass; on the contrary, alternative plans have been described, and care has been taken to make the directions as full, detailed, and explicit as possible. Scattered through the volume are over 200 woodcuts of dressings, bandages, splints, &c., and all of them are of a high order of merit. Mr. Mills contributes an excellent chapter on the use of anæsthetics, and Mr. Field and Mr. Heyward are the respective authors of chapters on the management of aural cases and the extraction of teeth. Mr. Pye has accomplished his task with a great measure of success, and has produced a work which may be confidently recommended as thoroughly trustworthy and likely to prove very useful to those who will consult it.

THE COMMA BACILLUS.

WE have received the following "conclusions" arrived at by Dr. E. Van Ermengen after some researches upon the comma bacillus of Asiatic cholera communicated to the Microscopical Society of Belgium on October 26th. They will be seen to traverse most of the points in dispute, and to accord with Dr. Koch's results.

1. In the intestinal fluids of patients attacked with cholera (eight autopsies and thirty-four examinations of stools) there exists an organism identical with the comma bacillus discovered by Koch.

2. Its curved shaped, its S-shaped, and chain-like groups, due to juxtaposition, and its occasional formation of slightly wavy filaments, give an assemblage of microscopical characters which render it easily recognised from pathogenic microorganisms hitherto known.

3. It is more or less abundant in the choleraic products according to the period of the disease and the time of examination. In two rapidly fatal (*foudroyants*) cases it occurred in the intestinal contents almost in a pure culture. In one case of short duration, where the patient had succumbed with very marked algide phenomena, there were very few comma bacilli to be found in the intestinal fluid. They disappear from the darker stools of the reaction stage.

4. It would have been very important to search for them in the dejecta of patients attacked with so-called premonitory diarrhœa, but our investigations were not brought to bear on this point.

5. In the single case of algide cholera, where microscopic examination failed to detect numerous comma bacilli, a culture of a small quantity of the intestinal contents on soiled linen in a damp chamber yielded an incalculable number of characteristic comma bacilli in twenty-four hours.

6. Microscopical examination of dejecta can suffice to establish the diagnosis of Asiatic cholera, when preparations containing the different forms of comma bacilli in excess are obtained.

7. Bacterioscopic research supplies the deficiencies of microscopical examination in cases where the comma bacilli are scanty, and are even not found with certainty in the preparations. The characteristic aspect of their colonies, studied under a low power (150 diam.), renders them easy of recognition. The practical value of these culture processes on the glass slide in nutrient gelatine (10 per cent.) is well shown by our experiments. Mixtures of a very small quantity of the cultivation product with a considerable amount of putrefied blood, stagnant urine, fæcal matter, hay infusion, &c., yield preparations where the typical colonies of comma bacilli have been detected with readiness in the midst of most varied vegetation.

8. The study of the morphological characters of the comma bacilli at different stages of development, cultivated in various media, chiefly in chicken broth and fluid serum, shows that they should be classed with true spirilla.

9. The most varying conditions of temperature and medium have not resulted in the discovery of a stage of spore formation; and their want of resistance to drying proves that they do not produce permanent germs.

10. Gelatine cultures cease to be inoculable six or seven weeks after having been sown. Agar-agar cultures still contain living organisms after eight to nine weeks.

11. The temperature most favourable to their development seems to be that of from 25° to 37°. C. Below 16° (between 8° and 15°) they are still developed, but with difficulty.

12. Their phenomena of growth and multiplication are extremely active. In from two to three days they completely liquefy many cubic centimetres of coagulated serum.

13. The curved bacilli of the saliva, discovered by Miller (March, 1884), and believed by Dr. Lewis to be identical with the choleraic comma bacilli, do not develop in gelatine, 10 per cent.

14. The cultures of the organisms, to which MM. Finkler and Prior attribute the production of cholera nostras, are impure. That which I examined contains two kinds of bacilli. Their mode of vegetation and the appearance of their colonies in gelatine differ from those of the comma bacilli of Asiatic cholera. One of them gives to the cultivating medium a very characteristic greenish-blue fluorescence, which is wanting in the pure cultures of the comma bacilli.

15. Attempts at inoculation of the cultivation products have so far yielded very encouraging results in some species of animals, such as dogs, rabbits, and guinea-pigs. Three out of four guinea-pigs died in two or three days after the injection into the duodenum of one drop of a culture (fourth day) of the comma bacilli in liquid serum, after the method pursued by MM. Nicati and Rietsch of Marseilles. The cadaveric appearances were those of cholera, and the intestinal fluids contained large numbers of comma bacilli.

16. The pathogenic action of these products of cultivation is very likely due to a zymosis, to an unstable albuminoid compound. Corpuscles of fresh human blood placed on Ranvier's heated platinum, and brought into contact with a drop of a serum-culture, present characteristic changes wholly comparable with those described by MM. Nicati and Rietsch in their observations on the blood of choleraic cases.

17. The discovery of the comma bacillus is of the greatest importance in the diagnosis of choleriform attacks of doubtful nature which occur at the commencement of epidemics, and for the resort to more effective prophylactic measures which this early diagnosis allows.

18. The employment of bacterioscopic methods in the diagnosis of cholera does not offer any great difficulty in practice, and it would be very desirable, in view of the serious threats of an invasion of Belgium by cholera, that a sufficient number of physicians employed in the sanitary services should be initiated therein with the least possible delay.

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THE LANCET.

LONDON: SATURDAY, NOVEMBER 29, 1884.

AT a meeting of the Annual Committee of the University of London, held on the 21st inst., it was resolved, by 15 votes against 2, "That the Annual Committee recommends Convocation to again urge upon the Senate the desirability of holding the Preliminary Scientific (M.B.) Examination twice a year." At the next meeting of Convocation this will doubtless be passed as on previous occasions, and it will probably be again ignored by the Senate. The history of this question of holding the Preliminary Scientific Examination twice yearly, and so increasing the facilities for the obtaining of the medical degrees by students, is most interesting just now, when everyone is complaining of the great difficulty which the metropolitan student experiences in acquiring a degree by honest work and intelligence. On Dec. 5th, 1879, this subject was first brought to the notice of the Annual Committee, and a subcommittee was appointed to consider it. Its report was subsequently received and adopted, and at the meeting of Convocation on January 13th, 1880, it was resolved, "That the Senate be requested to consider whether it would not be desirable that in future the Preliminary Scientific and First M.B. Examinations should be held twice a year." On July 2nd, 1880, the Registrar of the University addressed a letter to the Deans of the Medical Schools, informing them that a committee of the Senate had adopted a resolution affirming the desirability of holding the Preliminary Scientific Examination twice a year, and asking for the views of the professors and teachers in the medical schools on the proposed alteration. Fifteen replies were sent to this letter, and of these thirteen were in favour of the alteration. The movement therefore had the support of the majority of the teachers in the medical schools, the Annual Committee, the graduates in Convocation, and a committee of the Senate itself. It would have been a great boon, for a student who matriculated in January was compelled to wait eighteen months before presenting himself for this examination, and a rejected student had to wait another full year, at a great expense of time and money. Everybody interested expected that the new scheme would at once come into force. But on November 19th, 1880, eleven graduates of the University and teachers of science presented a memorial to the Senate objecting to the alteration on these grounds: (1) that it would disorganise the present (or any efficient) course of study; and (2) that it would increase the difficulties of examiners, and would be likely to render it "impossible to secure the services of examiners possessing the necessary experience." A memorial of a similar tenour was addressed to the Senate on February 15th, 1881, by six graduates of the University and teachers of science. The alteration was therefore, from the first, opposed by teachers of science almost solely on grounds of personal convenience, for it is quite absurd to suppose that no alteration can be made in their courses of study. Extra work on the part of the teacher, or additional assistant for the junior students, is all that is necessary. On receipt of these memorials the report of the special committee of the Senate was referred back for reconsideration, and it was therefore deemed expedient that it should be also reconsidered by the Annual Committee and brought again before Convocation. A further subcommittee, including such representative medical teachers as the late Dr. HILTON FAGGE, Drs. BAXTER, CURNOW, and POORE, was appointed, and on April 8th, 1881, it again recommended "That the Preliminary Scientific Examination be held twice in the year," and in May, 1881, this resolution was adopted by Convocation. The opinion of Convocation and of its Annual Committee was thus fully expressed, but the Senate, acting on the advice of the science teachers and the permanent officials of the University, who of course see great difficulty in carrying out such a simple reform, declined to act on their recommendation, and adopted instead the futile suggestion of allowing a student to postpone any one subject to the year following his examination. This has now been abandoned, and new regulations have been passed by which the student is precluded from doing any medical work before passing his Preliminary Scientific Examination. No student, therefore, who wishes for the degree can enter on the scientific course and reckon any medical study which he may have previously done. The agitation for increasing the facilities by a double examination has resulted in more closely fettering the aspirant for a degree. In 1880 a letter was addressed to the Chancellor by Dr. BRISTOWE, pointing out how few of the English students became medical graduates of the University, and that this was mainly due to the severity of the matriculation and Preliminary Scientific Examination; but no heed was paid to his suggestions. In 1881 and 1882 it was moved in the Senate that "boards of studies" should be formed as a means of bringing the authorities into closer relations with the teachers, but the late Vice-Chancellor was quite indignant that such an innovation should be seriously urged, and as the "masterful" mind of Sir G. JESSEL gave but little consideration to any views which were opposed to his own, the University remains a mere examining board, out of all sympathy with teachers or pupils. This history of the Preliminary Examination, of Dr. BRISTOWE'S letter, and of the "board of studies" proposition, shows how little influence is possessed by teachers or by graduates on the deliberations and actions of the Senate, and how small a chance there is of the University adapting itself to the legitimate requirements of the medical student in the metropolis. The members of the Senate are appointed for life, and the mode of filling vacancies is so peculiar that Convocation itself can scarcely exert even an indirect influence; but to this point we must return on another occasion.

We must now enlarge the meaning of the word "hospitalism" as used by Sir JAMES SIMPSON and others. They used it with reference to the bad physical elements of the atmosphere in hospitals; and we cannot refer to this use of the word without reflecting how great and splendid have been the results of its use. They have amounted to a revolution in surgery; beginning, perhaps, three-quarters of a century ago with the improvement in the ventilation of lying-in hospitals, and ending in that almost perfect state of atmo-

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sphere, compounded of fresh air *plus* disinfecting elements, in which the performance of ovariotomy in a general hospital can be made as safe as in a private and fresh house. "Hospitalism," in the sense used by Sir JAMES SIMPSON, is likely to become an obsolete word. But we need it still, and, indeed, more than ever to signify a tendency in the public to rush off to hospitals for every conceivable ailment, from a cut finger to a sore-throat. Hospitals used to be considered the refuge of the poor, now they are sought by the rich. The poor are being ousted from whole wards that those who have good beds at home may have hospital beds. The Apostle JAMES in his day administered a just rebuke to those churches which catered for people with gold rings. We want a bishop nowadays who will denounce with a prophet's indignation those hospital authorities which "sell" their wards, and congratulate themselves at the Mansion House on the success of schemes for excluding the poor from the hospitals that were built for them. This kind of hospitalism needs public attention to be directed to it, for it is proving infectious and demoralising. A hospital is meant for a class only too numerous in every large community. It can only be used for others by an entire revolution in our notions of charity. Mr. SAMPSON GAMGEE, in his recent pamphlet, raises, if he does not entirely settle, several most important questions in regard to hospitalism, in the new sense which we propose to give the word. He shows the tendency of thousands of people to flock to the hospital who never went to it before. His admirable address on "Our Medical Charities and the Working Classes," which we are glad to see published in a convenient and complete pamphlet form, contains, among many other valuable statistical tables, one giving the comparative growth of the general and the hospital population of Birmingham. We must give it entire.

	Population of Birmingham.	Patients relieved at the Birmingham medical charities.	Percentage.
1867	325,895	66,671	20·45
1876	371,839	104,048	27·98
1883	414,846	144,750	34·89

The period of sixteen years included in these dates was on the whole one in which wealth accumulated considerably in Birmingham. This should have made the people more unwilling, as it certainly made them less fit, to seek relief at hospitals. But they went to the hospital in greater numbers at the end of the period, by 14 per cent. of the population, than at the beginning. In connexion with this fact Mr. GAMGEE brings out still more prominently another—viz., that the working classes of Birmingham contribute an annually increasing sum to the hospitals. Forty years ago they gave nothing; now the expenditure of the medical charities of the town is £44,351, towards which the working classes in 1883 made the creditable contribution of £9664 8*s.*, or 21·79 per cent. Eighty per cent. of this amount is paid in three forms: annual subscriptions (£1195 4*s.* 5*d.*), registration fees (£1973 6*s.* 6*d.*), Hospital Saturday Fund (£5439 9*s.*). Birmingham is proud of its Hospital Saturday Fund, and Mr. GAMGEE is disposed to be proud of it too. We are not inclined to be severely critical in trying to find reasons for abating this pride. But if the case of Birmingham is to be taken as a model—and there is an extensive disposition to regard it so,—it is high time to inquire what is the exact value of the generosity of working men in their hospital contributions. The two facts must be taken together—viz., that the working men of Birmingham are giving more to hospitals, and that they are using hospitals more than they formerly did. At first sight this may appear right and proper. After a little examination of the facts the case is rather more doubtful. It is sometimes, and with good reason, complained that rich men use their hospital or dispensary subscription not to benefit the really poor, but to provide cheaply for the treatment of their own servants at public and charitable institutions. Is it not true that something of this kind is going on at Birmingham, and that the working classes are taking too commercial a view of their subscriptions and expecting a very big *quid* for a very small *quo?* It will be a misfortune for the Birmingham working classes to imagine that their contributions to hospitals and dispensaries entitle them to use these institutions on the ordinary medical occasions of life, or to think that they and their families are to be attended wholesale at public institutions in consideration of their contributions to the Hospital Saturday Fund or the payment of registration fees. There is another party to be considered and consulted before our hospitals can be thus commercialised—and that is the medical profession. Its members are deeply and willingly committed to the gratuitous service of hospitals and dispensaries in *fit cases.* But there is a growing determination that the cases shall be fewer and fitter, and that the Hospitals and Dispensaries themselves must take more pains to protect their staff from the exhausting and enormous demands of crowds of out-patients, half or three-fourths of whom should not appeal to the charitable principle, but be relegated to the private practitioners or the provident dispensaries of their respective neighbourhoods. We share with Mr. GAMGEE satisfaction with the disposition on the part of the working men of Birmingham to help the medical charities. We gather that he shares with us the opinion that it is necessary to guard working men from thinking that they can thus *buy* all their medical service from medical charities. We are convinced that he does from various passages in his able and important address. Hospitals and free dispensaries are for the calamities of life, and are well entitled to the benevolent subscriptions of working men. But they are not for use by well-to-do men in the ordinary medical emergencies of their life. Working men who think to use them so are deceiving themselves. They are doing not a charitable action, but one of questionable justice, not to say meanness. One striking illustration to our purpose is given by Mr. GAMGEE. The contributions of working men to the Lock and Skin Hospital in Birmingham amounted in 1883 to £574 1*s.* 5*d.*, actually £8 in excess of the expenditure. How admirable! Some politico-medical reformers would say, "Not so at all." Well over £500 of this was in registration fees. Mr. GAMGEE himself points out by implication how questionable is the application of the word "charity" to such an arrangement. What guarantee has the public—still more what guarantee has the medical profession—that the registration fees were anything but an evasion of proper medical charges for the cure of improper diseases? It will scarcely be believed by those who have not thought of the matter, that the medical profession who treated all this disease got no remuneration

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for its work, and for aught that appears in Mr. GAMGEE'S address the whole system is discreditable. If care is not taken in working this system of registration fees, the medical treatment of the working classes will become more demoralising to themselves and unjust to the profession than ever. A few years ago there was a healthy and creditable discovery that the payments to club doctors were disgracefully low, and in many places they have been justly raised. But in some quarters and directions shabbiness is in the ascendant. The registration fee system is one example of this shabbiness, or may readily become such, where those who can afford to pay a medical man a pound or two a year sneak into a hospital with a registration fee. Another gross form is the Friendly Societies' Medical Institution, which, as Dr. MAUNSELL of Bath has lately powerfully shown, tries to exact a vast amount of labour from the youngest and most impecunious members of the profession for a contemptible rate of remuneration. He estimates that work which even under the old friendly society arrangements was not too liberally paid is now grossly underpaid; that what medical men got £3000 for, they get now perhaps £600. We confidently appeal to working men to denounce such injustice, and to stand by the medical men, in private or club practice, who have been amongst the best friends of themselves and their families.

DR. D. BALDI has recently undertaken a series of experiments on the process of secretion of the bile in the laboratory of M. LUCIANI of Florence, in which he has endeavoured to ascertain whether it takes place in a uniform manner in accordance with the presence or absence of food in the alimentary canal, and whether it varies materially with the nature of the food. The results are given in the third volume of the *Archives Italiennes de Biologie*. A biliary fistula was first made, the ductus communis choledochus being ligatured so that no bile entered the duodenum. Dr. BALDI found that there was a singular irregularity in the quantity of the secretion formed, distinguishing the function of the liver from all other digestive secreting organs. Not only was there great variation in the absolute quantity secreted, but the composition of the bile differed remarkably at different periods after a meal. Speaking broadly, in an animal that has been supplied with food, there is an augmentation in the total quantity of bile secreted in the course of some hours, as compared with the quantity secreted in the same time by the animal when fasting. It is not possible, however, to fix the time at which the secretion of bile after food is at its maximum; indeed, it is even possible that the maximum may be attained during some one hour when the animal is fasting. Different kinds of food, starches, proteids, fats, and mixed foods, have no appreciable effect on the quantity or quality of the bile. If we consider, in addition, that, unlike the other secretions which are poured into the intestinal tract, the bile continues to be secreted in prolonged fasting, as has been demonstrated by various experiments, we shall be led to the conclusion that this fluid, from a physiological point of view, has more analogy with urine than with the other digestive fluids. In a second series of researches, in which the effects of reputed cholagogue drugs were investigated, Dr. BALDI is not in accord with either RÖHRIG or with RUTHERFORD. RÖHRIG found that colocynth was the most active cholagogue; then, in succession, jalap, aloes, senna, and rhubarb. RUTHERFORD considered the order to be—podophyllin, rhubarb, aloes, colocynth, senna, and other drugs. BALDI experimented with podophyllin, rhubarb, jalap, sodium phosphate, pilocarpine, and Carlsbad water, and, from his results, feels inclined to doubt altogether the cholagogue value of all these substances. He admits, however, that the presence of a biliary fistula seriously interferes with the action of remedies. Dr. BALDI undertook still another series of experiments, to determine whether bile injected into the blood was excreted by the liver. The animal employed was the dog. The bile injected was that of the ox deprived of mucus. Dog bile is brown; ox bile green. Almost immediately after the injection of ox bile the colour of the bile secreted by the dog became green.

MR. FLEET has lost his case against the Metropolitan Asylums Board in connexion with the small-pox encampment at Darenth. His contention was that the camp constituted a danger of infection to his house, which stood at a distance of 655 yards from the nearest portion of the site that was used by patients. This point, and the question as to whether the Asylums Board had done anything illegal in their provision and management of the camp, were the only matters that came before the High Court of Justice. Mr. Justice PEARSON, in giving judgment, expressed his gratification that the issue was thus limited, adding that he had feared he might have had to decide upon the great dispute as to the aerial dissemination of the small-pox contagium. On the general question, Mr. Justice PEARSON pointed out that any experience with respect to London small-pox hospitals, situated as they are in a densely peopled city, could not of itself be held to apply to the camp of Darenth, which had been placed in a sparsely populated locality. In London, he admitted that the evidence went to show that small-pox did spread in the immediate vicinity of hospitals, but at Darenth there was an absence of any such evidence, and hence he could not but conclude that the plaintiff had failed to prove his case. He, however, gave the plaintiff a very strong hint as to the lines on which his action should have been based by saying that he "could hardly think anything more destructive of the amenities of a residential property than the neighbourhood of a small-pox hospital, nor did he understand the defendants to say that no injury was done to the property as a place of residence."

From a scientific point of view the trial has been a disappointing one. It has already been abundantly proved that under the conditions of a large town an aggregation of acute small-pox patients beyond a very limited number does constitute a source of danger to the community. But at Darenth the circumstances are different; for setting aside a period of extreme pressure, when small-pox patients in all stages were sent to Darenth, the camp has been reserved for convalescents and mild cases. These circumstances are entirely new, and no attempt was made to deal with them. If the plaintiff had maintained that mild cases were really acute ones, although in an early stage of the disease, and that hence aerial diffusion was as likely to result at Darenth as in London, some interesting evidence might have been forthcoming, notwithstanding the fact that owing to the

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sparse population there was as yet hardly any one to be affected at Darenth. But as the case now stands, it is evident that in the opinion of Mr. Justice PEARSON, town small-pox hospitals, if resembling in their circumstances what the London ones have heretofore been, can properly be closed as a danger to public health; whereas, on the other hand, the burden of proof that injury has already resulted will lie with the plaintiff in the case of hospitals in localities having rural characteristics. As regards the Metropolitan Asylums Board, we are bound to acknowledge the unceasing energy which they have displayed in their efforts to provide for the isolation of metropolitan small-pox cases, and we can only hope that this mingling of acute cases—under the name of mild cases—with convalescents, in the large numbers which their Darenth camp is capable of containing, will not eventually constitute a new element of danger.

Annotations.

"Ne quid nimis."

APOTHECARIES' SOCIETY: EXAMINATION IN SURGERY.

THE Court of Assistants of the Apothecaries' Society have resolved to institute an examination in surgery for those candidates for the L.S.A. who have not already passed an examination in Surgery at one of the Royal Colleges, or at one of the universities, or such other examining body as may be deemed satisfactory to the Court of Examiners. The examination in Surgery will be held twice a week, and will consist of written questions, clinical diagnosis and treatment, and the uses of instruments. It will be necessary for candidates holding no surgical qualification to pass this examination before admission for the ordinary examination, which may be done immediately after passing the surgical examination.

SIR LYON PLAYFAIR ON MEDICAL LEGISLATION.

SIR LYON PLAYFAIR has been saying his usual list of pleasant things to the universities and medical corporations of Scotland, in the hope of securing his re-election for the university. He speaks with the air of a man who can shape the future Medical Bill, conscious no doubt of having wrecked the Bill of last year. We can believe anything of Parliament and parties at present except a capacity for sound and honest work, and we see no improbability in the idea that Sir Lyon Playfair's wisdom will be accepted by the present Parliament in place of the wisdom of a Royal Commission and the immense majority of the medical profession. This infallible guide, who told the House of Commons that our much over-stocked profession was disappearing at the rate of 1600 a year, and that there was a risk of the public not being sufficiently supplied with medical men, told his constituents that a Bill of three clauses would meet all the necessities of the case, and that he hoped to see such a Bill next session. The three points to be secured are: sufficient examination in Medicine, Surgery, and Midwifery; a properly representative Medical Council; and, thirdly, that the Council should inquire and report upon, and if necessary render more efficient, the modes of teaching and examination of the different bodies which give medical education and licences. Our readers will observe that this programme contains no guarantee of any reduction in the twenty competing bodies, throws on the profession the cost of maintaining them, and on the Council the impossible duty of checking and supervising them all. Verily, the exigencies of a candidate for an election are terrible, and he has to bid high for the favours of his constituents. To judge from Sir Lyon Playfair's address one would fancy that the Scotch medical authorities, including the Corporations, had raised the profession to its present eminence, and that no evidence was forthcoming to show that the said corporations had sold fellowships, made thousands of pounds by the sale of licences, and given diplomas with freedom to men rejected by other boards. All we can say is that if Parliament can be so misled by Sir Lyon Playfair, so much the worse for Parliament. We shall certainly be no parties to treating so slightly the deep wounds of an "agitated" and misrepresented profession.

"MORBID RELIGIOUS AFFECTION."

WE have nothing to add to and nothing to withdraw from our remarks on this subject, in spite of letters approving and letters condemning the position we have taken up. It may be granted at once that it is to be regretted that there should be any need to refer to topics of such a class and character; but evil must not be allowed to work because it requires some courage to deal with it. We have not spoken precipitately, or made rash statements. It is necessary to be cruel to be kind, when those who are in a dream of folly have to be awakened. We say again that religious affection is too often morbid. In the interests of true and sober-minded religion it is essential to expose that which is simply emotional and has evil tendencies. It is not, confessedly, our business to pose as critics of honesty in conviction. The medical standpoint is, however, one which not only enables but compels the practitioner of physic to include in his field of vision much of the mental and moral life of his patient. When we see morbid religious affection paving the way for disease it is our duty to speak out plainly; and let us take leave to say that we are not to be deterred from the discharge of what we believe to be our duty by any imputation of falseness, wantonness, or wickedness. We believe, and cannot therefore hesitate to say, that the ecstatic reverie of worship or adoration into which women are wont to throw themselves before the crucifix *is* "vicious" and demoralising. We do not say that they are conscious of the real nature of the emotional excitement stirred within them; but this does not affect the fact that it is an undesirable—most undesirable—state, and we must reiterate the expression of a hope that heads of families and ministers of religion, who think more of the intellectual integrity and the mental and physical health of their people than of forms and ceremonies and "ways and means of grace," will interpose to put a stop to practices in religion which tend to undermine the very health and happiness they are designed to advance and improve. Anything and everything that suspends the control of the will, even for a moment, is injurious. Ecstasy and reverie are, physiologically considered, states of mental unsoundness. It is idle to speak of sullying the mind and moral purity by warning those who are forming the habit of falling into these states against that tendency, because the very existence of a state of ecstasy or reverie implies and involves surrender of the mind to all contingencies. It is as difficult for a woman abandoning herself to this ecstasy to prevent her thoughts from drifting into impure channels as it would be for a man entering upon a drunken tirade to determine that he would be coherent and reasonable. The "emotional nature" is as nearly allied to the passions as these latter are to the organs of which they are the function. The mischief that results from thinking and speaking of the "mind" as something apart from the body, as more than brain-function, cannot be over-estimated.

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It is the cause of most of the troubles and difficulties we have to encounter in striving to live natural and healthy lives. There is peril, grave besetting peril, in the tolerance of mind-states which do not fall under the direct, active, and continuous control of the will. Waking dreams are madness while they last, and the sort of day dream which grows out of the contemplation of the crucifix is one that may readily become morbid, and in so doing deprave the moral sense—first, because the state is mentally unsound, and, second, because the object of contemplation has special elements which may readily suggest impure thoughts.

DISEASED MEAT.

A FEW days since the Tiverton magistrates had before them an important case for decision. It was one in which the question was raised as to the fitness of a carcase of beef for human food. The facts, which were briefly as follows, were not disputed. A dairyman named Hellyer owned a cow which had recently calved. As the animal was suffering from "milk fever" Mr. Chase, the veterinary surgeon to the sanitary authority, was asked to give his advice in the matter; this he did to the effect that the animal should be slaughtered, and inasmuch as the flesh presented a healthy appearance he saw no reason why it should be destroyed. The butcher, with commendable straightforwardness, informed the sanitary inspector that the carcase was in his possession, and requested him to take what course he thought fit. Dr. J. P. McNeil, medical officer of health, stated to the Court that he considered the flesh of a diseased cow, especially after the birth of a calf, as unwholesome food, admitting at the same time that he was not in a position to condemn it on the grounds of any morbid appearances. The magistrates, after inspecting the four quarters, held that they did not see their way to condemn the meat, especially as the veterinary surgeon "could not see how the flesh could be diseased." The question, What is diseased meat? is an exceedingly difficult one to answer satisfactorily. It is needless to say that the flesh of animals infested with parasites should be discarded, seeing how uncertain are the methods of rendering the peccant bodies inert. Nor do we hesitate to affirm that animal matter which has undergone rapid putrefaction should be unreservedly condemned. The unfortunate results of eating rotten meat hitherto experienced are sufficient justifications of this assertion; but there still remains a group of cases, amongst which are included those of animals dead of specific or infective fevers, about which opinions differ as regards the propriety of allowing the carcases to be used as human food. That the latter must have deteriorated from the action of living organisms and the concomitant conditions of the febrile state is beyond dispute; but this in itself falls short of the proposition that such meat is absolutely dangerous as an article of diet. Nevertheless, we maintain that since it has been proved that certain specific diseases are communicable from animals to man, and that the flesh of animals affected with the acute fevers is very prone to decompose with the formation of what may be deadly cadaveric principles (whether these consist of fatty derivatives, microbes, or alkaloidal ptomaines matters little), we hold that the balance of evidence is in favour of prohibiting the sale or consumption of meat which at any rate contains the elements of danger, if not a certain cause of poisoning. This would undoubtedly entail a serious pecuniary loss on those immediately concerned, and would be felt in the aggregate by the community at large, though of course to a less degree; but the objection to such a procedure falls to the ground in the face of the greater one that health, and even life, may be sacrificed on terms which no reasonable being would willingly accept. It seems a little puzzling to reconcile the advice of Mr. Chase, that the cow should be killed to save it from impending death by disease, with his statement that the carcase might be eaten with safety, and that he would not hesitate to partake of it himself. However, if a person chooses to run a blockade he cannot complain if his ship is disabled or sunk, but it is quite another matter to recommend, or even sanction, the enterprise by one ignorant of the risks attending it. Possibly on the whole the most practicable plan of dealing with the matter of meat "under a cloud" would be to judge each case on its merits, providing that the opinion of the medical officer of health be paramount.

THE BISHOP OF PETERBOROUGH AND SIR ANDREW CLARK ON TEMPERANCE.

THE cause of true temperance is in the ascendant, and will be greatly helped by such speeches as that of the Bishop of Peterborough and Sir Andrew Clark. It is greatly to the credit of the Bishop that he has sided with the Church Temperance Society, and so far done what he could to counteract the influence of that little smart epigram into which he fell a few years ago, and which, though in senses true, was in its main application highly questionable. The teetotalers will put themselves entirely in the wrong if they do not meet the Bishop half way, and endeavour to make common cause with all who try to increase the sobriety and abate the drunkenness of the nation. Absolute abstention is a moral necessity for those who cannot observe moderation, and a medical necessity for a large number of cases of alcoholism. What we want is "earnest advocates" of "temperance" in the sense of the great Apostle who "reasoned" about it, men who can admit, like Sir Andrew Clark, that while "not necessary for health," there are many persons to whom it has not yet been proved that certain small quantities of alcohol, taken at stated times, at dinner and supper, are injurious. Let us abolish casual drinking, tippling, public-house drinking, and careless social uses of alcohol. This will cut off nine-tenths of the disease which now desolates families and disgraces British Christianity.

ACUTE RHEUMATIC ARTERITIS (?).

A CASE which possessed considerable interest and not a little rarity was narrated by M. Legroux at a recent meeting of the Société Médicale des Hôpitaux. The patient was a young lady, aged twenty-two, whose family history was only characterised by the presence of the arthritic diathesis. In July, 1884, she had a second attack of acute rheumatism; a first having occurred at the age of twelve years, but had left no trace behind it. The rheumatism was of a subacute character; some joints became painful, rose coloured, and a little swollen, but during the moderate fever an eruption of nodose erythema appeared on the front surface of both legs. After the lapse of three weeks the patient went to the seaside and seemed to improve considerably. At the beginning of August there was quotidian fever, which could only be explained on the assumption of a malarial origin. On the 15th of August there suddenly appeared numbness of the left hand, forearm, and arm, soon followed by acute pains and inability to move the fingers or other parts of the limb. When seen by a doctor after these new symptoms, the radial, ulnar, and brachial pulse could not be felt on the left side; the limb was icy cold; the hand and forearm were a little swollen, and presented on their dorsal aspect some spots of a rose-brown colour. Gangrene was feared, but did not occur. The fever, although somewhat abated by the administration of sulphate of quinine, still continued, and after the fresh incident increased once more; the pulse numbered 110 to 120 a minute; the temperature reached 38° to 39° C., and soon precordial pain, dyspnœa, palpitation, and a murmur of systolic time masked a pre-existing hæmic bruit

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The murmur was loudest at the apex beat, but extended towards the base and all over the aortic area. The first diagnosis made by the patient's ordinary attendant was ulcerative endocarditis with embolic thrombosis of the left brachial artery. There was a little tenderness about the left brachial artery. Dr. Charles Hardy, who saw the patient later, suggested that acute rheumatic inflammation of the artery existed because of the nodosities to be felt along the vessel, of the sensitiveness of the vessel, and of the presence of a bruit all along the thoracic aorta. The obliteration would on this opinion have been due to the acute arteritis, possibly starting from the endocardium and aorta. The limb was kept absolutely at rest, the pains were calmed by hypodermic injections of morphia, and small doses of iodide of potassium were administered. Some time after M. Legroux saw the patient for the first time. The cardiac disturbance was then marked by loud bruits, and the action of the heart was so tumultuous that it was almost impossible to differentiate the various factors of this commotion. There was an intense bruit all down the vertebral column corresponding to the path of the aorta; auscultation over the left subclavian region yielded a loud bruit. There was a tender pulsatile dilatation of the axillary artery of the size of a large plum. Below the aneurysm the brachial artery was to be felt as a hard, fibrous, pulseless cord. The limb was pale, flabby, wasted, and motionless; the hand was atrophied, and a deep furrow in front of the lunule of the nails indicated the period at which the circulation had been almost completely arrested. A small degree of sensibility remained. A slight effusion into the right pleural cavity was diagnosed. The ultimate issue of the case is not yet known.

INVALID HOTELS.

THE project of establishing hotels for the reception of invalids in London is one which, if planned with due consideration and carefully carried out, ought to command the support of the class for whom it is intended. The idea is not a new one; it is the extended, but also modified and trained, development of that which has been known as the "home-hospital" system. We may say that it differs essentially from the latter in the predominance of the home element over the hospital. Comfort is provided for as at the large general hotels, but with special regard for the necessities of disease, while at the same time exclusive centralisation, that fruitful source of quack practice, would seem to be in a great measure obviated. The prospectus which lies before us disclaims any purpose of organising a hotel medical staff, or portion of a staff. The invalid tenant is to be attended by any practitioner whom he may choose; he has his separate room, receives, subject to medical restriction, the visits of his friends, and has access under all ordinary conditions to such society as his state allows. He is in fact a sick man in chambers, where he can be cared for. In one part of the plan, the employment of a trained nursing staff under the control of matrons, the hospital principle is introduced unchanged. A compromise is thus designed between the methods of private medical practice on the one hand and those of the nursing home on the other. The blend might be a happy one or it might not. The proposed measure, it seems to us, though better than others which have preceded it, still has its weak point in this dissimilar association. Decentralisation goes hardly far enough, not so far as the title of the new establishment suggests that it will do, and not so far but that the hope of harmonious action between medical men and their nursing assistants must chiefly, if not wholly, depend upon the even balance of their social qualities. This is committing too much to human nature. The experience of Guy's Hospital a year or two ago has weakened our belief in nursing corporations. It would probably be more satisfactory to all concerned if nurses and doctors alike were available for hotel patients on some system approximately similar to that which now exists in family practice. By maintaining a fixed moderate scale of remuneration and a code of board regulations where necessary, this result, we think, might conveniently be achieved. We have spoken of the hotel principle as an extension of that of the pay hospital or home hospital. It is so inasmuch as it is intended to meet the requirements of no one class, but of all save the poorest classes, which, as hitherto, we still consider to be the appropriate charge of those great and free charities, the hospitals in the original and truest sense. The invalid hotel of whatever grade, and this no doubt may vary, should be, in short, the resort of strangers, of sick strangers, a place where they can feel at home and can be treated and healed as if they were at home. Its institution, if it be maintained as we have suggested, so that puff, quackery, and caucus over-pressure shall be equally condemned in it, need not disturb the fair equilibrium of medical work, while it will afford to many in their sickness a relief from avoidable anxiety.

DIPHTHERIA IN MICHIGAN.

THE recently published annual report of the State Board of Health for Michigan contains a number of very interesting papers. Amongst the subjects dealt with a somewhat prominent position is given to diphtheria, a special committee having been appointed for the purpose of investigating it, and a list of questions having been prepared by Drs. Kellogg and Avery, and issued to a large number of medical men. Briefly stated, the conclusions at which the committee arrive are as follows:—The disease is due to the invasion of the system by a microscopic fungus, the growth of the bacteria resulting in fibrinous infiltration and inflammation, with invasion of the blood and the whole system, the patient by his breath, &c., throwing off great quantities of the infecting material. The contagiousness of the disease is regarded as unquestionable. The contagion is looked upon as capable of attaching itself to articles of clothing, &c., and of being communicable to some of the lower animals. The poison may be retained for months, and perhaps for years, but either drying or putrefaction rapidly destroys its activity. Amongst the predisposing influences, the age of from one to five years is stated to be that during which susceptibility is at its greatest, and acute catarrh of the throat and bad sanitary surroundings are mentioned as favouring the reception of the infection. With regard to the relation of diphtheria to other diseases, all that can be said is that there appears to be some sort of relation between it and true croup, scarlet fever, and some other septic diseases. Dr. Baker, the secretary to the board, also contributes a paper on the distribution of deaths from diphtheria in the State.

MEDICAL STUDENTS AND ROWDYISM.

A SCENE of disorder seldom occurs in London without being attributed to medical students. This we think is very unjust to a class of men who are as a rule certainly young and, as befits the arduous profession they have adopted, robust and full of health and its concomitant high spirits. We venture to assert that if Charles Dickens were writing now he would have some difficulty in finding in our hospitals Bob Sawyers and Allens to typify the medical student. The medical student of the present day may be, as we have said, full of health and spirits, but he is not a rowdy or a rough; and it is unfair that he should have to bear the opprobrium and reproaches heaped on the head of such. On Monday evening last a disgraceful disturbance occurred at Covent Garden Theatre, at the close of the Promenade Concerts. It is stated to have arisen out of "an organised plan by a gang of *so-called* (the italics are our own) 'medical students' and

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others." We are glad to note and emphasise the qualification in this instance. It is true that certain cries were raised, such as "Guy's to the front!" and "Medicals to the rescue!" and it is probable that there was some medical student element in the crowd. Nevertheless we do not believe that this turbulent and discreditable scene was planned in our hospitals, or carried out by their students. Four persons were subsequently accused at Bow-street Police-court of complicity in these disorders, three of them being fined—not by any means too severely—and the fourth ordered to find a surety in £20 for his good behaviour for a month. It is significant to note that of these one was described as a builder, another as a merchant, and a third as a gentleman, the occupation of the last, who was identified as one of those who shouted "Guy's to the rescue!" not being given; he, however, denied that he knew any medical students, and excused his conduct on the ground of over-indulgence in drink.

NEPHRECTOMY FOR CALCULOUS PYELITIS.

THE dependence of the issue of nephrectomy upon the healthy state of functional activity of the remaining organ is adverted to by Dr. E. Sonnenburg, who details a fatal case in which the non-extirpated kidney exhibited no definite structural change. The case (*Berliner Klinische Wochenschrift*, Nov. 24th) was that of a woman fifty-two years of age, who had suffered from pain in the right loin since last Easter, accompanied by fever, wasting, and polyuria. She came under Dr. Sonnenburg's care in August, when the presence of a large fluctuating tumour in the right half of the abdomen was ascertained, and on aspiration pus was drawn off from it. Nephrectomy by the abdominal incision was performed on August 25th. The operation was difficult and tedious, the thin wall of the cyst rupturing in the removal. The whole pedicle was secured to the wound, but it was found impossible to suture the peritoneum. The organ was converted into a chambered, pus-containing sac, with numerous thin-walled outlying cysts, and a large branching calculus was lodged in the dilated pelvis. Hardly any renal tissue remained. Great collapse followed, terminating in death on the second day, and during the whole interval no urine at all was secreted. There was no peritonitis; the left kidney weighed 190 grammes, and was anæmic, but histologically almost normal, except for some localised fatty degeneration of the renal cells and slight increase in places of the interstitial tissue. The fatal issue of the case could not, Dr. Sonnenburg thinks, be attributed to the shock of the operation and the collapse alone; but that the condition of anuria, the cause of which remains unexplained, was in the main answerable for this result.

OPENING OF THE PARIS SCHOOLS.

THE Medical Session in Paris begins in November, and our enterprising contemporary *Le Progrès Médical* always devotes some space to a description of the introductory lectures of the various professors, which may be mentioned briefly here. M. Falret commenced a course of lectures on Mental Diseases at the Salpêtrière by dealing with the subject of classification and showing its imperfections, and proposing to treat in his course with what are termed the new forms of insanity. M. Lannelongue, discoursing on Surgical Pathology, avowed himself a follower of Lister and a believer in the germ theory. M. Blanchard treats of the subject of "Medical Natural History," and commenced his course of lectures by drawing attention to the close affinities, physiological and pathological, between man and the anthropoid apes. M. Trélat opened his course of Clinical Surgery at the Charité Hospital by some general remarks upon clinica teaching, and the method he intended to pursue. At the Morgue Professor Brouardel was presented with an address from the students, testifying to the regard in which he is held and their appreciation of his efforts to utilise for instruction in legal medicine the rich material of that institution. M. Sée began his lectures on Clinical Medicine at the Hôtel Dieu by insisting on the necessity of combining its study with physiology, histology and pathological anatomy, and instanced the light thrown upon clinical medicine by micro-biology—e.g, in tuberculosis, pneumonia, and cholera. He then discussed some of the symptoms of cardiac disease, and the value of convallaria as a diuretic and regulator of the heart's action. At the Salpêtrière M. Charcot's clinic was, as usual, most numerously attended. He took for his subject the disease which was first described by himself, amyotrophic lateral sclerosis, illustrated it by the exhibition of a well-marked case, and pointed out that cases occur, as in tabes, of an incomplete or abortive kind. M. Charcot's lectures are delivered on Fridays. M. Duplay lectured at the Faculty on Operative Medicine—in other words, surgical therapeutics; he devoted his first lecture to a study of the general conditions of the patient, external and internal, which govern operative procedure. M. Magnan began his course of Mental Pathology, discriminating between two great classes of mental diseases:—(1) Mixed states belonging to general pathology and psychiatry, as general paralysis, senile dementia (cerebral atheroma); circumscribed lesions (softenings, hæmorrhages, tumours, &c.); hysteria, epilepsy; intoxications (alcohol, absinthe, morphia, opium, &c.) (2) Insanity or psychosis, including chronic delirium, intermittent insanity, insanity of the degenerate, mania, and melancholia. M. Le Fort, in commencing his course of Clinical Surgery at the Necker Hospital, spoke on the germ theory; M. Strauss dealt with cholera in beginning his lectures on Pathological Anatomy. M. Cornil, who holds daily demonstrations at the Hôtel Dieu, began his weekly lectures on the 12th, with a description of the comma bacillus and its culture. Lectures on Diseases of Children were commenced by M. Legroux at the Faculty of Medicine, and by M. Joffroy, who has succeeded the late M. Parrot at the hospital.

THE DRAINAGE OF PRIVATE HOUSES.

THE near approach of cholera has once more awakened public attention to the necessity of drainage improvements. The newspaper-reading community are called upon to "put their houses in order," and the assurance is given that then the cholera need not be feared. This advice, however, is far easier to give than to carry out. A great number of tenants in London and in many other large towns hold their houses on merely a three years' lease. It is not to be expected that they should incur any considerable expense for improvements which at the end of the short lease would enable the landlord to augment his rent and oust his tenants. On the other hand, the landlord almost invariably refuses to make the required improvements; nor do the sanitary authorities move in the matter unless the nuisance be of a very flagrant description. Most tenants, too, are very chary of complaining to the sanitary authorities; not a few are in arrears with their rent, or at least irregular in the payment, and under such circumstances are anxious to avoid anything that may lead to unpleasantness. Finally, there is no fixed official standard as to what constitutes a well-drained house. In this respect the sanitary administration of Brussels is better organised than anything we possess on this side of the Channel. At the Hôtel de Ville of Brussels may be seen specifications given by the Service d'Hygiène of what the law imposes. If any lodger, tenant, or other person have reason to suppose that in any particular house the principles laid down by these specifications are not carried out, he has only to report the fact. An official inspection is at once made. If the landlord inquires from

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what source the complaint emanated, he is politely informed that that has nothing to do with the question. Either his house is in order, and if so there could be no objection to the fact being confirmed by the official inspector of the town; or the drainage is not in a proper condition, and of course it would be only right that he should conform to the general regulations. Thus it is well known what should be done, who should do it, and how that person may be compelled to act, without the tenants or others being involved in any unpleasantness.

OXFORD GRADUATES' MEDICAL CLUB.

THE second dinner of this Club was held at Limmer's Hotel on Thursday, November 20th, and, as members were allowed to introduce guests belonging to their own or the sister university, a large assemblage took place, which was presided over by Sir H. Acland. The objects of the Club are the maintenance of associations with the University and the promotion of good-fellowship among the members. In fulfilment of this many came from the country to attend this meeting, amongst others Professor Burdon Sanderson, Mr. Pridgin Teale, Dr. Griffin, &c., whilst London was represented by a large number of well-known physicians and surgeons. The health of the Club, which was proposed from the chair, was responded to by Dr. Fincham, the President, who paid a warm tribute to the secretaries, Dr. Samuel West and Mr. John H. Morgan, whose exertions had been attended by such satisfactory results, as was shown by the numbers of the Club, which already amounted to upwards of ninety, and for which several fresh candidates had sought admission since the inaugural dinner in June last. He in turn proposed the health of the Cambridge Medical Graduates' Club, coupling with the toast the name of Professor Humphry, which was most enthusiastically received. Dr. Humphry made a very eloquent speech, and alluded to the interests and sympathies which both universities possessed in common, and, touching with much tact and delicacy upon the various parts which each had taken in furthering medical education, pointed out that while differing in their views on this subject each had much to learn from the other. The health of the chairman was proposed by Dr. Andrew, and after this had been responded to the members spent the remainder of a very enjoyable evening in renewing acquaintanceships and in discussing the many medical topics in which Oxford men are now taking so prominent a part.

AN ANALYSIS OF CASES OF DIPHTHERIA.

AT a recent meeting of the Berlin Medical Society Dr. Henoch read a paper upon diphtheria, as observed in the Charité Hospital in the years 1882 and 1883, the full text of which is to be published in the next "Charité-Annalen." Exclusive of doubtful cases of angina, so-called scarlatinal diphtheria, and idiopathic croup, no fewer than 319 cases of the disease were observed; 216 of these were between the ages of two and six years. The mortality was very high—viz., 208,—particularly in the first three years of life, for only 17 out of 118 attacked in this period recovered. This high mortality was ascribed partly to the "genius epidemicus," partly to the insanitary surroundings of the sick, and to the fact that many of them were tuberculous and of the lowest class. In 145 cases the larynx was implicated, and 129 of these succumbed; of the remaining 174 cases, 79 died. Tracheotomy was performed in 138 cases, with only 16 recoveries—i.e., 11½ per cent.; but 17 of these deaths were due to the supervention of scarlet fever. Of 66 cases tracheotomised in the first three years of life only 2 survived; death being almost invariably due to croupous bronchitis or broncho-pneumonia; but occasionally to erysipelas of the wound and diphtheritic collapse. On an average the greatest danger to life was from the second to the fourth day after the operation. Speaking of the associated conditions and symptoms, Dr. Henoch said that, scarlatinal cases excluded, cutaneous eruptions were rare. In three cases a diffuse urticarial-like erythema was noted over the nates and extensor surfaces of the extremities. Swelling of the submaxillary glands was constantly observed; but except in highly malignant cases it did not pass on to suppuration. In no case—except one doubtful scarlatinal one—was there swelling of joints; nor endocarditis, which was never found post mortem. Albuminuria was most common, and if it reached an amount of about one-third or more was regarded as of bad prognostic significance; for in such a case it indicated either intense blood-poisoning or nephritis, which *per se* was an element of danger even after the diphtheria had passed away. Dropsy, however, rarely occurred, and uræmic symptoms were never observed. This nephritis, which could hardly be considered a true sequel, was frequently associated with cardiac debility, the occurrence of inflammations, and diphtherial paralyses. The use of corrosive sublimate as a gargle, of arsenic and iron, and of papayotin in serious cases, was advocated.

THE HEREDITY OF LONGEVITY.

IT would be interesting to study more closely, in the case of centenarians and other aged people, the ages of their near relatives and immediate ancestors. It will probably be found not rarely that long-lived persons have not been stronger than those who have been short-lived. They have their "often-infirmities" like other people. It will also frequently be found that their brothers and sisters have been as short-lived, or more so, than others. At the same time an element of heredity may not seldom be traced, or may have to be recognised, for we have not yet sufficient data for dogmatic conclusions. We are able to give to-day some few more particulars of the ages of the immediate family relatives of Sir Moses Montefiore, which we have reason to believe are correct, though in one particular at variance with a statement in a previous number. Thus one parent died at seventy-nine, one at eighty-three, his grandfather at eighty-seven, his grandmother at ninety-three, a brother at seventy-five, another at sixty-nine, a sister at eighty-four, another at seventy-nine, another at eighty-two. These nine ages at death give an average longevity of eighty-one years. The first four—those of the parents and grandparents of Sir Moses—give an average of eighty-five years.

THORBURN v. CRAWFORD.

THIS action, which, in our opinion, ought never to have been brought, was tried last week by Mr. Justice Manisty and a special jury. The plaintiff, Dr. Thorburn, lately a Surgeon-Major in the Army, sued the present Director-General of the Medical Department for an alleged libel contained in a letter written by him in 1882, when he was Surgeon-General and Principal Medical Officer in Bengal. The case, as stated by Dr. Thorburn's counsel, was that in 1881 the stewards of the races at Delhi had suspended Dr. Thorburn from "riding, training, and running horses on the course," in consequence of a charge brought against him of having ordered a pony of his to be "pulled" on purpose to lose the race. On an appeal to the stewards of the Calcutta Turf Club this decision was confirmed. The result of this appeal was published in the Calcutta papers and thus became matter of public notoriety. Dr. Crawford felt it his duty, in the interests of the discipline, good conduct, and repute of the department of which he was the responsible head, to bring the circumstances to the notice of the Commander-in-Chief in India, who ordered a Court of Inquiry

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to be held. Dr. Thorburn had in the meantime sent in an application to retire from the service, receiving a gratuity. He subsequently wished to withdraw this, but was refused permission by the military authorities. Dr. Thorburn brought the present action against Dr. Crawford, alleging that as a result of his letter "he had been injured in his reputation and had been compelled to retire from the service," and claiming £10,000 as damages for the injury thus done him. Dr. Crawford pleaded "privilege, denying that he wrote maliciously or that in consequence of his letter the plaintiff was injured or compelled to retire." Dr. Thorburn's counsel, Mr. C. Russell, Q.C., stated the case for the plaintiff, but admitted that Dr. Crawford had "only discharged his duty in sending the letter, and that he would have failed in his duty if he had not sent it"; and he also admitted that an officer under such circumstances was not liable to any action. The learned counsel stated that the action was brought by Dr. Thorburn to vindicate his character and to have an opportunity of denying the charges against him. We think this hardly justifies the course adopted of bringing an action against an officer who clearly had only discharged his duty. According even to his counsel's statement, Dr. Thorburn appears to have been remiss in taking steps to have the charges judicially investigated at the proper time. "In this, no doubt, he committed a mistake in not demanding a court-martial," we presume when they were first brought against him. On the application of Mr. Russell a juror was withdrawn, and the case thus dropped without any verdict. It has been from first to last a most unpleasant affair, and while we cannot help feeling sorry for the plaintiff, we also feel that Dr. Crawford has been exposed to an amount of unjustifiable annoyance and worry for having simply done his duty. Surely some less objectionable way might have been found to afford the plaintiff an opportunity of making public a denial of the charges which had been brought against him in India.

DR. BALTHAZAR FOSTER AS A CANDIDATE FOR PARLIAMENT.

WE see with great satisfaction that Dr. Balthazar Foster of Birmingham is to be a candidate, in the Liberal interest, for Chester. We wish him every success. Of course we have no politics in the vulgar sense of that word; but we wish to advance the best interests of the people, and we see no better way of doing this than by sending some of our best men to Parliament, where their large human experience and enlightened professional knowledge will be likely to tell. We should expect, too, that Dr. Foster, if he were in Parliament, would mercilessly expose those refined forms of obstruction to medical legislation which have discredited some would-be representatives of the profession, and brought them into very questionable Parliamentary company.

CRUELTY TO ANIMALS.

IT is satisfactory to find that in these days, thanks to the existence of a Royal Society for the Prevention of Cruelty to Animals and to the fact of our having sensible and humane judges on the Bench, animals cannot *always* be ill-treated with impunity. An appeal against a decision of the magistrates of Petworth, in Sussex, in a case in which a man named Gilham was prosecuted by the above Society for having contravened the Wild Birds Protection Act of 1880 under the following circumstances, was heard in the Court of Queen's Bench recently. He had trapped a large number of sparrows on March 15th, and sent them in bags, each containing six dozen, to the Swan Hotel, Pulborough, the manager of which bought them for 1*s.* 6*d.* a dozen, for the purpose of a starling and sparrow shooting match which was held in the grounds on the 17th. The birds were placed under flower-pots, which were made to serve as traps, and many of them were in so exhausted a state from being kept so long in the bags that they would not rise, on which they were either pulled or kicked to death. The magistrates dismissed the charge on the ground that proof had not been given by the prosecution that Gilham had not the licence or authority of the occupier of the land on which the birds were netted. This decision was reversed by Mr. Justice Hawkins and Mr. Justice Grove, the former adding: "This case will be sent back to the magistrates to convict, and I hope when they do convict they will pass an exemplary sentence on all who took part in the brutal sport of shooting at these wretched birds." All trap-shooting is cruel, but in this particular case cruelty seems to have followed cruelty in a very shocking way. We trust, therefore, that the magistrates, even if themselves supporters of pigeon-shooting from traps, may be deterred by no scruples from following Mr. Justice Hawkins's advice. The same Society was also successful at Manchester the other day in a charge they brought against a horse-slaughterer for disposing of a horse for hard work that had been left at his yard for the purpose of slaughter, contrary to the provision of the Act 13 and 14 Vict., sec. 9. We were glad, too, to see that a man described as a porter has been deservedly sentenced to a month's hard labour for what the magistrate described as "most arrant brutality" to a cat. We take this opportunity of reminding those who are responsible for the state of our streets that a free, and above all a prompt, use of sand when the wooden paving is slippery from frost or greasy from slight rain may be the saving of much cruelty to horses.

TESTIMONIAL TO DR. HANDFIELD JONES.

WE understand that the retirement of Dr. Handfield Jones from the post of senior physician to St. Mary's Hospital, an institution with which he has been connected for over thirty years, will be made the occasion for presenting him with a testimonial by his colleagues, pupils, and friends. No man has done more to advance the cause of scientific medicine than Dr. Handfield Jones, and we do not doubt that his valuable labours will meet with a fitting recognition. The subscription to the fund is limited to one guinea, which should be sent to either of the honorary secretaries. Malcolm Morris, Esq., 63, Montagu-square; or A. J. Pepper, Esq., 122, Gower-street, W.C.

DISINFECTING STOVES.

A NUMBER of new contrivances for the disinfection of infected bedding, clothing, and other articles by heat have recently appeared, and sanitary authorities seem somewhat in difficulty as to their efficiency. Any stove or other apparatus professing effectually to disinfect by heat should be capable of securing a uniform temperature throughout all parts of the disinfecting chamber of not less than 250° Fahrenheit, and this temperature should be capable of thoroughly penetrating such articles as bedding, &c. In this country there are not many appliances which can be trusted to produce this result, both uniformity of temperature and power of penetration often failing. Dr. Ransom's stove, as manufactured by Messrs. Goddard and Massey of Nottingham, is one which after long experience may be trusted in these respects, and it has the immense advantage over others that, owing to the automatic contrivance which controls the amount of gas which is consumed in producing the heat, it needs but little supervision, and it ensures the greatest procurable economy by the fact that no more gas is consumed than is required to maintain the heat at which the regulator is set. Mr. Washington Lyon's steam disinfector stands foremost amongst disinfecting chambers where steam under pressure is relied on. It, too, has

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certain special advantages. In the first place, its power of penetration is much more rapid than in the case of stoves in which dry air is used, and hence it has largely come into use in towns where a large amount of disinfection has to be carried out; it is, in short, certain and quick in its action, and can hardly be excelled. When compared with the Ransom stove, it has the drawback that the use of steam involves constant skilled attendance; but, on the other hand, steam can be used in places where gas is not available. These two disinfecting chambers are, in our opinion, by far the best yet manufactured, and they may be fully trusted to secure the end desired. Amongst the others which have been manufactured, we may, however, mention a steam apparatus which has recently been made by Messrs. Benham. We have reason to believe that it also is efficient for all ordinary purposes, but as yet it has hardly been put to the test of experience to which the others have been subjected. Failing a really efficient apparatus which responds to the conditions we have laid down, sanitary authorities would do well to rely on effectual fumigation of articles that can be spread out, and the destruction of others.

PARTIAL INQUESTS.

WHETHER from respect for the feelings of common jurymen or from a want of due appreciation of the duties attaching to their official position we know not, but this much is certain, many of our coroners fail to carry out the provisions of the law, which enacts that an inquiry shall be held as to "when, where, and *by what means*" So-and-so came by his or her death. We have repeatedly called attention to the unsatisfactory way in which inquests are too frequently conducted, or rather concluded, and quite recently our attention has been directed to the same point. On Monday, Nov. 17th, an inquiry was held at Waingroves touching the death of Lydia Shawcroft, aged sixty-six. The deceased was seen alive and apparently well at 8.45 A.M. on Saturday; at 4.30 in the afternoon she was found dead on the floor, the body being quite cold. The jury, "at the suggestion of the coroner," returned a verdict of "Death from natural causes." It does not appear in the report that a post-mortem examination was made, nor even that medical evidence was taken. We ask the question, Was all reasonable care taken to show that death was not the result of accident or other mode of violence? Unless the answer can be given in the affirmative, and we fail to see the grounds for it, it is clear the verdict was not wholly warranted by the evidence. In a second case investigated at Manchester on Nov. 29th, the cause of death of a woman, aged forty-one, was the subject of inquiry. It appears that the deceased, who suffered from bronchitis, took some "Balsam cough elixir." Shortly afterwards she felt sleepy; this was followed by coma and death. The coroner advised the jury that inasmuch as persons poisoned by morphia or opium—it was not proved that the "elixir" contained either—usually fell into a stupor some time before death, and that in the present instance the fatal issue quickly supervened, it did not seem probable that death was due to opium poisoning. He then left it to their discretion whether an analysis of the elixir should be made, and very naturally they were content with the matter as it then stood, and forthwith brought in their verdict of "Death from natural causes, probably bronchitis or heart disease." Now, whether the administration of the patent medicine had any part in causing the death—and this was the main point at issue—was left unsolved, and the object of the inquiry remained as problematical as ever. If there be an instance in which it is important to decide the exact share that each of several possible factors has taken in bringing about the death of a person, it is one like that under consideration, for there is no other mishap from which the public stand in need of warning and protection more than that arising from ignorance of the properties of drugs vaunted as specifics, and sold without the expressed or implied information that danger is to be apprehended from small doses in diseased states, or large ones in healthy. We take exception to the view of the coroner respecting the action of a narcotic in a patient suffering from acute bronchitis.

ASIATIC CHOLERA IN NORTH AMERICA.

AN important conference was held at St. Louis last month on the threatened extension of Asiatic cholera to the North American continent, and on the action necessary to prevent or limit a cholera epidemic. Dr. Rauch, Secretary to the Illinois State Board of Health, contributed a paper dealing with the practical recommendations necessary to secure the desired end; this was followed by one by Surgeon Smart, U.S.A., on "Quarantine, and the Sanitary Methods formulated by the National Board of Health," which went to show that the principles advocated by that Board very much resemble those in practice in this country, and that cleanliness, medical inspection, and isolation are the essential remedies; and then Dr. Chancellor followed by asking "Can epidemic diseases be excluded by sanitary cordons?" Dr. Chancellor is inclined to some views which we hardly concur in, but these in no way interfere with the value of his conclusions that quarantine cannot be trusted to prevent the importation of cholera, and that it is on an enlightened sanitary control of towns and cities, and on such measures as cleanliness &c., that people must in the main rely. Dr. Baker (Michigan) was the reporter of a special committee appointed by the Conference, and he, with the concurrence of his fellow-workers, reported that three factors were essential to the prevalence of cholera on the American continent: first, the importation of the disease by means of ships, more or less directly from its only place of origin in India; second, local insanitary conditions favourable to the reception and development of the disease; and, third, persons sick with the disease in some of its stages, or things infected by such sick persons, to carry it from place to place. The recommendations as to action, whether by the State, sanitary bodies, or individuals, were based on the acceptance of these three factors, and, with the exception of the representatives from Minnesota, who refrained from voting because they thought the paper was too important to be dealt with without further consideration, the Conference was unanimous in accepting the conclusions formulated.

DENTAL ANÆSTHETICS.

THE two deaths that have lately occurred in dental practice show but too clearly the necessity there is of some definite opinion on the subject. Nitrous oxide gas has so long held the pride of place in dental anæsthesia that in London it is very seldom any other anæsthetic is ever required, and when the request for such is made it is because the patient has had some experience (generally of chloroform), or it is a matter of economy and convenience in which the operating dentist acquiesces, if he has not already insisted upon it. The difficulties attending upon the exhibition of nitrous oxide in the provinces are, however, often so prohibitory that we are constantly startled with the announcement of a death from some other anæsthetic agent; and this is more easily understood when it is known that the simplest gas apparatus requires almost constant use for its efficiency, and thorough practice in its manipulation on the part of the administrator, if nitrous oxide is to be exhibited deftly. Should there be any operation of sufficient magnitude about the mouth, that it cannot be performed under three or four administrations of nitrous oxide gas, it ought

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to be treated, as far as the anæsthetic is concerned, with just as much dignity as any other surgical operation. The latest American dental chairs are least suitable of any for such work for many reasons. A high sofa or surgical operating table, with the patient duly prepared and placed in a horizontal position, ought to be the preliminaries in experienced hands; the choice of anæsthetic that in which the administrator has a constant experience. The subsequent administration of ether to a preliminary exhibition of nitrous oxide gas robs the latter of its good name and best qualities.

UNQUALIFIED ASSISTANTS AND THE MEDICAL ACT.

UNQUALIFIED assistants and those who employ them should take warning from a case at Hammersmith the other day, in which an unqualified assistant was fined in the maximum penalty of £20, and ordered to pay 23*s.* costs, recoverable by distress. The complainant was John Tomlin, and the defendant Henry Trist. The complainant alleged that he was led to think the defendant a properly qualified practitioner by seeing premises with "Surgery" written up, a notice that a medical man attended daily, and finding the defendant in the consulting-room, who examined him and prescribed for him. The complainant was much dissatisfied with the treatment, and called in Mr. Cooney, under whose care he got well. It does not appear from the report before us that the defendant called himself a medical man or by a medical title, but that he put himself falsely in the position of a medical practitioner. His solicitor tried to get him off on the theory that he was the assistant of a medical man, Mr. Lintoff, and that it was the practice to employ unqualified assistants, who, he said, were preferred to those who have diplomas! We commend this defence to the Licensing Bodies. We regret to notice that the report adds that Mr. Cooney, on leaving the Court, was assaulted, though the complainant said in his evidence that he had not taken the proceedings on the recommendation of Mr. Cooney. The case is only one of many showing that the law will not shelter either unqualified assistants or those who employ them to act independently.

THE PONTIFICAL HOSPITAL.

IN view of the return of cholera to Italy, the Pope is, at his own expense, constructing a hospital on a considerable scale. It will stand near the little church of Santa Maria on the Vatican Hill, almost within the shadow of St. Peter's. Its drainage will be carried to the Tiber by a great conduit now half completed. Its area, quite isolated, will occupy 69,000 square metres, and its water-supply every twenty-four hours will amount to 120 cubic metres for drinking and 1000 cubic metres for other purposes. The building will comprise seven blocks, with three spacious gardens besides the courtyards. The hospital itself will stand in the centre, and will consist of four storeys in addition to the ground-floor, the latter containing the residence and bureau of the medical superintendent, the telephone office, the reception room for patients, the lift, the *ruota* or revolving machine for receiving provisions from without, the dispensary and pharmacy, the kitchen and refectory, the gasometer, the baths and the boiler for disinfecting the linen conveyed to it by an iron tube which opens on each floor. To the east of the grounds are the laundry and the apparatus for the dry-air disinfection of wearing apparel; to the north the *corps de garde*. There are, besides, ante-chambers for the examination of the dead, with electric arrangements for each bed, a mortuary and pathological room, with a furnace for the combustion of refuse; there are, further, a steam-generator for the different services, magazines for funeral-cars, fire engines, ice machines, and such like apparatus. The infirmary proper on the upper floors of the hospital will have every means of maintaining cleanliness, disinfection, and the isolation (when necessary) of the sick. Ample accommodation is also being provided for the confessors, the sisters of charity or nurses, the resident physicians and pharmacists; while a separate house or tents will be organised for convalescents. The entire arrangements have been planned under the direction of Dr. Ceccarelli, surgeon to his Holiness, with the assistance of the architect, Signor Mannucci, and of the engineer, Signor Gismondi, and, when in full working order, the hospital with its adjacent temple will form a nineteenth century reproduction of the old Æsclepian system under which the care and cure of body and soul were made ancillary to each other.

KING HUMBERT.

KING HUMBERT of Italy is one of the most fortunate of sovereigns. He stands high in the esteem of his people, and deservedly so. The Roman citizens on his entry into the capital thronged the streets, we are told, regardless of the wintry weather, and filled the air with the sound of a welcome deeper and more cordial than that of mere State courtesy. They were giving voice to their feeling of respect for one who, being critically placed, knew how to rally and lead them and their fellow-subjects in adversity. It cannot be said of them that they only praised the King, but rather that the free and disinterested devotion shown by him in his practical sympathy with a sister city has proved to their heart and judgment that a King is at his best when he is most a man among men.

VACCINATION AGAINST YELLOW FEVER.

THE researches which have during the past two years been made by Dr. Domingos Freire have now reached a new point of departure. This investigator has prepared an attenuated virus with which he proposes to vaccinate individuals, with a view to rendering them proof against the occurrence of yellow fever. The Emperor of Brazil, having regard to the alleged innocuousness of the prepared virus, has authorised the practice of vaccination. Dr. Freire has accordingly vaccinated five hundred individuals. Three captains and all the crews of English vessels have been vaccinated with a view of escaping the infection from yellow fever, which prevails at Rio Janeiro. Thus far none of the vaccinated people have been attacked by the disease, and none of them suffered the least inconvenience from the operation. M. Bouley, who gave the facts to the Académie de Médecine, whilst implicitly believing the above-narrated facts, does not yet implicitly accept the views of Dr. Freire on the micrococcus xanthogenicus.

HÆMOGLOBINURIA AND SYPHILIS.

THE pathogeny of intermittent or paroxysmal hæmoglobinuria is shrouded in obscurity. The notion that it is related to malarial disease is now almost abandoned, at any rate as a universal proposition. Its dependence upon exposure to cold led to the hypothesis that it was due to vascular engorgement of the kidney, and that in that organ the blood-cells were broken up and the hæmoglobin excreted. Such a theory may be called the vaso-motor hypothesis, but it cannot be invoked in many cases. Others have suggested that the corpuscular disintegration was due to the absorption of bile acids into the blood, or to some less manifest change in the fluid. That the syphilitic poison is sometimes a factor, as some allege, is supported in a few cases mainly by the effects of treatment. In the *Berliner Klinisch. Wochenschrift* for the 10th inst. is recorded a case by Herr Gotze, from Professor Rossbach's clinic, where a child of nine years, the subject of inherited syphilis, became liable to the

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affection on the slightest exposure to cold or even slight changes in temperature. A resort to iodide of potassium, and to mercurial inunctions, was followed by a freedom from liability to the attacks which could but be regarded as a cure; for even immersion in ice-cold water of the extremities, and once of the whole body, failed to reproduce the hæmoglobinuria after this course of treatment.

IRISH UNIVERSITY REPRESENTATION.

MR. GLADSTONE never speaks of the medical profession but with respect and apparently sincere desire to advance its dignity and its unity. In a recent utterance he expressed his wish to see it more largely represented in Parliament, though not seeing how medical men could be admitted into Parliament save through the ordinary methods of popular election. Dr. Augustus H. Bampton, in *The Times*, expresses a hope that the claims of the graduates of the Royal University of Ireland will not be overlooked in the new Bill. We quite share this hope. This University has absorbed the graduates of the late Queen's University, a large proportion of whom are medical graduates. A member for the new University would be an act of justice at once to the University and to the profession.

PORRO'S OPERATION AND LAPAROTOMY FOR ILEUS.

La Gazzetta degli Ospitali of November 19th reports that Dr. Vincenzo Lesi performed Porro's operation in the civil hospital of Imola on the 23rd ult. The patient was rachitic, and had been in labour many hours. Ten days after the operation, absence of fever and other favourable conditions justified hope in complete recovery. Laparotomy for ileus, with fæcal vomiting of ten days' duration, was performed at Florence by Dr. Edgard Kurz on the 2nd inst. The strangulated portion of intestine was readily found and liberated, the operation being completed in half an hour, under the spray and with iodoform dressing. Soon afterwards free action of the bowels commenced; the patient took liquid nourishment with appetite, and recovery proceeded rapidly, without febrile or other disturbance.

EXCISION OF TUMOUR FROM THE BRAIN.

ON Tuesday last, at the Hospital for Epilepsy and Paralysis, Regent's-park, a tumour was successfully removed from the substance of the brain. The case is under the care of Dr. Hughes Bennett, who, having diagnosed an encephalic morbid growth of limited size, and localised it in the upper part of the fissure of Rolando, requested a surgeon to trephine the skull over the suspected region. This was carried out by Mr. Rickman Godlee. A mass of glioma the size of a walnut was extracted from under the grey matter of the upper part of the ascending frontal convolution. Up to the present time the patient has progressed favourably in every respect. We shall be glad to learn the future progress of the case.

SUCCESSFUL REMOVAL OF THE LARYNX.

MR. JORDAN LLOYD last Saturday removed the larynx from a man, aged fifty-one, who was progressing favourably on Wednesday, with every prospect of a successful issue. We shall give a report of the operation and sequel in a future number.

THE COMBINATION SCHEME.

WE publish at page 972 the series of regulations relating to the professional education and examinations in connexion with the Combined Scheme of the Royal College of Physicians and the Royal College of Surgeons.

FROM the report on the composition and quality of daily samples of the water supplied to London during the month of October, recently issued by Messrs. Crookes, Odling, and Tidy, it appears that of the 188 samples subjected to examination 3 were found to be very slightly turbid; the remaining 185 being perfectly clear, bright, and well filtered. As regards degree of freedom from organic matter, the water more than maintained the character it has now exhibited continuously for a long time past. Thus, while the mean proportion of organic carbon in the water supplied by the Thames Companies during the previous three months was ·128 part in 100,000 parts, the mean proportion in that supplied during the past month was only ·118 part in 100,000 parts, corresponding to about two-tenths of a grain of organic matter per gallon; this excessively low proportion of organic matter being quite unusual for the period of the year.

FROM the report of the examination made by Colonel Sir Francis Bolton of the water supplied by the several Metropolitan water companies during the month of October, it appears that the Thames water was of practically the same quality as in the previous month, the proportion of organic matter being again small, as in all the samples collected since March last. The water drawn from the Lea also exhibited no material change, the amount of organic matter in it being less than in the samples of Thames water. All the waters were clear and bright on delivery.

DR. MURRAY LINDSAY, superintendent physician of the Derbyshire Lunatic Asylum at Mickleover, was on the 25th inst. severely wounded while entering one of the wards of that institution. One of the patients had been lying in wait for him, and succeeded in inflicting three stabs upon him with a chisel before being overpowered. Although the wounds are severe, one under the fifth rib, the second in the groin, and the third on the hip, it is expected that Dr. Lindsay will recover.

ON Wednesday, the 19th inst., the works for the amelioration of the Roman Campagna were commenced. Two hundred labourers have pitched their tents in the ravine of the Almo, a tiny affluent of the Tiber, between the Via Appia Antica and the Via Appia Nuova, and are employed on the desiccation of the soil. At night their encampment is picturesquely illuminated with bonfires of dead leaves and brambles with which they seek to disinfect the air.

DRS. FINKLER and PRIOR have replied to Dr. Koch's strictures on their recent methods of research on bacilli in simple cholera by a letter to the *Kölnische Zeitung*. For thus appealing to the public in a lay journal rather than to the profession through the medical press they have been severely blamed, especially as the *Zeitung* had not previously published Dr. Koch's criticism.

THE members of the medical profession in Paris strongly oppose the admission of female medical students to the hospital wards. It is stated that not one French lady student has applied for admission, all the candidates being Russians, Roumanians, and Americans.

DR. T. W. MILLS has been appointed Professor of Physiology and General Pathology in McGill Medical College, in the room of Professor Osler, who has been elected to the chair of Clinical Medicine in the University of Pennsylvania.

THE epidemic of measles at Aberdeen seems to be spreading with alarming rapidity among the children in the city. The infant departments of the public schools and most of the Sunday schools have been closed.

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EXAMINING BOARD IN ENGLAND, BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND,

Under the Provisions of Clause XIX. of the Medical Act (1858).

REGULATIONS RELATING TO PROFESSIONAL EDUCATION AND EXAMINATIONS.

SECTION I.

Professional Education.—Any candidate who desires to obtain both the licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England is required to comply with the following regulations, and to pass the examinations hereinafter set forth. (See Section II.) Every such candidate who shall commence professional study on or after October 1st, 1884, will be required, at the times prescribed in Section II. for the respective examinations, to produce satisfactory evidence:—

1. Of having been registered as a medical student by the General Medical Council. (See regulations of the General Medical Council, to be obtained of the Registrar, 299, Oxford-street, London, W. Note A.—Professional studies commenced before registration, except in the cases of chemistry and chemical physics, materia medica, botany, and pharmacy, will not be recognized.

2. Of having been engaged in professional studies at least forty-five months, during which not less than three winter sessions and two summer sessions shall have been passed at one or more of the medical schools recognised by the two Colleges. One winter session and two summer sessions may be passed in one or more of the following ways:—(*a*) Attending the practice of a hospital, infirmary, or other institution, recognised as affording satisfactory opportunities for professional study; (*b*) Receiving instruction as a pupil of a legally qualified practitioner holding such a public appointment, or having such opportunities of imparting a practical knowledge of medicine, surgery, or midwifery, as shall be satisfactory to the two Colleges. (*c*) Attending lectures on one or more of the required subjects of professional study at a recognised place of instruction.

3. Of having received instruction in the following subjects:—(*a*) Chemistry, including chemical physics, meaning thereby heat, light, and electricity. (*b*) Practical chemistry. (*c*) Materia medica; (*d*) Botany. (*e*) Pharmacy. Note B: The instruction in practical pharmacy must be given by a registered medical practitioner, or by a member of the Pharmaceutical Society of Great Britain, or in a public hospital, infirmary, or dispensary.

4. Of having performed dissections, at a recognised medical school, during not less than twelve months.

5. Of having attended, at a recognised medical school:—(*a*) A course of lectures on anatomy during not less than six months, or one winter session. (*b*) A course of lectures on general anatomy and physiology during not less than six months, or one winter session. (*c*) A separate practical course of general anatomy and physiology during not less than three months.

6. Of having attended, at a recognised medical school:—(*a*) A course of lectures on medicine during not less than six months, or one winter session. (*b*) A course of lectures on surgery during not less than six months, or one winter session. (*c*) A course of lectures on midwifery and diseases peculiar to women during not less than three months. Note C: A certificate must also be produced of attendance on not less than twenty labours, which certificate must be signed by one or more legally qualified practitioners. (*d*) Systematic practical instruction in medicine, surgery, and midwifery, including—(1) the application of anatomical knowledge to the investigation of disease; (2) the methods of examining various organs and other parts of the body, in order to detect the evidence of disease or the effects of accidents; (3) the employment of instruments and apparatus used in diagnosis or treatment; (4) the examination of diseased structures, whether recent or in a museum; (5) the chemical examination of morbid products; (6) the performance of operations on the dead body; (7) post-mortem examinations. (*e*) A course of lectures on pathological anatomy during not less than three months. (*f*) Demonstrations in the post-mortem room during the whole period of attendance on clinical lectures. (See Clause 8.) (*g*) A course of lectures on forensic medicine during not less than three months.

7. Of having attended, at a recognised hospital or hospitals, the practice of medicine and surgery during three winter and two summer sessions. Note D: No metropolitan hospital is recognised which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients. A three months' course of clinical instruction in the wards of a recognised lunatic hospital or asylum may be submitted for the same period of attendance in the medical wards of a general hospital.

8. Of having attended, at a recognised hospital or hospitals, during nine months clinical lectures on medicine, and during nine months clinical lectures on surgery, and of having been engaged during a period of three months in the clinical study of diseases peculiar to women. Note E: These clinical lectures must be attended after the candidate has passed the second examination.

9. Of having discharged, after he has passed the second examination, the duties of a medical clinical clerk during six months, and of a surgical dresser during other six months. Note F.—These duties may be discharged at a general hospital, infirmary, or dispensary, or parochial or union infirmary, recognised for this purpose, or in such other similar manner as shall, in the opinion of the two Colleges, afford sufficient opportunity for the acquirement of practical knowledge.

10. Of having received instruction in the practice of vaccination. Note G: The certificate must be such as will qualify its holder to contract as a public vaccinator under the regulations, at the time in force, of the Local Government Board. Students are required to attend examinations which are held in the several classes. N.B.—Exemption from any of the foregoing regulations can only be granted by the committee of management.

SECTION II.

Professional Examinations.—There are three professional examinations, called herein the first examination, the second examination, and the third or final examination, each being partly written, partly oral, and partly practical. These examinations will be held in the months of January, April, July, and October, unless otherwise appointed. N.B.—Every candidate intending to present himself for examination is required to give notice in writing to the registrar of the Royal College of Physicians, or to the secretary of the Royal College of Surgeons, fourteen clear days before the day on which the examination commences, transmitting at the same time the required certificates. All fees must be paid three days prior to the day on which the examination commences.

The First Examination.—The subjects of the first examination are: Chemistry and chemical physics, meaning thereby heat, light, and electricity. Materia medica, medical botany, and pharmacy. Elementary anatomy, and elementary physiology. (Synopses indicating the range of subjects in the examinations in chemistry and chemical physics, materia medica, medical botany, pharmacy, elementary anatomy, and elementary physiology may be obtained, together with the regulations.) A candidate may take this examination in two parts at different times, or he may present himself for the whole at one time. A candidate will be admitted to the examination on chemistry and chemical physics, materia medica, medical botany, and pharmacy on producing evidence of having been registered as a medical student by the General Medical Council, and of having complied with the regulations prescribed in Section I., Clause 3; but he will not be admitted to the examination on elementary anatomy and elementary physiology earlier than the end of his first winter session at a medical school. A candidate rejected in either part or in both parts of the first examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection, and he will be re-examined in the subject or subjects in which he has been rejected. The fees for admission to the first examination are as follows:—For the whole examination, £10 10s.; for re-examination after rejection in either of the two parts, £3 3s. Any candidate who shall produce satisfactory evidence of having passed an examination on any of the subjects of the first part of this examination conducted at a University in the United Kingdom, in India, or in a British Colony, will be exempt from examination on those subjects in which he has passed.

The Second Examination.—The subjects of the second examination are:—Anatomy, physiology. (A synopsis indicating the range of subjects in the examination in physiology may be obtained with the regulations.) A candidate may present himself for examination in either of these subjects or parts separately, or in both at one time. A candidate will be admitted to the second examination after the lapse of not less than six months from the date of his passing the first examination, on producing evidence of having completed, subsequently to registration as a medical student, eighteen months of professional study at a recognised medical school or schools, and of having complied with the regulations prescribed in Section I., Clauses 4 and 5. A candidate rejected in either part or in both parts of the second examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection, and will be re-examined in the subject or subjects in which he has been rejected. The fees for admission to the second examination are as follow:—For the whole examination, £10 10s.; for re-examination after rejection in either of the two parts, £3 3s.

The Third or Final Examination.—The subjects of the final examination are:—Medicine, including therapeutics, medical anatomy, and pathology; surgery, including surgical anatomy and pathology; midwifery, and diseases peculiar to women. (Questions on forensic medicine and public health will be included in the third or final examination.) A candidate may present himself for examination in these three subjects or parts separately or at one time. A candidate will be admitted to the third or final examination on producing evidence:—1. Of being twenty-one years of age. 2. Of having passed the second examination. 3. Of having studied medicine, surgery, and midwifery, in accordance with the regulations prescribed in Section I., Clauses 2 and 6 to 10. The Colleges do not admit to either part of the Third or final examination any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months, nor till the expiration of two years after his having passed the second examination.—NOTE: Students are recommended to pass these two years in acquiring practical knowledge in the wards, or in the out-patients' department, of a recognised hospital. A candidate rejected in the third or final examination, or in one or more of the three parts into which he may have divided it, will not be admitted to re-examination until after the lapse of a period of not less than six months from the

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date of rejection, and he will be re-examined in the subject or subjects in which he previously failed to pass. Any candidate who shall have obtained a colonial, Indian, or foreign qualification which entitles him to practise medicine or surgery in the country where such qualification has been conferred, after a course of study and an examination equivalent to those required by the regulations of the two Colleges, shall, on production of satisfactory evidence as to age, and proficiency in vaccination, be admissible to the second and third examinations. The fees for admission to the third or final examination are as follows:—For the whole examination, £15 15s.; for re-examination after rejection in medicine, £5 5s.; for re-examination after rejection in surgery, £5 5s.; for re-examination after rejection in midwifery, £3 3s. Every candidate who shall have passed the third or final examination is, subject to the bye-laws of the two Colleges, entitled to receive the licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England. (Forms of the required certificates may be obtained of the registrar of the Royal College of Physicians, or of the secretary of the Royal College of Surgeons.)

FREDERICK A. MAHOMED, M.B. CANTAB., F.R.C.P. LOND.

ANOTHER instance of a fellow-labourer of great promise

"Dead, dead ere his prime."

The profession in London for the last fortnight had been aware that this brave worker in the fever-field was himself smitten with typhoid and had trembled for the result, which, alas! is very bad. We shall not now attempt to do justice to the labours and to the hopes of Mahomed, for he was a bold and ambitious explorer "in the regions beyond" the accepted limits of pathology. It is not the least significant proof of his character that we are supplied or premised on all hands, from worthy contemporaries, not to say rivals, accounts of his work and of himself. One, and no mean tribute, from a capable and generous hand we here produce:—

"I have known Frederick Mahomed during the whole period of his too short career in scientific medicine, and he has always seemed to have possessed an individuality far more strongly marked than most of us who are his contemporaries. It must be twelve years ago that there appeared in the *Medical Times* that series of papers upon the sphygmograph which at once stamped him as an ardent and industrious student; indeed, he was characterised by an ardour and energy which often made him formulate propositions far in advance of the ideas of his more cautious comrades, and led him sometimes into mistaken inferences, but none the less honestly believed and advocated. It was a common saying that no one but Mahomed could interpret all the teachings of the sphygmograph, and it may be that this study of its records led him to place too strong a reliance upon the faithfulness of a mechanical contrivance, without due allowance for its necessary imperfections. In spite of that it cannot be denied that his fervent advocacy did much to re-establish the sphygmograph in clinical estimation. These early studies of the pulse gave a bias to all his future work, which was mainly centred upon the subject of Bright's disease. One of the first fruits of this pursuit is to be found in the paper read in 1874 before the Royal Medical and Chirurgical Society on the Pre-albuminuric Stage of Scarlatinal Nephritis. He showed here from a wide experience, due to his connexion with the London Fever Hospital, that the occurrence of albuminuria in scarlatinal subjects was preceded by increase in arterial tension, and often by the transudation into the urine of hæmoglobin; and he showed, further, that this was so constantly preceded by constipation as to suggest a causative relation, and the prescription of purgation with the view of anticipating, and even preventing, the supervention of nephritis. The importance of such an increase in arterial tension as a prodromal phenomenon in renal disease became clearer to him as time went on; and he devoted himself to solve the riddle of Bright's disease, and determine the significance of albuminuria. His last production on this subject is to be found in the recently issued volume of Guy's Hospital Reports, but he had previously made it the subject of his graduation thesis at Cambridge University, and communicated a paper upon it to the International Medical Congress of 1881, as well as to a previous volume of the Reports. It is beyond my power to condense into a few words the outcome of all this labour, for his writings upon the subject teem with pathological and clinical observations. Suffice it to say that the attempt to lay greater stress upon cardio-vascular change than upon the structural lesions of the kidney was supported by many facts, and harmonised with the doctrine of arterio-capillary fibrosis expounded by Sir W. Gull and Dr. Sutton. But Mahomed did not confine himself to this one subject, vast as that subject was. His activities and sympathies were far wider. He was a most constant attendant at the meetings of the metropolitan medical societies, and a frequent speaker in the discussions, showing a familiarity with many subjects and the good use to which he had put his faculty of observation and his retentive memory. Of late his activity seemed to have redoubled, and as an instance may be cited the fact that last spring he attended a meeting of the Glasgow Pathological and Clinical Society to take part in a debate on albuminuria, while at the same time he contributed the results of his experience of the use of cold baths in the treatment of typhoid fever to the Medical Society of London. It may here be remarked that his experience of this treatment at the London Fever Hospital convinced him of its utility to such an extent that he urged its adoption in his own case, but owing to the mild course of the fever in its early weeks it was not deemed necessary to resort to it. The work with which Mahomed himself would perhaps most wish to be remembered is, I imagine, not his personal scientific labour so much as the share he took in establishing a scheme to encourage accurate observation and record by medical practitioners generally. Whatever may be the outcome of collective investigation, and to what extent it will be found practically useful, it is almost entirely owing to him that the idea took form in this country, in the British Medical Association. The movement has since been taken up by other countries, and finally by the International Medical Congress. All who have been associated with him in the furtherance of this scheme must have felt how largely the whole plan and method of procedure were the creation of himself; and such progress as collective investigation has made in this country is mainly due to the unremitting labour and enthusiastic advocacy which he bestowed on it. To those who have held aloof from the movement, or who see in it no practical gain, we would wish for a little of this enthusiastic spirit. It must not be forgotten that as yet and for some time to come the prosecution of the work must be regarded as experimental. No one—not even the sanguine mind of Mahomed himself—could have imagined that so novel and striking an effort should be commenced in as perfect a form as it was possible it might attain; but the central principle of the movement remains unshaken, no matter how faulty the methods whereby it is carried on. It is an extension of the same idea and the endeavour to collate facts bearing on the transmission and affinities of diseases that has been attempted by Mr. Francis Galton, in conjunction with Dr. Mahomed, in the encouragement of family registers; and the anthropometrical laboratory, so popular at the Health Exhibition, was a type of an institution which the same inquirers hoped might one day be multiplied over the country. It was upon these collateral subjects, which some may regard as impracticable, that Mahomed expended much time and energy, pursuing them with what to many seemed an almost Quixotic ardour. Yet on these subjects, as on others, he did not rest until he had followed them up to the full; and everything he undertook, down to his last public act at the College of Physicians, where he vainly urged the College to take measures to enforce the regulation of the sale of drugs, was done with an intensity and a fervour rarely to be met with. It was by virtue of these qualities that, young as he was, Frederick Mahomed was perhaps better and more widely known than any of his contemporaries; and in the knowledge of these elements in his character his friends felt that there was opening to him a prosperous career—now, alas! abruptly brought to a close."

The first symptoms of Dr. Mahomed's fatal illness appeared on October 30th, the day on which he brought forward at the Royal College of Physicians a motion to appoint a committee for the purpose of urging the Government to exercise control over the quality and composition of patent medicines and drugs. Then followed some days of malaise, and in about a week the true nature of the malady became clear. For the first fortnight the fever ran a mild course, being marked by constipation. Then the temperature rose to 104°, and on the nineteenth day a severe attack of intes-

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tinal hæmorrhage created considerable anxiety. The recurrence of hæmorrhage and the supervention of extreme tympanites increased the state of exhaustion under which he sank in the early morning of the 22nd inst. During his illness he was attended by Drs. Cayley, Broadbent, and Wilks.

THE PROGRESS OF CHOLERA.

CHOLERA still continues to decline in Paris, and on the alleged ground that the epidemic has subsided no further bulletins are to be issued. We very much doubt the expediency of this step, especially as during the twenty-four hours preceding its announcement nineteen cholera deaths took place in the city. The desire may be to remove needless alarm, and to intimate to intending visitors that there is no further reason why they should stay away from Paris; but, coming as the intimation does at the termination of a period of seven days during which 203 deaths occurred from the very disease which is regarded as having disappeared as an epidemic, the proceeding is certainly liable to be interpreted as an indication to hush up the mortality that still takes place, and we fear it may have a contrary effect to that which is anticipated. Even after the disease has altogether disappeared people may feel disinclined to believe it, when they remember that nineteen deaths a day were not deemed worthy of being announced. Elsewhere in France the disease may for the present be regarded as having subsided.

From Spain comes definite information as to a not inconsiderable number of cases and deaths at Toledo (around which town a sanitary cordon has been established) and at Beniope, both of them places from which deaths had previously been announced. The absence, however, of any material spread of the disease in Spain is a hopeful sign.

Foreign consuls are now, it is stated, giving clean bills of health to vessels from Naples.

THE METROPOLITAN ASYLUMS BOARD.

AT the usual meeting of this Board on the 22nd inst., the chairman congratulated the managers upon the result of the action which was recently brought against them by Mr. Fleet of Darenth in regard to the small-pox camp, and upon the proof which the trial afforded that the camp had been conducted with judgment and care. In the report of the North-Western Hospital (Hampstead) committee, Dr. Gayton, medical officer of that asylum, gave some examples of "how small-pox is spread" outside the walls of asylums. The first case mentioned was that of a man who, feeling ill, went to St. Bartholomew's Hospital on Nov. 7th, and after sitting in the waiting-room for some time was seen by a medical man. He was told that he would be admitted, and then went home to tell his wife. He returned to the hospital, was placed in a room through which about one hundred persons passed while he was there, and was put, after being bathed in the usual way, in a ward in which there were other persons. The next day he was seen by a physician, and pronounced to be suffering from small-pox. The patient was ordered to be removed at once, and came to the asylum at Hampstead, dressed in his ordinary clothes. The man was suffering so acutely that he died nine hours and a half after admission. The next case was that of a chemist's assistant, who spent four hours in the House of Commons, presumably in the Strangers' Gallery, after suffering from the initiatory fever of small-pox. The next day, when the eruption had appeared, he served in his employer's shop, and continued to do so until he was taken to the hospital. A third case was that of a young woman who lived in the caretaker's rooms of a school at Hampstead. When suffering from the premonitory symptoms on Nov. 10th, she rode to London in an omnibus to see the Lord Mayor's Show, and mingled with the crowd; she afterwards rode to Regent-street in an omnibus. It was resolved, with respect to the first-mentioned case, that the authorities of St. Bartholomew's Hospital should have their attention drawn to the statements made by the patient, and some members remarked that the whole facts showed the necessity for the asylums used for patients with infectious diseases being open to medical students, in order that the appearances of these diseases in all stages should be more accurately known than they appeared to be in the general hospitals. Sir E. H. Currie, for the General Purposes Committee, called attention to the increased need for more accommodation for imbeciles. The asylums at Leavesden and Caterham had many children, and the Darenth committee were called upon to take these; but in the Darenth Asylum for Children there was an excess of 130 cases. In regard to imbeciles generally, the number committed to the charge of the managers had increased from 3652 in 1873, to 5327 in 1883. He moved that steps should be taken to prepare and submit plans for the erection of buildings at Darenth for 500 or more imbecile patients. The motion was adopted unanimously.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5389 births and 3512 deaths were registered during the week ending the 22nd inst. The annual death-rate in these towns, which had been equal to 21·3 and 20·9 per 1000 in the two preceding weeks, was again 20·9 last week. During the first eight weeks of the current quarter the death-rate in these towns averaged 20·7 per 1000, and was lower than in any corresponding period on record. The lowest rates in these towns last week were 17·0 in Bristol, 17·6 in Newcastle-upon-Tyne, 19·1 in Halifax, and 19·4 in Brighton. The rates in the other towns ranged upwards to 25·2 in Nottingham, 25·8 in Sunderland, 26·0 in Wolverhampton, and 26·2 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 392 and 369 in the two previous weeks, rose again last week to 391; these included 76 from whooping-cough, 72 from scarlet fever, 67 from "fever" (principally enteric), 59 from measles, 44 from diphtheria, 40 from diarrhœa, and 33 from small-pox. The deaths from these zymotic diseases caused the lowest death-rates last week in Brighton, Huddersfield, and Bristol; and the highest rates in Bolton, Norwich, and Cardiff. The greatest mortality from whooping-cough was recorded last week in Leeds and Halifax; from scarlet fever in Salford and Sheffield; from "fever" in Derby, Newcastle-upon-Tyne, and Norwich; and from measles in Hull, Halifax, Bolton, and Cardiff. The 44 deaths from diphtheria in the twenty-eight towns included 31 in London, 3 in Liverpool, 2 in Norwich, and 2 in Salford. Small-pox caused 53 deaths in London and its outer ring of suburban districts, whereas no death from this disease was registered in any of the twenty-seven large provincial towns. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had been 580, 669, and 750 on the three preceding Saturdays, further rose to 768 at the end of last week; the new cases admitted declined to 149 last week, from 233 and 199 in the two previous weeks. The Highgate Small-pox Hospital contained 48 patients on Saturday last, 11 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had steadily increased in the nine preceding weeks from 159 to 370, declined to 354 last week, and were so many as 141 below the corrected average. The causes of 94, or 2·7 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Leicester, Bolton, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Huddersfield, Birkenhead, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 22·5, 22·6, and 22·3 per 1000 in the three preceding weeks, rose to 26·2 in the week ending the 22nd inst.; this rate exceeded by no less than 5·3 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 8·4 and 14·3 in Perth and Greenock, to 31·2 in Paisley and 36·0 in Aberdeen. The deaths in the eight towns included 115 which were referred to the principal zymotic diseases, against 116, 98, and 103 in the three preceding weeks; 34 resulted from measles, 27 from whooping-cough, 21 from diphtheria, 14 from

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scarlet fever, 14 from diarrhœal diseases, 5 from "fever," and not one from small-pox. The rate from these diseases in the Scotch towns last week averaged 4·8 per 1000, and was more than double the rate from the same diseases in the large English towns. The 34 deaths from measles in the Scotch towns showed a further increase upon recent weekly numbers, and included 19 in Glasgow and 10 in Aberdeen. The 27 fatal cases of whooping-cough also showed a further increase upon recent weekly numbers; 9 occurred in Glasgow, 6 in Dundee, and 4 in Edinburgh. The 21 deaths from diphtheria also showed an increase, including 8 in Glasgow and 5 in Edinburgh. Nine of the 14 deaths from scarlet fever occurred in Glasgow; and 3 of the 5 deaths referred to "fever" were returned in Edinburgh. The 145 deaths referred to acute diseases of the respiratory organs in the eight towns showed an increase of 44 upon the number in the previous week, and were 5 above the number returned in the corresponding week of last year. The causes of 89, or 14 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 24·7, 25·3, and 30·0 per 1000 in the three previous weeks, further rose to 32·7 in the week ending the 22nd inst. During the first eight weeks of the current quarter the death-rate in the city averaged 28·1 per 1000, whereas the rate during the same period did not exceed 19·0 either in London or in Edinburgh. The 220 deaths in Dublin last week showed a further increase of 18 upon the number in the previous week, and included 39 which were referred to the principal zymotic diseases, against 18 and 26 in the two previous weeks. Of these 39 zymotic deaths, 16 resulted from scarlet fever, 7 from "fever" (typhus, enteric, or simple), 7 from whooping-cough, 6 from diarrhœa, 2 from diphtheria; 1 from measles, and not one from small-pox. These 39 deaths were equal to an annual rate of 5·8 per 1000, the rate from the same diseases being 2·3 in London and 4·0 in Edinburgh. The deaths from scarlet fever, which had been 8 and 10 in the two preceding weeks, further rose to 16 last week, and exceeded the number returned in any previous week of this year. The fatal cases of whooping-cough and diarrhœa also showed an increase. The 7 deaths referred to "fever" were two fewer than those in the previous week. Six inquest cases and five deaths from violence were registered, and 70 deaths were recorded in public institutions, showing a marked increase upon recent weekly numbers. The deaths both of infants and of elderly persons were fewer than those in the previous week. The causes of 34, or more than 15 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

COCAINE.

To the Editor of THE LANCET.

SIR,—Permit me to add my testimony to the advantages to be derived from the use of a 4 per cent. solution of cocaine in operations upon the eye. It acts excellently as a local anæsthetic, rendering the conjunctiva and cornea insensitive in the course of a few minutes. I first tried it on the 13th inst. in a case of extraction of a cataractous lens at the Royal Westminster Ophthalmic Hospital. It was dropped into the conjunctival sac about four times in the course of twenty minutes. The speculum was introduced, the conjunctiva was seized with the forceps, and the man was asked whether he felt pain. "No, Sir," was the reply. The linear knife was then passed across the cornea, and as it was slowly made to cut its way out, the patient was asked two or three times whether he experienced any suffering. "Not a bit, Sir," he answered each time. I have since tried it on three cases of cataract, in all of which the pain was stated to be inconsiderable though not entirely absent. I further tried it in a case of entropion, the solution being subcutaneously injected; but it did not seem to effect any material alleviation of the pain, perhaps because a sufficient interval of time was not allowed to elapse. On Friday last I operated on a boy of eight years of age for squint. No pain was felt till the tendon was picked up with the hook, when as it was divided the child whimpered a little, because he did not like the scissors. This, however, did not prevent him from submitting, with a little coaxing, to the operation on the other eye. Lastly, I have done one iridectomy for glaucoma under its influence. The application of the forceps and the transfixion of the cornea did not produce any complaint of pain; the division of the sclerotic caused some, but not severe pain. The division of the iris excited no remark. The patient, on being informed that the operation was completed, said, "I was told there would be no pain; there was some, but it did not last long." The partial failure of the remedy in this case may reasonably be referred to the difficulty with which absorption takes place when the eye is very tense. On the whole I am well satisfied with the effects produced, and consider that it will prove of the greatest benefit to those who are old and infirm, or who from any other reason object to the use of chloroform or ether. In general surgery it will probably prove useful in cases of stricture, and as an anæsthetic in the removal of dressings. It does not seem to produce any disagreeable after-effects.

I am, Sir, yours truly,

Cumberland-place, W., Nov. 1884. HENRY POWER, F.R.C.S.

To the Editor of THE LANCET.

SIR,—As an addition to the information given by my friend, Dr. Felix Semon, last week, on the effect of cocaine on the larynx, will you allow me to publish the effect of cocaine on the interior of the nose? The experience is all the more valuable, because it is personal; the nose which was operated on was my own, the operator was Dr. Semon.

About three weeks ago, Dr. Semon was kind enough to apply the galvano-cautery freely through the thickness of the mucous membrane over my right inferior turbinated bone, as for some time past I have suffered from slight symptoms of obstruction, which, I thought, might cause or at least aggravate the attacks of migraine from which I occasionally suffer. He made three long incisions in the membrane. They produced so much pain that I found it difficult, even with great determination, to sit still. My right eye ran with water and the conjunctiva was instantly intensely congested. The application of the cautery to the turbinated bone immediately lighted up the pain on the right side of the head and in and behind the eye, such pain as I always experience during an attack of migraine. I was very unwell during the rest of the day, and on the day following was laid up with the most violent attack of migraine I have ever had. On these accounts it was agreed that when the operation was repeated I should take gas or chloroform. In the meantime we have become acquainted with the properties of cocaine, and Dr. Semon has, as he has already told you, put it to the test in affections of the larynx. To-day he repeated the burning of my nose, and, instead of three linear cauterisations, made five—two in the inferior and three in the middle turbinated bone. But, instead of using gas or chloroform, he first painted the surface of the bones thoroughly twice with a 20 per cent. solution of cocaine, allowing an interval of five minutes to elapse between the first and second paintings, and another interval of five minutes between the second painting and the burning. The effect was marvellous, far more so than I, or even he, I think, expected. The burning was not felt by me more than the introduction of the brush in painting. I cannot say I did not feel the operation, but the sensation must be described as feeling, not pain; for indeed I suffered none. There was scarcely any watering of the eye or suffusion of the conjunctiva, and there was no pain in the head or about the eye. Of the length of time during which the effect of the cocaine lasts I am not able to speak, for although after the first operation I was much more unwell than I feel at present, there was really very little pain in the nose. Certainly the discomfort has been less this time, and the cocaine has not left any disagreeable sensations.

Dr. Semon begs me to draw attention to the strength of the solution of the muriate of cocaine which was used—20 per cent.; very much greater than the strongest solution which is used in ophthalmic surgery. At an earlier hour on the same morning he performed the same operation on the turbinated bone of a patient (a medical man) who brought with him a 4 per cent. solution of cocaine. The pain was less than if no local anæsthetic had been employed, but was

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not entirely absent, as in my case. I can confirm this observation so far that on the previous day I used a 4 per cent. solution in operating on the larynx of a delicate woman under my care at St. Bartholomew's Hospital without producing any marked anæsthesia. Yet the application was made twice, and an interval of at least five minutes was allowed between the applications and between the second application and the operation. It is not improbable that a solution of less strength than 20 per cent. will suffice in operations in the interior of the nose, and this will easily be determined during the next few weeks or even days. Indeed, the sooner it is determined the better, for the muriate of cocaine is at present extremely expensive, costing about one shilling a grain. When the 20 per cent. solution is employed, and the nose or larynx is brushed over twice thoroughly, it will be found that from two to four grains of the cocaine have been used. I am informed that the cost will probably increase during the next few months if the drug is as largely employed as it bids fair to be, for the supply is very limited, and there is not even a good prospect of obtaining a sufficient supply of the leaves from which the alkaloid is manufactured.

Nov. 24th (two days after the operation).—Yesterday I suffered from a slight attack of migraine, not so severe as I have often experienced, and not to be compared with that which followed the first cauterisation. To-day it has completely passed off, for it only lasted a few hours. How much of the difference is to be attributed to the use of the cocaine I am not able to say, but I believe a part of it at least. I mention it to make the case as complete as possible, and to show that there is certainly no reason to apprehend that the after-effect of the alkaloid will exaggerate the suffering of the patient. I remain, Sir, yours truly,

Queen Anne-street, W., Nov. 24th, 1884. HENRY T. BUTLIN.

P.S.—Dr. Semon has just looked through this letter, and thinks I ought to have offered some explanation of the reasons which induced him to perform and me to submit to the cauterisation of the turbinated bones for migraine; but I think it will be better to defer that and the discussion of Hack's theory to a later date, when we have more material within our reach. The object of the present communication is to direct attention to another use of cocaine.

FLUKES IN MAN.

To the Editor of THE LANCET.

SIR,—Having received from Dr. Manson a copy of Dr. Wallace Taylor's paper entitled "Distomata Hominis," I request permission to offer a few criticisms in no unfriendly spirit. Dr. Taylor says that "the whole subject of distomata infesting man has probably been worked up better in Japan than elsewhere." Nevertheless his memoir, which from the clinical standpoint does him much credit, omits all reference to the labours of Lewis, McConnell, Sonsino, Thomas, and others. My papers on Distoma crassum, Bilharzia, &c., naturally share the same fate.

Dr. Taylor gives a description of Distoma Ringeri, but, following Prof. Baelz, he calls the parasite D. pulmonale. My description of the original fluke sent by Dr. Manson was published in the *Quekett Journal* in 1880, two years before the publication of Baelz's memoir in the *Berliner Klinische Wochenschrift*, which he quotes (1883). Baelz, it seems, had mistaken the eggs of this fluke for gregarines.[1] But apart altogether from the question of priority, the title (D. pulmonale) is badly chosen, because the lung flukes of mammals are so very like one another. The D. compactum found by me in the lungs of the Indian ichneumon is apparently a mere variety of, if it be not identical with, D. Ringeri of man, and as much may be said of Dr. Kerbert's D. Westermanni infesting the lungs of the tiger.[2] In all three corresponding forms the uterine organs have precisely the same character and disposition. Certainly Baelz's and Kerbert's figures leave little to be desired.

The second parasite described by Dr. Taylor is still more unfortunately named. He calls it D. hepaticum. Here, again, he follows Baelz, who had previously called it D. hepatis perniciosum. It seems incredible that anyone writing on flukes should be unfamiliar with the natural history and characters of the common D. (Fasciola) hepaticum so beautifully worked out by Professor Thomas, and already known to have been detected some twenty times in the human subject; yet Dr. Taylor naïvely remarks that "whether D. hepaticum hominis is of a different species from the Fasciola hepatica (Linn.), well known in Europe as the cause of the sheep 'rot,' I am unable to decide." Dr. Taylor's parasite (D. hepaticum hominis) is utterly unlike the common liver fluke. If it be a good species, it will be less confusing to call Baelz's fluke (D. Baelzi). My impression is that it is only a contracted or broad example of the species which I have called D. sinense. Dr. Taylor, however, says of his D. hepaticum that, "omitting minor differences, the general description given of the viscera of the D. pulmonale will answer for this." This statement surprises me, for his own, or rather Professor Baelz's, really good figures show that (as regards the position and extent of the vitellaria and other reproductive organs) no two fluke species of the same genus could well be more divergent in the arrangement of their essential organs.

The next species described by Dr. Taylor is Prof. Baelz's so-called Distoma hepatis innocuum. This fancied new parasite is (as Manson himself points out in a pencilled side-note) nothing more than the now well-known D. sinense, of which I have specimens sent by the original discoverer, Prof. McConnell. Unaware of my prior description, Leuckart named the same parasite D. spatulatum. I have part of a liver well infested by this fluke, which is doubtless "pernicious" in its effects. Baelz's zoological nomenclature is therefore altogether inadmissible.

Dr. Taylor's memoir closes with figures of two other fluke parasites. Here again he is equally unfortunate in his determinations. The large fluke "infesting the stomach of cattle," which he calls a distoma, is the well-known Amphistoma conicum, whilst the smaller fluke, taken from the liver of a cat, is probably Creplin's Distoma conus. The size, to be sure, is rather larger than Dujardin states it to be in his description.

The errors which exist in regard to the synonymy of parasitic species are already sufficiently burdensome, and it was in the hope of aiding identification that I published a "Manual of Reference" to all the known human parasites, bringing the literature up to date (1882). Honest and good workers, who are not at the same time systematists, can have little idea of the great trouble and confusion which the introduction of new names for old or familiarly known parasites creates in medicine. Solely in the hope of checking errors of fluke-nomenclature in relation to important diseases I have made these few remarks, which I trust will be accepted in the spirit in which they are offered.

I am, Sir, your obedient servant,

Portsdown-road, W., Nov. 22nd. T. SPENCER COBBOLD.

[1] See THE LANCET, 1883, vol. ii., pp. 548.

[2] Archiv für Mikroskop. Anat., Bd. 19, S. 332.

"CHARCOT'S JOINT DISEASE."

To the Editor of THE LANCET.

SIR,—The interest excited by the discussion at the Clinical Society on "Charcot's Disease" induces me to state that you published in THE LANCET of Jan. 28th, 1871, in a report by me of cases under the care of Dr. Charcot at La Salpêtière, Paris, the first notice of this disease in England. This report included a very short *résumé* of the clinical facts, and by what, in considering the diagnosis, rheumatism was excluded. In 1876 I begged of Dr. Charcot that he would kindly give some specimens of bones illustrating the disease in question. He informed me that the specimens he had shortly before had at his disposal were sent to the museum of St. Thomas's Hospital. May I here have the pleasure to acknowledge that Dr. Charcot did not send me empty-handed away, but gave me sections of the spinal cord in another form of disease—namely, progressive muscular atrophy, which I exhibited at the Pathological Society May, 1877, as having a relationship with the joint affection.

I append an extract from your journal of the date above named.

I am, Sir, your obedient servant,

Stratford-place, W., Nov. 1884. T. W. NUNNELEY.

"Dr. Charcot pointed out some cases of joint affection which he believed showed that consecutive to lesion of the nervous system arose mischief in the joints. In the *Archives de Physiologie* No. 1, 1868, he has published papers: "Sur quelques Arthropathies qui paraissent dépendre d'une Lésion du Cerveau ou de la Moelle Epinière." "Th[illegible]

of these papers is to describe certain phenomena which are occasionally to be observed during the progress of disease of the nervous centres; and he divides into two groups the joint affections which respectively occur during the progress of locomotor ataxy, and in hemiplegia dependent on disease of one of the cerebral hemispheres."[1]

ENGLISH DEGREES FOR ENGLISH STUDENTS.

To the Editor of THE LANCET.

SIR,—Not only practitioners and students, but all patriotic Englishmen, must agree with the remarks in your leading article of November 1st on the continuous exodus of English medical students from their native schools. This is a matter with which pecuniary considerations have absolutely nothing to do, as at the present day the necessary expenses of medical education vary little on either side of the Tweed, and the fee for the double degree of M.D., M.S., in the North is about the same as that for the usual double qualification in London. I brought this subject forward at the meeting of the Royal College of Surgeons in March last, and then drew attention to the rapid decadence of the English schools of medicine. There is no doubt whatever as to the cause of this. The real explanation, as I then pointed out, is the fact to which you allude, that "no more learning is needed and no greater effort demanded to obtain a diploma of doctor of medicine in other places than is required in London and most of the English schools to obtain a mere licence to practise." This is, indeed, an understatement of the facts, for in all that concerns medical knowledge and experience much more is demanded of a candidate for the English licence than of a candidate for a Scotch degree, as may be seen by anyone who will compare the regulations of the examining bodies.

A glance at the Medical Directory will show that about 2000 practitioners suffice for the medical requirements of the whole of Scotland, whilst there are more than twice that number in active practice in London alone, and six times the number in addition in the English provinces. But at the medical schools in Scotland there are probably twice as many students as at all the medical schools in London; a considerable proportion moreover of those entering at the London schools find out afterwards the mistake they have made, and go off after one, two, or three years to other schools where their labours will be more fitly rewarded. The result is that the English licentiate is everywhere thrust aside by the Scotch graduate, and elbowed out of office, employment, and profit; every honorary medical appointment is closed to him by the universal rule admitting only graduates, and he is necessarily relegated to a secondary rank, and is thus and thus only prevented from rising to such a professional position as he might otherwise attain, and to which his qualifications and abilities would give him an indisputable right. There is an easy and natural remedy for this state of things without calling upon the London or any of the other universities to lower its standard, and without adding to the excessive number of licensing bodies already existing. At the meeting to which I have referred I proposed that the two Royal Colleges of Physicians and Surgeons should be amalgamated into one great Royal College of Medicine, to be endowed with the power of granting the degrees of M.D. and M.S.[2] (see the report in your issue of March 29th). There is no need to call the United College a University, nor would there be any advantage in doing so. There is nothing either novel or incongruous in a college granting degrees; various instances might be cited from both ancient and modern times, but it will suffice to mention the University of Edinburgh, which was only spoken of as a college for more than a century after its foundation, and which, as Sir Alexander Grant says, "never did and never could become a university in the mediæval sense of the term." Oxford, and Trinity College, Dublin, are now the only universities requiring the B.A. to be taken previously to the M.D., so that as far as medicine is concerned the College of Physicians is practically on exactly the same footing as any of the other universities—it prescribes a curriculum, conducts an examination in, and grants a diploma for, medicine, which is a licence to practise. The moment a university medical degree is dissociated from an Arts degree, and allowed to become a licence to practise, it ceases as such to be anything more, and the whole of its value as a higher title will depend on the character and standard of the particular curriculum, and examinations of which it is the end and aim. It cannot surely be difficult for a committee of both Colleges to prepare a scheme of complete union which shall be satisfactory to the English profession. The mere conjunction of the Colleges for examination purposes will not retain students at the London Schools nor make the London qualification more attractive; and if the fees remain exactly as in the separated Colleges, there can be no conceivable advantage to the English student in a mere conjoint board at all. Although the question of expense enters very little into this question of the driving away of students from the London schools, yet so large fees, being charged for primary examinations must rather deter than attract students, and one sees no reason why either College should now charge ten guineas for exactly the same examination that each before charged five guineas for; it would have been far better to continue to charge five guineas for each primary examination and twenty-five guineas for the double pass examination; but a little more liberality in this matter of fees would disarm much opposition to the scheme, and would probably result rather in a gain than a loss in a pecuniary sense.

The present is a great opportunity. On the boldness or hesitation of those who influence the affairs of our two Royal Colleges depends the continuance of the success of our English Schools of Medicine—depends probably the future existence of the Colleges themselves.

I am, Sir, yours obediently,

WILLIAM HICKMAN.

Dorset-square, N.W., Nov. 16th, 1884.

"OVER-PRESSURE IN SCHOOLS."

To the Editor of THE LANCET.

SIR,—In THE LANCET of Nov. 15th there is a leader on the above subject. Your remarks are well timed and essentially to the point, and I believe that there are few members of our profession who will be found to disagree with their general tenour. The subject is one of vital importance to the future well-being of the nation, and it is a subject, moreover, in the settlement of which the medical profession is peculiarly concerned, for it is impossible, in my opinion, for anyone who has made the nature of disease a study and its treatment a practice, to remain in ignorance of the fact that the present system of education is being maintained at a ruinous, and to the general public, almost inexplicable expense. The expense is not a monetary one, but consists in the wasted energies and premature deaths of children, who, in other and more reasonable circumstances, might have lived long and useful lives. To the members of our profession whose daily work brings constantly under observation the relations which the various parts of the human frame bear to one another during life the difficulties which at present roughen the educational road are easily apparent; but it is otherwise with the general, and, as a rule, unthinking mass of the population. The average parent desires that his children shall be educated as speedily, as cheaply, and as thoroughly as possible; and he naturally regards with favour a system of education which endeavours to make up for lack of time by an increased amount of material, and it is with feelings of pride that such a parent will tell admiring friends that his boy of ten is almost fit to leave school, and has his head stored with a wonderful amount of learning. The boy often begins to fag and to fall into a state of ill-health which is misunderstood by both parent and schoolmaster, and the educational mill is allowed to grind into dust all the fair promises of early boyhood, and upon the very threshold of life this prodigy of youthful learning falls. His brain, over-driven and exhausted, is like a jaded horse, dull and irresponsive at a time when its best efforts are required, and his body, neglected and forgotten, fails with sad and ominous frequency in the performance of its duties; and, in a word, a wasted life is the result, the inevitable result, of a premature and excessive demand upon the higher functions of the human frame. This is, perhaps, a somewhat gloomy picture, but if we consider for a moment the delicate and easily disturbed organism over which the relentless educational Juggernaut is driven, the reason for

[1] THE LANCET, Jan. 28th, 1871, p. 117.

[2] To the title "Royal College of Medicine," the words "and of Physicians and Surgeons of England" could be added as a secondary title if thought desirable, to satisfy the scruples of some who might regret to part with these time-honoured designations.

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the gloom will perhaps become apparent. The labours of Ferrier and other workers in the field of the higher neural physiology have made it plain to us that the brain is to be regarded as the organ of mind, and that in the present state of our knowledge it is useless to consider even the most exalted thought, feeling, or imagination as phases of mental action which are apart from or above or independent of the change and interchange of material atoms. If we look upon the brain, then, as analogous to any other part of the human frame—as a muscle, for example—we shall easily conceive of its being over-excited and over-wrought, and as a consequence exhausted, and even in process of time altered in its structural elements. A muscle, we know, becomes hypertrophied by over-use, and, if timely rest be not obtained, will also atrophy and decay. But how much more delicate is the brain than any other organ of the animal economy? It is so delicate that nature, always provident and far-seeing, has provided for its protection a covering which combines lightness and strength in a degree never attained by any work of man. The minute and variously shaped cells, the fine network of nervous tissue, the subtle fluids, and the fragile and easily inflamed investing membranes, all have a part to play in the formation of every phase of mental action, and all become more perfect or inapt in the performance of their parts as the years pass by. Education, if one were permitted to describe so important a subject in a phrase, *is essentially a physical process.* The brain and body ought to be regarded as one to be educated together, and to grow in usefulness together. There is but one distinction worthy of present notice: the former is more easily deranged in its action and altered in its structure than the latter. Spencer, in his essay upon Education, remarks that the ancients educated the body and forgot the mind, while we in our day educate the mind and forget the body, and advises a combination of the ancient and modern conceptions of education.

The evils of over-pressure are at present only apparent to the few, and even by the few their extent cannot be estimated. It is to the future that we must look for the direst result of the present system of education.

I am, Sir, your obedient servant,

Glasgow, Nov. 18th, 1884. ROBERT MACPHERSON.

ANTISEPTIC SURGERY.

To the Editor of THE LANCET.

SIR,—I enclose a sketch of rules observed, in their main features at least, by many German and Austrian surgeons; and I cannot help thinking they will be quite novel to most in this country. Statistics are not of much use, of I could quote some remarkable series of abdominal operations without deaths in which these rules were rigorously observed. In private practice much of this elaborate care is impracticable, but I venture to believe that one single rule is almost alone requisite. It is this: Let the air be as free from dust as possible, and allow nothing to be brought in contact with the wound, or parts near, which is itself impure, or has touched any doubtfully pure surface. How far this can be carried out without special training is another matter.

I am, Sir, yours faithfully,

A. OGIER WARD,
Tottenham, Nov. 17th, 1884. M.B. and C.M. Edin.

RULES OF ANTISEPTIC SURGERY IN GERMANY AND AUSTRIA.

1. *The Operator and Assistants.*—During the previous twenty-four hours they should not have made any post-mortem or anatomical dissections or vaginal examinations, nor have attended any infectious cases; but if any of these rules have been run, extra cleansing of the person is demanded. On the day of operation care is taken that no scurf shall fall from the head, and the beard is carefully attended to. At the time of operation the coat is removed (also collar and waistcoat in some cliniques), and a clean apron or short-sleeved linen jacket is put on, the arms being bare to the elbows. Hands and arms are washed, first in hot water, then in a corrosive sublimate solution, 1 to 2000, or else in 1 to 20 carbolic solution, and the nail-brush is diligently employed for the entire hands and arms, not for the nails alone. A basin of this solution is in frequent use throughout the operation, and if anyone touches any unsanctified object, he must again wash his hands and not merely dip them. In some cases the coats and hats are excluded from the room, and care is demanded that the boots shall be as clean as possible.

2. *The Room.*—This is thoroughly washed all over with carbolic soap as shortly before the operation as may be practicable, and the spray is often used for some time before the operation.

3. *The Apparatus.*—The instruments are most carefully scrubbed with 1 to 20 of carbolic solution, the handles receiving great attention, and they lie soaking for a considerable time beforehand, if feasible. The protective, if employed, is also soaked before use. The outsides of all bottles, syphon-tubes, syringes, &c., are washed with one or other antiseptic; and tourniquets, Esmarch's bandages, and so forth, all come in for attention. The usual porcelain trays are used to hold the apparatus, and are liberally supplied with carbolic or sublimate solution.

4. *The Patient.*—The patient is cleansed as far as possible before being brought into the room; and, if a limb is to be operated on, it is wrapped in a solution for some hours previously. When laid on the table the patient may be enveloped in a blanket; but if so, that is scrupulously covered by waterproof sheeting, the outside of which is sponged over with some solution. The exposed limb or part is now scrubbed with sublimate solution, then shaven and again washed. Now, all who have had to handle these unclean surfaces repeat the scrubbing of their own hands, and the operation commences.

5. *The Operation.*—No instrument, or appliance of any sort, is allowed to touch the patient unless both it and the hands of the assistant are absolutely beyond suspicion. Thus, if the assistant rests his hand on the table, the operator will not take an instrument from that hand until it has been washed, not dipped. In fact, the guiding principle is that nothing shall touch the open wound which, either primarily or secondarily, has been in contact with an unclean surface. The dressings vary with the fancy of the operator. Iodoform glycerine, 1 to 20, figures largely, as also iodoform gauze. It is customary to cut away the outside foot or so of any carbolised bandage, and the outer surface of a fresh mass of salicylic wool is never allowed to be placed next the skin.

REGINA *VERSUS* C. F. J. B. BRIGGS AND ELIZABETH BRIGGS.

To the Editor of THE LANCET.

SIR,—I beg to call your attention to this case, wherein it appears that a very serious miscarriage of justice has taken place.

At the last Nottingham Assizes a man named Briggs and his mother were tried for the murder, by starvation, of Thirza Briggs, the wife of the male prisoner. I enclose you a newspaper report of the trial and notes of the evidence. It was proved that the mother-in-law of the deceased behaved with great cruelty to her, and that the husband (a weakly and nearly blind man) did not supply his wife with food. It was proved, however, that the deceased had silver in her possession, and that she procured food from her neighbours during the six weeks immediately preceding her fatal illness; also that she had as recently as July been staying some weeks with friends, where, it was admitted, she had everything she required. On Sept. 28th she fell down in a fit, and on Oct. 3rd she died comatose. A post-mortem examination was made and an inquest held, when a verdict of wilful murder was returned against the two prisoners. At the trial two medical men, who had made the post-mortem, swore that the deceased died of serous effusion on the brain, the result of starvation. On that evidence the male prisoner was found guilty of manslaughter and sentenced to twenty years' penal servitude.

Now, Sir, I venture to state that the post-mortem examination entirely failed to prove starvation, and that the sworn facts of the case were absolutely incompatible with starvation.

I am, Sir, yours obediently,

The Sanctuary, Nov. 25th, 1884. THOS. BOND, F.R.C.S.

THE REMOTE EFFECTS OF GOUT.

To the Editor of THE LANCET.

SIR,—I read with much interest the description of the relation of certain diseases of the eye to gout, as reported last week in THE LANCET. Mr. Hutchinson has remarked in his lecture on the obscure non-arthritic effects which gout

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may produce in the children of gouty parents, without any ordinary gouty symptoms. I have had two cases lately in my practice which illustrate his remarks so well that I cannot forbear from quoting them. A Mr. H—— came to me suffering from chronic eczema and psoriasis. He attributed it himself to the great changes of temperature and profuse perspirations incidental to his business. I put him on arsenic and afterwards on iodide of potash, without much benefit. He told me that he had never had any gouty symptoms in his life. Shortly afterwards his married daughter, Mrs. B——, consulted me on certain intense pains in her eyes, accompanied by temporary congestion and partial blindness, which attacked her whenever her digestion was deranged. Recognising this to be a gouty symptom, and bethinking me of the obscure skin disease which afflicted the father, I made somewhat minute inquiries into the previous family history. I then found that the grandfather of Mrs. B—— and the father of Mr. H—— had been a martyr to gout for many years, and had eventually died of a form of Bright's disease, which I have no doubt from the description was the "contracted granular kidney" so intimately associated with gout.

These cases are, I think, interesting as showing the protean character of the disease, extending over three generations. The grandfather was thoroughly gouty; the father had skin affections without any other gouty symptom; the third generation exhibited eye symptoms and nothing else. I may mention that both cases improved rapidly upon colchicum and alkalies.—Yours sincerely,

Southsea, Nov. 24th, 1884. A. CONAN DOYLE, M.B., C.M.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE.

OUR mayor has published a letter he has received from Mr. John Hall of this city, in which the latter states that seeing the sum of £10,000 is likely to be required for the extension of the infirmary, he will with pleasure contribute £1000 to the object, and at the same time he makes the laudable suggestion that the work should be carried out now, when so many are out of employment and material is so cheap. A statement has been going the round of our papers contrasting the rate of increase in the legal and medical professions during the last ten years; and it is pointed out that whereas the ranks of the law have increased at the rate of 17 per cent. those of the medical profession have been augmented only at the rate of 3 per cent. These figures may hold good in a general way, but scarcely in particular instances. In Newcastle and its vicinity, for instance, there has been a marked increase lately in the number of medical practitioners; indeed, it is a general remark that we are over-stocked, and in this way it may be questioned if a medical school in a moderate-sized provincial city is an institution to be desired by the resident practitioners as an unmixed blessing.

NORTH SHIELDS.

The Duke of Northumberland has in the most generous manner made an offer which is little other than a gift to the North Shields Corporation of an important portion of land for the purpose of forming a public park on the Tynemouth-road. The Duke has at the same time urged that the present was a most opportune time for laying out the land and giving employment to a large number of people.

THE SMALL-POX EPIDEMIC AT DURHAM.

At a special meeting of the Durham Town Council lately held in connexion with the small-pox epidemic it was stated that the town was not nearly so bad as represented, and that the disease would soon be stamped out. That the epidemic is bad enough is evident from the fact that there are thirty-four cases in the hospital just opened. It is certain, also, that small-pox cannot be stamped out by the distribution of handbills, however useful in their way. A correspondent points out that the police ought to endeavour to repress juvenile ignorance and temerity in riding behind the carriage used to convey the small-pox patients to the hospital, that he was distressed to see so many children gathered together at a passage end to see a patient brought out, and on making inquiry he found that there were no fewer than five cases down the same passage, and he asks, "Can it be wondered at that the disease is spreading?"

SCARLET FEVER AT WALLSEND.

At the usual monthly meeting of the Wallsend Local Board last week Dr. Henry Aitchison, the medical officer, reported that the death-rate for the past month was equal to an annual rate of 39 per 1000. Fully one-half of the deaths reported was from scarlet fever of a malignant form, which was still epidemic.

GATESHEAD PENNY DINNERS.

I mentioned in a previous communication the success of the Rev. Moore Ede, Rector of Gateshead, with his system of cheap meals for school children. He has now further developed his method so as to provide cheap meals for the working classes. The foundation of his system is "No charity, no pauperisation," therefore nothing is sold under cost price; nevertheless, he has found that, owing to economy of fuel and labour, as well as to the larger amount of nutriment extracted by the cooking apparatus employed, he can supply excellent nutritious soup at the price of ordinary soup kitchens—viz., one penny per quart. The number of dinners has increased from half a dozen to 100 per day, and the demand for soup and other articles for home consumption is daily increasing. The following is an example of the bill of fare:—Pea-soup, lentil-soup, potato stew, and raisin pudding. Wholemeal bread is supplied at the rate of fourteen ounces for 1*d.*; in fact, a good meal for a working man with a hearty appetite is supplied for 2*d.*, including stew or soup and pudding. As to the economical aspect, Mr. Ede gives his figures, which show that since the commencement of the experiment the amount spent on materials was £24 14*s.*, while the receipts were £32 13*s.* 4½*d.*, leaving as a balance £7 19*s.* 4½*d.*, considerably more than was required to pay wages and gas for heating, so that by the end of the year he hopes to have a handsome balance to hand over to the Distress Relief Fund.

Newcastle-on-Tyne, Nov. 26th.

IRELAND.

(From our own Correspondent.)

ACADEMY OF MEDICINE IN IRELAND.

THE opening meeting of the Medical Section took place on the 21st inst. at the College of Physicians, when Dr. Cruise, President of the College, delivered the inaugural address. He principally referred to the conflict which occasionally took place between law and medicine, and dwelt at considerable length on the loss of time and money occasioned to practitioners for attendance on patients whose affairs were relegated to the Court of Chancery. Dr. Cruise gave several typical cases illustrative of the hardship he had suffered, and where fees in some instances were altogether lost or reduced by the taxing master, and said that for such treatment medical men practically had no redress.

ROYAL COLLEGE OF SURGEONS.

The new scheme of education and examination for the diploma in Surgery of this College has now been in operation for some time, and the longer it exists the more it is disliked by all who have to do with it. There is a very large section not alone of Fellows but of the Council who now consider it an ill-advised scheme, and one which will require to be amended very materially before the principal objections to it can be removed. I am confident a large number of those who voted for it formerly would now oppose it if brought forward, and it is a subject of considerable regret that the scheme as it at present stands was ever introduced. Several candidates for the Second Professional Examination having been stopped in October last, they recently petitioned the Council for a supplemental examination; and this the Council at a meeting held last week have granted. The examination will take place in March next, and the candidates will be allowed credit for the various lectures and hospital they may take out this session. I may add that of forty candidates for this examination in October, no less than twenty-two were rejected.

DEATH OF DR. LESLIE MATURIN.

This gentleman, who was resident physician to Cork-street Fever Hospital, Dublin, died last week after a short illness

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from malignant scarlatina, aged thirty-five. Dr. Maturin was formerly surgeon-superintendent of the Emigration Department, New Zealand, and afterwards surgeon to the Red Cross Society, Russo-Turkish War of 1877-78. Skilful and kind, his untimely death is much regretted by a very large circle of friends.

IRISH PRISONS BOARD.

It is rumoured that Sir John Lentaigne, an unpaid member of the board, has recently sent in a report to the Lord Lieutenant, in which he suggests a board without the introduction into it of a medical member, and contrary to the recommendation of the Royal Commission. On the other hand, another member, Mr. O'Brien, who does not belong to the medical profession, is of opinion that an independent medical gentleman should be a member of the Irish Prisons Board, and not merely an official under it.

THE SALARY OF THE CORONER FOR DUBLIN.

The coroner, Dr. Whyte, recently applied to the Corporation for an increase of salary—viz., from £500 to £600 a year, but the application was refused to be entertained. Last week, before Mr. Justice Johnson in the Queen's Court Division, Dr. Whyte, through his counsel, applied for the increase. An objection was lodged that sufficient notice had not been given, but ultimately this was waived. Mr. Justice Johnson said the Act provided that when the Corporation and the coroner could not agree as to the amount of salary, the coroner should refer the matter to the Chief Secretary, and as that had not been done the Court could not interfere. Later in the day it was suggested that the Corporation might consider the propriety of granting a sum as salary for a clerk, but as it was too late for the present city presentments, the matter fell through.

THE RIVER LIFFEY.

The Corporation have adopted a report of the Public Health Committee in reference to the nuisance caused by the discharge of sewage into the Liffey. Pending the carrying out of a system of main drainage the committee are of opinion that the only way of completely abating the nuisance is the scavenging of the river bed during the summer months, and the more effective employment of disinfectants. They recommend the annual grant for that purpose to be increased from £200 to £500. The expenditure of £200 last summer had no effect in abating the intolerable stench, and it is doubtful if the larger amount will produce a better result.

Dublin, Nov. 25th.

BELFAST.

(From our own Correspondent.)

THE ROYAL HOSPITAL.

THE annual meeting of the subscribers of this deserving charity was held on Monday, Nov. 17th. From the report we gather that during the year 2181 intern patients have been treated, being an increase of 182 over last year, and considerably in excess of the number ever before treated in the hospital. There were also treated 11,765 extern patients, showing an increase of 1201 on last year. The intern and extern cases together number 13,946. Clinical instruction has been given in the wards to 168 students during the winter, and to 88 during the summer session. Lord Ashley has been elected President of the hospital in place of the late Marquis of Donegal. During the year the sum of £533 12*s.* 3*d.* has been received from sixty-one churches, this sum being £13 8*s.* 6*d.* less than the amount contributed the previous year. There is also a slight falling off in the general subscriptions during the year. The donations and bequests have also decreased, the sum being £899 12*s.* 6*d.* less than the previous year. The two cheering features in the accounts are the continued increase in the subscriptions of the working classes and the result of the Hospital Saturday movement. Last year the working classes increased their subscriptions by the sum of £580 16*s.* 2*d.* This year there is a further increase of £680 14*s.* 11*d.*, bringing up the total contributions of the working classes to £1692 3*s.* 7*d.* From the efforts made on Hospital Saturday a sum of £529 15*s.* 9*d.* was raised. The total expenditure on the hospital for the year was £8051 11*s.* 7*d.*, and notwithstanding all the efforts put forth, there is a deficit of £1791 10*s.* 1*d.* During the year several of the wards of the hospital have been refloored and refurnished, and at present, through the munificence of Mr. Robert Dunville, D.L., several other wards in the centre of the hospital are being refurnished, while Mrs. Dunville is most generously fitting up new rooms for the out-patients in connexion with the department for the diseases of women.

The Grand Bazaar and Fancy Fair in aid of the Royal Hospital was opened on Thursday. The main hall was transformed into an ambulance encampment, the tents being used as stalls for the sale of goods, while in the annexe marquee there was a great variety of entertainments. In the minor hall the private theatricals were largely attended. There is to be a fancy dress ball on Tuesday, Dec. 2nd, in connexion with the hospital bazaar. It is hoped that by the efforts put forth at the bazaar a large sum of money will be raised for the hospital, and that the present debt will be much more than extinguished.

PRIVATE HOSPITAL ACCOMMODATION.

The want of an institution of this kind for women having been experienced in Belfast, a hospital to supply the need has been opened in Regent-street, and is now ready for the reception of patients. It is intended for those who are able and willing to pay for the accommodation, and who, if they so desire it, can be attended by their medical adviser. All kinds of accidents and diseases except infectious cases will be received. The careful nursing and diet with the privacy of their own homes are advantages which will be eagerly sought after, and it is confidently expected that the applicants for admission will be very numerous.

OPENING OF THE WINTER SESSION.

The present winter session began in the first week of November, and the classes at the College and the cliniques at the hospital are now in regular working order. The opening meeting of the Queen's College Literary and Scientific Society was held on the 21st inst., and the College Musical Society will shortly give their first concert.

DEATH OF DR. MARTIN.

I am sorry to have to announce the death of this member of the profession, who for a period of sixteen years held a dispensary appointment in Belfast. Dr. Martin was a man highly respected by his patients, and for his public appointment a very active canvass is being made.

THE ULSTER MEDICAL SOCIETY.

The first meeting of the above Society for the present session was held on Nov. 11th. The retiring president (Dr. Dill) having given a short address, the incoming president (Mr. John Fagan) read a very interesting and practical paper. The annual dinner took place on Tuesday evening.

PARIS.

(From our own Correspondent.)

THE CHOLERA EPIDEMIC.

THE cholera epidemic in Paris is decidedly on the decline, as shown by the official reports daily published, which I need not trouble you with. I may, however, transcribe those for the last three or four days to give your readers an idea of the course of the epidemic:—

	Admissions.	Deaths.
November 20th	42	20
,, 21st	15	63
,, 22nd	27	10
,, 23rd	20	19

These figures comprise the admissions and deaths in town and in the hospitals. On the evening of the 21st there were 274 (168 males and 106 females) choleraic patients under treatment in the hospitals. On the 22nd the number was reduced to 221. On the 24th there were 2 deaths in town and 6 in the hospitals; but there were no fresh cases reported, as the bulletins have ceased to be published. It has already been brought to notice that the ill-fed and intemperate were the readiest victims of the disease. In a report by Dr. Watelet, who was deputed to inquire into the origin of the cholera in the Asylum for the Aged in the Avenue de Breteuil, this physician declared that he could not trace its origin, but that the rapid spread and fatality of the disease among its inmates were probably due to unwholesome food, and as this consists of the remnants collected from the different hotels and restaurants, the possibility of the food thus obtained

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being infected with cholera germs has been suggested. Be this as it may, a rapid diminution in the number of cases was observed as soon as the diet of these poor people was improved in quality as well as in quantity. With the active measures that are being taken to improve the sanitary condition of the town it is to be hoped that the epidemic will soon entirely die out.

DEATH OF PROFESSOR FONSSAGRIVES.

The death is announced of Professor Fonssagrives, on the 21st inst., from an attack of cholera which carried him off in a few hours at his château near Auray, in the department of the Morbihan, whither he had retired some months ago owing to failing health. His friends and medical attendant were at a loss to know how the lamented physician could have contracted the disease, as his residence is situated in the open country far from any town, and he had had no communication with any cholera patient. Dr. Fonssagrives was for a long time Professor of Hygiene at the Faculty of Montpellier, and since his retirement he did nothing in the way of practice, but occupied himself a great deal in writing. He was the author of several works, among which his "Traité d'Hygiène navale" is the most recent, and is held in considerable esteem. But his principal work is his "Traité de Thérapeutique et de Matière Médicale," the second edition of which is in the press. Dr. Fonssagrives was a corresponding member of the Academy of Medicine. He commenced his professional career as a naval medical officer, and at the age of thirty he was appointed Professor of Therapeutics at the medical school at Brest. He was born in 1823.

Paris, Nov. 26th.

THE SERVICES.

WAR OFFICE.—Medical Staff: Brigade Surgeon R. W. Carter is granted retired pay, with the honorary rank of Deputy Surgeon-General; Surgeon-Major D. Renton, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon; Surgeon-General Alexander Smith, M.D., C.B., and Surgeon-General Jones Lamprey, M.B., have been placed on retired pay.

INDIA OFFICE.—The Queen has approved of the retirement of the following officers of Her Majesty's Indian Military Forces:—Brigade Surgeon Charles Kilkelly, of the Bengal Army; Surgeon-Major George Edwin Seward, M.D., of the Bombay Army.

The following officers are granted a step of honorary rank on retirement:—Deputy Surgeon-General Richard Henry Perkins, of the Bengal Army, to be Surgeon-General. Brigade Surgeon Alexander Morison Dallas, of the Bengal Army, and Brigade Surgeon George Stewart Watson Ogg, of the Madras Army, to be Deputy Surgeons-General. Surgeon-Major Frederick William Alexander De Fabeck, of the Bengal Army, and Surgeon-Major Charles Robertson, of the Madras Army, to be Brigade Surgeons.

ENGINEER VOLUNTEERS.—2nd Gloucestershire (the Bristol): Arthur Frederick Blagg, Gent., to be Acting Surgeon.

RIFLE VOLUNTEERS.—2nd Volunteer Battalion, the Queen's Own (Royal West Kent Regiment): Surgeon Bertie Pardoe Matthews is granted the honorary rank of Surgeon-Major.—21st Middlesex (the Finsbury): Surgeon Francis Edward Thurland resigns his commission.—1st Cambridgeshire: Honorary Assistant-Surgeon William Groom resigns his commission.—1st Cornwall (Duke of Cornwall's): Richard Charles Mason Pooley, Gent., M.D., to be Surgeon; Edward Scudamore Angove, Gent., to be Acting Surgeon.—1st Dumfries: James Maclachlan, Gent., M.B., to be Acting Surgeon.

ARTILLERY VOLUNTEERS.—1st East Riding of Yorkshire: The services of Surgeon Henry Dodd are dispensed with.

MEDICAL NOTES IN PARLIAMENT.

Brigade Surgeons.

IN the House of Commons on Friday, November 21st, in reply to Sir H. Fletcher, the Marquis of Hartington stated that vacancies in the rank of brigade surgeon had not been filled up since the issue of the Circular on August 1st as to the examinations. The officers among the senior surgeons-major who had to be examined were serving in all parts of the world; and the promotions could not take place until all their examinations had been held and had been considered. But as the promotions would be antedated to the time when the vacancies severally occurred, the officers promoted would not be injured by the delay. The home examinations were fixed for the 27th and 28th inst., those for the colonies for December 1st, and in India as soon as arrangements could be made.

The Contagious Diseases Acts.

On Monday, Sir T. Brassey, in reply to Mr. Hopwood, stated that, as is well known, the police no longer exercise any compulsory powers in connexion with the Contagious Diseases Acts, but voluntary applicants are received into the lock hospitals on signing a form attested by an inspector of police. It had been suggested to the Mayor of Portsmouth that the duty of attestation should be performed by the superintendent of borough police on payment of a fee of 2s. 6d.; but this payment was proposed as a remuneration for the extra duty entailed on the superintendent, and not as an inducement to patients to enter the lock hospitals.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary or First Professional Examination for the Fellowship at meetings of the Board of Examiners on the 24th and 25th inst.:—

Farnell, Henry Dawson, University College.
Gilford, Hastings, Guy's.
Gregory, Alfred, London.
Harris, Clayton Campbell, St. Bartholomew's.
Lamont, John Charles, Edinburgh.
Owen, Samuel Walshe, Guy's.
Porter, Thomas Morrison, Liverpool and University College.
Taylor, William Frederick, Kingston and Guy's.
Taylor, Frederick Howard, London.
Williams, William, St. Mary's.

Of the 21 candidates examined 11 failed to satisfy the Board, and were referred for six months' further anatomical and physiological study.

COLLEGE OF PHYSICIANS IN IRELAND.—At the November examinations the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Robert Abraham, John Martin Coates Cole, Eugene Crowley, Ignatius P. Doyle, John T. Gaynor, Daniel Kenny, Patrick Joseph Kiernan, Annie McCall, John McGuinness, James Lougheed Rowlett.

MIDWIFERY.—Robert Abraham, John Martin Coates Cole, Eugene Crowley, J. P. Doyle, Thomas Fagill, John T. Gaynor, Charles Hayden, Daniel Kenny, Patrick Joseph Kiernan, Marcus Moore Loudon, Matthew McAuley, Annie McCall, John McGuinness, James Lougheed Rowlett, Hugh Smith Morrison, William Alexander Wadsworth.

The undermentioned have been admitted members:—

Frederick Joshua Roberts. | Henry L. Smith.
Thomas Frederick Young.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 29th:—

Gregory, Edward Thomas, Charing-cross Hospital.
Lees, William, University College.
Loftus, Arthur Smith, Charing-cross Hospital.
Mullis, Geo. William, Guy's Hospital.
Orr, Joseph Orlando, Toronto University.
Shadwell, Harry Winstanley, St. Bartholomew's Hospital.
Thomas, Thos. W., University College.

The following gentleman also on the same day passed the Primary Professional Examination:—

Theodore Albert Vores Ford, St. Thomas's Hospital.

THE newly erected Lying-in Hospital at Brownlow-hill, Liverpool, was formally opened on the 19th inst.

PATHOLOGICAL SOCIETY.—Tea and coffee will in future be provided at the meetings of the Society from 8 to 9 P.M., instead of at the close of the meeting as heretofore.

THE Princess Christian has consented to open the new building in connexion with the Middlesex Hospital on Tuesday, Dec. 16th, at 12.30 P.M.

THE Dean and Chapter of Durham have agreed to grant an acre of land on Gilesgate Moor to the Durham Corporation as a site for a hospital for infectious diseases.

AN inspection of the Ambulance Station situated in Seagrave-road, Fulham, will be made by the managers of the Metropolitan Asylums Board on Saturday, the 29th inst., at 2.30 P.M.

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HYDROPHOBIA has been rampant in Vienna for some weeks, there already having been some eighty cases and eleven deaths.

AN outbreak of diphtheria has occurred in the village of Littlebourne, near Canterbury, and it has been deemed advisable to close the schools.

SCARCITY of water is still being complained of by the inhabitants of Manchester and by the residents of many districts of Yorkshire.

THE Royal Hants County Hospital has received a donation of £500 from Mr. Thomas Courtney of Headbourne Worthy, and also, through him, of £100 from his sister, Miss Courtney.

PRESENTATION.—On the 4th inst. Dr. M. W. Taylor, late of Penrith, was presented by the inhabitants of the town and neighbourhood of Penrith with a service of silver plate and an address, on the occasion of his retirement from the town.

THE Rev. G. N. Godwin, Chaplain to the Forces, makes a public appeal to the benevolent on behalf of the wives and children of invalid soldiers at the Netley Hospital, who, he states, are sadly in need of warm clothing at this season of the year.

AT a meeting of the British Medical Temperance Association, held on Tuesday last in the Medical Society's Rooms, it was announced that the President, Dr. B. W. Richardson, F.R.S., and the Council were now prepared to offer a prize of 100 guineas for the best essay on the Physical and Moral Advantages of Total Abstinence from Intoxicating Liquors, to be competed for by medical students in the United Kingdom. Dr. Heywood Smith subsequently read a paper on the Use of Alcohol by Parturient Women.

UNIVERSITY OF CAMBRIDGE.—Dr. Donald MacAlister has been elected to the new examinership in medicine necessitated by the increasing entry for the Third M.B. Examination.—The following have been appointed members of special boards of studies:—Medicine: Mr. E. Carver, St. John's. Physics and Chemistry: Mr. P. T. Main, St. John's. Biology and Geology: Mr. J. W. Hicks, Sidney Sussex. The following gentlemen have been appointed members of the syndicate of State Medicine: Dr. Bradbury and Professor Dewar. At a congregation held on the 20th inst. the degree of Bachelor of Medicine was conferred on Oswald Auckinleck Browne, Trinity.—During the Michaelmas Term the examinations for Medical and Surgical degrees will be held as follows:—For the degree of Bachelor of Medicine, first examination, Dec. 2nd, 3rd, 4th, 5th, and 6th; second examinations, Dec. 5th, 6th, 8th, 9th, and 10th; third examination, first part, Dec. 9th and 12th; second part, Dec. 10th, 11th, 13th, 15th, and 16th. For the degree of Bachelor of Surgery, Dec. 12th and 13th. For the degree of Master of Surgery, Dec. 12th and 13th.

HOSPITALS FOR INFECTIOUS DISEASE.—The Works and Sanitary Committee of the Kensington Vestry having considered the special report of the General Purposes Committee of the Asylums Board upon the subject of the reception and treatment of non-pauper cases of infectious diseases at the marquee hospitals, reported on the 19th inst. that they saw no reason to depart from the principles already adopted by the vestry—viz., that the managers should be empowered to make adequate provision of hospital accommodation for infectious disease, for all classes of the population in need of such accommodation; that patients should be admitted into the managers' hospitals upon certificates signed by any duly qualified medical practitioner, conjointly with the order of the medical officer of health; that, as the hospitals of the managers have been established for the common good at the public cost, no compulsory payment should be exacted from persons whom the sanitary authority may deem it necessary or expedient to remove to the hospitals for the purpose of isolation; that all expenses incidental to the maintenance and treatment of such persons in the hospitals should be defrayed out of a common sanitary fund, the metropolis being treated for the purpose as a single district; and that steps should be taken to alter, by Act of Parliament, the constitution of the Board, by severing its connexion with pauperism in so far as relates to the treatment of infectious diseases, and by providing for the election of a certain proportion of the managers by the several sanitary authorities—i.e., the vestries and district boards.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ADAM, Mr. MATTHEW A., has been appointed Public Analyst for the County of Kent.

BROGDEN, R. W., M.R.C.S., L.R.C.P., has been appointed House-Physician to Guy's Hospital.

BURROUGHS, JOHN E. B., M.R.C.S., L.S.A.Lond., has been appointed by the Court of Assistants of the Merchant Taylor's Company Medical Attendant at the Company's and at Christopher Boone's Almshouses, at Lee, Kent, in succession to the late Mr. C. W. Steel.

CAIGER, F. FOORD, M.B., B.S., M.R.C.S., L.R.C.P., has been appointed House-Physician to St. Thomas's Hospital.

COOMBS, W. GODWIN, M.D., has been appointed Resident Medical Superintendent of the Eastern Counties Asylum for Idiots, Colchester.

DUNLOP, ROBERT S., M.B., C.M.Ed., has been appointed Medical Officer to Kilmaurs Parochial Board, vice G. Buchan, M.B., resigned.

FIELDEN, W. E., M.B.Lond., has been appointed Assistant Medical Officer to the Asylum for Idiots, Earlswood, Redhill, Surrey, vice B. Hall, M.B.Lond., resigned.

GREEN, C. D., M.B., M.R.C.S., L.R.C.P., has been appointed Resident Accoucheur to St. Thomas's Hospital.

HEATON, FRED. LUXMOORE, M.B.Oxon., L.K.Q.C.P.I., M.R.C.S., has been appointed Medical Officer for St. Asaph District and Workhouse, St. Asaph Union, vice Lodge.

HICK, JOE, M.R.C.S., L.R.C.P. & L.M.Ed., late Senior Assistant House-Surgeon to the General Infirmary at Leeds, has been appointed Junior Resident Medical Officer to the Leeds Public Dispensary.

JOHNSTON, G. D., M.R.C.S., L.R.C.P., has been appointed House-Physician to St. Thomas's Hospital.

JONES, WILLIAM WANSBROUGH, M.A., M.B.Oxon., B.Sc.Lond., M.R.C.S., has been appointed Resident Medical Officer of the Convalescent Hospital of the Manchester Royal Infirmary, Cheadle.

KENNA, M. F., L.R.C.S.I., L.R.C.P.E., &c., has been appointed Medical Officer to the Fontstown Dispensary District of the Athy Union, co Kildare, Ireland.

LANKESTER, H. H., M.R.C.S., L.S.A.Lond., has been appointed Non-Resident House-Physician to St. Thomas's Hospital.

LAWSON, R., M.R.C.S., L.S.A.Lond., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

MACKENZIE, H. W. G., M.A., M.B., has been appointed Assistant House-Physician to St. Thomas's Hospital.

MARRINER, W. H. LISTER, M.B., M.R.C.S., L.R.C.P., has been appointed Clinical Assistant in the Department for Diseases of the Throat at St. Thomas's Hospital.

MURCHISON, FIN. FIN., M.B., M.A., has been appointed Medical Superintendent of Peckham House Asylum, Peckham, S.E., vice J. Asbell Brown, M.R.C.S., L.S.A.Lond., resigned.

OAKES, HENRY, L.R.C.P.Ed., L.F.P.S.Glasg., has been appointed Medical Officer for the Loppington District of the Wem Union, vice Wilson.

ORFORD, J., M.R.C.S., L.R.C.P., L.S.A.Lond., has been appointed House-Surgeon to St. Thomas's Hospital.

PARKINSON, SIDNEY GEORGE, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Second District of the Wimborne and Cranborne Union, vice Wyke-Smith.

PLOWMAN, S., M.R.C.S., L.S.A.Lond., has been appointed Clinical Assistant in the Department for Diseases of the Skin and Ear at St. Thomas's Hospital.

ROBINSON, H. B., M.R.C.S., L.R.C.P., has been appointed House-Surgeon to St. Thomas's Hospital.

SALVAGE, J. V., M.S., M.B.Dur., M.R.C.S., L.R.C.P., has been appointed House-Surgeon to Guy's Hospital.

STOWERS, J. HERBERT, M.D., has been appointed Physician to the Department for Skin Diseases, North-West London Hospital.

SUTTON, S. W., M.D., B.S., M.R.C.S., L.R.C.P., has been appointed Ophthalmic Clinical Assistant to St. Thomas's Hospital.

WHITE, E. WOOD, B.A., M.B., B.Ch. Univ. Dub., has been appointed Honorary Surgeon to the Birmingham and Midland Eye Hospital, vice Edwin Cheshire, F.R.C.S., resigned.

MARRIAGE.

CARTER—BAKER.—On the 20th inst., at St. Jude's, South Kensington, Sidney Herbert Carter, M.B., Army Medical Staff, youngest son of the Rev. Henry Carter, D.D., of Kingstown, late Rector of Ballintoy, co. Antrim, to Henrietta Margaret, youngest daughter of the late Rev. Robert Duncan Baker, M.A., Vicar of Friston and Snape, Saxmundham, Suffolk, and of Mrs. Duncan Baker, of Hogarth-road, Cromwell-road, S.W.

DEATHS.

BODDY.—On the 20th inst., at Camberwell-road, William Barnard Boddy, M.R.C.S., aged 89.

FLUDER.—On the 15th inst., at Cromer, Norfolk, Arthur Riedell Fluder, M.R.C.S., L.S.A.Lond., youngest son of the late Charles Fluder, of Lymington, Hampshire, aged 40.

MAHOMED.—On the 22nd inst., at Manchester-square, W., Frederick Akbar Mahomed, M.B.Cantab., F.R.C.P., Assistant-Physician to Guy's Hospital, in his 36th year.

MATURIN.—On the 19th inst., of scarlet fever, Leslie Maturin, M.K.Q.C.P.I., Resident Physician at Cork-street Fever Hospital, Dublin, eldest son of John Maturin, Esq., of Newtownstewart, co. Tyrone, aged 25.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

Monday, December 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M
LONDON HOSPITAL MEDICAL COLLEGE.—3 P.M. Mr. Jonathan Hutchinson: Head Injuries, Hernia, and other Matters.
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
MEDICAL SOCIETY OF LONDON.—Mr. Boyce Barrow: A Case of Gastrostomy (with Specimen).—Mr. John H. Morgan: Cyst of the Neck.
ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—8 P.M. Casual Communications by Messrs. J. C. McAdam, Storer Bennett, W. Coffin, and Dr. St. George Elliott.—Mr. J. Bland Sutton: Comparative Dental Pathology.

Tuesday, December 2.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Pye-Smith: Cystic Disease of Cerebellum, Kidney, and Pancreas.—Dr. Lanchester: Intussusception in an Adult Male.—Dr. Carrington: (1) Simple Ulceration between the Trachea and Œsophagus. (2) Atrophy of the Liver (card).—Mr. Treves: (1) Two Specimens of Tumour of Soft Palate. (2) Epithelioma of Bladder, with Renal Calculus (card).—Mr. Eve: Lympho-Sarcoma of the Bladder.—Mr. Poland: Congenital Hydrocele of the Spermatic Cord.—Mr. Bowlby: (1) Fistular Communication between the Bladder and the Rectum (card). (2) Infiltrating Fibroma of Thyroid.—Dr. Paddison: A Case of Charcot's Disease, with Sections of the Spinal Cord (card).—Mr. Hudson will show a new and simple Ether Microtome.

Wednesday, December 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL MEDICAL COLLEGE.—3 P.M. Mr. Jonathan Hutchinson: Dislocations and Fractures.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Horrocks, Dr. Carter, and others.—Adjourned Discussion on Dr. Graily Hewitt's paper on "The Severe, or so-called 'Uncontrollable,' Vomiting of Pregnancy;" to be opened by Dr. Robert Barnes, and followed by Dr. Braxton Hicks.—Dr. Potter: A Case of Retained Product of Conception.—Dr. McKeown: The Prevention of Ophthalmia Neonatorum and its Ravages.

Thursday, December 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. W. S. Savory: The Pathology of Cancer. (Bradshawe Lecture.)
HARVEIAN SOCIETY.—8.30 P.M. Mr. Thomas Bryant: The Mode of Death in Acute Intestinal Strangulation and Chronic Intestinal Obstruction. (Harveian Lecture.)

Friday, December 5.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Pathological Specimens by Mr. Percy Dunn. Clinical Cases by Mr. Keetley.—Mr. Spencer Watson: Sympathetic Ophthalmia.—Mr. B. F. Benham: The Uses of Sulphide of Calcium.—Dr. Thudichum: Inflammation, Abscess, and New Growths of Echmoid Cells.

Saturday, December 6.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, November 27th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Nov. 21	29·77	N.E.	41	39	..	44	36	·11	Raining
,, 22	30·16	N.E.	37	35	..	42	32	..	Hazy
,, 23	30·20	N.W.	38	36	..	43	35	..	Bright
,, 24	30·17	S.W.	38	36	..	40	31	..	Foggy
,, 25	30·30	N.W.	30	..	..	39	28	..	Foggy
,, 26	30·29	N.W.	36	35	..	45	30	..	Foggy
,, 27	30·18	W.	44	42	..	47	35	..	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SUPPOSED CANCER OF THE RECTUM IN A BOY AGED NINETEEN.

To the Editor of THE LANCET.

SIR,—If you think the following description of a case of supposed cancer of the rectum in a boy of only nineteen years of age worthy of record, I should feel obliged by its insertion in your valuable journal, as the facts are peculiar and interesting.

I was called on Sept. 27th into the country to visit the case in question in consultation with the medical attendant. I was informed that the patient was suffering from cancer of the rectum. The patient had always been in perfect health, a fine, well-grown, muscular lad, but had had dysentery for several weeks, which had not been controlled by treatment. A week previous to my visit a tumour was found occupying a portion of the rectum posteriorly, which the medical attendant in conjunction with another practitioner pronounced to be cancer of the rectum. I found the boy free from any sign or symptom of cancer of the rectum. Upon examination, there was undoubtedly a tumour; it was of a rounded nature, well defined, and resembling to the feel the os of the gravid uterus—not unlike the thumb and knuckle flexed. There was frequently also considerable hæmorrhage of a very dark colour, which I suggested was from the bowels. The patient was fairly nourished and in good spirits. There was no characteristic cachexia, no pain, and no constipation or obstruction; but the hæmorrhage was evidently having effect upon the strong constitution of the boy, and, if unchecked, would most probably be fatal. I was inclined to give the patient the benefit of the doubt; nevertheless, the medical attendant strongly insisted that the case was one of cancer of the rectum. I believe a case of cancer of the rectum in one so young is not on record; and this was admitted.

I should feel obliged if any of my medical brethren would state their view as to the case.

I am, Sir, yours truly,

London, Oct. 8th, 1884. D. M. DOUGLAS.

Dr. G. H. Simmons (Lincoln, Nebraska).—We are unable at present to devote space to the subject.

"IRRITATION OF THE SKIN FOLLOWING THE APPLICATION OF VASELINE AS A SURGICAL DRESSING."

To the Editor of THE LANCET.

SIR,—Referring to our letter of the 17th inst. on the subject of the use of vaseline in the Leeds Infirmary, we fear that we used language which may be misinterpreted to mean that the red vaseline was not fit for human use. We had no such intention, and should certainly not have been a party to the sale to any infirmary or hospital of goods which it would be injurious to use. The higher grade of vaseline is that which we sell for use in hospitals throughout the country, the principal demand for the red or inferior grade being for veterinary use; but the latter would be in no manner unfit for hospital use, although necessarily inferior to that which is more highly refined.

We are, Sir, yours faithfully,

CHESEBROUGH MANUFACTURING COMPANY.

Holborn-viaduct, E.C., Nov. 26th, 1884.

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THE ARCHÆOLOGY OF HYGIENE.

THERE is no denying that Pagan Rome was superior to Pontifical in the observance of sanitary laws—so much so, indeed, that the historian of public health might write an instructive chapter on the contrast. To say nothing of the modern neglect of personal ablution, as compared with the attention betowed on it even under the Republic, let alone the Empire, the disposal of animal refuse seems to have engaged in the century before Christ an amount of civic care which the Rome even of twenty-five years ago might have imitated with advantage. Excavations recently in progress on the margins of the Viminal and Esquiline hills have brought to light inscriptions bearing upon the sanitary regulations of that period, one of them referring to the guardianship and the limits imposed on an extensive dung field in the Campus Viminalis. The urban prætor at whose instance the edicts in question were inscribed was Lucius Sentius, who belonged to an illustrious Volscian family of the "Atina Potens" of Virgil. The inscription concludes with the following sanitary admonition:—

STERCVS LONGE
AVFER
NE MALVM HABEAS.

That is: "Remove ordure to a great distance, as you would avoid evil consequences." It has taken well nigh fifteen hundred years to revive and give practical force to this edict of the Pagan Republic!

Idem.—There is no invariable rule. The custom of the place must decide the matter.

Mr. McGill's paper will be published in an early number.

"THE LIBRARY OF THE COLLEGE OF SURGEONS."

To the Editor of THE LANCET.

SIR,—I was very glad to see in your issue of the 15th inst. the letter of "A Member," referring to the above library.

In June, 1883, I wrote to the Secretary, calling his attention to the short time during which the library was open, and the many interruptions that were caused to readers through the room being frequently closed for examination purposes. The reply I received somewhat surprised me; for while the interruptions were held to be unavoidable, owing to there being no other room large enough for the examinations, no increase in the time during which the library is opened could be granted, as it would hardly be fair to the officials to ask them to prolong their hours so as to accommodate a certain number of readers. Luckily for the credit of the College, this view was not held by the Library Committee, before whom the subject was brought a few months later; for they decided to open the library one hour longer—viz., from 11 A.M. to 6 P.M., instead of from 11 A.M. to 5 P.M.

Now that the subject of library accommodation is being brought forward, and Sir Spencer Wells holds out hopes that something will be done, it seems to me to be an opportune time to call attention to one great disadvantage under which medical men in London work. So far as I am aware, there is no complete library in the metropolis from which books can be borrowed for reference at home, with the exception of that of the Medical and Chirurgical Society, whose high entrance fee and subscription, to say nothing of other hindrances to entrance, are prohibitive to most medical men. In Manchester books can be borrowed from the Medical Society's library; in Strasburg and Dorpat, and no doubt many other continental towns, from the University library. But here there is nothing of the kind. Surely, it is time that something was done.

I am, Sir, yours truly,

Somerfield-road, N., Nov. 24th, 1884. R. W. GREENISH, F.R.C.S.

"IS DEAFNESS A BARRIER TO PRACTICE?"

To the Editor of THE LANCET.

SIR,—In your issue of Aug. 16th I noticed a letter signed "Constant Reader," asking the opinion of any medical man as to the prospects of continuing to practise when afflicted with deafness. Unfortunately I am one who can sympathise with your correspondent in his affliction; and though my letter will reach you some months after the date of the publication of his, the relation of my experience may be of service, and, if so, of some comfort. For five years I practised in the country in this colony, during which time I was very deaf, and had to use an ear trumpet. To this my patients took very kindly indeed, and I made about £800 a year. Last year I had further ear mischief, which completely destroyed one ear; but I found that with an ordinary speaking-tube I could hear almost the lowest whisper—in fact, I heard much better than I did with the trumpet before the right ear was destroyed. Without the tube I am almost absolutely deaf. On this last ear trouble happening, little hope was given of my ultimate recovery. I therefore left the country, settled in the city as a chemist, and practised with the aid of a tube, all the doctors advising me that it would not be unprofessional to do so under the circumstances. Now I have a moderate practice, and it astonishes me how naturally everyone takes to speaking through the tube. My practice, of course, is not large; but, with the chemist's shop worked by assistants, I make sufficient to support myself and family fairly well. If "Constant Reader" will boldly make use of a speaking-tube as a matter of course, with a polite notification that he can thus hear better, I am sure he will find very few express astonishment, and he will also find they will retain confidence.

I am, Sir, yours truly,

New South Wales, Sept. 26th, 1884. MEDICUS.

"THE WANT OF PRACTICAL TEACHING IN MIDWIFERY."

REFERRING to a letter which appeared in our last week's number from a "Member Brit. Med. Assoc.," "Another Member" writes:—

"A charge has been made against the Dublin medical schools which is not at all borne out by facts. I have always heard that the Dublin men had the reputation of being well grounded in midwifery. In my time (eleven years ago) the teaching in the Coombe Lying-in Hospital was of the most thorough character, professors and students being very enthusiastic in their work, and the drilling of the latter being of the most practical kind. As to the Rotunda Hospital, Dr. Playfair, in his work on Obstetrics, states: 'It may be fairly assumed that the practice of the distinguished heads of that well-known school represents the most advanced and scientific opinion of the day.' But if the teaching there be as defective as your correspondent tries to make out, how can he account for the feeling so prevalent among English senior students of the present time that obstetrics can be learned nowhere so well as in Dublin? Or how is it that they flock over there in such numbers, each cherishing the conviction that he is going to the fountain-head of obstetric science, as others go to Germany to perfect themselves in ophthalmology and pathology?"

"The X.P." remarks on the same subject:—

"The experiences a 'Member Brit. Med. Assoc.' has of my countrymen's knowledge of midwifery are, as far as I know, unique. Why this selection of Irishmen as synonyms for ignorance of midwifery while other countries send in their representatives? No recently qualified man is expected to be a Spencer Wells. Proficiency in obstetric craft is the result of 'experience and wisdom,' as Professor Macnamara puts it; but every medical man should know how to feel the os. No such ignorance is justifiable. And though students do not study the book of nature as they ought to, I refuse to believe that the Irish schools send out ignorant medical men as a rule, and I deby *in toto* their incompetency in midwifery. It is, indeed, a pity that Irish graduates should be made the subjects, in my opinion unjustly, of uncalled-for censure. They have to contend with the greatest difficulties that blind and guilty prejudice can subject them to, as the medical agents in London and elsewhere can testify."

"Dublin" remarks:—

"As to the Dublin schools 'turning out' men deficient in practical knowledge, is it not the case with every school, English as well as Irish, probably owing to the difficulty of ascertaining the practical knowledge of the student. 'Member Brit. Med. Assoc.' has shown up Dublin men rather to a disadvantage, but I can inform him that I have met highly qualified men (not Irish) who could not tell when labour had commenced, and on one occasion I was sent for and requested to bring long forceps to assist in delivering a case in which the short forceps were of no use. On examination I found a breech presentation. Yet this medical man was highly qualified, had a pocketful of diplomas (M.D., &c.), and was not an Irishman. Your correspondent will therefore see that it is not only Irishmen who are armed with diplomas to kill and cure."

Mr. Soutter.—We are receiving copies of the disgraceful pamphlet every week. The name of the author has been removed from the roll of the London College.

Ethical.—The title suggested by our correspondent is right.

HIGH DEATH-RATE IN CARDIFF.

To the Editor of THE LANCET.

SIR,—I think you would be doing a good work if you called attention to the high rate of mortality in this town.

Two years (or even less) ago we were boasting of the very low death-rate we had as compared with other large towns; but now that is all changed, and at the present time there are only three towns (Liverpool, Bolton, and Preston) which record for the quarter ending Sept. 29th, 1884, a higher death-rate than our own. If the Registrar-General's Return be examined, it will be found that in the quarter just mentioned deaths from the following zymotic diseases took place in Cardiff:—small-pox, 2; measles, 1; scarlet fever, 55; diphtheria, 7; whooping-cough, 3; fever, 9; diarrhœa, 100. Now, it will naturally be asked, What are the causes producing this high rate of mortality? I believe myself that the following conditions contributed largely to swell the death-rate: 1. The foul state of the main sewers, which gave rise to the most offensive exhalations from the "open" gratings in the streets. 2. The scarcity of water. 3. The insanitary condition of the new houses. In the majority of cases these are built without foundations, and with mortar which is composed of house refuse and lime. Then there is no supply of water to the closets. The pans are flushed (?) by pouring water down. I am sure this is the worst system. Then the soil pipes are hardly ever ventilated. 4. Houses are allowed to be occupied long before they are fit for occupation. 5. Overcrowding of houses. In consequence of the high rents two or three families are compelled to live in a house only large enough for one family.

The death-rate as given by the medical officer of health for the thirteen weeks ending Aug. 23rd, 1884, is even larger than that given by the Registrar-General in the third quarter of the present year. Dr. Paine gives the death rate as 28·8 per 1000, and the deaths from the seven zymotic diseases as 66, being at the rate of 9·1 per 1000, as against 6·5, the death-rate of the other large towns.—I am, Sir, yours truly,

Cardiff, Nov. 9th, 1884. T. GARRETT HORDER.

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J. R. F. (Glasgow).—As in all eruptive fevers, the invasion of dengue is beset with difficulties in diagnosing it from the early stage of allied febrile maladies. There is a useful treatise on Dengue by Dr. Gerson da Cunha (Thacker and Co., Bombay and London, 1872), who had specially favourable opportunities of studying it during the epidemic which prevailed in Bombay in 1871-2.

Mr. J. A. Shaw.—The letter has been forwarded.

"M.B. PASS EXAMINATION, UNIVERSITY OF LONDON."

To the Editor of THE LANCET.

SIR,—As you have allowed several letters to appear on this subject, perhaps you will spare me a few lines.

The unfairness of a question on "unilateral hæmatokolpos" has been adverted to; but probably few of your readers are aware of the serious difference which the total omission of one question may make to a candidate. The "pluck" this year is larger than usual—a result doubtless due to the selection of this question. Then, too, besides the rarity of the affection, the term employed to define it is open to objection. A university which ignores Greek ought not to allow its examiners to set a question which can only be answered by knowing the meaning of the Greek word "kolpos." The parenthetic explanation (retention of menses) given in the paper does not precisely locate the affection.

A general complaint amongst candidates is the scanty time allowed for the papers, or, rather, the length of the latter, especially those set by the examiners in medicine. I enclose copies of those recently given, and beg respectfully to challenge either of the examiners to answer them fully within the time allowed. I do not mean as a test of knowledge, but as a test of rapid writing. I do not doubt the knowledge of either of these gentlemen, but I do question very much their capability of putting it on paper in the short time allowed. I also enclose an analysis of the pass-list, which furnishes another proof, were any needed, of the justice of the remarks frequently made in your editorial columns as to the inaccessibility of London degrees to London students. Only thirty-one London students have now graduated, unless we include the two female candidates. Our largest school only graduates four students. At the same school the number of new entries last October was 125.

I am, Sir, yours truly,

Nov. 24th, 1884. ONE WHO HOPES FOR REFORM.

M.B. PASS EXAMINATION.—1884.

Monday, Nov. 3rd. Afternoon, 3 to 6.

General Pathology, General Therapeutics, and Hygiene.

Examiners: W. H. Broadbent, Esq., M.D., and W. M. Ord, Esq., M.D.

1. Enumerate the various sources of lead-poisoning, and discuss, particularly in relation to manufacturing processes, the means of prevention.

2. Discuss the various means and methods available for the treatment of insomnia.

3. Describe the local morbid processes resulting from pyæmia. [N.B.—The causation of pyæmia is not included in the question.]

4. What are the conditions of soil and climate which give rise to intermittent and remittent fevers? What precautions should be taken by people resident in or travelling through malarious districts?

5. Enumerate and classify the objects to be gained by the administration of aperients, specifying the particular drugs to be selected for particular purposes.

6. Give the etiology and pathology of purpura.

Tuesday, Nov. 4th. Afternoon, 3 to 6.

Medicine.

Examiners: W. H. Broadbent, Esq., M.D., and W. M. Ord, Esq., M.D.

1. Specify the causes of over-distension of the right side of the heart. Describe the symptoms to which this condition may give rise, and the treatment to be employed for its relief.

2. Describe an attack of measles, with the complications which may arise in the course of the disease, and the treatment to be adopted under different circumstances. In what respects do German measles differ from common measles?

3. Describe the morbid changes which may result in diminution of the size of the liver, the appearances presented by that organ in each form of disease, and the signs and symptoms by which the several affections may be recognised during life.

4. Describe the several varieties of erythema. Discuss their causes and treatment.

5. Describe the symptoms, course, and differential diagnosis of progressive muscular atrophy.

6. What forms of suppuration may occur in connexion with the kidneys? Give the pathology, symptoms, and diagnosis of one of them.

Analysis of Pass-List.

	First.	Second.	Total.
University	9	3	12
Guy's	3	1	4
Bartholomew's	3	1	4
King's	2	2	4
St. Thomas'	3	2	5
St. Mary's	1	0	1
St. George's	0	0	0
Middlesex			
London			
Charing-cross			
Westminster	1	0	1
Queen's	0	0	0
Liverpool	0	1	1
Birmingham	0	0	0
Leeds	0	0	0
Edinburgh and Aberdeen	0	1	1
Women			
Totals	19	10	29

SIAMESE THEORY AND PRACTICE OF MEDICINE.

DR. E. A. STURGE gives in a recent number of the Philadelphia *Medical Times* an interesting account of this subject. All nature, according to the Siamese, is composed of four elements—viz., earth, water, fire, and wind. The human body is supposed to be made up of these same elements, which are divided into two classes, visible and invisible. To the former belongs everything that can be seen, as the bones, flesh, blood, &c.; to the latter the wind and the fire. The body is composed of twenty kinds of earth, twelve kinds of water, six kinds of wind, and four kinds of fire. The Siamese divide the body into thirty-two parts, as the skin, heart, lungs, &c. The body is thought to be subject to ninety-six diseases, due to disarrangement of the earth, wind, fire and water. An undue proportion of fire causes fevers, and dropsies are caused by too great a proportion of water. Earth is supposed to produce disease by invisible and impalpable mists and vapours, and wind can cause all manner of complaints. The natives use almost everything as medicine; the bones and skins of various animals occupy a large part of their pharmacopœia, while the galls of snakes, tigers, lizards, &c., are among the most valuable of their medicines. Burnt human bones, powdered and mixed with an equal portion of powdered alum, form a favourite medicine for sprinkling on ulcers. The eye-teeth of tigers, bears, lions, and various other animals (the more the better), ground up together, form the most popular remedy for fevers. The ashes of earthworms and human hair, mixed with cocoanut-oil, are frequently used for cuts. Dissection is never practised among the Siamese, consequently they are grossly ignorant in regard to the science of anatomy. The functions of the different organs are not at all understood. In the heart is supposed to be a cavity about the size of an almond. This cavity is thought to be filled with a fluid which changes its colour and consistency with our passions. When we are calm and peaceful, this fluid is perfectly clear, like water; when we are angry, it is turbid; when very angry, it turns dark; and when we are in love, it is red. In stupid persons the apex of the heart is rounded, while in those possessing the usual amount of wisdom it is pointed. It is not known that the heart has anything to do with the circulation.

Omega.—The Health Crape may be obtained of H. Ammam, 2, Star-court, Broad-street, E.C., or of Howell and Co., 60, Watling-street.

DEATHS FROM INANITION.

To the Editor of THE LANCET.

SIR,—May I be allowed to make one or two more so-called "causes" of death that ought not to be returned in medical certificates, and certainly ought not to be accepted by the registrars. First, concerning "inanition." It is, as you remark in an annotation in your issue of Nov. 1st, a condition of actual or partial starvation, which may be induced by wilful deprivation of proper food, or by the inability of the patient to digest any food in consequence of disease of some kind. In either of such cases the primary cause should be stated when death is the result. Again, "convulsions," being a symptom of some remoter ailment, cannot be a cause of death. Convulsive seizures may be the result of any one of various causes, which should be inquired into, and the actual cause stated in a certificate of death. Once more, "Death from natural causes" is a common verdict by coroners' juries, and a certificate is generally given by the medical witness (who has attended the case), in accordance with his own testimony at the inquest. If some of these cases were more searchingly investigated, it would be found that, instead of the death being "natural," especially in the case of little children, the fatal result is too often brought about by gross neglect or culpable carelessness, which all humane individuals must regard as an *unnatural* cause.

The mortality statistics would be far more valuable, because more true and trustworthy, if all vague certificates as to causes of death, such as those indicated above, were henceforth rejected by the Registrar-General, who should demand more precise definitions from medical practitioners and all others concerned.—I am, Sir, yours obediently,

Nov. 11th, 1884. M. A. B.

"A NEW-BORN INFANT OF EXTRAORDINARY SIZE."

To the Editor of THE LANCET.

SIR,—Mr. George Eddowes records the birth of a boy weighing 20 lb. 2 oz. This is so uncommon that more details would be interesting. I was under the impression that a child delivered by Mr. Owen at the Queen Charlotte Lying-in Hospital when I was house-surgeon there, weighing 17 lb., was about the largest on record. But this is now greatly out-scaled. The following details should be stated: Is the child alive? Have its parents had other children? If so, what did they weigh? Is the period of gestation established—that is, was the gestation presumed to be protracted? What is the occupation, mode of life, age, and diet of the parents? Was the child delivered by Mid. of fet, or was delivery spontaneous? Did the mother suffer any laceration during labour? In this wonderful case nature seems to have made a little mistake. The weight of the puppily distributed, would have made very respectable triplets.—I am, Sir, yours truly,

ROBERT BARNES.

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COCAINE IN DENTAL OPERATIONS.

IN reply to correspondents, we may say that we hope in the course of a week or two to be able to publish the results of experiments performed to determine the use of "cocaine" in dental operations.

THE WATER SUPPLY OF ROME.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Oct. 11th, page 665, your "own correspondent" at Rome seems to have very peculiar ideas on the subject of good drinking water. He vaunts that of the "Eternal City" as being "long known for purity as the finest in Christendom," which is saying a good deal to start with; and as having been again examined "with invariably satisfactory results," the said results showing the water to contain *only* 50 grammes per 100 litres of residue [or 50 parts per 100,000 of water], of which 50 grammes only 30 were carbonate *of lime* (I suppose he means), and 4 grammes magnesia.

Perhaps it is natural for foreigners to ignore things in the country they call "the States"; but the writer of the Roman letter must forgive me for saying that he will find it difficult to obtain authority for calling such water "pure," and *a fortiori* for calling it the "purest in Christendom." In benighted America we should call such water unfit for drinking, unless our object was the speediest possible creation of calculi. May I therefore add the analysis of the Brooklyn water, furnished this city for many years, of equal and unvarying purity.

Analysis.

Ammonia	Free	0·00075 gramme per 100 litres.
	Albuminoid	0·00826 " " "
Oxygen required to oxidise the organic matter		0·413 gramme " "
Nitrites		None.
Nitrates		1 gramme per 100 litres.
Chlorine		0·55 " " "
Total solids		6 grammes " "
Mineral solids		5 " " "
Organic and volatile solids		1 " " "

Hence we see (1) that the "free" ammonia is only one-eleventh of that deemed permissible in good water; (2) that the albuminoid ammonia is only half the permissible amount; (3) that the ratio of organic and volatile residue to mineral residue is very small, only 1 to 5; and (4) that if no better city water is presented—and I think Glasgow only excels us—the "Ridgewood water of Brooklyn" will "wear the bell" as "the purest in Christendom."—I am, Sir, yours truly,

NELSON B. DE S. SIZER, Bac.Sc., M.D.
(Neo-Eboracensis.)

Brooklyn, Oct. 27th, 1884.

Sigma should consult his partner as to the rule of the place in the matter. Forms of thermometer chart are legion; the simpler the better.

IS THIS OVER-PRESSURE?

To the Editor of THE LANCET.

SIR,—I should like to ask those who differ from Dr. Crichton Browne their opinion, as medical men, of the following questions, which were put to boys in Standards 6 and 7 at one of the Board schools in this neighbourhood—that is, to boys of the ages of thirteen and fourteen years:—"Describe the three sorts of levers, and give examples of each in the human body." "Describe 'fibrin' and 'liquor sanguinis.'" "Name all the involuntary muscles in the body, and state why they are so." I cannot vouch for the exact wording of the questions, as they were given me by a teacher from memory; but the above gives the intent and meaning of the questions.—I am, Sir, yours truly,

Holloway-road, N., Nov. 17th, 1884. W. HENRY KESTEVEN.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Harkin, Belfast; Dr. Saundby, Birmingham; Dr. Haughton, Norwood; Mr. C. Mann, Glasgow; Mr. St. G. Mivart, London; Mr. J. H. Danby, Alfreton; Mr. Mayo Robson, Leeds; Dr. H. F. Banham, Sheffield; Mr. Stamford Felce, London; Dr. Lancaster, St. John's; Mr. Alban Doran, London; Mr. Gerrard, London; Mr. F. E. Cane, Leeds; Mr. Noble Smith, London; Mr. Clement Lucas, London; Messrs. Griffin and Co., London; Mr. Bond, London; Messrs. Robertson and Scott, Edinburgh; Mr. Hodgkins, Oxford; Mr. Bramwell, Carnforth; Mr. J. A. Shaw, London; Mr. Greenish, London; Mr. G. S. Walker, Liverpool; Mr. Lawson Tait, Birmingham; Mr. A. C. Doyle, Southsea; Mr. W. H. A. Jacobson, London; Mr. S. Snell, Sheffield; Dr. G. Johnson, London; Mr. Roocroft, Wigan; Dr. Sankey, Littlemore; Mr. Butlin, London; Mr. B. B. Rawlings, London; Mr. T. W. Nunn, London; Dr. Ogle, London; Mr. Knight, London; Mr. T. Clarke, London; Mr. Treves, London; Dr. Paul, Liverpool; Mr. Piggott, Rosbridge; Dr. Hickman, London; Mr. J. M. Clarke, Fallowfield; Major Garland-Matthews; Dr. Ferguson, Cheltenham; Mr. J. Baker, W. Brighton; Messrs. Goddard and Massey, Nottingham; Dr. R. Barnes, London; Dr. Renton, Glasgow; Messrs. Wyleys and Co., Coventry; Dr. Cobbold, London; Mr. E. K. Campbell; Mr. Hadrill, London; Mr. Whitford; Dr. Waters, Liverpool; Messrs. Mitchell and Co., London; Mr. Southall; Dr. Eberle, Thirsk; Messrs. Mackay and Co., Edinburgh; Dr. Waddell, Longton; Messrs. Arnold and Son, Smithfield; Mr. Woodson, London; Dr. Molyneux, Hessle; Dr. Stansby; Mr. Gibson, Bromley; Mr. De Lancy; Mr. Ogden, Fareham; Messrs. Woolley and Co., Manchester; Messrs. Maclehose and Son; Mr. McCarthy; Mr. Maythorn, Biggleswade; Mr. Cornish, Manchester; Messrs. Wood and Co., New York; Mr. Cornford, Cheltenham; Mr. Hallimont; Dr. C. H. von Klein, Dayton; Mr. Jones, Eastbourne; Messrs. Mottershead and Co., Manchester; Dr. Andrew, Shrewsbury; Dr. Merry, Vermont, U.S.A.; Mr. Elliott, Carlisle; Mr. Hutton, Ormskirk; Mr. Haslam, Edgbaston; Dr. Bodine, Trenton; C. F. B., Shanklyn; Commander, Chelsea; The X.P.; One who hopes for Reform; Ethical; Sigma; Taxes; Beaver; Medicus, Newbury; Dum Vivo Vivat; M.D., U.S.A.; Stanley, Manchester.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Pavey, London; Mr. Hicks, Bodmin; Dr. Latham, Cambridge; Dr. Milne, Accrington; Mr. Poole, Dudley; Mr. Adams, Ipswich; Mr. Dunning, Devizes; Mr. Cook, Ipswich; Mr. Griffiths, Chester; Mr. Hammett, Thornton; Mr. Bell, Darlington; Mrs. Pratt, Cardiff; Messrs. Baker and Co., Philadelphia; Mr. Ross, Clacton-on-Sea; Mr. Allsop, Bradford; Mrs. Burlam, Shanklyn; Mr. Norcaux, Norwich; Mr. Pentland, Edinburgh; Mr. White, Bayswater; Mr. Goddard, Brentford; Mr. Jeffrey, Epsom; Mr. Swann, Alfreton; Messrs. Newman and Sons; Dr. Skinner, London; Dr. B. Squire, London; Mr. Austin, Faversham; Mr. Gray; Mr. Raynes, Ilkeston; Dr. Barr, Liverpool; Mr. Watson, Glasgow; Dr. Boyd, Dublin; Mr. Hughes, Hansworth; Mr. Turner, Finsbury; Dr. Leeson, Brighton; Mr. Curtice, Exmouth; Mr. Davenport, London; Dr. Hopkins, Bath; Dr. Althaus, London; Messrs. Smith and Son, Manchester; Mr. Wood, Southam; Mr. Tumner; Mr. Townsend, Exeter; Dr. Tate, Notts; Mr. Brown, Pimlico; Dr. Beale, London; Mrs. W., Walsall; Medicus, Edgbaston; C. L., Hornsey; Alpha; Medicus, Leigh; R. F. G.; M. T., Liverpool; Lexicon; Medicus, Great Marlow; Surgeon, Denmark-hill; Medicus, Ebbw Vale; Alpha, Godalming; F.S.A., Wye; M. L., Birmingham; Beta; Practice West; M. O. H.; C. C., Lewisham; Sister Amy; P. D. H., Weymouth; Alpha, Croydon.

Manchester Courier, Ripley Advertiser, Liverpool Courier, Retford News, Liverpool Echo, Aberdeen Daily Free Press, Cheshire County News, Jarrow Guardian, Alnwick and County Gazette, Times of Natal, Natal Mercury, Pietermaritzburg Commercial Advertiser, Natal Witness, Newcastle Daily Chronicle, Birkenhead News, British Merchant Service Journal, Kensington News, Daylight, Animal World, &c., have been received.

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Clinical Lectures on CASES OF DIFFICULT DIAGNOSIS.

By SAMUEL FENWICK, M.D., F.R.C.P.L.,
PHYSICIAN TO THE LONDON HOSPITAL.

PERFORATION OF THE APPENDIX VERMIFORMIS.

WHEN a student first enters on his hospital career he is struck with the vast variety of cases presented to him. The diseases and their modifications seem to him so innumerable, the symptoms of many of them appear so closely to resemble each other, and the distinctions he is taught to regard as important for their discrimination are often in his view so trifling, that he despairs at ever being able to overcome the difficulties connected with their diagnosis. Experience, however, soon shows him that many of the maladies he encounters are readily recognised, and that the similarity of their symptoms is generally more apparent than real, and careful attention to the rules laid down for his guidance will usually enable him to arrive at a tolerably correct opinion as to the nature of most of the ordinary cases presented to his notice. But there are some affections that occur so rarely that only a few instances fall within the observation of any practitioner, and they are consequently apt to be overlooked or confounded with other maladies of more frequent occurrence, whilst the rules for their detection and treatment are necessarily vague or imperfect. It is some disorders of this kind that I would from time to time invite you to study with me, examining the symptoms they have presented during life, and, in such as have proved fatal, the morbid conditions discovered after death.

I propose that we should first consider some of the more obscure diseases of the abdominal cavity, inasmuch as, on account of the great number of organs, differing in structure, in size, and in functions, that are enclosed in it, the diagnosis of the more rare maladies is more difficult in this than in the other cavities of the human body; and also because increased certainty of diagnosis is likely to lead to improvements in treatment. The remarkable success that has of late years attended the operation of ovariotomy encourages the belief that if our diagnosis could be made more certain, some of the diseases now rebellious to medicine might be relieved by surgical procedures; for there can be no doubt that many of the operations performed prove unsuccessful not so much from the nature of the malady or from any special liability of the injured structures to secondary inflammation, as from the late period at which they are undertaken.

I would first invite your attention to a disease of rare occurrence, which has only of late years attracted the attention of practitioners, and which often presents considerable difficulty in diagnosis—viz., perforation of the vermiform appendage. Five cases of this kind have been admitted into the hospital during the past twelve months, and I have selected two that occurred in my wards as illustrations of the symptoms and course usually presented by the malady.

CASE 1.—A man, seventeen years of age, was admitted under my care on Feb. 14th, 1884, complaining of great pain in the abdomen, accompanied by weakness, to such an extent he was scarcely able to stand. He was very thin, with a face expressive of severe suffering, the eyes were sunken, and the skin remarkably dark around them. He referred the pain chiefly to the epigastric region, although it extended over the entire abdomen, which was tender upon the slightest pressure; he had frequent vomiting, and the bowels had been constipated during the whole period of his illness. The pulse was 108, very compressible; tongue much furred; respiration 42; temperature 99·8°. The abdomen was greatly distended and tympanitic, but the loins and flanks were not distended, and there were no visible movements of the intestines. The hypogastric region was dull on percussion; over the cæcum the note was less dull, and percussion upon this part gave rise to a gurgling sound. On examination by the rectum a mass could be discovered in front, which was smooth, and gave the impression of its consisting of several coils of intestine united together. He stated that he had always enjoyed good health until nine weeks ago, when he thought he had hurt himself by lifting a heavy roll of paper; since that time he had lost flesh, but had been free from pain, or any other symptom. Seven days ago he was suddenly attacked with severe pain of the epigastrium shortly after supper, and the pain had continued ever since, in spite of medical treatment. Perforation of the appendix was diagnosed, and he was ordered frequent and full doses of opium. During the next three days he seemed somewhat easier, the vomiting was less frequent, and the abdomen became less distended. The temperature sank on the second day to the normal point, and on the two subsequent days it was 97° and 97·6°. The physical signs remained unaltered, excepting that there was more fulness over the region of the cæcum, but the pulse became gradually more feeble, and he died on the tenth day of his illness.

Post-mortem examination.—A considerable quantity of pus escaped when the abdomen was laid open, and the intestines were seen to be everywhere adherent to each other, pus being situated between the adjacent coils. The part where the gurgling had been elicited by percussion was occupied by a fold of small intestine, bent upon itself, filled with air and fluid, and lying upon the cæcum, whilst the tumour felt through the rectum proved to consist of some coils of intestine united together and enclosing collections of pus, and adhering by recent lymph to the back of the bladder and the sides of the pelvis. There was also a considerable quantity of free pus in the pelvis. The appendix was extremely congested, the tip being of a purplish colour and much thickened; its sides at the lower third were covered with pus and lymph, and a concretion was felt impacted in its upper third, whilst between this and the tip was an ulcerated opening. The cæcum itself was congested, and contained only a few small pieces of fæces and bits of gelatinous-looking matter.

CASE 2.—A man, aged fifty, was admitted complaining of pain in the chest and abdomen. He was emaciated, sat upright in bed without any drawing up of the legs, and stated that the pain from which he suffered was not severe; the tongue was furred, there was no vomiting but frequent hiccough, the bowels were greatly relaxed, and he was unable to swallow solid food; the pulse was not much quickened, and his temperature was only 97·5°. Although so little complaint was made of pain, the hypogastrium was tender on pressure and slightly swollen, it was comparatively dull on percussion, and percussion over the right iliac fossa elicited a gurgling sound, as of air and fluid. He made no complaint of cough or expectoration, but there was dulness on percussion over the right supra-spinous fossa along with tubular respiration and increased tactile fremitus above and below the right clavicle. He had been a soldier and served in the Crimea and East Indies, and had formerly suffered from dysentery. Six months ago he first had pains of the chest and abdomen which had been at times so severe that he was unable to follow his employment of a labourer. He could not fix any time when the pain of the abdomen became worse, but five days before his admission he suffered from constant vomiting, which gradually subsided. During his residence in the hospital he never complained of much pain, but suffered greatly from diarrhœa, the bowels being relaxed as often as ten or twelve times in the twenty-four hours. His temperature was below the normal point, excepting on one occasion, when it reached 99°. He gradually died from exhaustion seven days after his admission, the physical signs remaining unaltered.

Post-mortem examination.—There was fibroid consolidation at the apex of each lung. On the right side was a cavity, and the middle and lower lobes of each lung contained tubercles; but there were no tubercles on the peritoneum and no ulceration of the small intestines or the cæcum. The small intestines were adherent to each other in the hypogastric region, with pus situated between the adjoining coils, whilst a collection of pus presented itself in the pelvis, walled in by recent lymph and coils of intestine adhering to each other. The vermiform appendage was perforated by an ulcer, which communicated with the abscess, but no concretion could be found. The part where the gurgling had been heard on percussion was occupied by a loop of small intestine, situated over the cæcum and adherent by recent lymph to the adjoining parts.

Now, it is scarcely necessary for me to point out to many of you who have attentively listened to the narratives of these

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two cases how remarkably they differ, although in each there was the same lesion of the vermiform appendage and the same local inflammation resulting from it. But in the former case general peritonitis had existed from the first, the symptoms were ushered in by sudden and intense pain, vomiting, and constipation; whilst in the latter the inflammation was confined to the part at which it had commenced; and the pain was never severe. The patient was, in fact, unable to fix the date of the beginning of his illness, and severe diarrhœa was the prominent symptom. But what we shall hereafter find was of great importance, was that in the first case the disease occurred in a person previously healthy and resulted from the irritation set up by a concretion; whilst in the second it took place in one who was suffering from long-standing phthisis.

From the fact of five cases of this kind having been admitted into this hospital within the last twelve months, you might infer that perforation of the appendix is by no means uncommon, but such is certainly not the case. During the last eight years only nine persons have come under my own care in whom the lesion was either proved to be present by post-mortem examination or in whom the symptoms were so well marked that the diagnosis could be made with tolerable certainty. Again, in carefully examining the post-mortem records of the London Hospital during the last forty years I have only been able to find nineteen in which the appendix was in a diseased condition. It is quite certain, however, that this number cannot truly represent all who have died in the hospital during so long a period of this disorder, for in the earlier volumes only one or two instances are recorded. But whether this may be the case or no, it is evident that the experience of no single practitioner will be sufficient to furnish him with instances of all the varieties the malady may present, and I have, therefore, collected 129 cases that have been published by different authors in the hope that from a careful study of so large a number we may be able to clear up some of the difficulties connected with the subject.

Of the whole number of cases collected only ninety-five have been recorded with sufficient details to enable us to ascertain the exact results of the perforation of the appendix, and of this number thirty-eight presented a localised collection of pus. Sixteen are said to have had an abscess in the neighbourhood of the appendix; and in all probability the condition was similar to what has been described in the two cases before quoted, where one or more coils of the small intestine were united to the surrounding parts and walled in the pus, or where it was situated in the pelvis and was surrounded by newly formed lymph. In twelve cases the pus was situated in the iliac fossa, in some around the cæcum, in others below the fascia, the muscular fibres being softened or broken up. A few instances are recorded in which the pus had burrowed upwards beneath the peritoneum, and had formed a huge abscess round the right kidney; in six instances the presence of an abscess is noticed, but its locality is not defined. But the question arises, Why in cases of perforation of the appendix is there this tendency to the inflammation of the peritoneum being localised, whilst in perforation of the stomach or small intestines such a condition so rarely occurs? No doubt the difference depends upon the nature and the amount of the material that is extravasated into the peritoneal cavity. In perforation of the stomach a large quantity of a highly irritating liquid is effused, which quickly finds its way to all parts of the abdominal cavity, exciting inflammation wherever it reaches; whilst in the case of the appendix the material is solid or in small amount, and being in the most depending part it does not at once reach the more distant portions of the peritoneum. We thus find that even where no abscess had been produced, it is mentioned that the inflammatory products were met with in the greatest quantity in the immediate vicinity of the cæcum, in the proportion of twenty-three cases out of ninety-five. It is easy to understand why only lymph should be found in one case and a collection of pus in another, for death probably occurred so rapidly in the former that there had not been time for the suppurative process to take place; but it is more difficult to explain why the abscess should be confined in one individual to the pelvis and in another to the iliac fossa. The most probable reason is that as the length and direction of the appendix vary in different subjects, so the seat of the inflammation must vary accordingly, being most intense at or [illegible] the nearest point to the perforation. When, for example, the [illegible] and has been the seat of the ulceration and it has [illegible] projected into the pelvis, the abscess will be situated in the hypogastrium or in the pelvis; but when the appendix has been very short, or placed behind the cæcum, or the perforation has taken place near its origin, the structures in or around the iliac fossa will be mainly implicated. Another circumstance that must tend to determine the position of the abscess is the formation of adhesions between the appendix and some of the neighbouring organs, which is recorded in ten cases out of the ninety-five. The cæcum, small intestines, the peritoneum, and the bladder were the organs to which the appendix was attached, and in some instances the adhesion had evidently occurred some time before the perforation had taken place. Various cases are on record where the appendix has been adherent to the inguinal canal, or has formed part of the contents of a hernial sac, and the pus has presented itself in the scrotum and been successfully evacuated.

It is evident that an abscess in the peritoneal cavity will usually set up so much constitutional irritation that death will ensue before it can be evacuated, but such is not always the case. In one instance at this hospital the pus was evacuated through the abdominal walls, and I have seen a very similar instance in my own practice. When it is situated near the cæcum it may burrow beneath Poupart's ligament, and may present itself in the thigh, as occurred in a boy who was under my care in the hospital two years ago, and who perfectly recovered after pus and fæces had been discharged from the wound. Other cases are recorded in which the pus has found its way into the cæcum, the ileum, or the rectum, and thus relieved the patient from imminent danger.

Of the whole number I have collected only one is mentioned in which pus was found in the abdominal veins, one in which abscess of the liver was present, five where pleurisy and two where pneumonia was discovered after death. It is doubtful whether we should not refer the pleurisy to the extension of the inflammation of the peritoneum through the diaphragm, but the others were most likely the results of the absorption of pus. When we remember how commonly pyæmia takes place in cases of deep abscesses of the limbs, we cannot but be surprised at the small number of cases recorded as following perforation of the appendix; but the explanation is not difficult. In the limbs large veins are numerous in the vicinity of an inflamed part; in peritoneal abscess the pus is walled in by adhesions, and the surfaces of the mesenteric veins are coated with lymph. In like manner we can see why abscess of the liver is so common a result of dysentery, and so unusual in peritoneal abscess; in the former the irritating and decomposing contents of the intestine are brought into immediate contact with the vessels laid bare by the sloughing of the mucous membrane; in the latter the pus is defended from immediate contact with the vascular system. But in those unusual situations of abscess resulting from perforation of the appendix, such as where the muscular tissue of the iliac fossa or of the loins is the seat of the suppuration, we will probably find that pyæmia is as apt to occur as when inflammatory action has arisen from other causes. Although the inflammation, as we have before seen, chiefly affects the lower part of the abdominal cavity, fifty-nine cases [illegible] out of ninety-five in which the whole peritoneal surface was implicated, and, judging from my own experience, I should be inclined to estimate the proportion still higher. Of course the amount of mischief varies greatly; in some cases the intestines are everywhere adherent, and collections of pus are met with in the most depending parts, [illegible] enclosed between the adjacent coils; in others lymph is uniformly spread over the surface of the membrane, and more rarely, we only meet with slighter [illegible] inflammation. General peritonitis occasionally [illegible] itself as the first indication of the perforation; in other [illegible] it travels slowly from the neighbourhood of [illegible] whilst more rarely it results from the bursting [illegible] abdominal cavity of an abscess set up around [illegible] and which had been circumscribed by adhesions [illegible] neighbouring structures. But at whatever [illegible] case the inflammation of the peritoneum may [illegible] almost always of a suppurative character, [illegible] which in all probability arises from the decomposition [illegible] of the substance which has originated the [illegible]

When this accident first attracted [illegible] it was remarked that the appendix [illegible] foreign body, and the idea arose that this [illegible] as regards this point; in fifty-five [illegible]

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a concretion, a mass of fæces, or some other foreign body was present, and it is fair to conclude that the numbers would have been larger if a sufficiently careful search had been practised in them all; for as the contents of the appendix often drop into the pus surrounding the ulceration, it is easy to understand that a small concretion may frequently have been overlooked. The nature of the foreign body has varied, for in forty-seven cases sufficiently detailed to allow of analysis twenty-eight were concretions, fourteen consisted only of hardened fæces, and in five others, substances such as seeds or shell were present. But why should a foreign body in this part set up such serious results, when we know that in numerous instances the appendix has been found on post-mortem examination to be occupied by shots, seeds, and even, as in a case lately observed in this hospital, by lumbrici, without any apparent ill results; and when we so constantly meet with concretions in the kidney and the gall-bladder without any manifestations of disease having arisen from their presence? I think in most cases the presence of a concretion by its irritation gives rise to ulceration, and the proximity of the part to the cæcum filled with decomposing materials tends to produce sloughing in what would be otherwise a mere abrasion of the mucous surface. In support of this view I may mention that in sixteen cases the appendix is stated to have been in a gangrenous condition, although there is no notice in any of them of the cæcum being in a similar state. I think, too, we may find in the anatomical relations of the appendix a reason why in some instances perforation so readily occurs. In Case 1 you will remark that the ulceration had taken place in the centre of the process, where it was distended by the concretion, but the perforation was at the end. Now, the appendix is supplied with blood by means of a small mesentery of its own, which sometimes terminates before the extremity of the process, so that the end must derive its nutriment from the bloodvessels of the parts nearer to the cæcum, and under such conditions any acute inflammation or ulceration that obstructs the circulation must tend to rapid disorganisation of the structures. That this is by no means an uncommon cause of the perforation is shown by the fact that in the majority of cases the perforation is found at the extremity, and very rarely near to the cæcum.

Then how are the concretions produced? It has been generally assumed that they are the result of a secretion of the phosphates of lime and soda, of which they principally are composed, by the mucous membrane of the appendix, small nodules of fæces or some undigested particles of food which had obtained access to the part serving as nuclei. This is no doubt correct in many instances, as nuclei of this nature have been shown to exist in some concretions, but in others the calculus appears to be composed solely of earthy salts. Now, in one of the cases at this hospital it is noted that the appendix was distended by a milky fluid, the communication with the cæcum being obliterated, and in others recorded by different authors the appendix is stated to have been occupied by a substance resembling putty. It is, then, to obliterations of the valve, and consequent distension of the appendix with thickened secretions, that I suspect we must look not only for an explanation of the formation of many of the concretions, but also for the cause of some of the ulcerations that occur in which no foreign body can be discovered after death.

The second case I have narrated was one in which phthisis was present, and no concretion was discovered; and we might have conjectured that perforation would often occur under such circumstances, on account of the similarity of the structure of the mucous membrane of the appendix to that of the cæcum, which is liable to suffer from ulceration in this disorder. It is, however, much more rare for perforation to arise from tubercular ulceration than from the presence of a concretion, as I have only met with thirteen cases out of ninety-eight. Occasionally perforation occurs in typhoid fever, but I have only found six in which it took place in persons suffering from this disorder. Two cases have been recorded in which it happened during convalescence from other eruptive diseases; but there is no evidence that there was any connexion between the original malady and the abdominal complication.

It has been remarked by different writers that perforation of the appendix is much more liable to affect the male than the other sex, and this is borne out by the experience of this hospital, where of seventeen whose ages were recorded only three, or 18 per cent., were females, whilst of 105 cases collected from various authors only twenty-five, or 23 per cent., were of this sex. The proportion varies with the cause producing the perforation, for in the cases occurring in phthisical individuals 41 per cent. were females, and all of those that took place in the course of typhoid fever whose sex is mentioned were also females. When no foreign body was found in the appendix the proportion of females was 23 per cent., but amongst those in which a concretion or other foreign body was discovered after death there was only 17 per cent. It is evident from both sexes being equally liable in those affected with phthisis that there is no anatomical difference in structure which can account for the smaller proportion of females who suffer from perforation, so that we must seek for an explanation of the above facts in the habits or circumstances of the stronger sex. Now, it has been conjectured that the male is more liable to affections of the appendix on account of the more severe exertions to which he is exposed; and in support of this we may remark that in the first case the patient stated he had never been well since a strain received in his occupation, whilst other instances are recorded in which the fatal illness had been preceded by an injury to the abdomen. But, on the other hand, the history of an injury is only exceptional, and in the majority of cases the symptoms of the disease present themselves suddenly and without apparent cause. In addition to this, as we shall shortly see, the accident occurs more often in the young than in those at a later period of life, when severe labour is more generally undertaken. You will remember that I before suggested that many cases arose from obstruction of the valve, probably the result of catarrh; and this derives support from the fact that males are more liable to catarrhal affections of the cæcum than the opposite sex; for example, the numbers of cases of typhlitis admitted into this hospital for the last seven years have been fifty-nine, of whom only eighteen were females, which is at the rate of 30 per cent.

Let us now examine whether we can find any predisposing cause of ulceration of the appendix in the age of the persons affected. I have included all the cases whose ages are stated in the following table:—

Years of age.	Number of cases.
Under 10	9
10 to 20	29
20 to 30	21
30 to 40	16
Above 40	22
Total	97

It will be remarked that a considerable number have occurred under ten years of age, and half of these were under five; indeed, the accident sometimes takes place at the earliest period of life. From ten to twenty is the most usual time, and after thirty the numbers gradually decline. This is better seen if we divide the cases according to the cause producing the ulceration. Thus, if we examine only those in which either a concretion or some other foreign body was discovered, we find that thirty cases out of forty-three, or 70 per cent., occurred in those under twenty years of age, only four between twenty and thirty, and five between thirty and forty. If we separate those in which concretions were present from those where only particles of hardened fæces or other foreign bodies were discovered, the same liability is shown, as 64 per cent. of the latter and 80 per cent. of the former occurred under twenty years of age. But as we saw in the former table that a considerable number of cases of ulceration of the appendix occurred in persons above twenty, it is chiefly in those above this age in whom no foreign body has been discovered. In the next table I have included all the cases of typhlitis who have recovered and who were admitted into this hospital in the years before mentioned.

Years of age.	Number of cases.
5 to 10	2
10 to 20	24
20 to 30	25
30 to 40	2
40 to 50	5
Above 50	1
Total	59

It will be seen, on comparing these tables, that both ulceration of the appendix and inflammation of the cæcum are

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most liable to occur between the ages of ten and thirty, when food is consumed in the largest quantity; and we may therefore assume that both affections depend upon a similar condition, and that the retention of indigestible materials in the cæcum and the catarrh so produced is the most usual cause. But as typhlitis and ulceration of the appendix are both common between the ages of twenty and thirty, although concretions are less common at that period than in the ten years before it, we are justified in supposing that a catarrhal condition of the cæcum, either by producing closure of the valve or by propagation of the inflammation to the appendix, often gives rise to ulceration, although no foreign body be present.

Most of the cases of ulcerated appendix in phthisical subjects occur at a later period of life than when it is due to the presence of concretions or catarrh, for out of those I have collected only one was below twenty years of age, seven were between twenty and forty, and three were above forty. All those connected with hernia were above forty years of age.

I have already mentioned the prevalent idea that the concretions so often found in the appendix are always the result of hardened fæces, or of indigestible materials of the food, and if such were the case we should expect to find that most of the sufferers had been liable to constipation. Now, I have collected forty-three cases in which the previous state of health is recorded, and of these only three had been subject to a constipated state of the bowels. It is therefore evident that this theory derives but little support from facts. I should be more inclined to believe that the concretions are in most instances the result of an excessive secretion of the mucous membrane of the appendix arising from the stimulus afforded by an undue use of solid and indigestible food. This view derives support from the fact that of twenty-five cases in which a concretion was discovered twenty are described as having enjoyed robust health, and three had been delicate; whereas of eight in whom no concretion was discovered, only five had been robust and three delicate. The presence of a concretion produces no pain until catarrh or ulceration is excited, for out of twenty-five cases of concretion only two had previously complained of abdominal pain; whilst of eighteen in whom no concretion was recorded five, or 30 per cent., had suffered in this way. I have before mentioned that injuries to the abdomen are supposed by some authors to give rise to ulceration of the appendix, and this derives some support from the fact that three cases out of eighteen in which no concretion was discovered referred their complaint to blows or strains. In four instances out of forty-three there was a history of a previous attack of typhlitis from which the patient had perfectly recovered; in two of these the patients died from peritonitis only, and in the remaining two both abscess and peritonitis were discovered after death.

(To be concluded.)

ON THE USE OF COCAINE FOR PRODUCING ANÆSTHESIA ON THE EYE.[1]

BY DR. CARL KOLLER.

TRANSLATED AND REVISED BY J. N. BLOOM, B.A., M.D.

GENTLEMEN,—I take the liberty of addressing you in order to inform you about some experiments which I have undertaken in order to produce anæsthesia on the eye. It is not the first communication which I have made on this subject. I have already addressed such a one, in order to preserve my priority in this discovery, to the Convention of German Oculists, which, as it annually does, met on the 15th and 16th of September in Heidelberg. Dr. Brettauer of Trieste was kind enough to bring my communication into notice and to repeat my experiments before the Convention, and since then the same have been repeated and confirmed in various other places. ... ...

It is a well known fact that cocaine, an alkaloid produced in 1859 by Nieman from the leaves of the erythroxylon coca, possesses the peculiar property, by its local application, of anæsthetising the mucous membrane of the tongue. Prof. Schroff mentioned this fact for the first time in 1862 in a lecture on its nervous effect read before this assembly. It is also well known that cocaine narrows the peripheral arteries when taken internally; further, we know that cocaine dilates the pupil by means of its local application as well as by its internal use. We therefore see that cocaine has already been applied to the eye, but until now those phenomena have not been observed which I make the object of my discourse to-day. After repeated experiments with its internal use cocaine fell into discredit and disappeared from the scene. Dr. von Anrep in 1880 produced a comprehensive research into cocaine, at the end of which it was hinted that the local anæsthetising action of cocaine might in the future become of considerable importance. In Vienna, especially, cocaine has been brought to the front through the interesting therapeutical work of my colleague in the general hospital, Dr. Sigmund Freud.

I have started with the premise that a substance which paralyses the terminal sensory nerves of the mucous membrane of the tongue would not act very differently on those of the cornea and conjunctiva; so I undertook a series of experiments on animals, which I carried out in the laboratory of Prof. Stricker. My results, in brief, are as follows:—If a few drops of an aqueous solution of muriate of cocaine[2] are dropped upon the cornea of a guinea-pig, a rabbit or a dog, or if the solution is instilled in the usual way into the conjunctival sac, the animal blinks for a while, clearly as the result of a weak irritation. After a period of from thirty seconds to one minute the animal opens its eye, which gradually assumes a peculiar expression of rigidity. If one now touches the cornea of the animal with the head of a pin, being careful not to come in contact with the eyelashes, no reflex closure of the lids occurs, the bulb does not deviate, and the head is not thrown back, as would otherwise happen. On the contrary, the animal remains quiet, and by the employment of a stronger irritation we can convince ourselves that the cornea and conjunctiva are completely anæsthetised. For instance, I have scratched the cornea of the animals upon which I experimented with a needle, pricked the same, irritated the cornea with an induction current which was so strong that it produced a painful sensation in the fingers and was unbearable on the tongue, and cauterised their cornea with a pencil of nitrate of silver until it became as white as milk; all without a single movement on the part of the animals. The last two experiments convinced me that the anæsthesia included the whole substance of the cornea, and not only its surface. However, after I had cut into the cornea, the animals showed decided signs of pain at the moment, when the aqueous humour gushed out and the iris prolapsed. Even in my later experiments on animals I was unable to determine whether the iris also could not be anæsthetised by the instillation of the solution into the corneal wound, or by a continued instillation into the conjunctival sac, begun and kept up for some time before the operation; for experiments testing sensibility of animals which are not narcotised are very difficult, and, especially if they are in the slightest degree complicated, are apt to give equivocal results. I had yet to find out experimentally whether cocaine could produce anæsthesia of the inflamed cornea, and this question was answered in the affirmative, when the animals upon which I produced an artificial keratitis, by means of a foreign body, showed the same anæsthesia of the cornea as the healthy ones. Complete anæsthesia lasts on the average ten minutes, when a 2 per cent. solution is used.

After such successful experiments I did not hesitate to apply cocaine to the human eye. At first I experimented upon myself and a few colleagues; later, on a large number of other individuals; the results of which without exception proved that the cornea and the conjunctiva were thoroughly anæsthetised by its use. The sequence of the symptoms is as follows:—When a few drops of a 2 per cent. solution are introduced into the conjunctival sac, or, better still, if they are allowed to run over the cornea, together with an increased secretion of tears, a slight burning sensation is felt, which disappears after an interval of from thirty seconds to a minute, to give way to an obscure feeling of dryness. To the observer an eye thus treated has a peculiar rigid expres-

[1] A paper read at the meeting of the Vienna Royal Imperial Society of Physicians on Oct. 17th, 1884.

[2] A solution of cocaine in water, up to 5 per cent., can be made without the addition of an acid. The solution is always cloudy. The addition of an acid [illegible] as even a very small quantity of an acid causes a very [illegible] solution. When filtered the solution becomes [illegible]

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sion, very like that which I noticed as remarkable on the animals upon which I experimented. This expression arises from a decided widening of the palpebral fissure, the explanation of which I shall give later. If now the head of a pin is brought in contact with the cornea we note the absence not only of the pain usually associated, but we absolutely do not feel the contact, and all reflexes are absent. The same holds good for the conjunctiva, which loses its sensibility to heat and cold. Without any inconvenient sensation, or the slightest reflex movement on the part of the patient thus treated, we can grasp the conjunctiva of the bulb with a toothed forceps, or we can pit the cornea by pressure. In this connexion the only thing to be observed is that the appearance of objects becomes indistinct, which naturally is caused by the changed curvature of the cornea. This complete anæsthesia lasts from seven to ten minutes, to give way to the normal condition after a considerable period of subnormal sensibility. From fifteen to twenty minutes after the instillation the pupil begins to dilate; the dilatation reaches its maximum during the first hour, decreases decidedly in the second hour, and disappears completely in a few hours more. The dilatation is never a maximal one, and during the whole time the pupil reacts promptly to light and on convergence; therefore the feeling of dazzlement which is connected with atropia-mydriasis is either entirely wanting or is present to a slight degree only. With mydriasis there appears and disappears a very slight paresis of accommodation; the near point of myself and one other person whom I examined for this purpose was lengthened half an inch. I have observed in the normal conjunctiva, especially in the conjunctiva palpebrarum, a decided ischæmia, about the duration of which I can say nothing certain. I shall for the present pass over certain other observations not yet completely confirmed, as, for instance, those concerning the appearances shown by the ophthalmoscope, only stating that I have never seen any symptoms of irritation arise from the use of cocaine. As for the previously mentioned widening of the palpebral fissure, the symptom precedes in point of time, at any rate, its action on the iris and ciliary muscles, and as it appears almost simultaneously with the anæsthesia of the cornea and conjunctiva, I have referred it to the anæsthesia as a cause, and explained it by the disappearance of the irritations which normally affect the cornea and conjunctiva and cause the usual width of the palpebral fissure. As regards the anæsthesia, I have still some practical and important points to bring forward.

1. The anæsthetic effect of cocaine can be increased to a certain limit—that is, if cocaine is dropped into the eye after the partial cessation of the anæsthesia, a second complete anæsthesia results which lasts longer than the first. In this way I have produced complete anæsthesia lasting from fifteen to twenty minutes from the last application by a continuous repetition of the application at intervals of five minutes. 2. The anæsthetic effect is pre-eminently a local one—i.e., it is stronger on those places to which the solution has been directly applied and where it has been for some time in contact. 3. Since, as may be proved, cocaine is absorbed, and after every instillation a quantity, even though small, reaches the anterior chamber, one would *a priori* expect that the deeper portions of the eye could be rendered anæsthetic were it possible to introduce larger quantities of cocaine into it. But as, on the one hand, a certain time is necessary for its absorption, and on the other the anæsthetic effect in point of time is limited, the anæsthesia of the cornea would be over when the iris and ciliary body began to be affected; it would therefore be necessary to anæsthetise the cornea again. I believe I can meet both of these conditions, as the following will show. By means of a continuous application repeated every five minutes with a 5 per cent. solution kept up for some time (about half an hour) I succeeded in producing such an effect upon the deeper parts of the bulb that its sensibility to strong pressu was very decidedly diminished.

Through the kindness of Professor von Reuss, who placed at my disposal for experimental purposes the material of his (formerly Jaeger's) clinic, I was able for two or three weeks to test the effect of cocaine upon the pathological eye. From the very beginning I held cocaine to be valuable therapeutically for two purposes; one for its use as a narcotic in painful diseases of the eye; the other as an anæsthetic in operations on the eye. As for its use in the first instance, I expected much good from its action, especially in diseases of the cornea and conjunctiva, where there is much pain and intolerance of light. Indeed, I used cocaine in a 2 per cent. solution on a large number of patients with conjunctivitis pustulosa (herpes corneæ). Several minutes after the instillation all the patients thus treated expressed an improvement as regards their subjective condition. The pain was diminished and the intolerance of light was decidedly lessened. With the same unanimity the patients complained that the pain and intolerance of light returned two or three hours after the instillation. We would expect that the pain and intolerance of light could be done away with, or at least diminished, by a frequent application. This method of application could not be carried out up to the present time because of the expense of the drug. I have not observed any influence, beneficial or otherwise, on the course of the disease in the experiments I have made as given above.

Similar results were obtained by me with the use of cocaine in the case of a man with painful erosions on the limbus. I hope also to control the pain in iritis by the use of cocaine, since I believe I have previously shown that its anæsthetic action includes to a certain extent the iris and the ciliary body. The mydriatic effect would not be of so much importance; still one might expect an influence upon the course of the disease from the vaso-constricting power of the drug; perhaps combined with atropine it might be successful. Up to the present time I have had no opportunity of using it in this disease.

The pain connected with cauterisation of the conjunctiva with nitrate of silver is entirely done away with, or, at least, decidedly lessened, by the previous instillation of cocaine. Most of the patients thus treated experimentally expressed themselves as having experienced no pain. In some cases, after a period of latency, the pain appeared, but after a fresh instillation it disappeared. One patient asserted that the pain, although much less than usual, lasted longer. I have little, and, in part, contradictory experience in the use of cocaine with the sulphate of copper treatment; at any rate, in this latter use it must be applied much stronger than in cauterisation with nitrate of silver.

I come now to the second use of cocaine—namely, as an anæsthetic in operations on the eye. Cocaine is used with excellent results in the removal of foreign bodies from the surface and substance of the cornea, an operation which is often rendered so difficult by the restlessness of the patient. I anæsthetised a considerable number, almost thirty, of such patients, making each, either seated or standing, look downwards, and allowing two drops of a 2 per cent. solution to flow down the cornea. After a period varying from three to five minutes the instillation was repeated. All the patients thereupon asserted that they had lost the sensation of a foreign body in the eye, and believing it was removed, prepared to go home. They held their bulb quiet during the extraction of the splinter by means of needles, and when asked what they had felt answered that they had felt nothing at all. Cocaine was used with the same good results in a case of tattooing of cicatrices on the cornea, and in the operation of pterygium. Good results might be obtained with cocaine in cauterisation of corneal ulcers with the actual cautery in the puncture of the cornea and discissio cataractæ.

Dr. Reuss performed the operation for staphyloma upon two children—one a boy, aged ten years, the other a girl of seven—without narcosis, using only cocaine in the manner to be described later on. The children remained perfectly quiet, and, according to their own confession, experienced no pain. Dr. von Reuss kindly allowed me to employ cocaine in several cases of iridectomy and cataract operations after Graefe, which he performed. In general, I only wish to state that these cases, one and all, ran their course without any irritation, and this, to say the least, calls for further trials of the drug. The experimental use of cocaine gave results which were more or less favourable according to the strength of the solution and the manner in which it was employed. The most favourable and almost completely satisfactory results as regards painlessness in operations were given by the cases in which the following method was carefully observed. For at least half an hour before the operation two drops of a 5 per cent. solution are instilled every five minutes. The patient is placed horizontally (without a pillow under the head), the upper lid is elevated, and, while the patient is told to look towards his feet, the solution is dropped upon the sclera just above the cornea.

Among those so treated was a woman, upon whom a linear extraction was made and who was questioned during each

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stage of the operation; she answered that she felt absolutely no pain from the corneo-scleral incision, the seizure and cutting off of the iris caused her but little pain. During the whole operation there were no reflex movements. A like result was obtained in the case of an idiotic woman upon whom the same operation was performed, and upon whom Dr. von Reuss hesitated to operate because she was in other respects very sensitive.

The following case appears to me to be worthy of notice on account of its peculiar circumstances. Iridectomy was performed upon the left eye of a man with a bilateral seclusio pupillæ. Cocaine was employed. The man did not move in the slightest degree during the operation, and asserted he did not feel the corneo-scleral incision at all; that he felt the seizure and cutting off of the iris, but it did not pain him. Eight days later the other eye was operated upon, but this time without the use of cocaine; he writhed and "bore down," so that the operation was rendered decidedly more difficult. Although a large majority of people who have to undergo such operations are torpid individuals and bear their pain with patience, nevertheless, the last case appears to me to prove that even in such cases an anæsthetic might be of excellent service.

The translator of the above paper on the anæsthetic use of cocaine has been requested by the author to add the following short notice, the results of later experience in the use of the drug. Lack of time and space prevent details. Operations for cataract are almost painless when performed with cocaine. Hence in those cases of prominence of the bulbs, where there is great danger of escape of the vitreous humour during the operation, the elevator has been dispensed with. The importance of this will be appreciated by oculists. As predicted by Dr. Koller when he wrote his article, the operations of puncture of the cornea, discissio cataractæ and cauterisation of corneal ulcers have since been frequently performed under the cocaine anæsthesia, and absolutely painlessly.

That cocaine is of great value in relieving pain in iritis, the following case, given in brief, will show:—

A woman, M. F——, forty-five years old, in Dr. von Reus's wards, suffered so much pain from iritis as to be unable to sleep. The insomnia was complete, and had lasted seven days and nights. Atropine had been employed continuously. Cocaine in 5 per cent. solution was instilled six times in half an hour in the manner already detailed. The pain disappeared completely but reappeared three hours later. Cocaine was again instilled; this time three times in fifteen minutes. The pain vanished and the patient slept comfortably for the rest of the night. The next day on the reappearance of the pain a third instillation was used, and the pain disappeared and did not return.

In the clinic of Dr. von Reuss nearly all the operations are now performed under the cocaine anæsthesia according to the method already given in detail.

NOTE ON THE VALUE OF HYDROCHLORATE OF COCAINE IN OPHTHALMIC SURGERY.

BY J. CRAWFORD RENTON, M.D. EDIN.,
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FOLLOWING the recommendation of Dr. Koller of Vienna, which was brought under my notice by Mr. Marcus Gunn of London, I have recently been using the hydrochlorate of cocaine in all operations on the cornea. Two per cent. and four per cent. solutions, some made with distilled water alone, others with boracic acid and glycerine to prevent putrefaction, have been used, as also the discs of the strength of $\frac{1}{300}$ gr., made by Savory and Moore on the suggestion of Mr. Nettleship, and I have no hesitation in saying that my best corneal anæsthetic results have been obtained with the discs, two being quite sufficient to produce complete anæsthesia in six minutes, and being maintained from fifteen to twenty minutes. The 2 per cent. solution in distilled water acted well, but that made with glycerine was not satisfactory. One patient, who had both solutions used in a double iridectomy he required for lamellar cataract, stated that he felt no pain whatever with the plain solution, but slight pain with the glycerine preparation. In cataract extractions and needle operations the anæsthesia of the cornea is most satisfactory, and patients state that they feel no pain. For the removal of foreign bodies from the cornea the cocaine promises to be most serviceable. As a mydriatic, in some patients it is very decidedly so, our present house-surgeon, Dr. McIntosh, who kindly allowed me to use it in his eye, found that his pupil remained fully dilated for a week. As a controller of ciliary pain I have not yet found the cocaine of much value, nor have I been able to satisfy myself that the conjunctiva or skin is much affected by it; but its value in preventing pain during an operation and keeping the eye soothed for some time after cannot fail to conduce to good results in ophthalmic surgery.

Glasgow.

CHOLERA.

BY MAX VON PETTENKOFER, M.D.,
OF MUNICH.

(*Continued from page 905.*)

THE same considerations hold good in India. The famous places of pilgrimage, whose sanctuaries are annually visited by many millions of individuals, always have some cases of cholera amongst them, but it is only occasionally that an epidemic breaks out, and then it is only at those times when the predisposition to cholera exists—periods, be it noted, which do not for the most part coincide with the time when the number of pilgrims is at its greatest, nor when the principal feasts are in progress. For instance, Bryden has drawn up tables showing the number of admissions into the hospital at Puri in the neighbourhood of the sanctuary called Dschagganath for the years 1842 to 1866, and these statistics show the number of receptions of cases of cholera for each month of the year. This journal, extending over so many years, must give a good idea of the frequency of cholera in pilgrimage even though the numbers be but small. The principal feasts, when the chariot of the deity is drawn over the breasts of the faithful, occur in the middle of March, but the period at which cholera is at its height is in June, when there are many fewer pilgrims assembled. Altogether there were 313 cases in March during twenty-five years, whilst the number was 1155 for June, or nearly four times as many admissions for cholera into the hospitals. Puri lies on the south-west border of the territory where cholera is endemic, and has the same rhythm so far as cholera is concerned as Madras. Hardwar lies in the north-west of India, where the chief feast occurs in April, the principal day being the 12th, and often hundreds of thousands of pilgrims, if not millions, stream together here; yet cholera only breaks out in an epidemic form when the regions are predisposed to it. It will be interesting to go further into detail on this question. Hardwar is situate about 1000 feet above the level of the sea where the Ganges quits the Himalayas, and belongs to the holiest of places which the Hindoos worship. Cholera only occurs occasionally in an epidemic form. In the last century (1783) a severe epidemic was known to have occurred amongst the pilgrims at Hardwar. From 1858 to 1867 the feasts passed on without the occurrence of any epidemic of cholera, and this immunity was believed to be due to the soundness of the arrangements which were enforced by the Government. In 1867 the whole prophylactic armour was thrown aside. But already in November, 1866, an epidemic of cholera was approaching the neighbourhood of Hardwar from Agra. The pilgrims began to arrive at Hardwar on April 1st. On April 3rd the majority had assembled, although the stream of pilgrims continued to increase till the 12th. The whole number of pilgrims reached about three millions. On April 9th the first case of cholera was detected by Dr. Kindall and taken into hospital. Other cases soon followed. On April 12th, on holy day, the pilgrims bathed from sunrise to sunset in the Ganges, in a holy fort which is separated from the torrent of the river by a rail, so that the people could not be drowned. Through this fort there was an incessant movement of men all day long. The water became thick and muddy, partly from the ashes of the dead which the pilgrims had brought with them to strew in the stream, and partly from the washing of the clothes and persons of the bathers. Every time a pilgrim entered the holy fort he dipped himself three times under, drinking the

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water and saying his prayers. The drinking of the water was never forgotten; if two or more members of a family bathed together each one drank from the palm of another's hand. All these things happened every year for eight years without ill consequences. But in 1867 a violent epidemic broke out among the pilgrims. Macnamara, a believer in contagium and in the drinking water theory, speaks as follows: "On the night of April 11th and on the following day a severe storm burst upon the unsheltered multitude. Only those who know what a storm on the mountains in the tropics is can have any conception what a night of misery these three millions of people suffered on the open plains of Hardwar. This fall of rain must have washed the contents of the closets and the filth on the surface of the earth into the Ganges." And Macnamara believes that on April 12th the pilgrims drank cholera from the Ganges; but Macnamara is wrong. Granted that the storm had really washed the cholera stools into the Ganges, then the stools must have remained either in the river itself or else in the holy fort, just as was the case in Koch's water tank. It is true I can find no numerical observations concerning the rapidity of the flow of the Ganges in Hardwar; but if we suppose that its rate is like that of the Seine in Paris at low water—i.e., half a foot per second,—then the water would move at the rate of 1800 feet an hour. The railed off fort in which the pilgrims bathed is 650 feet long by thirty feet wide, and if the bathing lasted twelve hours, and if only a third part of the pilgrims had bathed, then more than 83,000 persons must have hourly passed through the water; this was impossible, so that only a small proportion of the pilgrims could have bathed on April 12th. These places of pilgrimage are also colossal markets and great places of business. It does not support the drinking-water theory to assume that during the bathing of the 12th that cholera bacilli did not get into the holy fort from cases of cholera which would hardly be in a condition to bathe, but from cases of diarrhœa. Either a few of the bathers were, to start with, infected, and so large numbers could not be infected until the bacilli had become distributed, or if a large number were infected at the outset, we naturally inquire where the infection was taken, and whether there was no possibility of their having been infected before going to the bath. If I do not believe that the pilgrims drank death from the holy stream, yet I shall not maintain that the stormy weather had nothing to do with the cause of the epidemic. Cases of this kind have occurred outside India, as in Malta and Spezia in Italy, where a sudden storm has sent up the death-rate in an explosive fashion. But if a weather storm can create a "cholera storm," then the cholera must be existent in the soil. One is reminded by this invasion of cholera of the clouds of dust which the watering-carts raise in summer. If the earth is very dry, the water not only lays but makes dust. I can conceive how a sudden heavy fall of rain may rapidly drive out the infective stuff contained in the soil. But Hardwar had experienced bad weather in other years on the same days in April without being followed by such evil consequences.

How does the journey of the pilgrim act in the spread of cholera? That infection can occur in a short space of time is witnessed in soldiers on the march. A case from Bryden's work may be quoted. In March, 1857, the 66th Ghorka Regiment marched simultaneously in two divisions about seventy English miles apart, from the plains to the hill stations along the Himalayan heights—the A division towards Almorah, the B towards Lohnghat—and both wings, though free from cholera on starting, became infected *en route*. The A division, 611 men strong, arrived on the 13th of March free from cholera at Tarai, a narrow strip of land between the plain of the Ganges and the Naini valley. Tarai is notorious for its fevers and cholera, whilst the Naini valley is celebrated for its general salubrity and its remarkable freedom from epidemics of cholera. The division left Tarai the morning after its arrival, passed into the healthful Naini valley, and halted at the hill station of Almorah. The first case of cholera showed itself in the Naini valley twenty-four hours after the first opportunity for infection. The first fatal case occurred on March 16th, two deaths occurred on the 17th, ten on the 18th, nine on the 19th, and one on the 22nd. These numbers show a mortality of nearly 10 per cent. The B division was 361 strong, and passed through Tarai about a week after the A division, remained there but one day, and reached Lohnghat on the 23rd of March. The first fatal case occurred on March 21st, whilst the division was still in Tarai; there were 2 fatal cases on the 22nd, 18 on the 24th, 8 on the 25th, 1 on the 26th, and 1 on the 27th. Fatal cases thus occurred within a period of seven days. Such statistical facts, which might be multiplied, have as much value, as direct experiments, as infection through the linen of cases of cholera. It is strange, however, that most of the "cholera linen" first originated in the Naini valley, in Almorah and Lohnghat, where the disease did not spread further and where certainly disinfection by carbolic acid or corrosive sublimate was not thought of. But the contagionists have no eyes for such facts. Just as was the case with the Ghorka Regiments, so was it with the pilgrims at Hardwar. On April 15th the great mass of the pilgrims—who had been quartered on a flat, partly marshy, tract of land, about a square mile in extent, for several days—broke up and departed, so that a stream of 3,000,000 of infected individuals for the most part, notwithstanding the influence of the bathing in the Ganges, reeking with filth, began to spread abroad over all India. According to the contagionists, an epidemic of cholera ought to have broken out in every place to which the wandering pilgrims came. In my view epidemics may break out only where the time and local conditions are favourable; and where these conditions do not exist an epidemic is impossible, as the case of the Ghorka Regiments proved. Bryden expresses himself in the following terms on the Hardwar cholera. "From all accounts which have been written concerning the outbreak at Hardwar, the impression is gathered that the epidemic was by no means a typical one. That is only the case, however, if the facts are considered in the light of preconceived theory. For those who search the statistics the facts come out in their true light, and prove that the type of an epidemic has nothing to do with the smallness or largeness of the number of people affected. The suppression of the cholera at Hardwar towards the east and south, and the increase of it in the west and south-west, are inexplicable phenomena [Bryden ought to have said, for the contagionists]. But the phenomena are not difficult to understand if the preconceived theory be laid aside. If we take Hardwar as the central point at which the gathering on April 12th was infected, then it will be found that the pilgrims died only in those districts which were reached within a limited time after their daily march had begun. The great majority of fatal cases did not occur at Hardwar, but in those regions which were reached within the first few days after leaving Hardwar. It seems to me that the end of the outbreak at Hardwar was pretty much the same as that of local outbreaks elsewhere, and I can see no connexion between the epidemic of cholera in the Punjaub in May and the return home of the pilgrims." The movement the cholera had taken in the autumn of 1866 led Bryden to say, "I believe that the geographical distribution of cholera in 1867 would not have been very different, even supposing that the gathering of the pilgrims had never taken place." And Bryden is perfectly right, for in 1862, for example, the cholera in India became remarkably widely spread without cholera having broken out amongst the pilgrims at Hardwar.

Such epidemiological facts which cry aloud for the truth of the existence of local and time predisposition stand as sure, as etiological elements, as the discovery of a microscopic organism in the intestines of cholera patients. Only ignorance and prejudice can ignore such facts. It is but a necessary logical conclusion that the comma bacillus, if it have anything to do with the infective material of cholera, must also have some relationship with the local and time conditions which favour cholera. And, further, the relationship must be discovered by the bacteriologists before they can explain as epidemic by the aid of their bacilli and before practical rules can be framed thereon.

Another objection to the views of the contagionists is found in the behaviour of cholera on board ships. Long before I announced my views on local conditions, the epidemics of cholera, not only on the rocks of Malta and Gibraltar, but also on ships, were brought as witnesses against my doctrines. What can soil and ground water have to do with epidemics on ships? And although I had found nothing but confirmatory evidence of my views, still the contagionists remained obdurate. As I cannot suppose that all my readers are sufficiently acquainted with my observations on cholera in ships, I must be allowed to give a few illustrations. The contagionists, referring to cases in which epidemics occur during the voyage from Europe and

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America, say that such can only be explained on the view of infection of one case from another. The facts of such epidemic outbreaks are known to all. How often do such attacks occur? As an instance, I shall refer to the intercommunication between New York and Europe in the year of cholera 1873. In that year, according to the register of the offices at New York, there were 760 vessels which arrived from different parts of the world, giving an aggregate of 316,956 individuals, but of these 266,055 came from Europe. Of these 113,920 came from England, which was free from cholera; from the remainder of Europe the numbers were 152,135, and about 400 vessels served to convey the individuals, making up the last figures, from ports infected with cholera. If we inquire into the statistics we find that cholera chiefly occurred on four vessels only. Eleven cases were registered from the *Westphalia;* one fatal case from the *Ville du Hâvre;* from the *Washington* three fatal cases; and from the *Holland* one fatal case.

Although the chances of contagion aboard ship are very favourable, yet how small was the number of cases of cholera. Take the ship with eleven cases, and we find that they belonged to two German families only; two died during the voyage, nine were landed on Dix Island, and of these but one died and the rest recovered. How is it conceivable that cholera should have confined itself to two families without attacking others? I believe that both families had contracted cholera before going on board; indeed, an epidemic may occur in a ship provided the passengers have all come from a place where cholera exists. The contagionists have, however, replied that some remarkable epidemics have happened on board ship, which could not be explained on the above mentioned view. It is a question whether cholera can infect on board ship. The contagionists take facts conveniently, they select those instances which occur least frequently and adopt them, to the exclusion of the great majority of instances which tells against them. I recall the articles which I wrote in the *Vierteljahresschrift für öffentliche Gesundheitspflege* and in the *Zeitschrift für Biologie* to prove that I have thoroughly investigated the nature of epidemics of cholera on ships. Rumours of false returns concerning cholera on board ship have been bruited. But these falsifications can hardly be committed when *an epidemic* occurs during a voyage. It may be said that my instance of 1873 does not disprove the contagiousness of cholera. Cholera, like small-pox, does not attack everyone who is brought into relationship with it. If even a few instances of contagion were proved to have occurred on board ship, we should have to admit the contagiousness of the disease.

(To be continued.)

TWO CASES OF CHARBON.[1]

BY A. F. M'GILL, F.R.C.S.,
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THE two cases which form the subject of this paper are examples of a disease which manifests itself in many various ways, and which has received several names, but which is distinguished by the presence of a characteristic organism, the bacillus anthracis. The cases apparently have but little in common. In the first the symptoms were mainly general; in the second local. The first proved rapidly fatal, the second terminating in recovery.

CASE 1.—A butcher, aged sixty-four, at the time in perfect health, was on July 23rd skinning a beast which had that day been slaughtered. The beast was known to be diseased, several other animals in the same pasture having previously been affected; its spleen was found to be greatly enlarged and soft. The man while examining the viscera to find out the nature of the ailment, knocked a small piece of skin off the lower part of his right forearm. The next day his hand was swollen, and he felt ill; on the evening of July 25th, two days after the accident, he applied to and was admitted into the Leeds Infirmary. On admission the forearm was seen to be enlarged, tense, and shining, the swelling extending above the elbow; there was a small excoriation above the wrist, which did not present any unusual appearance; the lymphatic glands in the axilla were not enlarged. He seemed depressed and ill, but not more so than the local disturbance would account for; his temperature was 100°. There were no unusual symptoms about the case, which was looked upon as ordinary diffuse cellulitis. Numerous incisions were made in the forearm and arm, and a poultice was applied. The next day (July 26th) the condition of the arm remained stationary, but the general condition was worse. The temperature was only 100°, both morning and evening, but the appearance was pinched and the aspect bad. On July 27th the temperature had fallen to 97·4°; the following note was made at noon:—The body and extremities were cold; the pulse could hardly be distinguished; the aspect was pinched and death-like. Yet his mind was clear, he could give a lucid account of his accident, and was not aware of his dangerous moribund condition. At 4 P.M. Dr. Barrs examined the serum and blood obtained from his arm. These fluids did not contain any organisms. At 6 P.M., four days after his inoculation, the patient died. A post-mortem examination was made twenty-two hours after death. The following notes were taken from the post-mortem register:—Rigor mortis present; body well nourished; right arm and forearm along the inner side were swollen and red, with many small punctures visible. There was a small unhealthy-looking abrasion at the point of inoculation on the right forearm. The tissues on the front of the chest were œdematous, and the pectoral muscles soft. The lungs were soft, congested, and œdematous; spleen very soft and diffluent; kidneys normal; liver slightly fatty; other organs healthy. Dr. Barrs examined several specimens of blood obtained from various parts of the body, and found that quantities of the bacillus anthracis containing spores were present. Mr. W. B. Russell examined the spleen pulp, and also found large numbers of the same organisms.

CASE 2.—On August 6th I saw a middle-aged man who had been under the care of Dr. Nowell. Four days before, while dressing a beast, which had been feeding in the same fields as that mentioned in the last case, and which also had an enlarged spleen, he scratched his right arm about an inch above the wrist. He thought nothing of it at the time, but in two days his forearm was swollen and a circumscribed sore appeared at the seat of the scratch. This sore gradually but rapidly increased in size. When I saw it, it presented the typical appearance of a malignant pustule. There was a black dry patch, rather larger than a shilling, situated an inch above the right wrist on the centre of the flexor aspect of the forearm, this was surrounded by a reddish-purple zone covered by small indistinct vesicles, and gradually faded into the surrounding skin; the whole forearm was considerably swollen. There was not much constitutional disturbance, though the patient was somewhat feverish, flushed, and anxious. I recommended immediate excision, and after consultation with Dr. Newell excised the pustule the same afternoon, cutting wide of the inflamed skin in all directions. The wound was dressed with iodoform, freely applied, and silk. On September 18th Dr. Newell kindly sent me a note of the further progress of the case. He says—"The case of malignant pustule has progressed well; iodoform and dry lint were used as dressings until about a fortnight since, when I substituted resin ointment, once or twice touching the weaker prominent granulations with silver nitrate. He came for the last time on the 15th, but promised to call and let me see the wrist by-and-bye. The wound is now healed and evenly filled up except an oval about the area of two lines by one." The pustule at the time of removal was placed in weak alcohol and subsequently examined by Dr. Jacob, who has furnished me with the following report:—"The pustule when hardened in alcohol still preserved its black centre, with a trace of the red areola. A section through the centre showed considerable necrosis of the epithelioid elements with partial separation of the epidermal layer by sero-fibrinous and cellular infiltration. A section stained with gentian violet and resin showed a large number of bacilli and spores scattered over the field, occupying the deeper as well as the more superficial layers of the corium. The bacilli were thick, short-jointed rods, the spores large and rounded, resembling rather those obtained by cultivation of the bacillus anthracis in meat infusion than those generally found in cases of anthrax in man. There were besides several collections of micrococci of the ordinary septic type."

There are several points which require notice in relation to these cases.

1. In the first case, though a careful examination was

[1] Read before the Leeds and West Riding Medico-Chirurgical Society.

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made, no specimens of the bacillus could be discovered in the patient's blood two hours before death, though at the post-mortem examination large numbers were found. This is often the case—indeed, it seems that life cannot be carried on when the bacilli in considerable number are present in the blood. The bacilli cannot live without the presence of oxygen, and as soon as they are developed in the blood, they speedily deoxygenate that fluid, rendering life impossible. It is probable that the spores of the bacillus circulate in the blood during the continuance of the disease, and it has been proved by experiment that they thrive without oxygen; as soon as the time comes for them to be developed into bacilli the patient dies.

2. The condition of Case 1 on the day of his death forcibly reminded me of a patient dying from cholera collapse. There was the same cold and clammy body and extremities, the same pulselessness, the same rapid breathing, and the same remarkable clearness of the mental faculties.

3. The satisfactory result which attends the early excision of malignant pustule is again exemplified. The success of this treatment has been proved at Guy's Hospital, where of fifteen cases in which excision was practised, thirteen made a good recovery. At Guy's it has been customary to apply chloride of zinc or some other strong caustic to the wound caused by the excision. Microscopic examination, however, proves that the bacillus is not found in the subcutaneous tissue, and this case shows that the application of a caustic is unnecessary.

4. As animals which die of splenic fever are in this district disposed of in the usual manner and sold for human food, it is interesting to know what is the effect of the bacillus when taken into the stomach. Koch made some experiments on sheep, with the object of elucidating the point. He found that sheep might be fed with unlimited quantities of the bacilli free from spores, and that no bad result occurred; but if the virus contained spores in an active state of development, death invariably occurred within two days. Fortunately the meat that is eaten will all be cooked, and we may hope that the bacillus is thus destroyed, and that no harm results. But the risk that is run by the persons who have to prepare and dress the meat derived from diseased carcases is only too evident. While meat of this description is sold in the open market, we should remember that cases of charbon may come under our notice, in which it will perhaps be impossible to ascertain the mode of infection.

SOME OBSERVATIONS ON THE

SPINAL CORD IN HEALTH AND DISEASE AT THE REGION OF THE FOURTH AND FIFTH DORSAL VERTEBRÆ.

BY ALEXANDER HARKIN, M.D., F.R.C.S.,

CONSULTING PHYSICIAN TO THE MATER INFIRMORUM HOSPITAL, BELFAST.

(*Concluded from p. 58.*)

CASE 1. *Paralytic chorea.* — This case, the first of which I have any record, occurred in 1850. It was that of a bank clerk aged eighteen years, of bilious habit and sluggish intellect. He was ill with paralytic chorea and what is now termed symptoms of incoördination and defective inhibition. His left hand had become unmanageable; he could not retain the hold of a pen, a teacup, or a book for a moment; and the loss of control extended to the left leg, which he dragged after him in walking. He was prone to involuntary laughter, and his features were seldom at rest. The senses of sight, hearing, taste, and smell on the affected side were much impaired. After giving a trial to various local and constitutional remedies in vain, and finding that the fourth dorsal vertebra was exceptionally sensitive to percussion, I applied a small blister over the fourth and fifth vertebræ, and with the healing of the raw surface every choreic and paralytic symptom had departed.

CASE 2. *Facial paralysis.* — About the same time a married lady, the mother of two children, consulted me for an attack of facial paralysis, accompanied with ptosis and derangement of vision in one eye, partial loss of taste, smell, and hearing on the same side, with loss of sensation in the integuments of the face and cheek on that side; the third, fifth, and seventh cranial nerves were engaged. In her case the fourth and fifth dorsal vertebræ were painful on pressure, and these only. After fruitlessly trying a variety of remedies then in vogue, I ordered a blister to be applied over the tender vertebræ; this was done, and before the expiration of a week all the motor and sensory functions in abeyance were completely restored.

CASE 3. *Chorea.*—In the summer of 1860 I was called to a case of well-marked chorea in an unmarried female, aged seventeen, her second attack. Her previous illness lasted for six weeks; she had then been under the care of a skilful practitioner, who prescribed cold shower-baths and drachm doses of carbonate of iron. I found her suffering from incessant jactitation of both upper and lower extremities, which seldom ceased even during sleep. Her head and tongue were in constant motion; there was no history of rheumatism or evidence of cardiac disease. Having found the fourth dorsal exceedingly sensitive to pressure, a blister was applied over it for eight hours; it rose well. I did not prescribe any other mode of treatment, and at the end of eight days the patient was restored to perfect health.

CASE 4. *Facial paralysis.* — On June 14th, 1870, Miss P—— called on me. She had contracted facial paralysis by sitting for some time at the open window of a railway carriage. Her mouth was drawn to one side, her left eye was permanently open, tears streamed unchecked from it over the cheek; common sensation and hearing were much impaired on the same side; she put out her tongue very awkwardly, and spoke with difficulty. On examining the vertebral column she shrank with a cry of pain when tapped over the fourth and fifth dorsal spines, over which a blister was applied. I saw her forty-eight hours afterwards, when she showed a marked improvement. Complete recovery resulted in the course of a few days.

CASE 5. *Chorea.*—C. K——, a lad thirteen years of age, was brought to me on Sept. 9th, 1870. He had but recently recovered from a prolonged attack of rheumatic fever, fourteen days after which the present symptoms supervened. He had been treated, his mother informed me, for some time without any benefit as an out-patient at the General Hospital. The left arm and leg, which suffered most from the rheumatic attack, were now the most affected with choreic movements. His eyes, lips, and head were in almost perpetual motion; there was no perceptible cardiac complication. I did not prescribe any medicine, but over the fourth and fifth dorsal vertebræ, which responded as usual to pressure, I applied the ordinary counter-irritant. On the 12th he had acquired control of the left hand, could hold a cup steadily, and perform any manual office freely. On the 19th he was quite well, with the exception of nervous twitches in his face. I then applied a second blister over the same place, and when he visited me on the 26th every abnormal symptom had disappeared.—Second attack: On Jan. 23rd, 1871, the lad had a return of the disease, almost a counterpart of the first attack. I ordered a blister, as before, to the same region, but was disappointed in not discovering any improvement. On the healing of the raw surface, however, I applied dry cupping glasses over it and near it, with great relief; a second application of the glasses completed the cure. I then took the lad into my service. Good fare and suitable occupation established his health, and he afterwards took to seafaring, and has been for some years an able bodied seaman in a coasting vessel.

CASE 6. *Facial paralysis.*—On Feb. 2nd, 1880, a lady called with her daughter, Miss L——, aged nineteen years. The latter stated that when passing from an overheated room into the outer air, then below zero, she suddenly felt a burning sensation in her right cheek, followed by sore-throat. She was then menstruating. On reaching home it was observed that her mouth was drawn to the left side when she attempted to speak or laugh; she was unable to corrugate her eyebrows, to wink with the right eye, or to close it, and when going to sleep had to bring down the right upper eyelid with her fingers. She could not distinguish even the largest type with that eye, and the sense of hearing on that side, and that of taste with the right half of the tongue, and of smell in her right nostril, were almost entirely obliterated. She suffered from epiphora, tears were constantly flowing over the affected cheek; when attempting to masticate, her food remained in the right side of her mouth till relieved by the finger, and she could not clear her mouth of saliva by ordinary expectoration. Common sensation was almost absent on the affected side. Her speech was indistinct, and she could not pronounce any

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word beginning with a labial. Before proceeding to treatment I invited my friend Dr. Walton Browne to look at the patient, and after he had recognised fully the nature of the case, I demonstrated the presence of spinal hyperæsthesia at the region of the fourth dorsal vertebra, and ordered the local application of a blister. This was done on Feb. 3rd, and at my visit on the 4th we found the patient much improved, especially in the direction of the motor symptoms. At the end of a week all phenomena due to lesion of the portio dura of the seventh nerve had disappeared, while those depending on the fifth and the nerves of special sense were still observable. I now applied a second blister over the same spot, and at the date of its cicatrisation (Feb. 16th) the patient was completely cured. It is worthy of remark that in the progress towards recovery the lesion of the motor nerve took precedence, and seemed to march in a different track from that of the sensory and special senses.

CASE 7. *Frontal neuralgia of the first division of the fifth nerve.*—On May 17th, 1881, Mr. E. M——, aged nineteen, called on me, complaining of neuralgia in the supraorbital division of the fifth nerve, which commenced the day following a thunderstorm, it subsided at night and recurred with violence every day about 10 A.M. He was of a neurotic family, his sister a martyr to hysteria, and his father, under forty years of age, crippled with neuralgia. I at first prescribed five-grain doses of croton chloral and the external use of atropine liniment, with only partial relief. After a week's trial I suspended their use and applied a blister over the fourth and fifth dorsal spines. The next morning there was an abortive attempt at a recurrence of the pain. At the end of a week, however, he informed me that he had completely recovered, and that after the blister had thoroughly risen, with the exception mentioned, he had not experienced the slightest pain.

CASE 8. *Facial neuralgia of the first and second divisions of the fifth nerve.*—Mrs. C——, aged twenty-four, mother of one child, very subject to neuralgia, and at present suffering, and had been for the previous fourteen days, from pain in the left side of the cheek, forehead, and face, called on me on May 26th, 1882. She informed me that this attack appeared twenty-four hours after a peal of thunder. She also complained of occasional pain in the left eyeball and severe pain at the exit of the supraorbital and infraorbital nerves. At the latter place there was a bright-red patch, which was painful and inflamed. The attack came on every day at 10 A.M., and lasted till noon, occasionally returned in the evening, and then subsided till the next morning. At its daily advent she became faint and felt great chest oppression; she was very anæmic and consumptive. Suffice it to say that a blister applied to the usual spot removed effectually and at once all neuralgic suffering, and she continued free from pain for many months afterwards, and as long as she was under my observation.

CASE 9. *Neuralgia of the third division of the fifth nerve.*—Mrs. McM——, aged nineteen, married six months, called on me at 6 P.M. on Nov. 5th, 1882. She complained of intense pain in the first molar of the lower jaw on the left side, the corresponding tooth had been extracted some months before for a similar cause, when immediately this tooth took on symptoms of toothache and began to be carious; the pain extended to the brow and head on the same side, and interfered with mastication. She had not slept for many nights. I applied the vesicating fluid over the fourth and fifth dorsal. Next day she called to say that an hour after its application she began to feel relief, that she fell asleep at 7 P.M. and awoke in the morning perfectly free from pain, which never returned. She was confined on February 14th, 1883.

CASE 10. *Reflex vomiting in pregnancy.*—Mrs. McM—— called on me again on July 17th, 1884, to say that she was pregnant, for the past two months, for the greater part of which time she had been suffering from pyrosis and sickness after breakfast and supper, teeth quite free, she rejects her food after these meals, and is not quite free from sickness in the intervals. On examining the back for the purpose of applying a counter-irritant, the discolouration caused by the previous application was quite apparent. I applied it as before, and I had a message by her husband to say that all gastric trouble had left contemporaneously with the formation of the blister, and up to date of writing she is perfectly free.

CASE 11. *Reflex vomiting of pregnancy.*—On Jan. 10th, 1884, I was consulted by a lady, the daughter of a medical man, for very severe morning sickness that had troubled her for many weeks. She was then five months pregnant of her second child; the excessive nausea and weakness were giving anxiety to her friends. I promised to cure her at once if permitted, but gave her the choice of a small blister between the shoulders or some sedative medicine. She preferred the blister, which I immediately applied, with the usual effect; the sickness never returned, and I attended her in her confinement on May 18th after. She was very grateful for the rapidity and simplicity of the remedy.

CASE 12. *Ozæna and dysmenorrhœa.*—When attending a lady in October, 1842, for an attack of bronchitis, she requested me to prescribe for a grown-up daughter for ozæna, which made her very unhappy and avoid society. Finding a pronounced spinal tenderness of the customary vertebræ, I said I could not promise a cure, but would make the endeavour. I painted the patient with epispastic fluid, with beneficial result. She called to thank me for the cure of the nasal trouble; but, to use her own words, she "was more than astonished at what occurred at the same time." She was then on the eve of her monthly period, which was always accompanied with vomiting and excessive pain, for which her mother prescribed a sedative, to be used in the middle of the night when the crisis arrived. To her surprise she had slept all night, and the potion was untasted in the cup. Since that time up till the present moment all signs of dysmenorrhœa have been absent in her case.

CASE 13. *Facial neuralgia and borborygmi.*—One Sunday in August, 1883, two sisters called on their way home from church. They were members of the choir, and the elder complained that from the neuralgic pain in her teeth and jaws, extending to the throat, she could not join in the psalmody without excessive pain. She requested me to blister her over the fourth dorsal vertebra. I smiled and answered, "Why?" She said, "You long since by that means cured my sister of a similar attack." I complied with her request, and finding evidence of previous blistering on the same spot, she reminded me that when attending her sister for her neuralgic attack I noticed how much she had suffered from borborygmi, and observed that they were evident many yards distant. The application had completely removed that troublesome ailment. I now painted her over the same spot, with the result of banishing at once all neuralgic affection of the dental nerve.

CASE 14. *Pruritus pudendi of pregnancy.*—In the month of November, 1883, I was called on to visit the wife of a mechanic, then in the fifth month of her first pregnancy. I saw her at noon. Her eyes were red with weeping. She informed me that neither herself nor her husband, who was present, had slept for many weeks, on account of the agony she suffered every night from the effects of pruritus pudendi, which then reached its climax, although painful every hour of the day. They had not the luxury of a second sleeping apartment, and the husband was quite worn out in looking at suffering which he could not remedy nor relieve. I promised to do everything possible for her. I did not prescribe either local or constitutional remedies, but applied the vesicant to the usual hyperæsthesic region, and called on the patient a week later. She was then bright and cheerful and most grateful. She said that the blister had risen before the evening, that at bedtime she slept without waking till the morning, that at breakfast time there was a slight return of the annoyance, and a milder attempt next day, but that it had then completely disappeared. She left for the country, and was delivered of a baby in due course without any return of her former trouble.

In thus selecting for the purpose of illustration a few typical examples from my repertory of cases, it is not my purpose to indulge in theoretic speculation or endeavour to account for the physiological action of the topical remedy under consideration. To explain the reason why derivatives applied to a specific area of the cerebro-spinal system are able to control or remove a pathological condition or state of excitation in regions only indirectly or remotely connected with it—whether by producing hyperæmia, and thus removing congestion; whether through the agency of the vaso-motor nerves, inducing contraction or dilatation of the bloodvessels; whether through the sympathetic system, called into action by irritation of the fine network of peripheral nerve distribution, a rational explanation may be given for these previously unrecognised therapeutic facts; whether the curative action of the cantharides is due to its vesicating power or to its stimulating influence on the skin (according to Anstie on the nervous system also), and a neurosthenic tonic like arsenic, which it is said increases the nerve force and restores order to its action when disturbed,—I shall not assume the

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responsibility of determining. One important feature cannot well be overlooked—the permanency of the cures of neuralgic ailments. Many years have passed and I have not had even in a single case a recurrence of the disorder; and even the case of Mrs. Mc——, where the exciting cause was again in operation, the neurotic affection did not appear in the form of neuralgic toothache, but in reflex disorder from uterine irritation and pneumogastric sympathy.

Belfast.

ANTISEPTIC STEAM IRRIGATION OF FOUL WOUNDS.

BY LEIGHTON KESTEVEN, M.R.C.S.,
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NOTWITHSTANDING the immense strides surgery has made in the last few years in the pathology and treatment of all the varieties of wounds, I believe I am right in saying that the "foul" wound is still the bane of surgical practice. By "foul" wounds I mean those large, open, suppurating surfaces which, notwithstanding, or from the previous want of, due antiseptic precautions, are so frequently met with. As, for instance, in the sloughing due to severity of contusion, from burns, phlegmonous erysipelas, indolent large ulcers, opening of abscess cavities, operations for necrosis, and in divers other instances too numerous to relate, where we have this objectionable feature—objectionable in hospital, with all due appliances at hand, from the inevitable septic virulence; and objectionable in the private house, from the dirt, the stink, and the repulsive task of dressing to amateur nurses. Apart from and beyond these grounds of objection, too, comes the far greater one to ourselves of the often insuperable difficulty of healing these wounds; in promoting such genetic action of the tissues as will enable them to repair the loss of material and fill up these "horrid chasms." Any plan therefore which will enable him to cope with these difficulties, or minimise them in any degree, may be acceptable to the practical surgeon; and, though not claiming to have discovered any new remedy, I desire to bring before the notice of the profession what I believe to be a new *modus opplicandi* of one we already possess, and which, I believe, supplies a real want. The oil of eucalyptus is the drug to which I refer, and its continuous application in a vaporous state the *modus*. Not exactly in the same condition of spray as in Professor Lister's method, but as a slight practical modification of its use. Briefly, my plan is this. The steam spray charged with a solution of eucalyptus oil (which from its more agreeable or tolerable odour, and, as Dr. John Duncan of Edinburgh says, its perfect antiseptic properties, is preferable to all other antiseptics for this purpose), played at close distance directly on to the wound for long-continued periods, thereby supplying a moister and warmer vapour—steam, in fact—than the spray, and effecting a mechanical cleansing of the wound combined with a thorough antiseptic permeation of the structures. That this does supply a desideratum of treatment I feel convinced by the successful results obtained in its practical application; and I will instance below two or three typical cases, out of the number I have treated with the same results. I conjecture that the very marked good effect which it has on large slowly healing sores or wounds is due to the stimulating effect to the tissues of the direct force of the steam on them at so close a distance, as the vivifying effect shown in the improved vitality of the part manifests itself so soon after its application. I can only compare this local effect to the constitutional stimulus of the morning shower bath on the man with jaded nerves.

The first case in which I tried this was one of excision—for bone disease—of the entire phalangeal and metatarsal bones, with the third cuneiform, and greater part of the cuboid. The wound was brought together by sutures, but owing to the previous destruction by disease (supposed syphilitic) of the superficial tissues, and the impoverished state of the whole foot, the meagre flaps would not unite, and a deep, gaping wound was left in which abundant sloughs formed, with a fetid, sanious discharge. Various different dressings were applied, always under the eucalyptus spray, with little or no good effect; till it occurred to me that I might by a sort of "steam irrigation" cleanse away a good deal of the superabundant sphacelated tissue. I therefore brought the nozzle of the spray apparatus to within an inch of the wound and turned it on at full pressure for over an hour. No pain whatever was caused by this measure; indeed, whereas the patient had been in acute pain before he said that it was soothed almost immediately by the pleasant warmth of the jet; the surface of the wound being cleared of a very large proportion of the débris, which now lay in a pool of the condensed steam and spray in a mackintosh put under his foot during the dressing. Seeing the good effect of this, I continued it twice daily for at least a fortnight, during which the improvement was most marked. The cavity, which had exhibited nothing but lazy sloughing before, assumed a healthy aspect, and went on filling up rapidly, and I only found it necessary to dress it once daily. All the fetor was gone, and the sanious discharge was replaced by healthy pus in moderate quantity. The very large loss of cutaneous tissue which had occurred by sloughing retarded considerably the closing of the wound, though it still retained its healthy condition, and it was only by constant drawing of the sides together by adhesive plaster that it was eventually healed, after a stay in hospital of nearly a year after the operation. He has now, however, a sound and fairly serviceable foot; and he most undoubtedly owes his having any at all to the timely aid of the "steam irrigation." I ought to say that I plugged the wound each time after the steaming with lint soaked in carbolic oil containing 1 to 20 of oil of eucalyptus.

W. K—— was brought into the hospital with a crushed foot, the wheel of a loaded goods waggon having gone over the instep. There was great laceration and contusion, the dorsum being laid almost bare to the bone, and the foot literally burst open at the outer side from the base of the little toe to the heel, almost entirely detaching the sole of the foot; indeed I could put four fingers between it and the tarsal bones. The first two phalanges were torn from the tarsus, the ligaments of the tarso-phalangeal joints being entirely gone, and the first phalanx of the big toe was fractured longitudinally. The bases of the metatarsal bones protruded from the wound. A hopeless case enough in all conscience for conservative surgery, but the lacerated condition of the wound prevented any considerable hæmorrhage, and, as he was a young, healthy, temperate man, I replaced the metatarsal bones as far as possible, put in sutures where necessary, and dressed it with the carbolic-eucalyptic oil under the spray. The greater portion of the skin of the dorsum, however, and a large part of the side wound sloughed, and the whole was looking utterly intractable when I brought the steam irrigation into play. The effect was the same as in the previous case, and after a long and naturally tedious recovery, he is now at his work again as a railway porter. Curious to relate, he has serviceable good joints in both the injured toes that were torn away. At this time, some eighteen months after the injury, he can walk well on the foot.

In an operation for necrosis where I removed the whole of the front of the tibia leaving a deep trough of bone, where there was every reason to believe the disease was tertiary syphilis of twenty years' standing, the same favourable results followed its application. This was in private practice, and I simply took my spray apparatus to the house, instructed my patient in its application, and left the dressing to him.

A horribly stinking varicose ulcer in a woman aged forty, with a syphilitic history, treated with the usual constitutional remedies, made most rapid progress to recovery after being open for the previous five years.

The advantages I claim to be derived from this very simple modification of an acknowledged plan of treatment are:—(1) Mechanical but gentle and efficient cleansing of foul wounds; (2) ease of pain; (3) obviation to a large extent of the disagreeables (in household cases) of dressing; (4) perfect deodorisation; (5) undoubted acceleration of the reparative process; (6) the most important but usual effect of antiseptic dressing, germ destruction, more thoroughly by greater permeation.

Brisbane, Queensland.

THE Sheerness Local Board of Health have decided to lay out the twenty acres of land they recently acquired on lease from the War Department as a recreation ground for the inhabitants. The Local Governmen Board have been asked to sanction a loan for the purpose.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

GUY'S HOSPITAL.

COMPOUND DEPRESSED FRACTURE OF THE RIGHT PARIETAL BONE; TREPHINING AND RECOVERY SO FAR THAT THE PATIENT FOR SOME WEEKS WAS RUNNING ABOUT THE WARD; DEATH FROM CEREBRAL ABSCESS AFTER HEALING OF THE WOUND; REMARKS.

(Under the care of Mr. R. CLEMENT LUCAS.)

FOR the report of this case we are indebted to Mr. E. A. FARR.

G. R——, a baker's boy, aged twelve, was admitted into the Accident Ward on Jan. 23rd, 1884. At 5 P.M. he was walking in the street during a very strong gale, when a tile fell from the roof of a house, striking him edgeways on the head and knocking him down. He was sick on the way to the hospital, but did not lose consciousness.

On admission at 5.30 P.M. an incised wound existed above and in front of the right parietal eminence, two inches in extent from before backwards, the bone being bare, and a depressed fracture could be distinctly felt. The patient was perfectly sensible, and able to walk into the ward without assistance.

At 8 P.M. Mr. Lucas trephined. The wound was enlarged by extending it downwards to the extent of an inch and a half. The side flaps were then held back, and a circular trephine saw was used near the seat of the depression. Whilst a circular piece of bone was being raised, a large portion of bone, one inch and three-quarters by one inch, came away with it; there were three other pieces, about a quarter of an inch in extent, also removed, the internal table being splintered, so that after all the bone had been removed a hole, two inches in length and an inch and a quarter in width, was left. A little venous bleeding occurred from a puncture of the superior longitudinal sinus, but it was easily controlled by digital pressure. The dura mater was not elsewhere torn or opened. The flaps were brought together with silver wire sutures, and gauze dressings were used, and an ice-bag was put on the back of the head after the operation. He was allowed a pint of milk during twenty-four hours. 10.30 P.M.: The patient lies on his side with his legs drawn up and his thighs flexed on the abdomen; he is perfectly sensible, and answers when spoken to by his friends, but is disinclined to talk. Temperature 100°; pulse 120.

Jan. 25th.—Pulse 134, feeble and rapid. Skin hot and pungent. The right eyelid is very much swollen and discoloured, extending upwards to above the eyebrows, but no conjunctivitis. He is very drowsy, and complains of great pain at the back of the head. Has no paralysis of his limbs. Temperature 102°; respiration 36. Wound dressed, the spray being used every day.

26th.—Head very painful. All the sutures were taken out at 2 A.M., and a large quantity of pus syringed out; there is great tenderness over the portion where the dura mater is exposed.

27th.—Temperature 100°; pulse 120. Discharge soaks through all the dressings; wound dressed three times a day. Throbbing of temples and pain at back of head; œdema of eyes less; movement of limbs perfect; speech clear, but he whines a great deal. A slough the size of a walnut taken away from the wound, which is now sloughing at the lower part. Allowed another pint of milk a day, as he says he is "starving." Ten grains of bromide of potassium, with chloral hydrate, were given on account of restlessness.

28th.—Slight oozing of blood from ears and nose. Cannot bear ice-bag on his head. This morning the movement of the left leg was slightly impaired, but this passed off before the afternoon. Still whines and groans continuously, and does not get any sleep. Ordered twenty grains of bromide with a drachm of syrup of chloral every six hours.

30th.—Patient slept four hours last night; there is a wonderful change this morning. He is sitting up in bed smiling, and says he is quite well and has lost all his pain. Temperature 98·4°. Granulations have sprung up at the edges of the wound; the bone is dotted over with minute red spots. Pulsation can be seen at the part where trephining was performed. There are about three drachms of laudable pus discharged. Dressed under spray once during the day.

31st.—Edges of wound brought close together with the aid of strapping.

Feb. 1st.—Pulse 104; temperature 98·4°. Two blebs have appeared, about three inches in extent, covering the whole of the heel and internal malleolus of the left foot; they are superficial, of a greenish colour, with red edges and a raised centre. They were opened with a pair of scissors and an ounce of pus let out, and then syringed with carbolic lotion (1 in 60) and dressed with strips of carbolic lint.

4th.—Put on fish diet. Temperature normal.

6th.—The bottom of the wound is covered with healthy vascular granulations extending from the edges to the centre; about an inch by a quarter of an inch of bone is now exposed. Has slight headache. Temperature 99°. The blebs on his foot have healed.

10th.—Wound dressed every day; much the same condition. Sleeps fairly well, but still complains of headache. Temperature 99°.

15th.—Pupils slightly dilated; still has headache and throbbing in the right temple and ear.

24th.—Dressed every day. The whole surface of the exposed bone is now covered in with healthy granulations, and skinning over from the edges. There is pulsation over an area of one square inch at the lower edge of the wound. The granulating surface measures two inches and a half in length by an inch in breadth.

March 13th.—The patient had been eating some figs, which made him sick; he complained of intense headache, so he was kept in bed. This occurred after a tea-party to which he was invited.

17th.—Headache, accompanied with shooting pains; he groans very much, and is unable to localise pain; when spoken to answers cheerfully. Temperature 99°.

18th.—Tongue coated with moist fur; complains greatly of frontal headache; restless; sick twice during the night. Milk and ice ordered. Bowels acted well after taking one ounce of castor oil.

21st.—Bowels constipated. Given ten minims of extract of cascara sagrada with twenty minims of syrup of tolu twice a day.

23rd.—This morning he is exceedingly restless, tossing about in bed, throwing off the ice-bag from his head, and screaming out that his head aches. Three grains of calomel were given.

25th.—Bowels well open. Temperature 98·2°; pulse 78, hard, slow, and irregular. He has internal strabismus of left eye; opening of eyelids painful; pupils widely dilated and insensible to light. Eyes examined by ophthalmoscope. Right eye: inner two-thirds of optic disc blurred; veins swollen and turgid. Left eye: veins of left optic disc swollen. Internal strabismus of right eye.

26th.—Right optic disc completely blurred; left optic disc at upper and inner part blurred. Patient very restless.

27th.—Lies quietly in bed, dull and heavy, but answers questions readily. No headache, but pains at the back of the neck. No sickness since the 19th.

28th.—Passes his motions involuntarily under him. Double internal strabismus from paralysis of external recti. Very weak, and much thinner. Intense pain at back of neck below the external occipital protuberance, and extending down back; a small Leiter's coil put on. Ordered two ounces of brandy.

31st.—Pains in the limbs and back; right arm more than left. Pulse 62, weak and irregular. Lies in bed quietly at times, calling out in shrill tones.

April 2nd.—Difficulty of breathing, during expiration uses his diaphragm strongly.

3rd.—Slightly delirious. Temperature 98°. Died at 11.45 P.M.

At a post-mortem examination the brain was found to weigh 63 oz. An abscess about the size of a hen's egg was seen in the right frontal lobe, containing about two ounces of pus; it was situated immediately beneath the seat of trephining, one-eighth of an inch from the surface of the brain. Double optic neuritis was present, but no meningitis. The opening in the skull was completely covered by skin and dura mater. All the other organs were healthy.

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Remarks by Mr. CLEMENT LUCAS.—This boy lost his life through the gale which swept over London on the 23rd of January. A tile was blown off a house as he was walking in the street and it fell edgeways, an angle striking his head and driving in the bone. Although the injury had produced no symptoms of compression there was a sharp angular depression with separated fragments, calling for trephining. These were removed, and a small punctured wound of the longitudinal sinus was found on elevating the bone. The hæmorrhage from this source, though considerable, was readily stopped by digital compression. Some suppuration and a little sloughing of the lacerated and contused scalp followed, but when this slough separated and the suppuration had subsided, the case progressed most favourably, the wound closing in by granulations. A week after the operation his temperature had fallen to normal, and then for several weeks he was regarded as out of danger and soon was allowed to be about the ward. During this time he occasionally complained of headache, but was intelligent and happy. On March 13th, seven weeks after the injury, he was allowed to attend a tea-treat given in the hospital, and in the evening ate several figs given him by another boy. He was afterwards very sick, and complained of intense headache. The attack at first appeared to be directly occasioned by the indiscretion in diet, but the subsequent course of events seemed to indicate that it brought to light symptoms of disease which had probably been slowly progressing. However this may be, the case proves what is no new fact, that for a long time after a head injury a carefully restricted diet should be persevered in. The pain in the head suddenly became intense, causing him to groan and occasionally to scream out with agony. It was chiefly confined to the occiput and back of the neck, and as it was soon followed by squint and signs of optic neuritis. These symptoms were taken to indicate basal meningitis. There was, however, scarcely any rise of temperature, and his intellect remained for a long time quite clear. Meanwhile the wound had healed, and there was no indication of anything amiss in the neighbourhood of it. He was carefully watched for the onset of any paralysis, to assist in localising the mischief, but, except the affection of the eyes, none occurred. He grew gradually weaker and thinner, then passed first urine and afterwards fæces involuntarily, and thus faded out without developing any paralysis of the extremities. The post-mortem examination revealed an abscess situated in the substance of the brain, not reaching quite to the surface nor extending to the ventricles, but in a position which could have been reached by a trochar and cannula plunged through the trephine opening. It is, perhaps, to be regretted that this was not done, but how the abscess cavity could have been drained would still have been a question of interest. Inversion of the body would seem to be the only way unless some syphon arrangement were contrived. It is probable that our prejudice against adopting the inverted position for drainage in head injuries is largely due to preconceived notions and the imbuement of popular ideas in our surgical practice. Still he would be a bold man who carried out in this way the principle of letting an abscess drain at its dependent spot. We must confess to having left this case to die without opening the abscess, but in another case where symptoms of an indefinite kind supervene some time after an injury we should be tempted to explore deeply though our wounds were healed, and though the symptoms were misleading as to the situation of the disease.

LIVERPOOL ROYAL INFIRMARY.

IMMEDIATE GANGRENE OF THE UPPER LIMB, PRESERVED ASEPTIC, AND SUCCESSFULLY AMPUTATED AT THE SHOULDER-JOINT SIX DAYS AFTER INJURY; RECOVERY; REMARKS.

(Under the care of Professor RUSHTON PARKER.)

HUGH W——, aged fifty-three, fell under a railway engine at Ormskirk on the evening of Sept. 1st, 1883, in a state of intoxication, while trying to evade the officials of the train in which he had been travelling without a ticket. He was taken to the Ormskirk Union Hospital, under the care of Dr. Anderton, who brought him to the Liverpool Royal Infirmary the following evening.

When seen shortly afterwards by Mr. Rushton Parker, in the presence of Dr. Anderton and another medical man from Ormskirk, the patient was cold and depressed with a weak pulse and an air of indolent dilapidation. The right upper limb lay helpless and cold. The shoulder and upper arm were swollen and ecchymosed and a little excoriated, but the rest of the skin was pale white and nowhere severed through. The humerus was obviously broken to splinters in its upper third; the artery, presumably plugged in the axilla, whether severed or not from the limb, besides being cold was pulseless below. The nerves were apparently bruised, if not divided, for all muscular and sensory power were gone, and the wrist and fingers were rigidly flexed. His cold and listless condition was, it was thought, unfavourable for the immediate respiration of anæsthetic vapours, and consequently for the performance of a serious operation; and even if this were survived the subsequent occurrence of early blood-poisoning was thought likely to be most difficult to prevent. The unbroken state of the skin made it appear probable that the injured tissues and extensive blood extravasation could with simple precautions be maintained uncontaminated, and consequently harmless, until he should sufficiently recover his strength to be submitted more hopefully to the inevitable amputation. So the opportunity thus afforded of gaining time was gladly seized. The skin of the limb, shoulder, and adjacent trunk was accordingly submitted to prolonged soaking with a hot watery solution of carbolic acid, varying from 2 to 5 per cent., after which a large gauze dressing was put on around the chest, enveloping the limb and immovably fixing it in the flexed position to the side, after the Listerian method of dressing an excised breast. The patient was put to bed, and daily improved in every way, feeling no inconvenience from the injured limb. Three days later he was taken into the theatre for amputation, but on inspection of the limb there appeared to be no occasion for hurry, and so it was decided to put off the operation two more days, for further improvement in the patient's strength. His complexion was now clear, his colour good, and his spirits revived. The limb was warm from contact with his body, but clammy and evidently dead. A slightly leaden hue had come over it up to the upper third of the arm, where a line of demarcation appeared in course of formation. But no black, green, or other colouration affected the skin, which appeared perfectly preserved throughout. A fresh application of wet gauze was applied direct to the excoriated parts, and the dry portions of the gauze dressing were replaced.

On the sixth day after injury amputation was performed under the influence of ether, the patient being quite well and in good spirits. By this time the line of demarcation had become more distinct, but without any inflammatory or ulcerated margin in the living skin. The lividity was more intense, but there was no trace of the dark colouration that occurs in exposed gangrenous parts. No precautions were taken to prevent hæmorrhage on account of the obvious plugging of the artery, so the operation was one of entire simplicity. The limb was grasped at the elbow with one hand, and severed with a short amputating knife held in the other by two long incisions from the angle of the scapula to a point on the chest near the nipple. The first incision through the integuments passed pretty much along the axillary border in the line of the teres and pectoralis major, curving across the inner side of the limb over the insertion into it of these muscles, as the elbow was held high up in the abducted attitude of the shoulder-joint. The other incision passed across the outer side of the limb, somewhat conforming with the lower margins of the deltoid muscle, joining the previous incision some distance from each end of it. A gush of bloody serum escaped from behind at the first puncture; the incision of the integuments almost sufficed to sever the limb, which was now found attached only by three of its large nerves, which were at once divided. The artery was found severed, and soundly plugged for an inch or two. The head of the bone was cut out of its glenoid cavity, and a few bleeding points thus opened were tied, the previous detachment of the limb having occurred at the point of fracture low down in the surgical neck. A similar dressing to that previously employed was placed upon the stump after putting in sutures and wide long drainage-tubes. Putrefaction occurred in the dressings after a few days, on account of which the sutures were all removed and every corner of the wound washed out daily with carbolic lotion, and freely smeared with eucalyptus petroleum ointment. A few sloughs at the edges of the flaps were clipped by degrees away, and eventually the putridity ceased. But the constitution of the patient never suffered in the least, no absorption of putrid materials having occurred. He remained two or three weeks in bed,

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and left the hospital at the end of two months, all being healed except an exposed tendon above the glenoid fossa. He returned to Ormskirk Union, where he remained till the end of the year.

On January 30th, 1884, he came over to Liverpool. A pouting granulation still remained in a corner of the scar. This was snipped off at once. The following day he appeared at the Medical Institution, and in a few days more he returned to Ormskirk, the spot having entirely healed.

Remarks.—In cases of extensive injury, especially with rubbing-in of dirt, and even without that in the presence of much bruising, the surgeon is naturally anxious to cut away, as soon as it is safe practically to do so, all tissues in which subsequent putrefaction is otherwise certain to occur. Temporary disinfection of wounded parts, when effectually possible, is obviously the only alternative to amputation in the case of hopeless destruction of tissues; and this expedient was in the present instance as easy of execution as could be wished. Had the tissues been exposed, their disinfection would have naturally been advisable, but would have been difficult, if not impossible; and the alternative amputation might have been considered a duty at a period too early or too late for the patient's safety. As it was, valuable time was gained, and the hour of amputation safely postponed; for the extensive ecchymosis and deep dead parts were not considered likely to undergo decomposition, while the dead skin was artificially preserved by superficial disinfection. At the moment of amputation the severed limb was in a state of perfect preservation throughout. The whole of the extensive ecchymosis and serous effusion remained similarly undecomposed, as evinced by freedom from turbidity and from loss of colour. The injured tissues of the stump manifested no sign of acute inflammation, except in one corner of the axilla, where at the moment of removal about a teaspoonful of purplish-grey puriform sanies was observed; and on the excoriated patch of skin over the scapula, where a little lymph and serous exudation, with the orange pigmentation that indicates one of the forms of micrococcous growth, showed the commencement of fermentative irritation. It is probable that in a few days more the focus of internal suppuration would have mixed with the adjacent liquid effusion, while the superficial decomposition of the skin, as it was probably spread by direct infection to the dead portions of skin left on the margin of the wound, would have had an unlimited extent of dead tissues in which to revel had the operation been further postponed.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Cystic Disease of Cerebellum, Kidneys, and Pancreas.—Intussusception in an Adult Male.—Simple Ulceration between Trachea and Œsophagus.—Tumours of Soft Palate.—Congenital Hydrocele of Spermatic Cord.—Infiltrating Fibroma of Thyroid.

AN ordinary meeting of this Society was held on Tuesday last, Mr. J. Whitaker Hulke, F.R.S., President, in the chair. An extraordinary living specimen of congenital deformities was exhibited by Mr. F. Treves.

Dr. PYE-SMITH read notes of a case of Cyst of the Cerebellum in a young man aged twenty-seven. The symptoms lasted only three months before death; they were vomiting, severe occipital headache, vertigo, double optic neuritis with retinal hæmorrhages in the right eye; there was no paralysis; no spasm and no convulsions. The patient gave a history of injury; the diagnosis made during life was abscess in the occipital lobe or in the cerebellum. Death was due to asphyxia. At the autopsy a simple serous cyst was found in the left lobe of the cerebellum; it was the size of a large walnut. There was passive effusion into the lateral ventricles, but no sign of meningitis. There were several small cysts in the pancreas and more numerous cysts in both kidneys, but no other signs of disease. Reference was made to other cases of simple serous cysts in the cerebellum which were not hydatids nor due to absorbed blood-clot, nor degenerated sarcoma or glioma. Reference was also made to a case of cystic disease of the liver and kidneys published by the author in the Pathological Transactions, vol. xxxii. (vide THE LANCET, Dec. 24th, 1881).—Dr. NORMAN MOORE referred to specimens of cystic kidneys in which the tissue between the cysts was perfectly healthy. In some cases he thought serous cysts developed in the meshes of the connective tissue of the various organs.—Dr. W. B. HADDEN spoke of a case which he had published. It was that of a woman, aged twenty-eight, in whom the symptoms of cerebellar disease—vertigo, occipital headache, staggering gait, vomiting, optic neuritis, and later on delusions—were well marked. There was a tumour in the left cerebellar lobe of the nature of a simple serous cyst. A history of injury was obtained.—Dr. CARRINGTON said the kidneys were examined microscopically for Dr. Pye-Smith and found to be healthy.—Dr. HALE WHITE referred to cases published by him in the Pathological Transactions for 1884, in which the kidneys, liver, heart, lungs, and brain all contained cysts of which the contents were gelatinous fluids. He came to the conclusion that the cysts were due to vacuolation of the cells; as a rule the cysts in the kidneys were the result of dilatation of the tubes.—Dr. PYE-SMITH, in reply, said it was possible for the cysts to originate in natural areolæ of the connective tissue, but he rather thought that the cysts were dilatations of the Malpighian capsules, as in the case shown before the Society in 1881.

Dr. LANCHESTER read a paper on a case of Intussusception in an adult male. The patient was a labourer, aged thirty-seven, who enjoyed good health, but had a little diarrhœa on February 7th, which continued a few days, the motions were bloody, and there was some tenesmus on the 15th. He was admitted into hospital, when the diagnosis of intussusception was made; the mass of diseased bowel could be felt per rectum, but the invaginated portion was too firmly impacted to give any hope of effecting reduction. Vomiting and hiccough began twenty-four hours after admission. The feeling of firm impaction, and the duration of the case, were the reasons for not performing abdominal section. Left lumbar colotomy was performed with a view of giving temporary relief, and in the hope that the intussuscepted portion might slough and come away. The patient died from peritonitis forty-eight hours after the operation. The specimen showed an invagination of the gut about three inches and a half in length, but the normal relations could not be restored whilst *in situ*; the firm impaction seemed partially dependent on the contracted mesocolic attachment. The disease may have been of long standing, whilst the symptoms were probably due to a recent strangulation.—Mr. JOHN CROFT asked whether both the muscular and the mucous coats were invaginated. He presumed the whole of the coats were involved.—Dr. SAMUEL WILKS said apparently all the coats of the intestine were invaginated; he had seen but two cases of intussusception in adults, and he considered the case as a remarkable and unique one.—Mr. R. J. GODLEE said that he had seen one case in which there was a tumour on the inner aspect of the bowel. What was the object of opening the descending colon? It was to be regretted that the case had terminated fatally, since it would have been interesting to see how far the symptoms would have subsided, for the nipping of the gut would have remained whilst the obstruction to the passage of fæces was removed.—Mr. W. HULKE referred to a case recorded by Dr. Coupland in which only three or four feet of small intestine had not been intussuscepted.—Dr. LANCHESTER, in reply, said, with regard to the propriety of operating, he had determined, by rectal examination with the hand, that the intussusception had begun at the lower end of the sigmoid flexure, and so he felt sure that he would be above the point of obstruction.

Dr. CARRINGTON read a paper on a case of Simple Ulceration establishing a communication between the Trachea and œsophagus, and setting up purulent bronchitis, with "sloughy" broncho-pneumonia. The patient was a man, aged twenty, who was admitted into Guy's Hospital on July 11th, 1884, under the care of Mr. Bryant. On June 19th, having opened a cask containing carbonate of ammonia, the patient was nearly suffocated by the fumes; half an hour later he could not swallow the first few mouthfuls of tea; two hours after the patient was only able to swallow some of the contents of a glass of beer, but the small quantity returned through the nose. Some hours after he vomited during a fit of coughing a small quantity of "matter and blood." After this event he was unable to swallow anything. He was fed by nutrient enemata. On admission to the hospital in July there was an ineffectual attempt to pass a bougie, and on a repetition of this attempt on July 22nd the bougie passed into the trachea. There were high fever and the

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signs of broncho-pneumonia. The pulmonary symptoms increased in severity, and the patient died on July 23rd. At the autopsy a fistulous communication was discovered between the œsophagus and trachea, and situated two inches below the level of the cricoid cartilage. The fistula was of an elongated form, and was longer on the œsophegeal than on the tracheal side. The margins of the opening showed no trace of thickening or malignant disease. The bronchial tubes were acutely inflamed and superficially excoriated, these phenomena being probably caused by the passage of swallowed matters into the trachea. Many patches of broncho-pneumonia were in a softened and sloughy state. There were no signs whatever of malignant disease, tubercle or syphilis. Dr. Carrington remarked on the obscurity of the affection, both as to its nature and the site of its origin. He thought that a case which he had recently seen might throw some light upon it. In the œsophagus of an individual who died of some independent malady, a scar was seen side by side with a small diverticulum. Might the lodgment of some material in such a diverticulum lead to suppuration and abscess, from which perforation of the trachea might ensue. The violent fit of coughing induced by the fumes of ammonia might have caused the final rupture of such an abscess as in the case under notice; the ejection of "matter and blood" by the patient some hours after the onset of the illness was of much interest.—Dr. S. WILKS spoke of a case recorded in the Pathological Transactions many years ago, in which a hole existed between the trachea and œsophagus, and in which there was no apparent malignant disease. A lupoid infiltration was spoken of, but was of doubtful existence.—Mr. A. BOWLBY said that he had seen an instance of ulceration of the œsophagus which seemed simple, but in which there was a cancerous growth in the kidney.—Mr. H. T. BUTLIN remembered the case referred to by Dr. Wilks, and from an examination of the reports of the Morbid Growths Committee, he concluded that the specimen was one of epithelial cancer.—Dr. ANGEL MONEY referred to a case which he had examined after death, with Dr. Wight of Holloway. To the naked eye there seemed to be no infiltration of the walls of the fistula, though there was no doubt of the malignant nature of the case.

Mr. TREVES exhibited two cases of Primary Tumour of the Soft Palate. The first patient was a man aged sixty-eight. The tumour occupied the whole of the left side of the soft palate. It was first noticed eight months before the man came under treatment. A precisely similar growth had been removed from the same part of the palate thirty-seven years ago by the late Mr. Luke. Mr. Treves ligatured the left common carotid, and removed the growth, together with the whole of the left half of the palate. The tumour had been examined by Mr. Eve, and proved to be an alveolar sarcoma. The mass was faintly encapsuled, and there was no glandular implication. The patient made a rapid recovery. The second patient was a man aged fifty-six, who presented a tumour the size of a chestnut on the right side of the soft palate. It had been first noticed two months before the man's admission into the London Hospital. Mr. Treves ligatured the right common carotid, and removed the tumour, as in the previous case. The patient made an excellent recovery. Mr. Eve had reported that the tumour was an adenoid carcinoma. Mr. Treves alluded to the great rarity of primary tumours of this part. He had found isolated records of all forms of connective tissue tumour in this region, of adenoid cancer, of so-called myomata, of vascular growths, of pure papillomata, and of dermoid cysts.—Mr. GODLEE had seen two cases in which both tumours shelled out easily from the soft palate; he had also met with two cases of papilloma of this region.—Mr. HULKE thought there could be no doubt that these tumours were excessively rare. He had notes of three cases.—Mr. BOWLBY thought both tumours were of an epithelial type, and had an alveolar stroma. He failed to see any difference between the cells of the one and those of the other.—Mr. TREVES thought that the history would hardly concur with that of carcinoma; no recurrence had taken place for thirty-seven years.

Mr. JOHN POLAND showed a specimen of Congenital Hydrocele of the Spermatic Cord taken from a child aged three years and a half. There was a swelling about the left side of the scrotum, which had been there since birth and had gradually increased in size. The tumour was said never to have disappeared or diminished in size at any time and crying did not increase its size. The patient was admitted into the North-Eastern Hospital in 1881 with acute peritonitis following the tapping of the hydrocele three days previously. The signs of acute suppurative peritonitis were seen at the autopsy. The peritoneum was full of pus; the sac of the hydrocele below communicated freely with the peritoneal sac. Its wall was much thickened by inflammatory material; the inner wall was shaggy from purulent lymph and the cavity contained sero-pus like that in the abdomen. The tunica vaginalis at the lower end of the sac was intimately blended with it; the smooth and glistening lining of the tunica vaginalis showed no traces of inflammation; the partition between the hydrocele and the tunica was firm and thick. The sac of the hydrocele extended upwards two inches and a half into the external abdominal ring, where it became somewhat narrowed at the internal ring; its constricted upper orifice (one-eighth of an inch in diameter) reached into the abdomen, with a finger-like process of peritoneum round its circumference. The cord was placed on its posterior aspect closely connected with its posterior wall. The specimen, the only one of its kind, showed well the process of formation of hydrocele of the cord from the funicular process of the peritoneum remaining unobliterated. It was called congenital, meaning a hydrocele of the cord still having a communication thereby with the abdomen above. Nearly all so-called encysted hydroceles of the cord have this same mode of origin, but the term was a convenient one. The specimen was an exceedingly rare example of a very early condition—namely, partial closure of the process of peritoneum at the internal abdominal ring.

Mr. BOWLBY read a paper on a case of Infiltrating Fibroid Tumour of the Thyroid Gland. The patient was a woman, aged forty-two, who first began to suffer three years before death. There was a history of much excitement and worry. Dr. Conolly made out that the thyroid gland was slightly enlarged in 1881, and in October, 1882, the enlargement had become greater. It was a hard, painless growth, and caused no dyspnœa. An ointment of iodide of mercury was employed with but little effect. Gradual enlargement laterally and vertically took place, and the consistence of the tumour became still more stony. Dr. Felix Semon saw the patient in April, 1883, and considered the disease to be malignant. The growth pressed upon the trachea and narrowed the calibre of that tube; the left vocal cord was fixed in the middle line from paralysis of the abductor. Attacks of dyspnœa then began to occur, and had become more frequent by the end of October, 1883, and the patient suffered a little from dysphagia. So the case went on till November 23rd, when the patient's life was evidently in peril from dyspnœa. She was admitted into St. Bartholomew's, and it was then not possible to recognise the natural structures of the neck. Tracheotomy, performed by Mr. T. Smith, was followed by temporary relief, but death followed. At the post-mortem examination the large new growth was found to be of a similar shape to the thyroid gland, and had a fibrous look on its cut surface. The outline of the tumour was ill-defined below, behind, and laterally; the nerves, veins, and arteries of the neck were included in the tumour; the trachea was compressed laterally and in front, and in places infiltrated by the new growth; there was no ulceration of the trachea; the aorta and all its branches were incorporated in the tumour, to which the apex of the left lung was adherent though not infiltrated. Microscopical examination showed the tumour to be entirely fibrous throughout; there was no disease of the surrounding lymphatic glands. The rarity of fibroma and the infiltrating manner of the growth were the interesting points. The tumour was malignant in its clinical characters because of its infiltrating nature; the slow process of growth and the absence of secondary deposits and glandular affection were noteworthy features.—Mr. BUTLIN had come to the conclusion that the case was one of malignant tumour on account of the invasion of all the tissues with which it had come in contact. It was not an innocent tumour except in histological characters. Hard carcinomata might become entirely fibrous, but the outlying parts of the growth should show spheroidal cells. Was the tumour sarcomatous? Rindfleisch looked upon fibromata as sarcomata, placing them after the spindle-celled variety. Mr. Morris and Mr. Haward had shown curious specimens of disease of the thyroid, which proved that this ductless gland presented many singular pathological puzzles for consideration.—Dr. NORMAN MOORE said that Dr. M. Baillie had observed a slight degree of ulceration in the œsophagus in cases of carcinoma of the thyroid body.—Dr. GOODHART referred the specimen to those classes of cases in which

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infiltrating fibrous forms of growth were met with in the peritoneum and ovary.—Mr. BOWLBY, in reply, considered that, in the manner of its growth and in its composition from fibrous tissue, the tumour was sarcomatous and malignant.

The following card specimens were shown:—Mr. Treves: Epithelioma of Bladder with Renal Calculus. Mr. Bowlby: Fistulous Communication between Bladder and Rectum. Dr. Paddison: Charcot's Disease. Dr. Norman Dalton: Tumour of Bladder and Surgical Kidneys; Chronic Orchitis; Cylindrical Epithelioma of Sigmoid Flexure, in which the new growth in the liver was associated with tubercle. Dr. Edmunds: Casts and photograph of Hypertrophy of Tibia. Mr. Hudson: A new Ether Microtome.

The following recent specimens were exhibited:—Dr. Carrington: Red Atrophy of Liver. Dr. Pringle: Fatal Typhlitis after Enteric Fever.

CLINICAL SOCIETY OF LONDON.

Charcot's Joint Disease.

THE meeting which took place on Nov. 28th, with the express purpose of discussing the nature of Charcot's joint disease, was crowded to overflowing. Living specimens, casts, drawings, photographs, and specimens, illustrating the morbid anatomy of the disease in question, were exhibited in all parts of the rooms in which the Society meets. The great success of the gathering was largely due to the activity of the most executive portion of the council, the president and hon. secretaries, Sir Andrew Clark, Dr. S. Coupland, and Mr. Rickman Godlee. The proposal to adjourn the discussion to the next ordinary meeting was put to the meeting by the President and carried.

Mr. Morrant Baker having read a summary of the paper which had elicited the discussion at the previous meeting, and Mr. Godlee an abstract of the views of the speakers who had joined in the discussion, the President called on Mr. Barwell, who had moved the adjournment of the debate.

Mr. BARWELL referred to the state of knowledge concerning the neural origin of joint disease, and thought that we knew but little of the real nature of acute, chronic, and gonorrhœal rheumatism. There was great evidence to show that arthritis deformans originated in some nervous injury which was not the same as the nervous injury in locomotor ataxia. He believed the two diseases to be separate, though both might be due to neural affection. It was necessary to compare the anatomical and clinical appearances, and he ventured to believe that these were more diverse than they at first sight appeared to be. Taking, for example, the elbow-joint of a case of Charcot's disease, the head and neck were almost entirely worn away, as were also the ulna and internal condyle of the humerus; the changes were not the same as we find in chronic rheumatic arthritis. He had never seen a joint possessing these appearances when the disease was arthritis deformans. The marginal hyperplasia, so strongly marked in chronic rheumatic arthritis, was absent in Charcot's disease. The interstitial atrophy and porcellanous deposits with the polished surfaces of arthritis deformans, together with the false bodies, of which as many as fifty may be found, were marked features of chronic rheumatic arthritis. Of the fibrous degeneration of the articular cartilage he said it was a very peculiar one, and he had never seen it in any other disease than arthritis sicca. The characters which marked the clinical course of Charcot's disease, the painless manner of its onset, and the rapid swelling of the whole limb, as well as of the diseased joint, were never observed in arthritis deformans where the hydrarthrosis was of gradual appearance when it occurred. The amount of movement in Charcot's disease and the large size of the joints which were usually affected were other characteristics; whilst the adduction of the hand was never met with.

Sir JAMES PAGET said he had listened with pleasure to the able exposition of Mr. Morrant Baker, and he agreed closely with him upon nearly all his points. And first, as to whether Charcot's disease was a new disease. In settling this question we should have to consider the positive and negative aspects. If we could prove that it was not old, that would be all that could be possible under the circumstances. Many things that happened in our environment we were totally unconscious of, and so it was easy to understand how disease might have been overlooked in the past. As to the argument that the disease remained unrecognised because the cases presented themselves chiefly to surgeons, he would reply by asking who our teachers were. There was John Hunter, who had studied cases of joint disease by the hundred in workhouses and infirmaries; George Langstaff, a poor-law medical officer; John Howship; Cruveilhier; and Mr. Stanley, who collected every species of disease of bone. When we remember that for so long a period as sixty or eighty years specimens of joint and bone disease were assiduously collected by these observers, we cannot but believe that Charcot's disease, if it had a separate existence, must certainly have been detected. And the fact remains that there did not exist in any museum, until recent times, a single specimen of the disease. This kind of evidence was sufficient to prove that the disease did not exist to anything like the extent which it is now found. In general terms he would say that Charcot's disease, if not an actually new malady, was, at all events, a new compound of disease. That the arthritic affection was the result of a neurosis alone he did not believe. He would not say that the disease was neither this or that, but he thought that it was some of these or some of those, a disease which was made up of several constituents, and of an altogether obscure and uncertain nature. So long as it is called after any individual we might conclude that but little was understood of its real nature. The morbus anglicus (or rickets), the morbus gallicus (or syphilis), Pott's disease, and Bright's disease were given as examples to show how diseases owning names derived from more or less accidental circumstances were but imperfectly known. As a practical name for chronic osteo-arthritis he thought rheumatic gout might be used, for no doubt many examples were compounded of these two things—rheumatism and gout. He believed it to be possible that Charcot's disease was a method of rheumatic arthritis altered from its pattern by the intervention of locomotor ataxia; the special character of the nervous disease being quite enough to explain the contrast. In the tabetic arthropathies we had examples of disease with wasting without repair, whereas rheumatic arthritis was a disease of bone with wasting, but with coincident attempts at a reparative process. It could not be said that in Charcot's disease there was no measure whatever of rheumatic arthritis, though the measure might be reduced in some specimens to a minimum, whilst in others the measure would be more obvious. If a careful study were made of all the specimens of rheumatic arthritis and of Charcot's disease it would not be doubted that a certain relation existed between the two. Whilst by drawing our comparison between typical cases, the differences appeared startling enough, yet, if the whole range of joint affections in locomotor ataxy were contrasted with the whole range of joint affections in rheumatic arthritis, it would be seen that as they thus run border and border they became confused on each side. If we considered the possible intervention of three such diseases as rheumatism, gout, and nervous disorder, we might explain a very wide range of characteristics. A very important study was that of the influence of mingling of disease. Syphilis implanted on a rheumatic or arthritic stock would produce in its tertiary stage a wholly different appearance than when implanted on a tubercular soil. The varieties produced by the intermingling and combination of disease would probably explain a great deal which was now but ill understood. A fair extension of that same method of inquiry would lead to the best results. It was but a vain hope to attempt to collect these diseases as examples of one typical form. Instead of seeing in examples of disease a tendency to assume a type—instead, in fact, of pursuing our inquiry in the method of natural history,—he would rather that attempts were made to analyse the cases as minutely as possible, so as to determine what are the several constituents entering into the particular case, and to ascertain in what proportion each constituent enters; in fact, to study specimens of disease after the fashion of organic chemistry rather than after the manner of a system of natural history.

Dr. ORD said he had seen very little of this joint affection, as he had never had a case under his care; but from what he had seen he thought there was a general agreement between rheumatic arthritis and Charcot's disease. He was inclined to agree almost entirely with Sir James Paget. Though he would recognise more than had been recognised, the matter of waste of bone tissue in Charcot's disease, yet he could

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not concur in the view that no attempts at repair were to be seen in cases of Charcot's disease. He had seen something like eburnation in the articular ends of bones of cases of tabetic arthropathy, and so could not endorse Mr. Barwell's views on this point. In cases which had been classed under the head of chronic rheumatic arthritis we had to do with a mixture of effects. What parts rheumatism and gout might play in the causation it was difficult to say, but there was an absolute necessity to analyse comp'etely all the individual cases which may be included under one common head. He preferred to speak of osteo-arthritis as a more neutral term, implying no pathological theory. That certain kinds of blood-poisoning could produce changes resembling those due to neurotic causes he had but little doubt. Three women who were under his care at the present time illustrated the general lesions of what might be termed chronic osteo-arthritis. The first was that of a young married woman aged thirty-four, who had irregular lesions of the joints of the fingers with wasting and outgrowth; there was ankylosis of the wrists and elbows and of one hip-joint; she had never had gout or rheumatism; the only nervous symptom present was great exaggeration of all the tendon reflexes. In the second case there were well-marked nodosities of the fingers, but no ankylosis anywhere; there was deviation of the digits to the ulnar side, but no nervous affection was to be observed; the patient had had nine attacks of acute rheumatism and cardiac disease was present. In the third case there was enormous thickening of the joints, with looseness of the ligaments, deviation of the hand, and subluxation of some joints, associated with a glossy condition of the skin and wasting of the nails and muscles, together with subcutaneous nodules. He submitted that there were differences enough in these three cases; there could be no question of the necessity of analysing this very obscure and difficult affection of the joints. Whilst there were strong evidences of a neurotic influence of a direct or reflex nature, he could not help thinking that there were many other causes which might give rise to similar changes.

Professor HUMPHRY said that he entirely agreed with the remarks of Sir James Paget; that such rockings and such deformities of articular surfaces could have passed unobserved in past times he thought was an impossibility. A comparison was drawn between the changes in the two diseases under discussion. In the one there was a low inflammatory affection with but a slow change in the articular surfaces, whilst in the other there were rapid decaying, wasting, or removal of bone. These features were most marked in a specimen which he exhibited to the Society. The tibia was greatly wasted and the decay of the bone beneath the articular surface had allowed the cartilage to become applied against the articular surface of the femur. There was not an absence of reparative process, and he compared the changes in Charcot's disease to those met with in intracapular fracture of the neck of the femur, where there were considerable outgrowths at the base of the trochanter with wasting of the head and neck. The quick repair of bones in old persons was in striking contrast with the atrophic change of the whole osseous system. It was astonishing how bone repair was so rapidly called into existence in old people.

Mr. JOHNATHAN HUTCHINSON said that he had been to see Charcot's cases when the disease was first proclaimed. In his lectures delivered at the College of Surgeons on the Relation of the Nervous System to Lesions of Nutrition he exhibited the first series of cases in this country, though Dr. Buzzard was the first to mention the disease here.[1] At first he was inclined to agree with Charcot that the disease was *sui generis*. But later on he doubted whether there was an active interference on the part of the nervous system in Charcot's disease and chronic rheumatic arthritis. In the lectures referred to he had made a special point of the changes in old age as being like those met with in the joint affection of locomotor ataxy and the term "morbus coxæ senilis" was illustrative in this relationship. He considered that the arthropathy of locomotor ataxy resembled a sort of tumultuous old age, a premature senility of the nervous system accompanied by a remarkable loss of sensation. This anæsthetic state was common to senility and locomotor ataxy. The loss of sensation in the bladder might lead to urinary retention, and he believed that perforating ulcer of the foot was induced by external causes acting in conjunction with the loss of sensation, and a conclusive proof of this ulcer being the result of pressure was afforded by the results of treatment. Sir James Paget had spoken of the nervous system as acting passively in permitting disease and not actively in causing lesions. And this represented Mr. Hutchinson's view in regard to tabetic arthropathy. He believed that there was no abrupt line of demarcation in the pathological appearances of Charcot's disease and chronic rheumatic arthritis, but the differences were very great, indeed, when typical forms were contrasted; but where the forms were not typical our ability to discriminate between the two might be very much at fault. The influence which the nervous system exercised in the production of the arthritic changes in locomotor ataxy was a purely passive one; the patient, owing to his long endurance as the result of the loss of susceptibility to pain, allowed destructive processes to go on. In the same way he would explain the other diseases which were credited to neurotic changes. His views on trophic lesions remained very much where they were when he lectured on the subject at the College of Surgeons.

Sir ANDREW CLARK asked Sir James Paget to explain more fully his views on the relation of the nervous disease to the tabetic arthropathy.

Sir JAMES PAGET said he would not be disposed to say that the joint changes are dependent merely on the nervous system, but he did not think that the nervous influence was simply a permissive and passive one. It would be difficult to say what morbid change actually determined the disease, though he believed that the nervous system had a definite power of producing disease in this part or that part. In such an example as herpes zoster, where the neuralgia continued after the eruption had disappeared, he believed that a nervous disturbance was the exciting cause, but the special character of the eruption was not determined by any condition of the nervous system. An error of nervous force determined the lesion, but why the eruption should be vesicular and not a scaly or ulcerative one was probably dependent on causes outside the nervous system. In symmetrical gangrene the nervous system played a part, but in none of the cases was it a simple disease. The affection was not solely determined by error of nervous force, but the method and manner of the external appearance of the disease was dependent on many other causes, such as gout, rheumatism, syphilis; and so individuals were prone to a disease in this or that method whilst the determining cause lay in the nervous system.

Mr. WHITAKER HULKE said that he felt unable to agree with those who looked on Charcot's disease as a separate malady. In malum senile or arthritis sicca, or by whatever name it be called, the joint disease in its anatomical appearances did not present any essential difference from a tabetic arthropathy. In the same individual he demonstrated excessive wasting of the humerus, with a knee-joint having but little wasting of the bones, but with numerous stalactitic outgrowths, whilst there was no neck to the femur, whose upper end showed an eburnated surface. Here there was a mixture of changes, and it would be difficult to say whether the bone changes were most like those of Charcot's disease or like those of chronic rheumatic arthritis. Then Mr. Barwell had said that the lesser joints were not affected in Charcot's disease, but this was not correct, for Mr. Hulke placed before the Society a foot having extensive wasting and disease of all the joints, and this specimen was sent by Charcot as a specimen of tabetic arthropathy. Then, in regard to the clinical course, he narrated the case of a French woman, who was an actress and dancer, and who suffered from unequivocal signs of locomotor ataxy, who presented enlargements of the joints of both lower limbs. One day a sudden swelling, attended with excruciating pain, appeared in one of the knee-joints, which swelling fluctuated; there were heat and redness, with tenderness; in fact, all the signs of an acute synovitis. This example proved that the joint changes were not always perfectly sluggish in their clinical manifestations. Many examples of tabes dorsalis occurred in which there were no articular affections; other instances of joint affection were met with in which there were no symptoms of tabes dorsalis, and again we had instances in which the two were concurrent. It was difficult to speak with certainty on

[1] A clinical lecture by Dr. Buzzard on "A Case of Progressive Locomotor Ataxy with Anomalous Joint Affection," with an illustration, appeared in THE LANCET of August 22nd, 1874, and another by the same author upon a second example of joint affection in locomotor ataxy on January 18th, 1879. The first case of the kind reported in England was by Dr. Clifford Allbutt in the St. George's Hospital Reports, 1868.—ED. L.

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the nature of the association of tabes dorsalis and joint affection. Syphilis might play a part in the causation.

Specimens of Charcot's Disease were exhibited by Messrs. Morrant Baker, Bowlby, Makins, Morris, Tyson, Porter, and Godlee, and by Drs. Lunn, Lees, Coupland, and Hadden, also by Mr. Francis for Professor Humphry.

Dr. Hale White showed a living specimen of an unusual case of Psoriasis.

MEDICAL SOCIETY OF LONDON.

Gastrostomy.—Cervical Cysts.

AN ordinary meeting of this Society was held on Monday last, Mr. Arthur E. Durham, President, in the chair.

Mr. BOYCE BARROW read a paper on a case of Gastrostomy in which he wished to draw special attention to the method of operation which he had employed. The patient began to suffer from dysphagia and pain last Christmas. He was treated till July 10th, 1884, as an out-patient. Pain was chiefly experienced at the sternal notch. Dysphagia and vomiting were marked symptoms, blood being sometimes ejected. An incision was made parallel with the lower costal margin and an inch and a half below the xiphoid cartilage, about a finger's breadth from the costal margin. After the muscles had been divided and the peritoneum opened the colon presented, and some trouble was experienced in finding the collapsed stomach, which was now secured to the edges of the wound by means of pins. The operation was performed antiseptically, iodoform and a dry dressing being used. Vomiting and collapse for a few days were followed by complete recovery. Rectal feeding had been employed, and the stomach was not opened till the tenth day after the operation, though the pins were not removed, yet no irritation ensued; moreover, the presence of the pins ensured complete and firm union. A tracheotomy tube of indiarubber material was introduced into the stomach for the purpose of feeding. The patient gained a stone in weight, and was growing more cheerful. Death occurred four months after the operation. Symptoms of blood-poisoning had supervened only ten days before death; abscesses were found in the cerebellum, cerebrum, and kidneys; also many petechiæ were seen under the serous membranes of the heart and lungs; the spleen was gangrenous at one part; the œsophagus was much ulcerated; and the malignant growth had involved the pericardium and left auricle of the heart. The advantages of this operation were its simplicity and the great amount of surface contact of the peritoneal surfaces.—Mr. DUNN had made the autopsy. The œsophagus was healthy as far as the sixth dorsal vertebra, where the œsophagus was thickened and infiltrated with cancerous material, much sloughy material depending into the cavity. In the middle lobe of the left lung there was an abscess, the size of a walnut, containing foul-smelling pus, which had a blood-stained appearance; there were abundant ecchymoses in the parietal and visceral layers of the peritoneum; a portion of the spleen was gangrenous; and the left auricle of the heart was infiltrated.—Mr. FRANCIS MASON asked for the age of the patient; it was important to consider when to open the stomach; and though Mr. Barrow had said it might be done on the second day, yet he doubted the propriety of opening so early. Two years ago he showed a specimen at this Society, in which the man had died on the third day, but the adhesions were by no means firm.—Mr. BLACK referred to the operation as performed by Mr. Macnamara, in which sutures were used.—Mr. PEARCE GOULD had performed gastrostomy five times, and in one case the patient lived for one month; the disease was situate at the back part of the trachea, and had ulcerated into that tube, causing death. He had had no difficulty in finding the stomach. The operation as performed by Mr. Barrow possessed the great advantage of fixing the stomach with the pins, and so enabled one to open the stomach earlier than if mere sutures were employed. Patients may be lost by their having to wait six or seven days before the stomach could be opened. We could not argue from cases of hernia to these cases because of the feeble state of the nutrition of patients requiring gastrostomy.—Mr. B. JESSETT would like to know whether all the coats of the stomach were transfixed or not.—Mr. B. BARROW said the man's age was fifty-two. The pressure of the harelip pins was beneficial in securing contact. Indiarubber protected the patient from the sharp points of the pins. The pyæmia was probably due to embolism of the splenic artery, the embolon being derived from the site of the malignant disease.

Mr. JOHN H. MORGAN read a paper on Cysts of the Neck. He arranged them into cysts due to change of normal structures and those due to developmental errors. Of the first category, there were bursal tumours and hydrocele of the neck. Cystic hygroma and congenital sebaceous cysts belonged to the second class. The situations in which they were found where in front of the pomum Adami and between the posterior surface of the hyoid bone and the upper surface of the thyroid cartilage. They might appear as rounded smooth collections of fluid moving with the larynx. Hydrocele of the neck has been described by Cæsar Hawkins and others. The difficulty was to distinguish them from solid tumours. The employment of a fine trocar might be useful in diagnosis, as in one case in which a dark fluid was evacuated. In contrast with this case was that of a woman, aged forty-seven, in whom the swelling turned out to be malignant. The size of the cyst may vary from that of a walnut to that of a cavity holding a pint of fluid; their effects depended on their size and situation, and they were single as a rule. Congenital cystic hygroma is most frequent in the neck, and here the growth lies beneath the fascia and spreads in the intermuscular spaces; the growth is always polycystic. These cysts assume every variety of colour and consistence. The walls may contain solid masses composed of connective tissue. Sir James Paget had suggested, in the Medical and Chirurgical Transactions for 1878, that there was a probability that some congenital and infantile cysts may be derived from branchial canals closed at both ends and distended with fluid. Mr. Morgan did not think these views satisfactory, chiefly on account of the situation of the growths and of the nature of their contents. Cases illustrating the method of treatment by puncture were narrated. Mr. T. Smith had recommended the use of Morton's fluid and setons of catgut. The readiness with which these structures became inflamed and their deep connexion were arguments against this method of treatment. Sebaceous cysts were doubtless the remnants of some errant portion of epiblast, and are generally formed in connexion with the branchial arches. Other relics of these branchial clefts and arches were supernumerary auricles and branchial fistulæ. Hydatids may also be found in the neck.

Mr. DURHAM exhibited a boy, aged fourteen, who was under his care at Guy's Hospital. He presented a large fluctuating tumour on the left side, extending from the lobe of the ear to within two fingers' breadth of the clavicle. The swelling was first noticed about four years since. Two years ago it was lanced, and a quantity of blood and serum came away; this operation was twice repeated, but the tumour had again filled after the third operation. He had found that these cysts had very deep connexions.—Mr. W. ROSE observed that it was exceedingly difficult to arrive at a diagnosis as to the nature and relations of the cyst. He referred to the case of a gentleman, aged fifty-five, who had a cervical cyst containing clear fluid; the swelling rapidly filled after being tapped, and a week later the fluid was found to be blood-stained, and a firm nævus could be felt; death ensued from extension of the malignant disease.—Mr. PEARCE GOULD inquired whether Mr. Morgan had ever met with a "blood cyst" so-called, from which it was said that exceedingly free venous bleeding occurred. He had been surprised to hear that Mr. Morgan had met with blood so often in hydrocele of the neck. In one case which Mr. Marshall had dissected out entire, Mr. Gould had made a nitrate of silver preparation of the wall of the cyst, and obtained clear evidence that it was connected with the lymphatic system.—Mr. MORGAN agreed with Mr. Rose in his observation with regard to the difficulty of arriving at a diagnosis, even after tapping, owing to the variable quality of the fluid. He suggested that the "blood cysts" referred to by Mr. Gould were either vascular sarcomata or cysts in direct connexion with one of the large veins.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY

AT a meeting of this Society on November 6th,

Dr. PORTER introduced a case of Embolism of the Central Artery of the Retina occurring in a patient suffering from mitral regurgitation; it was not associated with any other embolic symptoms. The sudden occurrence of the symptoms and the ophthalmoscopic appearances were very charac-

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teristic.—Mr. S. SNELL, remarking on this case, referred to the cases recorded by Eales, Wood, and White, in which the blood current rapidly became re-established, and also to a case in his own practice in which it would appear that at the outset very temporarily the whole artery was obliterated, but that the plug had later passed into the lower retinal branch. Three years later vision was still absolutely lost in the portion of the field, but in the other V=$\frac{1}{3}$.

Mr. PYE-SMITH showed several hundred "Melon Seed" Bodies which he had recently removed from a Ganglion in the Flexor Aspect of a Man's Wrist. The operation was done with Listerian precautions, and the wound soon healed.

Mr. PYE-SMITH also exhibited a Portion of Ileum with Perforation and three Grape Stones from a case of Strangulated Right Femoral Hernia in a woman aged forty-two. Herniotomy was performed directly after admission to the public hospital on the third day of strangulation. On opening the sac there was a fæcal smell, but as no perforation of the knuckle of intestine could be detected it was returned just within the peritoneal cavity, and a drainage-tube placed in the wound. On the fifth day after the operation fæces began to escape by the wound, and three weeks later the patient had fresh symptoms of obstruction, and a tumour formed between the artificial anus and the liver. In three days pus and fæces in large quantity made their way through the fæcal fistula, and the abscess tumour subsided. The woman lived two months after the operation, and died exhausted. On post-mortem examination the perforated bowel was found lying near the middle line, and in connexion with it there was a fæcal abscess cavity extending from the wound upwards in front of the cæcum and ascending colon to the liver; the intestines around were closely connected by adhesions blocking off the general peritoneal cavity. Just under the liver, in the fæcal cavity, were three grape stones. It was thought that these stones had led to the second attack of obstruction by blocking up the small opening in the skin, until they had gravitated backwards in the pus that formed.

Dr. SINCLAIR WHITE exhibited a specimen of Congenital Sarcoma of Hand in the First Interosseous Space in a boy aged eighteen months, who was a patient in the public hospital last July, under the care of Dr. Keeling. The tumour, which was as large as a walnut, was removed on August 6th, and had to be scraped away from the first and second metacarpal bones, to both of which it was adherent. The wound healed and all went well until the middle of September, when the tumour reappeared and grew with such rapidity that in a fortnight it equalled the size of the hand. It was very vascular and bled freely. On Oct. 8th amputation above the wrist was performed. The tumour was a succulent round-celled sarcoma, and sections under the microscope were shown. At present there was no recurrence of the disease.

Dr. DYSON exhibited a specimen from a case of Cancer of the Colon. The patient had been ill over a year. At first the symptoms were those of dyspepsia, with pain in the right flank. In February, 1884, he was acutely ill with pyrexia (103° F.), slight congestion at the base of the lungs, diarrhœa, and a tumour in the right flank. He passed some pus and blood per anum, and the symptoms and physical signs diminished. The temperature fell to normal. In June he was admitted into the public hospital, and was very anæmic, feeble, and febrile. On the day of admission, after a rigor, the temperature rose to 105°. The tumour since February had much increased in size, and reached from the liver above, with which it was continuous, to the iliac crest; its lower part was sub-tympanitic, and the upper absolutely dull; it was exquisitely tender. It did not distinctly follow the movements of the liver in respiration. There were night-sweats, with high evening and low morning temperatures. Urine, sp. gr. 1018; no albumen. The tumour was twice explored with a hypodermic syringe; on each occasion only a little pus with blood-corpuscles and débris came away. Quinine was given for the pyrexia, opiates for the pain, and astringents for the diarrhœa, which supervened towards the end. The right leg, and then both legs, became œdematous. The blood was examined, but no leukæmia was present. He died on Aug. 3rd, 1884. At the post-mortem a broken down cancerous mass surrounding the upper part of the ascending colon was found; it extended to the neighbouring part of the liver. In the centre of the growth was a cavity containing purulent matter and débris. All the surrounding tissues were infiltrated, but there were no secondary deposits. Dr. Dyson remarked on the variety of malignant disease of this portion of the bowel, on the difficulty of diagnosis, the rigors being suggestive of pericolitic or perinephritic abscess. The physical signs found during life were very clearly explained by the post-mortem conditions.—Mr. W. A. GARRARD, Dr. KEELING, and Dr. HUNT made observations on the case.

Mr. PYE-SMITH related notes of several cases occurring in general practice. The first was a case of widely diffused Lupus Erythematosus in a man aged sixty-seven, who had been suffering from it for three years. The parts affected were the face, head, neck, chest, and back. It was accompanied with great itching. At present no improvement had been effected by treatment. The patient was introduced. The second case was that of a young married lady, who, after a normal first labour, had on many occasions during the first three weeks exhibited a temperature between 104° and 106·2°. The rise was usually in the morning, and often after lack of sleep. There had been no other signs of serious illness, local or general, and the patient was convalescent and sitting up when the highest temperature was recorded. She was of a somewhat nervous temperament. The third case was one of continuous moderate high elevation of temperature during a period of more than six months, accompanied by various symptoms of disease, and ending in convalescence. The patient was an excitable young lady, aged seventeen. She gave a history of having recently been under treatment for inflammatory consolidation of the base of the left lung. The present symptoms were mostly hyperæsthesia, especially of the abdomen, dyspepsia, irregularity of the bowels, painful micturition, emaciation, flying pains in the limbs, and lowness of spirits. During the illness a small chronic abscess formed on the inner aspect of the right elbow, which healed after antiseptic incision. She also had a small abscess in the lobe of the left ear. The temperature ranged usually between 100° and 102°, the extremes being 99·2° and 103·2°. There was never any cough, and the patient always slept well. Physical examination always gave negative results. The temperature had now fallen to normal, and the patient had regained flesh and pretty well lost her pains, &c. The case was regarded as nervous (quasi-hysterical); but for many weeks gave great anxiety, the chief fear being tuberculosis in some form. The fourth case was one of general Anasarca occurring without Albuminuria in a married lady aged twenty-eight. The anasarca was well-marked in the ankles, legs, thighs, and slightly in the lower eyelids, the abdomen was also enlarged, but there was no fluid in the peritoneal cavity. The first time the urine was examined (about third day of œdema) it gave a slight cloud with tincture of galls, but on no subsequent occasion. It was tested daily and never gave any cloud with heat, nitric or picric acid. In ten days the patient was well. There was no history of previous scarlatina. Menstruation was regular. Mr. Pye-Smith referred to remarks on such cases by Dr. Dyce Duckworth, vol. xix., St. Bartholomew's Hospital Reports.

Reviews and Notices of Books.

A Handbook of the Diseases of the Eye and their Treatment. By HENRY R. SWANZY, A.M., M.B., Surgeon to the National Eye and Ear Hospital, Dublin. Pp. 437. London: H. K. Lewis. 1884.

WE have great pleasure in recommending this work to all students and practitioners who desire to acquire such a knowledge of the defects and diseases of the eye as will render them competent to recognise and undertake the treatment of any ordinary case which may present itself in practice. The author rightly states that a handbook can only be regarded as an aid, and must not for a moment take the place of clinical study. Just as it is impossible for the student to learn anatomy from plates, however well they may be drawn, so no picture of a disease sketched by the eye and hand of another can supply the place of actual observation.

The chapters to which the ophthalmic surgeon naturally turns in looking through the pages of a new work are those devoted to sympathetic ophthalmia, glaucoma, and cataract.

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Each of these affections presents difficulties of its own which sorely tax the judgment, and all are glad to learn the rules by which another is guided, and the practice he adopts. Mr. Swanzy distinguishes between sympathetic irritation and sympathetic ophthalmitis. The former he regards as a reflex neurosis, whilst the latter appears to be an extension of inflammation from one eye to the other, through the optic nerves and chiasma, and this seems to be the general opinion at present. The principles by which he is guided in recommending removal of an eye after injury, lest sympathetic ophthalmia should follow, appear to us sound and unexceptionable. They are briefly these. He removes any eye that is completely disorganised by injury, not only if seen immediately after the accident, but even when irido-cyclitis has become established, more especially when vision is lost. He enucleates any eye with irido-cyclitis that there is reason to believe has an irremovable foreign body in it. He removes atrophied and tender eyes. He enucleates the exciting eye, even when the other eye has become affected, believing that such removal tends to allay the inflammation in the sympathising eye; and, lastly, he enucleates even where there is only sympathetic irritation, if the sight of the exciting eye is very defective. He further lays down the rule that an injured eye should not be removed if there be no foreign body in it, and the sight is fairly good; and he would not enucleate the exciting eye if there appeared to be good reason for thinking that its vision might be superior to the other. These rules are dictated by the results of large experience, and of careful scrutiny of recorded cases, and are worthy of consideration in all doubtful and difficult cases.

In reference to Cataract Extraction, the author appears to prefer De Wecker's three millimetre flap, though the illustration and the description do not quite agree, owing to De Wecker making the downward section, whilst the drawing represents an upward one. He performs a small iridectomy as a second stage of the operation, this step being facilitated by the previous instillation of eserine.

In the treatment of Glaucoma Mr. Swanzy is a firm supporter of the method introduced by his old master, v. Graefe—viz., the operation of iridectomy. This proceeding has, he says, until lately, held an undisputed position as the sovereign remedy for glaucoma, and even yet has, he thinks, suffered but little from the competition of the proceeding termed sclerotomy. Sclerotomy he can only find in his heart to say has proved useful as a remedial measure in glaucoma, and observes that it has hitherto been employed more in chronic simple glaucoma, in which iridectomy is less satisfactory than in acute or subacute glaucoma. It should not be undertaken in cases in which eserine will not produce myosis. We think Mr. Swanzy rather underestimates the value of eserine when he says that the great use of its application will be found in cases of acute glaucoma where it is desirable to postpone operation for a few days, and in cases of chronic simple glaucoma where it may be desired to avoid, if possible, any operative interference. He admits, however, that a small percentage of cases of acute glaucoma may be radically cured by a few instillations of a solution of the drug.

The earlier chapters on Elementary Optics, Abnormal Refraction and Accommodation, and the Ophthalmoscope, are very clearly yet concisely given; and indeed throughout the book no pains have been spared to make the descriptions of the various diseases as brief as is compatible with perspicuity, and the type and illustrations are alike excellent. There is a very good chapter on the Physiology of the Iris, and a set of wools constituting Holmgren's tests for colour-blindness is pasted into the cover of the book. The work, as a whole, is most creditable to Mr. Swanzy, and in all respects represents well the present state of ophthalmic science.

Humphry Sandwith. A Memoir. Compiled from Autobiographical Notes by his Nephew, THOMAS HUMPHRY WARD. Pp. 261. London: Cassell and Co. 1884.

THE life of Dr. Humphry Sandwith is a most interesting book. It has been condensed by his nephew from a very full autobiography, drawn up during the later years of his life from the diaries which he had kept, and from much interesting correspondence. In the form in which it is presented to us it gives a history of his early struggles, of his first professional start in Constantinople, his wanderings with Layard through Armenia and Kurdistan, his work in Mesopotamia, his return to Constantinople, his appointment as surgeon on the staff of General Beatson when he raised the Corps of Bashi-Bazouks, his transfer to that of General—afterwards Sir Fenwick—Williams, and his services at the siege of Kars; his return to London, and appointment to the special embassy which was sent from this country to attend the coronation of the Emperor Alexander II. at Moscow, his subsequent brief career as Colonial Secretary to the Mauritius, and the services which he rendered, in connexion with the National Aid Society, to the wounded in the Franco-German, Servian, and Russo-Turkish wars. We cannot enter at any length into the details of his varied career, but this is the less necessary as we can recommend the work as being very readable, and full of interesting anecdotes. There is, however, one point which we think deserves special notice—the successful manner in which, under circumstances of great difficulty, he carried out the medical service of the army in Kars. In February, 1855, he was appointed by General Williams Inspector-General of Hospitals, with a staff of about fifty persons, physicians, surgeons, and apothecaries, "the two latter classes being entirely ignorant." The medical stores, which he found at Kars were "a marvel and a phenomenon," consisting chiefly of "cosmetics, aromatic vinegar, *eau de luce*, scents and other dainties, and medicines *de luxe*, besides sundry instruments destined for the infirmities of ladies in an interesting condition; but the medicines really necessary for the use of an army in the field were scarcely to be found, and the few that did exist were of the most worthless description." Setting to work zealously, backed up by his General, whom he describes as "the terror of Pashas great and small," and utilising to the utmost the resources of the country, Dr. Sandwith got his department into good working order before the siege of Kars began, on June 9th. From that date till Nov. 27th, when the town surrendered, his hands fall of work, not merely from the consequences of the ordinary operations of a siege, but from an outbreak of cholera, and from the effects of cold and starvation upon the troops. It speaks well for the arrangements he made that, under such deplorable circumstances, "during the whole siege of Kars we never had an epidemic of typhus, nor did that enemy of surgery—hospital gangrene—ever appear." It is gratifying to find that two days after the surrender of Kars General Mouravieff gave Dr. Sandwith his unconditional liberty, "in special recognition of the services which he had rendered to the Russian wounded who had fallen into Turkish hands after the battle of September 29th."

Mr. Ward has discharged in a very satisfactory manner the difficult task of collating this memoir. He has brought out the leading occurrences of an eventful life in a pleasing manner, without endeavouring to make the subject of it a faultless hero. Sandwith was fearless, honest, and high-minded, sometimes too impetuous and self-reliant. The history of his life leaves with us a regret that his early education was so desultory. Had he enjoyed the advantages of a better training, we feel that distinguished as he was, he would have been still more so, and probably would [illegible] the present time his account of the Turks [illegible] thirty years ago—and as we fear they still [illegible] he

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found pleasant reading. The memoir has given us much pleasure, and we can recommend it as an interesting record of a distinguished member of our profession, and the perusal of it as an agreeable relaxation from more serious work.

Analytical Records.

[WE think it right to direct attention to the system we adopt in the conduct of this department. Of the numerous articles of food and medicine submitted to us we select such as we think important to the medical profession and the public. Samples of these are bought by us in the ordinary way, and the results of our examinations reported.]

AERATED WATERS.

(CLAYTON BROS., RUTLAND-STREET, PIMLICO.)

We have analysed several of the aerated beverages made by Messrs. Clayton Bros., and also the water used in their manufacture. The water is the ordinary London supply, purified by precipitation as well as by filtration. The precipitation is an important additional security for the purity of the water, for it is well known that a precipitate in falling carries down with it suspended organic matter, the most dangerous contamination of drinking-water. With regard to the soda-water, potash-water, and lithia-water, all that need be said is that each was proved on analysis to contain, approximately, the proper quantity of the salt indicated by its name. The Brighton seltzer-water contained the carbonates of lime, magnesia, and soda, chloride of sodium, &c., and the sample analysed was practically identical in composition with natural seltzer-water from the spring. Of course it is a mild saline alterative. The evaporated residue was hardly coloured by ignition, showing the absence of organic matter. Messrs. Clayton's ginger ale is an excellent substitute for alcoholic beverages, and will be useful to many who from choice or necessity abstain from beer, for it is not too sweet and is free from the rough taste of crude ginger, which shows that the resin of the root has been successfully removed.

PROFESSOR TUSON'S DISINFECTANTS, LIQUID AND SOLID.

(MANUFACTURERS: A. BOAKE & CO., STRATFORD. AGENTS: BAISS BROS. & CO., JEWRY-STREET, LONDON.)

Of these disinfectants, which are distinct novelties in sanitation, the liquid appears to be essentially a solution of chloride of zinc saturated with sulphurous acid, and the solid a mixture of the sulphates of zinc and alumina and the sulphite of lime. Every chemist knows that sulphate of alumina and sulphite of lime decompose one another in the presence of water, with formation of sulphate of lime, alumina, and free sulphurous acid. Sulphurous acid is the oldest and best known, and certainly one of the most trustworthy of disinfectants, and the soluble salts of zinc are also of great and universally admitted value. Professor Tuson's union of the two combines, very happily, the advantages of both. Both, as antiseptics, are deadly to organisms of all kinds, and they possess the power, which carbolic acid is deficient in, of destroying the noxious products of putrefaction and the offensive odours emitted from animal excreta. When they are used jointly, as in these preparations, foul odours vanish as if by magic, and no disagreeable chemical smell remains to take their place. We have submitted these disinfectants to the test, not only of analysis, but of practical use. The solid is applied by a dredger, and when a little is sprinkled over a night-stool all smell is gone in a minute. The liquid, like other liquid disinfectants, must be diluted according to the directions on the label. When suitably diluted it has but little smell and no injurious action on textile fabrics. This last fact is noteworthy. The first idea of the chemist would be that the sulphurous acid, absorbing oxygen from the air, would form sulphuric acid, which would damage articles of dress and the like. But we can testify that no such damage takes place, possibly on account of the great dilution of the solution. We have seen woollen and cotton goods soaked repeatedly for hours in a solution strong enough to destroy infection, which yet, after washing, were entirely uninjured. It must, moreover, be remembered that sulphurous acid is commonly used as a bleaching agent.

PURE CONDENSED COW'S MILK (EDELWEISS).

(THE SWISS MILK COMPANY, 84, BASINGHALL-STREET.)

This preparation, which keeps well in the bottles in which it is sold, is, we find, genuine condensed milk, unsweetened and untreated with antiseptics. When mixed with twice its bulk of water it yields a milk fit for ordinary household purposes, not very rich, but rich enough to pass the tests of the public analyst. With an equal bulk of water a really rich milk is obtained, in which we found over 16 per cent. of total solids. In both cases the flavour is excellent. We consider the article useful and trustworthy.

CONDENSED CREAM EMULSION (CREMOR HORDEATUS LOEFLUNDI).

(LOEFLUND & CO., 148½, FENCHURCH-STREET.)

Messrs. Loeflund's well-known Hordeum Malt Extract is here emulsified with fresh cream. The result is a very palatable and easily digestible food, which may be compared with the cod-liver oil and malt extract which has come so much into favour of late. The chief constituents of malt extract are, of course, maltose and dextrin, and these soluble and easily digestible compounds seem to render the assimilation of oils and fats more easy. The diastasic, or starch-converting, power of this particular preparation is, however, low.

CEYLON TEA: PURE CEYLON TEA GROWN BY THE CEYLON COFFEE COMPANY.

(H. HEWETSON & CO., 59, MARK-LANE.)

Genuine young tea, of the kind which attained such popularity in the Ceylon stall at the late Health Exhibition. The leaf is unfaced, as is shown by the fact that we found in it only 5·24 per cent. of ash, which agrees with that found in the best Assam. China has a formidable rival in Ceylon.

DISEASED MEAT.

To the Editor of THE LANCET.

SIR,—With regard to your article on "Diseased Meat" in this week's LANCET, in reference to a case brought before the Tiverton magistrates, in which the question was raised as to the fitness for food of the carcass of a cow which had suffered from "milk fever," will you allow me to state that this term is wrongfully used to designate two very different diseases. These are "puerperal eclampsia" or, better, "puerperal apoplexy," and "puerperal" or "septic fever." Many mistakes have occurred through this confusion, and especially that with regard to the utilisation of the flesh of cows which have suffered from these diseases; and in my work on Veterinary Obstetrics I have laid particular stress on their distinctive features. In puerperal apoplexy, which was, I presume, from the symptoms enumerated, the malady from which the cow in question suffered, there is no "fever;" the attack is sudden, with all the symptoms of apoplexy; a fatal and prompt termination is, in the majority of cases, inevitable, notwithstanding the most active remedial measures. Provided the animal has not been drugged with injurious or unpleasant-smelling medicines, the flesh is innocuous, and therefore need not be condemned as unfit for consumption. In puerperal fever, on the contrary, there is a high degree of fever and the flesh is dangerous, inasmuch as the animal was suffering from septicæmia. The use of such flesh should undoubtedly be prohibited, though, I fear, it sometimes reaches the butcher's stall. The term "milk fever," a condition which is not often seen in animals, is not applicable to any of these morbid states. There should not be much difficulty in deciding whether an animal has died from puerperal apoplexy or puerperal fever on examination of its carcass. The case upon which you have commented was, in all likelihood, one of the first-named disease, and the decision arrived at by the magistrates was justifiable. The flesh of a cow which, after the birth of a calf, had been killed because of this apoplectic state is not unwholesome.—Yours truly,

GEORGE FLEMING, LL.D.,

Nov. 29th, 1884. Principal Veterinary Surgeon to the Army.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 6, 1884.

IN our last number we referred to the impossibility of obtaining from the University of London any of the reforms in medical education which have been suggested by medical teachers and graduates in recent years. The recommendation of holding a Preliminary Scientific Examination twice a year has been ignored, even when urged more than once by the Annual Committee and the graduates in Convocation, and supported by the deans and teachers of the principal medical schools; the letter of Dr. BRISTOWE, a distinguished graduate and a former examiner in medicine, has been treated with scant courtesy; and the suggestion that "boards of studies" might bring the Senate into closer relation with the teaching bodies has been almost contemptuously bowed out of court. Is it, then, any wonder that medical teachers have felt aggrieved, and that they despair of making any impression on a University whose authorities pay no attention to any criticisms, however friendly, on their line of action, and who give no heed to any suggestions of reform? The Senate, so far as medical training and qualifications are concerned, is possessed with only the one idea, that its mission is to "improve medical education," and firmly believes that the only method of accomplishing this is to be always raising its standard—that is, to leave out of consideration the average well-informed and hard-working student, and concentrate its energies on harassing the ambitious and able by making its examinations as difficult and its degrees as unattainable as an irresponsible board can make them. When we find that after forty-six years of existence only twenty-two gradnates per annum have on an average obtained the M.B. degree, we must confess that it seems to us to have succeeded to the utmost in its unwise procedure. Even in the last eight years an average of thirty-eight represents the total number of medical graduates from all the metropolitan and provincial schools, including even some who have been taught at the other universities. In 1884 there were eighty-nine more candidates for the Preliminary Scientific Examination than in 1877, but only thirty-one more passed. Almost every student who enters for the Preliminary Scientific Examination should be able by honest work to obtain a degree, for his general intelligence and culture have been already tested at the matriculation examination. But the University of London does not concern itself with a medical student of even this amount of industry and capacity.

What probability is there of altering such an unsatisfactory condition, and of persuading the University authorities to depart from their present absurd position? We fear none. The reasons for such a desponding view are to be found in the anomalous constitution of the Senate, and in the unfortunate certainty that, while it will not move towards any reform from within, by giving some control over its examinations to the teachers or their representatives, it is impossible to compel it to do so from without. The official bodies in the University are the graduates constituting the Convocation, with an Annual Committee, and the Senate, composed of thirty-six Fellows, with a Chancellor and a Vice-Chancellor. The Annual Committee can only advise Convocation upon any matter affecting the interests of the University, and even then only if the question has not been referred by Convocation to a special committee. The functions of its thirty-two elected members—*ex officio* members are rarely present—are therefore limited to finding matters for Convocation to discuss, and to making reports on such subjects either by their own free will or at the request of the graduates in Convocation. The powers of the members in Convocation are thus defined by the Charter of 1863:—"The power of discussing any matter whatsoever relating to the University, and of declaring the opinion of Convocation in any such matter; the power of deciding as to the recognition, upon such terms as the Senate shall propose, of any degree to be hereafter conferred under their own Charter, other than the said degrees in Arts, Laws, Medicine, and Science, as a qualification for admission to Convocation; the power of accepting a new or supplemental Charter, or the surrender of their own Charter or of any new Charter or supplemental Charter (with the consent of the Senate); the power of deciding on the mode of conducting and registering the proceedings of Convocation; the power of electing a chairman and of appointing and removing a clerk and of prescribing his duties; and, lastly, the power of nominating three persons whenever it is the turn of Convocation to elect a Fellow on the Senate, from whom the Crown shall select one. Except as expressly hereby provided, Convocation shall not be entitled to interfere in, or have any control over, the affairs of the University." In addition, the graduates who are entitled to vote in Convocation elect a Parliamentary representative for the University. The powers of the graduates are therefore limited to discussing the affairs of the University and to determining their own mode of so discussing them, to electing their own chairman and clerk, to voting for a Member of Parliament, to joining in the acceptance or refusal of a new or supplemental Charter, and to occasionally nominating a member to represent them on the Senate. Could more careful limitations of their powers have possibly been devised? If it were not for the last two provisions, meetings of Convocation would be always mere futile assemblies for exhibiting the debating powers of those present, as is usually the case, for its members have only been called on to act at intervals of years. How can active, busy men, be expected to attend such meetings regularly? And why should they? Moreover, by the mode of election of Fellows on the Senate the influence of the graduates on this body is reduced to a minimum. Every member of the Senate is appointed for life. Only nine out of thirty-six Fellows can be appointed by Convocation—that is to say, one member in every four is elected by his fellow-graduates; and when a vacancy to be filled by Convocation occurs, the list must even then contain three names for the Crown to select from, whilst three members in every four are nominated directly by the Crown without the intervention of Convocation. But it is a tacit arrangement that the Faculties of Arts and Law select alternately with those of Science and Medicine, so that only one

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in every eight really represents these two faculties. Again, as the Science graduates are as jealous of their privileges as are those with medical degrees, it follows that the choice of one member of the Senate out of every sixteen, or two and a quarter of the whole body, is all the direct representation that the medical graduates can expect to possess under the Charter. Only *one* medical graduate has, in fact, been elected within the past twenty years. It is therefore not without justification that we have called it an irresponsible board, and that we despair of seeing any alteration in its line of action. The only method by which any reform can be introduced is for Convocation to refuse to accept any new or supplemental Charter unless it provides that the tenancy for life of a Senatorship be exchanged for a term of years, and that the proportion of elected members be largely increased. But if these provisions were insisted on, the Senate would probably simply drop the application for a new Charter. In March, 1878, when women were admitted to degrees under a supplemental Charter, party feeling ran too high for the graduates to unite in insisting on the retirement of a member of the Senate after a definite period of years, or on an increased representation; but obviously the only hope for any change in the views and plan of action of the Senate lies in an insistence on these conditions. The infusion of new blood from the medical graduate side is imperceptible, and the other faculties do not understand our needs, or if they do they have no sympathy with them. Moreover, the medical influence, such as it is, is declining, and the possibility of active medical teachers being added to the Senate is infinitesimal. In 1863 fourteen members of the Senate had gone through a medical training; in 1884 only eleven have done so. Of these Professor HUXLEY is rather a scientific adviser than a medical graduate, and he is largely responsible for the alterations in the new regulations by which the Preliminary Scientific Examination has been made so stringent and inelastic. Mr. BUSK, Drs. QUAIN, STORRAR, and BUCHANAN, we believe, have never taught in a medical school; Sir WM. JENNER, Sir WM. GULL, Sir G. BURROWS, Sir JAMES PAGET, and Dr. CARPENTER have certainly not done so for many a year; whilst Dr. JOHNSON, who still teaches clinical medicine, would probably allow that he is not conversant with all the details of the student's early education. We need scarcely say that Preliminary Scientific Examinations were not in existence when these gentlemen took their degrees. This explains why the arrangement and the extent of the medical student's scientific studies have been practically turned over to the scientists on the Senate, and why the teachers at the medical schools are in open revolt against the University, and clamouring for a new body in which they will be able to exert some influence, and where regulations destructive to all students except a chosen few will not be made in spite of all their protests. The teachers of Arts and Science are as little satisfied and as inefficiently represented as we have shown our medical teachers to be, and are the leaders in the new crusade for a teaching university in London. Politicians, distinguished amateurs in literature and science, eminent graduates of long standing, and past examiners and officials, with crystallised and unchangeable views of the University as a mere examining board, have been allowed the control of university teaching in the greatest city of the world, and as a result have effaced the influence of the actual teachers and exalted that of pure examiners, until they have banished University teaching altogether.

IT is time that the question of the relation sustained by medical practitioners to their patients received very serious consideration by the profession, and it would, we think, greatly conduce to a proper solution of the growing and pressing problem of "safety" if the ideas of leading practitioners could be discussed at the meetings of some influential Society, and broad principles and rules of conduct formulated for general guidance. The matter is clearly one in respect to which the "men of light and leading" among us might render a significant service by giving the body of medical practitioners the benefit of their advice and example.

It is by no means so easy as it may seem to be to adopt such a mode of dealing with female patients as will meet the full necessities of the case. The medical adviser, and particularly the "family doctor," must needs be in some sort the friend of his patients. Mind is so essentially a body-function that he cannot prescribe for the one without having an insight into the state of the other. Even if it were otherwise, the medical man would inevitably become the friend of his female patients, because women *will*, unless they are kept at a great distance and treated with punctilious politeness only, confide in their medical advisers. Nevertheless, so far as physicians and surgeons are concerned *strictly*, and to the utmost limits of possibility with all practitioners, we are of opinion that it is undesirable for medical men to enter into friendly relations with their female patients. The very fact that a practitioner of medicine must be consulted as to the details of bodily health ought, with any modest woman, to place him on a footing which does not admit of personal or social intimacy. We have no patience with, and little respect for, women who fail to recognise this fact. The medical man may be the confessor, but for this very reason he ought not to be the intimate, of his female patients. A certain sanctity, in a true as distinguished from a canting sense, should attach to the office and surround the personality of the medical practitioner, and it ought to be his aim to preserve this separate and distinctive character throughout his intercourse with those who look upon him as the priest of Hygeia ministering health in the family. The older practitioners were wiser and more circumspect in this matter than those of to-day. They made it a rule never to enter into relations of intimacy with the members of families under their care. If this rule were revived and more commonly observed, we should hear less of charges against medical men alleging familiarity — we do not say *undue* familiarity, because no familiarity whatever of any kind or degree ought to exist; and in the absence of intimacy of any description there could be no ground or pretence for imputation or scandal. With regard to the length of visits, the greatest possible care should be taken. It is a wholly bad practice to allow what ought to be a strictly professional interview to degenerate into a gossiping visit. It is necessary to lay especial stress on this point of prudence. There is obviously too much laxity in respect to the length of visits among medical men. Not one moment longer than the clinical needs of the case require should a medical man, whether

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physician, surgeon, or general practitioner, remain in the room or the house of his patient. It is injudicious, and tends to detract from the respect in which the medical adviser is held, and to reduce that personal authority or influence upon which his usefulness specially depends, "to unbend," as the phrase goes, and chatter familiarly with those whom it is, above all things, expedient to hold in check. The social position of a practitioner is often equivocal. If his patients are of the lower class, he will either degrade or bring ridicule upon himself by adopting patronising ways if he tries to be familiar with them; while if his patients are his superiors in social station, as must sometimes be the case with men who are in what is called "good practice," he cannot assume airs of familiarity without insolence or effrontery, which may be tolerated, but is never really liked.

We cannot hold the profession wholly guiltless in the matter. There is urgent need of more caution in interviews with patients, and among the measures of safety imperatively necessary are the adoption of a more formally polite manner, with infinitely less hand-shaking and fewer compliments; and a considerable reduction in the habitual length of visits. Upon these two points we must strongly insist. They are required by personal respect and self-preservation, and they are demanded by the dignity of our profession, which we are all pledged to uphold, and which cannot be lowered without being sacrificed.

WITH the progress that is being made in the direction of the etiology of disease, and especially in respect to the infective diseases, there is much room for question how far therapeusis is aided by these discoveries. Even supposing it were proved for all specific maladies that they depended upon the entrance into and development within the body of some specifically endowed parasite, it would still remain a great problem how to arrest its progress. The possibility of employing some agent which can do this or can counteract the changes that the invader sets up in the body receives some countenance from the notable action of a few drugs, such as mercury in syphilis, quinine in intermittent, and perhaps of salicine in rheumatic fever; but as yet very little encouragement has been derived from experiences in the very wide class of infectious disease. And yet on experimental grounds it is well known that there are many substances which act as powerful poisons to microphytic organisms; and theoretically it should be possible to act upon them within the human body. M. CH. BOUCHARD, in raising the question at the recent International Medical Congress, in a paper which has just appeared *in extenso* in the *Revue de Médecine*, said it was folly to argue that such antiseptic medication would have to be pushed until the economy was saturated with the drug, or rather to the destruction of the host before the parasite. It is not necessary, nor is it possible, to attempt to destroy the germs of disease, when these are probably disseminated throughout the body, but he maintains that it is both possible and probable that much can be done to prevent the multiplication of the poison, or to neutralise its effects. It is certainly a fact that almost every antipyretic drug now in use, from quinine and salicine to the last introduced "antipyrin," is also an antiseptic agent, and hence the inference implied by M. BOUCHARD that they owe their antithermic action to a distinct effect upon the actual cause of the febrile state. He cites, with a gravity which can hardly be imitated, the case of a typhoid patient who was nearly poisoned accidentally by carbolic acid; but who, on recovering from the state of collapse produced by the poison, remained free from typhoid symptoms. Here was an instance, he thinks, where the specific fever was aborted by the powerful action of this antiseptic—an experiment which, he wisely adds, it is not desirable to repeat. The drugs that have been prescribed, especially in typhoid fever, with the idea of combating the germ of the disease or neutralising its poison, now compose a formidable category. The very fact that they are so numerous seems to indicate that they have not fulfilled the expectations formed of them. Amongst them all, M. BOUCHARD is most in favour of mercury, and claims the results of the calomel treatment of this disease to be due to its germicide action. He has lately pursued this line of medication in thirty-one cases, two of which were fatal. In eighteen cases salivation occurred after nine days' treatment; the fatal cases had been treated for seven days. This plan of treating typhoid fever, useful as it may be when commenced in the earliest stages, is hardly to be recommended to the practical physician. The evidence that it "aborts" the fever is very small, and if pursued, as its advocates desire, until the patient is saturated with mercury, it is harmful in itself. Convalescence is distinctly retarded by it, relapse is just as frequent. M. BOUCHARD thinks intestinal hæmorrhage is favoured; and amongst sequelæ of a formidable character which arose in cases treated by him were epistaxis, diarrhœa, pneumonia, and endocarditis. So powerful a remedy as this is surely as bad in its effects, and as likely to give rise to as much anxiety, as the disease itself if left to pursue its course with such aid as nursing and diet can afford, with no other medical interference than is required to allay the symptoms as they arise. Yet, in spite of this experience, M. BOUCHARD believes that the antiseptic treatment of typhoid fever is not a merely theoretical notion, but opens up a line of practice which should be diligently pursued.

An endeavour to select the appropriate agent for destroying the special germs of any disease is directed by the aid of experiment; and M. BOUCHARD discusses briefly some of the results obtained by him of the intravenous injection of various substances with a view to check the progress of a disease with the poison of which animals were previously inoculated. Since, however, comparatively few of the diseases in question have yet been shown capable of transmission from man to animals, the results of these experiments are not of a nature to advance knowledge very far. The aims of such an inquiry are no doubt as he describes them—viz., to ascertain what agents are most injurious to the specific microbe of an infectious disease, and at the same time least injurious to man; but as a matter of fact the employment of such remedies in disease is wholly different from their use in the laboratory. Something more, he thinks, may be done by using antiseptic agents locally, without any idea of getting them absorbed into the blood. Such diseases as diphtheria, dysentery, and if Koch's views are to obtain, cholera are open to be dealt with thus locally.

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But although diphtheria is, we should opine, invariably treated on this principle, it is very doubtful if any reduction in its mortality has been effected thereby. In typhoid fever, M. BOUCHARD has for the past nine years been in the habit of prescribing large doses of charcoal powder, with a view of lessening the dangers due to the presence of putrid sloughs in the intestine. He claims that in cases so treated the stools become inodorous, and are deprived of the alkaloidal substances to the absorption of which may be ascribed the symptoms of "auto-intoxication." Lately, he has combined iodoform with charcoal so as to bring to bear the antiseptic action of the former as well as the deodorant action of the latter; and yet he can claim no greater result than a reduction of mortality from 20 or 15 per cent. to 10 per cent. In fine, without any desire to damp the ardour of those who see in the adoption of the germ theory of diseases a promise of a scientific and rational line of treatment of the specific fevers, we cannot admit that the results of such therapeutic experiments are sufficiently encouraging to warrant a general adoption, or that the employment of "antiseptics" in medicine is a practice wholly free from danger.

MEDICAL teachers and medical students alike await with much anxiety the further action of the Association for promoting a Teaching University in London. As yet there is nothing to announce beyond the fact that a sub-committee is charged with the duty of preparing a report on the subject. This subject has been viewed hitherto very much from the standpoint of those who think it desirable to keep English students in England, and to give London students especially the clinical advantages of that unrivalled clinical field presented by the hospitals of London. It would be difficult to overrate the importance of this advantage. It is not denied even by those who vaunt the advantages of the Scottish universities, that the London hospitals supply the chief material for those discussions which give such importance and effect to our Medical Societies. The youngest disease, recognised, brings out with fresh vigour the ripest teachers, and places medical practitioners in the advantageous position of medical pupils. Let anyone who doubts the enormous advantage of London schools go for a night to a meeting of the Clinical Society or the Medico-Chirurgical Society, and see the rich gathering of cases and the evidence of the clinical detail with which they have been studied. The absence of a teaching university necessitates some of the best students leaving these schools just when they would profit by them, and going to other schools which, with all their advantages, cannot in this respect compare with them. There is another disadvantage in the absence of a teaching university in London which ought to be gravely considered—the entire want of sympathy with students in such an abstraction as a mere examining Board. A university should be a veritable *Alma Mater*. It should be nourishing above all things; but more than that, it should be genial and propitious. It should be encouraging. Adjectives more lucidly descriptive of what the existing University of London is NOT could not be employed. It does not nourish; it chills. It does not encourage; it deters. It is not genial or propitious, but terrible and disheartening. Many a young man gets a blow by striking his head against its examinations, which he is very slow to recover from, and some of the wisest graduates of the University do not hesitate to say so. The student in a true university feels the sympathy of his teachers and the rivalry of his fellow students. There is a domestic stimulus in such an arrangement which may be abused, but which is far too valuable to be dispensed with. The hard, impersonal, exacting, examining institution which now takes the place of a proper university in London must be regarded as a most dreadful device for discouraging; graduation a rock, a pit, a valley of humiliation. This is not what a university is meant to be nor what the nation wants. We would be the last to make graduation too easy, to vulgarise degrees, either in medicine or in any other faculty. In medicine such a course would be a public misfortune. But we want a university in London which will encourage young men to aim higher than for a mere licence to practise, which shall be a centre of healthy and hopeful rivalry in study as well as in the dreary work of examination, and which in its genial and domestic influences shall have some chance of comparing favourably with Cambridge and Oxford, while exceeding them both and the Scottish universities in the scale of its medical opportunities.

Annotations.

"Ne quid nimis."

THE COURT OF EXAMINERS AND THE COUNCIL OF THE COLLEGE OF SURGEONS.

AT the meeting of the Council of the Royal College of Surgeons of England, held on the 13th ult., Mr. J. C. Förster (president), Mr. Savory (vice-president), and Mr. Hulke resigned the office of member of the Court of Examiners. These resignations were accepted, and the vacancies will be filled next Thursday. Mr. Hulke has expressed his willingness to again take office should the Council re-elect him. Mr. Hulke has proved himself so efficient an examiner that his re-election will not only be serviceable to the College, but agreeable to the profession generally. Equally agreeable to the profession, and certainly not less serviceable to the College, will it be if the Council have the courage and grace to fill up the other vacancies by Fellows who are not in the Council. Without any disparagement of those members of Council who are, it is alleged, aspiring to the office of examiner, it may be said that none of them have claims superior to those of three or four of the candidates who are not members of the Council. The action of the Council is anxiously awaited by those who desire to see the College break away from those antiquated traditions which have so long trammelled it and impaired its dignity by perpetuating many of the worst characteristics of the Corporation of Surgeons on the ruins of which the College was originally built. What is urgently wanted in England is a *College of Surgeons* at least as desirous for the encouragement and promotion of the science and art of surgery as eager for the sale of diplomas. This cannot be accomplished as long as the governing body of the College is largely composed of examiners who are tempted to take more direct personal and even pecuniary interest in the sale of diplomas than in the promotion of surgical and biological science.

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THE REGULATIONS OF THE COMBINED EXAMINATION.

THE Royal Colleges of Physicians and Surgeons of London have lost no time in issuing regulations for their conjoint examination, which we published last week. Even the dates for the various examinations next year, beginning early in January, have already been fixed. The regulations laid down necessitate a consistent plan of study, and the student should pass the examinations *seriatim* as follows:—Elementary anatomy and elementary physiology, at the end of the first winter session; chemistry, chemical physics, materia medica, &c., at the end of the first or second summer session; anatomy and physiology, in the second winter session; and the remainder of the student's time should be devoted to the practical subjects of his profession—midwifery &c., surgery, and medicine. An important provision stipulates that after once passing in any subject, another examination in the same subject will not be demanded. Lectures on early scientific subjects, such as botany and chemistry, are optional, for certificates of instruction only are required, and only one course of lectures is made compulsory in the other subjects. Particular stress is laid on practical instruction, so that we anticipate that most English general practitioners will consider it necessary to pass the conjoint board. In the published regulations no exemptions are made for a graduate of a British university, but candidates with a colonial, Indian, or foreign qualification will have to pass the second and third examinations. Surely graduates of a university in the United Kingdom will not be asked to again go through an examination in anatomy and physiology, but will be at once admitted to the final examination. One advantage of the conjoint scheme is that candidates run no longer any risk of being referred by one examining board, after having passed a similar examination, by practically the same men at the other board some few weeks previously.

THE COLLEGE OF SURGEONS EXAMINERS UNDER THE COMBINED SCHEME.

AT a meeting of the Council of the Royal College of Surgeons of England, to be held on Thursday next, the 11th inst., the examiners for conducting the examinations under the combined scheme will be appointed. The College of Surgeons will appoint all the examiners in elementary anatomy and in surgery; while the College of Physicians will appoint all the examiners in chemistry (five), materia medica (five), and medicine (ten). Of the remaining examiners, the College of Surgeons will appoint one of the three in elementary physiology, four of the six in anatomy, three of the six in physiology, and four of the eight in midwifery. At the last meeting of the Council, held on the 13th ult., it was resolved not to restrict the selection of the examiners in anatomy and physiology to Fellows of the College, but to extend it to Members also. There is, we understand, a large number of candidates for the five examinerships in elementary anatomy, and for the four examinerships in anatomy. The candidates for the examinerships in elementary physiology and in physiology are, as might be expected, fewer. It may be stated that it is not intended to reappoint the existing Board of Examiners in anatomy and physiology. In place of this it has been decided to employ the examiners in anatomy and physiology appointed by the two Colleges under the combined scheme to carry on the primary examinations for the diploma of Member of the College in the cases of candidates who commenced their professional study before the 1st of October, 1884. A Board of Examiners will, however, be elected from among the Fellows of the College for the Primary Fellowship Examination. The examiners in midwifery will be chosen from among the Fellows of the College of Surgeons or of the College of Physicians. As respects the examiners in surgery, it is intended that, until otherwise determined, the Court of Examiners shall be constituted the examiners under the combined scheme.

THE REVIVAL OF OVARIOTOMY.

IN reference to the address on the Revival of Ovariotomy and its Influence on Modern Surgery, recently delivered by Sir Spencer Wells before the Midland Medical Society, Mr. Lawson Tait, in a letter addressed to us, states that Sir Spencer Wells's claim of having revived ovariotomy between the years 1858 and 1865 cannot in the least degree be substantiated when the facts of the case are fully examined, as, so far as has yet been discovered, the first ovarian tumour removed in England was by the hands of Dr. Charles Clay on Sept. 27th, 1842; all others, with the exception of one by Houston and another by Lizars in Scotland, being clearly parovarian cysts. In 1843 Mr. Aston Key removed both ovaries, and Mr. Bransby Cooper also tried the operation in that year; but it was not till 1844 that there was a successful case in London operated on by Dr. Frederick Bird, followed by one in the practice of Mr. Lane. In the provinces, however, many successful cases had been done. In June, 1848, Dr. Charles Clay published a series of 32 cases with 10 deaths, and in 1857 he had completed 77 cases with 24 deaths, and he continued to operate for many years until he had performed 395 operations with 101 deaths, his total mortality being fractionally above 25 per cent., a mortality almost identical with that occurring in the 1000 cases of Sir Spencer Wells. At the same time the operation was being performed frequently in the large provincial towns of England, but particularly in Manchester by Southam and others, with great success. The only revival, therefore, of ovariotomy, Mr. Lawson Tait points out, which Sir Spencer Wells can lay any claim to is after its temporary decadence for two years and a half in London in the hands of Mr. Baker Brown, and even upon this point the evidence is, says Mr. Tait, by no means satisfactory.

SANITARY CO-OPERATION.

DR. ALFRED CARPENTER read a paper on "Progress and Co-operation in Sanitary Work" on Nov. 27th at the Parkes Museum, Margaret-street. He traced some of the evils which now exist in the sanitary world to the numerous organisations which were trying to direct public attention to the prevention of disease. He asserted that some were established to provide gain to the promoters rather than for the public good. The custom which was growing up amongst men of mark of accepting fees for reports upon sanitary articles was one to be deprecated. Dr. Carpenter asked the members of the Parkes Museum to take a step in advance for the purpose of bringing together the various sanitary associations which were really trying to do good work. He argued that there was no medical association which could take up such a position as was required, because its managers must include non-medical men, such as engineers, meteorologists, land surveyors, and chemists; but, whilst giving honour to the medical profession as the first earnest promoters of sanitary work, they could not for that reason be the managers of an Institute of Health. He then referred to the Social Science Association as the mother of the Sanitary Institute of Great Britain. He thought that the Society of Medical Officers of Health should become a very intimate and integral part of the proposed new organisation, but that the medical officers of health should have a distinct and separate Council for the promotion of their new work and for the publication of their Transactions, but that all the members of that body ought to

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be members of the chartered body, whilst their work as regards the General Council could be as distinct as that of the Post Office or the Customs in reference to the government of the country. He further urged an amalgamation of the Sanitary Institute of Great Britain with the Parkes Museum and other bodies for the purpose of obtaining a charter to enable them to form a Royal Institute of Health upon a comprehensive basis. An endowment from Government might be asked for to subsidise the new chartered body, though he objected to anything like State interference.

ROYAL DOCTORS.

IT has always been the custom of intelligent princes to acquaint themselves with the studies of their time, and this fact, together with the other advantages of their position, have given them much influence in the advancement of learning. It is new, however, to find them taking a more particular interest in the life-work of their fellow-men, by adopting certain callings as their own, at all events if we except the profession of arms. This latter, from its close connexion with self-preservation alone, other matters being left out of sight, necessarily affects all classes of any people, especially in its earlier history. The peaceful developments of national work, again, belong to an age in which a wiser and more considerate law of comity has succeeded the rule of force, and in which the army has become a highly skilled and heroic form of international police obedient to that law of order. This, at least, is what ought to be, and what we think has begun to come to pass. It is in keeping with this advance in civilisation that members of Royal houses in our day have been attracted to take part in forms of labour which, from their wide application, must often present themselves to the minds of all who have the oversight of nations. The name of Prince Albert Victor will shortly be placed upon the student roll at the Middle Temple, and that of Prince Charles of Bavaria is to be counted among the medical graduates of Austria. It is in various ways advantageous to professional life that Royal and noble men should employ themselves in it, and this is no less true of the art which guards the public health than it is of that which stands in defence of civil rule, or of their sister calling which exists to maintain the purity of our common faith. Let us speak of medicine in particular. It is clear, in the first place, that the adhesion of great names cannot in itself ennoble any profession. On the contrary, a profession exercises its government on all who espouse it. Their work is done by its direction, and it is and must be honoured, not because of those who do the work, but because of the work which is done. This is pre-eminently true of medicine. Not less true is it that success in its aims cannot be said to wait upon or follow the introduction into it of distinguished persons. The Darwinian law has been well illustrated in its history; it has lived through a long and patient evolution, and has come to be what it is by contact with its circumstances, and, so far, with but little State encouragement. How, then, will it benefit by being connected with the first social and political rank? Partly in this, that the example of men whom circumstances have made independent of the primary needs of existence, and who have been surrounded with many of the less fruitful pastimes of leisure, when they earnestly devote themselves to professional work, is valuable to their fellows. It should impress on all others who are similarly engaged that the highest aim of medicine is not mere gain, either of wealth or of social reputation, but that it touches the life and gratitude of persons and of peoples in all their interests, physical, social, and moral. The great importance of hygiene among considerations of national management has been recognised by our institution of a Local Government Board, and by many smaller measures. Other countries have acted in a similar sense, and it is satisfactory to find that, with some at least of those who represent the highest political influence this interest is more than theoretical. We congratulate the Royal doctor and others of like mind upon their choice, and we do not doubt that, exercising as fully as they can the varied powers of their profession, they will find that they also are gainers, and that no vocation educates more equally or even more highly the stronger and the finer faculties of our human nature.

THE BROWN LECTURES.

MR. VICTOR HORSLEY, B.S., M.B., F.R.C.S., will deliver the Brown Lectures on December 12th, 15th, 17th, and 19th, in the theatre of the University of London, Burlington-gardens, at 5 P.M. The subject of the first two lectures will be "The Thyroid Gland, its relation to the Pathology of Myxœdema and Cretinism, to the Surgical Treatment of Goitre, and to the General Nutrition of the Body." The third lecture will treat of Simple Traumatic Fever, based on 100 cases of Simple Fracture. Urethral Fever will be the subject of the fourth lecture. All the lectures will be illustrated by photographs of specimens projected on to a screen by the limelight. Our readers will be interested to know that Mr. Horsley states that he has produced artificial myxœdema in the monkey by the removal of the thyroid gland.

TRACHEOTOMY IN CROUP.

UNDER the above heading, Dr. George W. Gay read an interesting paper at the annual meeting of the American Surgical Society in May last. Referring to the results of medical treatment of "pseudo-membranous laryngitis," he states that in the Boston City Hospital, to which upwards of 400 cases of diphtheria have been admitted within the last eight years, "not a single case of pseudo-membranous laryngitis has ever recovered without an operation." Tracheotomy has been performed 118 times for this disease, and thirty-nine, or just one in three, have been successful. Dr. Gay has himself operated sixty-two times, with success in twenty cases. For these and other reasons Dr. Gay holds that tracheotomy is the best treatment for this disease, and should be resorted to early. He much prefers the high to the low operation, and has no fear of dividing either the cricoid cartilage or the isthmus of the thyroid body. In reference to clearing the bronchial tubes of blood or other secretions, he makes some remarks which are very apposite at the present time. He regards suction as both useless and highly dangerous, and points out that "it is a physical impossibility to suck anything out of the trachea, unless air has a free ingress to supply the vacuum." In such circumstances he forcibly inflates the lungs through the wound, and this is always attended with a forcible return current of air which closes the tubes far more efficiently than any possible suction. In a case mentioned where the bronchial tubes were full of blood, a catheter was inserted into the trachea and air forcibly blown into the lungs, with the result of driving out a large quantity of blood. This plan is one that so long ago as 1867 was practised and recommended by Dr. H. J. Bigelow of Boston. He appears to have taught that the catheter should be passed beyond the blood clot or other obstruction, and that then the escape of the air blown in from the catheter would remove the blood, &c. No doubt this is desirable, but it is not always possible in cases of hæmorrhage into the trachea; and we imagine that in such cases the distension of the lung is followed by such a powerful expiration that this method is of great value. Dr. Beach, in a paper in the *New York Medical Journal* of Nov. 1st, says that the Boston surgeons always carry a catheter in their case of tracheotomy instruments, and that they have complete confidence in this treatment. It is certainly to

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be preferred to any method based upon suction, not only because of its physiological merits, but because it is simple in its application, and quite devoid of danger.

OUR ARMY.

THE General Annual Return of the Army for 1883, prepared by the Adjutant-General, has just been presented to Parliament. From it we obtain the following information bearing on the health and physique of the troops. The average strength throughout the year, exclusive of officers, was 174,778, of whom 86,357 were serving at home and 88,421 abroad. The deaths among them amounted to 1707, and the number discharged as invalids to 3374, being respectively in the proportion of 9·77 and 19·31 per 1000 of strength; both lower than in the preceding year. The number of recruits enlisted during the year was 61,804, of whom 15,389 were rejected as unfit, being in the proportion of 249 per 1000 inspected; and 1523 were rejected after attestation, raising the proportion to 274 per 1000, or almost identical with that of the preceding year. The total number who joined was 32,924, being 9369 more than in 1882; but to obtain this result it appears to have been found necessary to authorise, during the last eight months of the year, the enlistment of lads at eighteen years of age, and to lower the standard of height to five feet three inches. Nearly 8000 came into the service at the reduced age, the greater proportion being for the infantry of the line. Of the total number that joined, 629 per 1000 were under twenty years of age. Compared with the preceding year, the returns show a decrease in the courts-martial for drunkenness of about 2 per 1000, in the number of men fined for that offence of 7½ per 1000, and of cases of drunkenness in which a fine was inflicted of nearly 10 per 1000 of the strength. The courts martial for drunkenness were in the proportion of 16 per 1000 of the strength among the troops serving at home, and 22½ among those serving abroad. The Return does not furnish similar information with regard to the fines. The nationalities of the men serving at home and abroad on Jan. 1st, 1884, were: English, 722 per 1000 of the force; Scotch, 79; Irish, 186; colonial and foreign, 13. Compared with those serving on Jan. 1st, 1874, there is an increase of 43 per 1000 of English, and a decrease of 4 per 1000 Scotch, and of 49 per 1000 Irish soldiers. The returns continue to show an increase in the numbers reported as possessed of "superior education." The proportion amounted on Jan. 1st, 1884, to 783 per 1000 serving, an amount which leads us to doubt whether the test is a very strict one, or, if so, whether it is stringently applied.

GASTRITIS FAVOSA: A NEW DISEASE.

AT the meeting of the Vienna Imperial and Royal Society of Physicians on the 28th ult. Professor Kundrat exhibited specimens of a unique kind. The case was one of favus universalis which had given rise to an abscess of the thigh, and had terminated fatally from severe gastro-intestinal disorder marked by an uncontrollable diarrhœa. Numerous erosions mingled with diphtheritic swellings were found in the mucous membrane of the stomach, and the intestines contained some foul putrescent masses and much mucus. Professor Kundrat at once declared the diphtheritic swellings to be due to the favus fungus, a view which was confirmed on microscopic examination. This is the first recorded instance in which the mucorineæ have been the cause of death, as it is the first of favus of the stomach and intestines. Indeed, the naked-eye appearance of the tumours in the stomach closely resembled the favus cups on the skin, and the fact that but little of the fungus was found in the intestine was explained by Professor Kaposi by their having undergone putrefaction in the bowel. The patient had previously been shown to the Society by Professor Kaposi as a rare instance of favus, which covered the entire body, affecting even the finger-nails (attributed to his habit of scratching himself constantly). Favus of the stomach is as unknown a condition in animals as it is in man; at any rate, Professor Csoker, of the Vienna Hospital for Animals, stated that it never occurred in cats, although these animals frequently eat rats infested with the fungus. Professor Bamberger suggested that in this case the gastric mucosa was in an unhealthy condition at the time of infection, thereby affording a favourable nidus for the growth of the fungus. It must be borne in mind that the mucorineæ, unlike the schizomycetes, can thrive in acid liquids, and may therefore grow with impunity in the stomach. The case is of great importance, as showing that if they do gain access to the interior of the body, these fungi may be a source of danger and lead to a fatal result, thereby disproving the usually accepted notion of their harmless character.

WELLINGTON COLLEGE.

THE melancholy illness which during the past week has terminated two valuable lives at Wellington College appears to be a continuation of similar sad events occurring during the past four years. One of the pupils at the College, Percy Edmund Leopold Cust, aged fourteen, the orphan child of a distinguished English family, whose services to the country had already secured for him marks of Royal favour (for he was page of honour to the Queen), which in due course must have ensured for a youth of his promise still greater honour and dignity, died on the 24th ult. The other death quickly following this was that of the Rev. C. H. Lane, Bursar and Tutor to the College, and formerly of St. Catherine's College, Cambridge. Both were stricken down in the fulness of health, strength, and active life, and on the fourth day from the commencement of their illness it proved fatal. The nature of the disease was such that speedy interment had to be effected. Our readers will remember that in January and February of the present year we published a lengthened correspondence between the Hon. Colonel Talbot (Vice-President of the College), Mr. Barford (who for more than twenty years had been medical officer to the College), and Mr. Baldwin Latham (who had been engaged to carry out an improved system of sewerage, sewage irrigation, and water-supply). While, on the one hand, the Vice-President, on behalf of the Governors, admitted the existence of some local cause producing a series of deaths from "blood-poisoning," Mr. Baldwin Latham, on the other, contended that his system of sewerage, sewage irrigation, and improved water-supply had effectually removed these local causes of disease for the future. That the Governors of the College were earnestly determined to effect this at any cost was evident at the time, nor could otherwise be expected from so distinguished a body. Mr. Barford took exception to Mr. Baldwin Latham's system of sewerage, irrigation, and water-supply, pointing out at the time that the engineer had scarcely touched the fringe of the difficulty. Hope was held out that thenceforth grave and fatal illness would be banished from Wellington College. Mr. Barford felt justified from his long experience in predicting otherwise, and the sad events of the past week appear to leave but little doubt that his views were correct. The Governors of Wellington College must feel that, earnest and great as their efforts have been to rescue the institution from the suspicion with which it had come to be regarded, two fatal cases of illness in one week cannot do otherwise than cause anxiety among the parents of the boys committed to their charge. His Royal Highness the Prince of Wales, as President of Wellington College, is not likely to permit such events to pass without a full and impar-

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tial public inquiry being made, having equal regard to the medical and the sanitary aspects of this question. If Wellington College is to be visited perennially by disease and death, the question may well be asked, What is to be its future?

SHOOTINGS FOR LUNATIC ASYLUM PATIENTS.

A PARAGRAPH in the *New Moon* of October, 1884, a periodical published at the Dumfries Asylum, tells how 2000 acres of moor have been taken for shootings for the patients, and gives the name of a patient who was out shooting, and the bag made. The advisability of placing loaded guns in the hands of patients who are under certificates of lunacy, and detained as inmates of an asylum, is a question open to a considerable amount of diversity of opinion. The uncertainty of mental disease is known, also the frequency of sudden relapses in convalescents, and the impulsiveness of action in such cases is recognised. The physician who prescribes shooting for his insane patients must have a thorough belief in his knowledge of his cases, and in his own judgment. It is to be hoped that the attendants who accompany the shooting parties are well paid for the risks they run, and have their lives insured in accidental offices. Though the terms of the charters of most of the endowed asylums are not generally known, yet the tenour of the benefaction, in most instances, was intended to enable sufferers from mental disease, educated though poor owing to the calamity of their diseases, to enjoy medical treatment and social comfort suitable to their former position. Very properly, there have been of late years advances in the ideas of social comfort, and seaside houses and addenda of like description are now connected with asylums of this class. Occasionally remarks have appeared pointing out that some endowed asylums, neglectful of their true work, lay themselves out to attract rich boarders. Trustees and directors of endowed asylums should clearly keep before them the beneficent aims of original founders, and should not in any way be themselves the means of bringing an inquiry on themselves such as has been the case in some other endowed charities.

REGINA v. C. F. J. B. BRIGGS AND E. BRIGGS.

IN THE LANCET of Nov. 29th there appeared a letter from Mr. T. Bond, F.R.C.S., calling attention to the above case, which was tried at the last Nottingham assizes, when the male prisoner was sentenced to twenty years' penal servitude. We have now gone carefully through the depositions, and, much as we regret to challenge the accuracy of the conclusions drawn by the medical witnesses, we feel bound in the interests of justice to enter a protest against the statement that "death had been induced from want of sufficient food," and that "the absence of fat indicated a want of sufficient food." It appears that the deceased, Thirza Briggs, the wife of the male prisoner and the daughter-in-law of the female, had been ailing for some time, and that she had frequently complained of unkind treatment at the hands of both prisoners. On one occasion she wrote a letter to a witness at the trial, saying that she was being starved. Evidence was also adduced that she frequently partook of nourishment provided by the neighbours, and that too until a short time before her fatal illness. Concerning the general facts of the case, as sworn to before the magistrates and at the assizes, we have little or nothing to say; but we contend that the symptoms observed during life, and the post-mortem signs noticed by the medical men who conducted the autopsy, were not inconsistent with death having arisen from natural causes. "On Sept. 28th deceased fell down in a fit, and on Oct. 3rd she died comatose." The fit was believed by the medical attendant to be apoplectic in nature. There was paralysis of the *left* arm and leg. Post mortem the *right* side of the brain was seen to be congested, and two tablespoonfuls of cloudy serous fluid were removed from the base of the skull. Finding no trace of hæmorrhage in or upon the brain, the doctors concluded that the cause of the apoplexy was the pressure of the fluid upon the medulla oblongata and pons Varolii, and that the "serous effusion" was the result of starvation. In the first place, we join issue with the doctors on their interpretation of the facts observed. The fluid seen at the base of the skull was probably what had escaped from the ventricles during removal of the brain. The quantity, too, was, in our opinion, quite insufficient to bring about fatal compression. It is generally conceded that a slight increase in the cerebro-spinal fluid, such as was found in this case, is rather evidence of the mode of dying than of the cause of death. One thing is quite clear, it did not account for the unilateral paralysis. What, then, was the cause of the *left* hemiplegia? We will answer this question by another, What was the cause of the congestion of the *right* side of the brain? The deceased, be it remembered, was, from her own account, the subject of rheumatism, and at her age she was not unlikely to have cardiac valvular affection. We are aware, on the other hand, that the heart was declared to be healthy—that there were no vegetations on the valves. Still the origin of the "brain trouble" requires explanation, and we maintain that, in the absence of hæmorrhage, the cause was to be sought in the cerebral arteries, which were probably plugged with emboli or thrombi. With regard to the intussusception of the small intestine seen at the autopsy, that was probably a post-mortem phenomenon. We do not cast the slightest imputation upon the credit of the medical men, nor suppose that they acted other than from the dictates of conscience; but we prefer sooner to "believe a dozen honest men deceived than a law of nature reversed." If the conviction, and its consequent severe sentence, were founded upon the post-mortem testimony, we fear that there has been a serious miscarriage of justice, and we hold that the Home Secretary would be well advised to further investigate the case.

MEDICAL EDUCATION IN THE UNITED STATES.

THE mushroom-like growth of medical schools in the United States is a matter of concern, and almost of shame, to all who value the public health or the dignity of the medical calling. Our own Legislature is so nearly helpless at present in regard to medical education, and the bodies which test it, that we speak with some moderation. But in the United States things are much worse. In that "unhappy country," as Artemus Ward would say, every State does that which is right in its own eyes, and the greatest laxity prevails in the conditions of medical licensing. An important Report has lately appeared on the subject from a Commissioner of Education, General Eaton, which at least has the advantage of directing attention to the system of medical education from colonial times down to the present. The steady increase in the number of institutions, instructors, and students is ominous. Thus, in 1873, the number of institutions was 94; in 1882, 134. The number of instructors in 1873 was 1048; in 1882, 1946. The number of students in 1873 was 8681; in 1882, 15,151. The great evil there is as here, only greater—the number of competing schools and the tendency to lower or dispense with the entrance examinations. General Eaton says, "They do not like to establish effectual entrance examinations (which might force some candidates to defer the study of anatomy and chemistry until they had mastered the simpler mysteries of reading and writing), because they do not want to limit the number of doctors by artificial regulations." This is a curious view of entrance examinations, that they are "artificial regula-

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tions." The expression is quoted by General Eaton from the address of a widely known and much respected teacher and author. The old idea that a physician should be a man of letters and learning as well as of art has been there dissipated by the action of the competing schools. We must not omit to notice honourable exceptions given by General Eaton, the University of Pennsylvania Medical School, Harvard, the Chicago Medical College, and the New York Women's Medical College. In these institutions preliminary education is courageously enforced and more elaborate courses of study are required. We urge on the governing bodies of the United States the immediate importance of this question in the interest of the citizens. It is no mere question of professional jealousy. It is a life and death matter.

THE HEALTH OFFICERSHIP TO NOTTINGHAM.

THE appointment of a medical officer of health to the borough of Nottingham is now engaging the attention of the council and citizens of that town. A number of candidates have come forward for the post which Dr. Seaton has ably filled for some years, and which is now rendered vacant by his appointment to the health officership to Chelsea. Among other candidates are Dr. B. A. Whitelegge and Dr. Handford. Dr. Whitelegge, who is a graduate in medicine and science of the University of London, has devoted much time to the study of public health questions, and is well known for his excellent work in connexion with the Mansion House Council on the Dwellings of the Poor. If elected, he would bring to bear upon his duties an unusually well-trained mind and considerable experience. Dr. Handford, who is a graduate of Edinburgh, has also special sanitary knowledge, and is well known to many of the residents of Nottingham.

OVER-PRESSURE IN SCHOOLS.

THERE is more than a probability that the inquiry concerning this subject, instituted most unwillingly by the London School Board, will be either burked or conducted with closed doors, so that no good result can be obtained so far as the movement as a whole is concerned. We anticipated this miscarriage of prudence and honesty, and therefore are not in the least degree surprised by the news that reaches us. The Educational Department of the Privy Council will, of course, be quite contented with any arrangement which will secure a report as—well, let us say as little—satisfactory as that of Mr. Fitch. Nevertheless, the question which has been so boldly and effectually raised by Dr. Crichton Browne will not be brought to an issue by such trifling; and we venture to suggest that, in the interests of common sense and self-respect, the School Board for London should not allow its committee to play the part of cat's paw to any Department.

WASHHOUSES AND INFECTION.

A MEMBER of the National Health Society has rendered good service to the cause of sanitation and to his fellow citizens in a letter advocating the thorough disinfection of the clothes of cholera patients in the washhouses to which they may be sent when soiled. He draws attention to the statement in a daily paper, that no such measures have been instituted in Paris up to the present time, and quotes the experienced testimony of Professor Tommasi Crudeli in proof that very simple means applied to this purpose sufficed to limit the spread of the epidemic in Palermo in 1866. In Paris, it is stated, the clothing is brought from the foci of disease to the laundry, is washed in water which is merely warm, and without any further process besides that of drying thoroughly ?) is returned in the very vans by which it came. The last point indicates another glaring error. We understand, moreover, that it is not, except in the present instance, a Parisian fault, but that even in London clothes disinfected, for example after fevers, by professional disinfectors, are removed impure and restored after purification, sometimes by one and the same vehicle. We may be allowed to question whether this conveyance is cleared of all contagion after every journey. The suggestion as to the due cleansing of laundry clothing is a valuable one in connexion with a possible invasion of our own country by cholera. The means to be employed should be such as to ensure perfect dryness, which alone, according to Dr. Koch, is sufficient to kill the germ of contagion. Dry heat of a high degree may best be relied on for this purpose, and with this we would strongly advocate the combination of an additional security by antiseptic fumigation. The clothes should be subjected to the process before washing as well as after it, since the protection of laundry-women must not be overlooked. The careless employment of a few carts for indiscriminate carriage requires no words of ours to indicate its remedy.

LOW REMUNERATION OF MEDICAL OFFICERS OF PROVIDENT DISPENSARIES.

THE supporters of the West Cheshire Provident Dispensaries, including Mr. Vacher, the borough medical officer of health of Birkenhead, seem well satisfied with the progress of the institution. The number of members increases, as well as the amount of medical work. What continues to be doubtful is the advantage to the medical officers. This point seemed to weigh on only one of the speakers, at a recent meeting, the Rev. Canon Robson, who said "he was afraid their medical staff in Birkenhead did not get much out of the institution for their work for the good of the people, but he hoped its increasing success would compensate them." We hope so, too. A provident dispensary that does not pay its medical officers well is not worthy of the name.

LAYING STRAW IN THE STREETS.

WE regret that it should have been deemed necessary to suggest to parochial authorities the opportunity which exists for making a show of power, and thereby endangering the life, it may be, of some sufferer, by refusing to permit the laying of straw in the streets. This is one of those short-sighted interferences with the liberty of the individual which do infinite harm. Granted that there may have been a few isolated instances of needless straw-laying, far less injury was done by such excess than will be done by the delay now instigated. We repeat that we exceedingly regret the suggestion which has been made by Mr. Blyth, the medical officer of health for Marylebone. It will be productive of endless and wanton injury to poor sick folk, who in the streets of London can scarcely enjoy an hour's repose by day or by night. Whenever and wherever a registered medical practitioner recommends that straw should be laid down, permission ought to be granted without delay or objection.

REMARKABLE CASE OF HYPERTROPHY.

AT the Pathological Society, on Tuesday last, Mr. F. Treves exhibited an extraordinary living specimen of congenital deformities. The case was that of a man aged twenty-four, who was born at Leicester, where he was exhibited as the "elephant" man, and there is a certain amount of reason for such designation. The enormous hypertrophy of all the soft and osseous tissues of the right upper extremity formed the strongest contrast with the normal left limb. Projecting buttresses of hard bone distort the normal shape of the head so as to give a hideous expression to the countenance, which is not

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made less repulsive by the great hypertrophy of the right superior maxilla, which almost obliterates the oral cavity, though the patient stated that he could swallow easily. Large pendulous masses of fibro-fatty tissue, with hypertrophy of the skin, hung down in huge folds from the back and buttocks; in many parts the altered skin was decidedly papillomatous. The right lower extremity was out of all proportion to the left. The man's intelligence was apparently up to the average, so that he was not, like Caliban, "as disproportioned in his manners as in his shape." Mr. Hulke spoke of a case recorded by Mr. G. Pollock, in which large pendulous masses gave the body of a man a most ponderous appearance. Virchow, in *Die Krankhaften Geschwülste*, has pictured similar deformities.

THE HOSPITAL SUNDAY AND SATURDAY FUNDS.

THERE are one or two satisfactory features about the Report of the Hospital Sunday Fund for the current year. The first is the increase of 108 in the number of collecting congregations as compared with the previous year. Another is the contribution of £4500 from the Prince of Wales, as President of the International Health Exhibition. We may be excused for singling out another noble feature of the collection of 1884—namely, the contribution of £1087 by one congregation, that of Canon Fleming, of St. Michael's, Chester-square. We cannot doubt that such a collection implies not only generosity on the part of the congregation, but trouble and care on the part of the Canon to facilitate the action of such generosity. The example is one that cannot be too faithfully followed by other congregations. The Hospital Saturday Fund awards have been made, and are published. The sum distributed, £9000, we are glad to say exceeds that of the previous year by £750. Amongst the principal awards are the London Hospital, £555 1*s.* 6*d.*; Brompton Hospital for Consumption, £650 4*s.* 8*d.*; St. George's Hospital, £291 5*s.* 8*d.*, &c.

NEEDLESS NOISES IN LONDON.

AT the very time when a medical officer of health is, we regret to find, "putting up" local authorities to refuse permission for laying straw in the streets for the salvation of the sick who are racked on their beds of suffering by the rattling of cabs and waggons, a layman has started the excellent notion of forming a fund for the prosecution of engine drivers, or their employers the companies, for needless whistling. A contemporary, applauding the idea, and predicting that a fund will be quickly accumulated, suggests that the area of reform should be extended, and that the incessant ringing of church bells should be put down with an equally strong hand.

GERMAN COMMISSION ON VACCINATION.

WE learn that the German Commission appointed to inquire into the subject of vaccination has, with the exception of the three members opposed to vaccination, unanimously declared for vaccination with humanised lymph rather than with that from the calf. At the present moment we do not know upon what grounds this preference depends, but we assume that the fact is recognised that *direct* vaccination—i.e., vaccination with lymph which is not stored—"takes" far better, and therefore gives much more protection against small-pox, than vaccination with stored lymph. Vaccination with calf lymph throughout the country must necessarily be performed with stored lymph; but direct arm-to-arm vaccination with humanised lymph is a possibility everywhere. Calf lymph has its use in enabling practitioners to renew their stock, and also in giving opportunity for the direct vaccination of numbers of persons in large centres of population. If in future it can be found that calves can be inoculated with small-pox virus and the virus modified by such transmission through the animal, it is probable that the use of calf lymph will serve this purpose more than heretofore.

WILFUL "EXPOSURE OF SMALL-POX."

WE should like to see the opinion of a court of justice taken upon the folly of compelling a jury to view the body of a patient who died of heart disease when suffering from small-pox at the Western Hospital, Fulham. It would be interesting to ascertain whether or not the act of exposing the body of a small-pox patient to the jurymen was a breach of the Act which imposes a fine for the exposure of a patient suffering from small-pox in any public place. A hospital is not public, but if the public be brought into a hospital that makes it a public place. The inquest was wholly unnecessary. We think the jury or some of its members should try the case.

THE LATE DR. MAHOMED.

WE understand that it is proposed to hold a representative meeting at Guy's Hospital on Wednesday afternoon, Dec. 10th, at 4 P.M., with a view of concerting measures for giving substantial expression to the appreciation in which the memory of the late Dr. Mahomed is held by those who have been his colleagues, fellow-workers, and friends. It is earnestly hoped that as many as possible will attend.

ENTRIES AT THE DUBLIN MEDICAL SCHOOLS.

THE total number of students who have entered for the session 1884–85 amounts to 790, being a decrease of nine as compared with last year. Of the five medical schools, two show an increase, two a decrease, and one has exactly the same number as last session. The following are the returns:—School of Physic, Trinity College, 229; Ledwich, 213; Catholic University, 120; Carmichael College, 117; Royal College of Surgeons, 111.

BACILLI IN SYPHILIS.

THE discovery of bacilli in syphilitic lesions is announced by Dr. Lustgarten (*Wien. Med. Wochensch.*, No. 47). His researches, which were made in Weigert's laboratory at Leipsic, consisted in a special method of preparation and staining of sections of primary chancres and a gumma. In all were found isolated or in small groups, slender, straight or slightly curved bacilli, much resembling tubercle bacilli. The organisms were embedded within swollen lymphoid cells, and exhibited transparent spots, which resembled the "spores" of Koch's tubercle bacillus.

CASE OF EXCISION OF TUMOUR OF BRAIN.

THE latest information about this case is that the surgical condition of the wound is causing some anxiety; otherwise the man is in a satisfactory state. He has not had any violent pain or convulsion as before the operation, and his intelligence is perfect.

A MONUMENTAL brass to the memory of the officers, Army Medical Department, and non-commissioned officers and men, Army Hospital Corps, who lost their lives in Egypt in the years 1882–83, has just been erected in the Chapel of the Royal Victoria Hospital, Netley. The Memorial was raised by subscription among those officers of the department and corps who served in Egypt during that period. Messrs. Mathews and Hodgson, of Regent-street, London, executed the work.

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A MOVEMENT is on foot among present and past medical students of Cambridge University, and more especially those connected with Addenbrooke's Hospital, to raise a permanent testimonial to Dr. George Edward Paget, F.R.S., Regius Professor of Physic, late President of the General Medical Council of Education and Registration, in recognition of his great services to the profession in general, and to that department of university study in particular. It is proposed that the testimonial shall take the form of a statue, with a bust of the professor, to be placed in the grounds in the front of Addenbrooke's Hospital.

IT appears that the reports of the fatal epidemic which recently broke out in some remote counties of South-West Virginia and East Kentucky were not exaggerated. According to the latest reports it is estimated that 2000 persons have perished from the disease, which was, however, not of a contagious character. The use of water unusually impregnated, in consequence of evaporation, with salts and mineral products, is believed to have been the cause of the disease.

ON the 30th ult., the death occurred of Sir Alexander Grant, Principal and Vice-Chancellor of the University of Edinburgh, from an apoplectic attack with which he was seized on the 29th ult. Sir A. Grant was born in New York in 1826, and was educated at Harrow and Balliol College, Oxford, afterwards becoming a Fellow of Oriel College. In 1856 he succeeded his father as ninth baronet.

THE deaths are announced of two renowned physiologists—viz., Prof. v. Vierordt of Tubingen, and Prof. von Wittich of Königsberg. The former had long given up teaching, but it is only recently that the latter resigned his chair owing to ill health.

AT the quarterly general court of the Governors of the Middlesex Hospital, held on the 27th ult., Dr. David W. Finlay was elected additional full physician to the hospital. This will create a vacancy in the staff of assistant physicians.

DR. KOLBE of Leipzic, whose name is associated with the chemistry of salicylic acid, has recently died.

PROFESSOR C. Y. PEARSON has been appointed lecturer on Forensic Medicine in Queen's College, Cork.

CHOLERA is stated to have broken out in the French fleet blockading Formosa.

MR. FREDERIC S. EVE, F.R.C.S., has been elected Assistant-Surgeon to the London Hospital.

SANITARY ASSURANCE ASSOCIATION.—On the 3rd inst. Dr. Norman Chevers delivered an address at the Parkes Museum, W., on the objects of the Sanitary Assurance Association. Dr. Chevers urged that the sanitary condition of London was such that no householder should be satisfied without the assurance of some competent authority that his dwelling, whether a palace or a cottage, was free from drain contamination. He expressed an opinion that consumption was hereditary principally because successive generations neglected to remedy the sanitary defects from which their forefathers suffered, and pointed out that unless dwellings were properly disconnected from the main sewers, such sewers might prove to be of the greatest possible danger to the whole community in case of any epidemic. Sir William Robinson, Surgeon-General Perkins, M.D., Mr. Mark H. Judge, A.R.I.B.A., and others having spoken, votes of thanks were passed to Dr. Chevers and the chairman, and the meeting terminated.

Pharmacology and Therapeutics.

THALLIN.

THE industry of continental chemists in the application of the synthetical methods to the formation of new compounds has brought to light a new antipyretic agent, which appears to have been used successfully in a large number of cases in the clinic of Professor Nothnagel. It has the constitution of a secondary chinoline base, being one of a number of chinoline derivatives prepared by Professor Skraup, and is represented by the systemic name, "tetrahydroparachinanisol." The salts of this base, which have an acid reaction, are freely soluble in water, and have the property of forming green compounds when treated with solution of ferric chloride and oxidising agents. On account of this peculiarity, the cumbrous systemic name has been dropped in favour of the shorter designation, "thallin." The hydrochlorate, sulphate, and tartrate of thallin and the hydrochlorate of ethyl thallin are the salts that have been employed, and these are said to show great antipyretic activity in doses of quarter, half, and three-quarters of a gramme, a point in which thallin would seem to compare favourably with some of its competitors. The lowering of the temperature is said to take place gradually and to last a considerable time, whilst it is not accompanied by any secondary disturbances. Thallin can be conveniently administered in wafers containing a quarter or half of a gramme of the sulphate. Two other chinoline derivatives have been experimented with; one of them has but slight antipyretic properties, whilst the other was fatal to guinea-pigs in doses of from ·2 to ·6 gramme, violent tetanic seizures being excited.

ALKALOIDS OF QUEBRACHIO.

For a long period of time the inhabitants of South America have employed quebrachio on account of its febrifuge, tonic, antiasthmatic, and astringent properties. White quebrachio, of which three species are recognised, is a tree belonging to the family of apocynæ which abounds in the Argentine Republic. Penzoldt in 1879 proved that a decoction of the bark slowed the pulse and diminished the frequency of respiration, but he noted no antipyretic effects. Berthold and Picot confirmed these results. The value of one of the alkaloids, aspidospermine, discovered by Fraude, in relieving dyspnœa has been corroborated by a number of independent observers. Hesse has determined that there are as many as six alkaloids in the aspidospermine of commerce. MM. Eloy and Huchard have separated the alkaloids in a state of purity, and have made a series of thirty-six physiological experiments in reference to their antithermic action. The experiments were made on rabbits, guinea-pigs, and dogs by means of subcutaneous injections. All the alkaloids were found to exercise a marked antipyretic action. A remarkable effect was also observed to occur in the colour of the venous blood, which became of a vermilion red tint like that seen after poisoning by prussic acid and carbon monoxide. Subcutaneous injections of from ·10 to ·20 centigramme of the hydrochlorate of aspidospermine in patients suffering from typhoid fever appeared to lower the temperature in cases where quinine had had no effect. Lactate of aspidospermatine is a more powerful alkaloid in reducing the temperature than hydrochlorate of aspidospermine; the sulphate of hypoquebrachine and the lactate of quebrachine are still weaker antipyretics.

VAPOUR OF GLYCERINE.

According to an account in the *Gazette Médicale de Nantes*, M. Trastour has employed with great advantage the vapour of glycerine whenever a distressing or frequent cough has had to be alleviated. The remedy is very simple in application. About fifty to sixty grammes of glycerine are heated in a porcelain capsule by means of a spirit lamp; a large volume of vapour is thereby disengaged, and should be breathed by the sufferer. Glycerine, in which carbolic acid has been dissolved, may also be employed. The cough of phthisis and the irritation in the throat of many complaints afford proper trials for these remedies.

HYDROCHLORATE OF PAREIRINE.

In an interesting memoir on the therapeutic value of certain drugs contained in the Brazilian Pharmacopœia, M. Ferreira has drawn attention to the value of hydrochlorate of pareirine in the treatment of cases of paludism

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which prove refractory to the use of quinine. The dose of two grammes a day of the salt is proposed for chronic cases dependent on latent ague, and the dose may be doubled where the acute stages have to be dealt with.

CARBOLIC ACID IN AGUE.

The recommendation of a more frequent trial of subcutaneous injections of a 1 per cent. solution of carbolic acid was made recently by M. Dieulafoy at the Société Médicale des Hôpitaux. He had employed the method in an obstinate case of tertian ague. The remedy, which is by no means new, is employed twice or thrice daily in doses of from two to three centigrammes of the solution above indicated.

TREATMENT OF INTESTINAL OBSTRUCTION.

A DISCUSSION AT THE

LIVERPOOL MEDICAL INSTITUTION.

Dr. GEE, President, in the chair.

DR. HYLA GREVES opened the discussion by reading the notes of a case of intestinal obstruction by an abnormal appendix vermiformis, which was under his care at the Children's Infirmary, and which was operated upon by Mr. R. N. Pughe, and recovered. C. B——, aged six, a strong healthy lad. He had frequently suffered from attacks of constipation, which sometimes lasted a week, and on one occasion a fortnight, without a motion. On July 6th he was seized with violent pain in the abdomen, vomiting, with absolute constipation. Purgatives were administered without effect. He was brought to the Infirmary for Children on the fourth day. He was then suffering from severe pain in the right iliac region, where there was a distinct and localised feeling of resistance, which was quite resonant on percussion. No hard tumour could be felt. Rectal examination revealed nothing. He vomited everything. Constipation was absolute. An enema (given in the out-patient room) failed to give relief. On consultation it was decided to perform abdominal section. This was done on the fifth day of obstruction by Mr. Pughe. About twelve inches of small intestine were found to be tightly strangulated by an abnormal appendix vermiformis, whose free end had become fixed to the iliac fossa, forming a complete ring, through which the small intestine had slipped and become strangulated. This ring was divided, and strangulation relieved. The intestine was deeply congested and distended; there was no peritonitis, however. Pain and vomiting were at once relieved. The patient was fed entirely on filtered beef-tea and Valentine's extract. No milk was allowed. On the fifth day after the operation the bowels acted spontaneously for the first time. He was then allowed a little solid food. He did not have a single bad symptom after the operation, and he made a perfect recovery. When last seen, on Oct. 25th, he was in robust health. In the treatment of the early stages of acute intestinal obstruction Dr. Greves deprecated the employment of purgatives, abdominal taxis, insufflation, &c. Enemata, if used at all, should only be employed at the commencement of intussusception when the diagnosis was clear. He insisted on the necessity of withholding all solid food, including milk. Filtered beef-tea in small quantities, ice, &c., are amply sufficient to maintain life during the anxious period. Morphia should be given in proportion to the pain; unless the diet be strictly limited, opium is of no use. It is best given by the mouth, unless there be much vomiting; in the latter case morphia subcutaneously administered is better. A surgeon should be consulted early; advice is generally called in too late for any chance of operating successfully. When the symptoms of absolute obstruction exist, and their onset is sudden, a definite diagnosis as to the actual cause of the obstruction is not a *sine qua non* for operative interference. Therefore when, in spite of a short trial—e.g., two or three days—of palliative treatment, a strictly limited dietary, opium, raising of the foot of the bed (to encourage the gravitation of fluid towards the thorax and away from the site of strangulation), &c., the tongue becomes dry and brown, vomiting frequent and persistent, the pulse, though perhaps decreased in frequency, becomes weaker, abdominal section should be performed, care being taken to guard the patient against shock during the operation by protecting the intestines with hot antiseptic cloths, and maintaining the air of the operating room at a high temperature, &c. The after-treatment must resemble in its essentials that recommended for the earlier stages. No solid food by the mouth till the bowels have acted spontaneously should be taken.

Dr. WATERS remarked on the importance of the subject and the interest attaching to all cases of intestinal obstruction. He dwelt on the value of correct diagnosis, on its extreme difficulty in many cases, and its impossibility in some. The man who would hastily assume that obstruction depended on this or that cause, without very careful observation, would be liable to commit a gross error. He thought that in all cases where surgical interference was not directly indicated medical treatment should be fairly tried. The treatment which he adopted was absolute rest, complete or almost complete abstinence from food, and the exhibition of opium and belladonna. These latter he generally gave by the mouth, but in some cases subcutaneous injections might be preferable. This treatment he continued till the acute symptoms subsided, and then he gave large enemata. He deprecated very strongly the use of purgatives. Under such treatment as he had referred to a large number of cases would recover. If it failed, the failure would be due to the presence of some organic lesion. Allusion had been made to the gravity of fæcal vomiting as a symptom. It did not necessarily indicate organic obstruction. In a case recently under his care the vomited matter had a distinctly fæcal odour. The vomiting ceased after the exhibition of a dose of calomel, and soon after the bowels acted. The patient recovered. Dr. Waters mentioned a case, illustrative of the great difficulty of diagnosis, in which no sign of organic obstruction could be made out, and when after death it was found that rupture of the colon had taken place with escape of the intestinal contents into the structures behind it.

Mr. BANKS considered that two serious difficulties would always present themselves in connexion with the question of operation, the first being difficulty of diagnosis. After eliminating the more obvious causes of obstruction, such as impaction of fæces, intussusception in young children, and cancerous or other growths in the adult, capable of being felt, he believed that in all the other cases anything like a certain diagnosis was impossible, and that in his own instance he now, after considerable experience, felt no more certainty about pronouncing upon the nature of the disease than when he first began. In the only case in which he had operated the symptoms pointed in a very clear manner to one affection, but when the abdomen was opened a different and totally irremediable condition was found. The second difficulty consisted in the fact of spontaneous recovery under the opium, rest, and starvation treatment, which had now for many years been the recognised practice. As everyone of any experience knew recoveries took place under such treatment after obstruction had existed for weeks, so that he felt that an indiscriminate employment of the operation would result, for the most part, in the finding of conditions which either could not be relieved or which in time would have relieved themselves if left alone. On the other hand, while deprecating rash interference, he freely admitted that the post-mortem table every now and then showed us, to our great mortification, conditions which might have been relieved by early operation. At the present moment our pressing urgency was more knowledge in the way of clearly defining this limited class of cases. While he trusted that time would improve our means of diagnosis, at present he would only operate, to put the matter in the simplest possible way, in the case of a child or healthy young adult, suffering from all the symptoms of an acutely strangulated hernia, but in whom a hernia could not be found.

Mr. H. O. THOMAS, after expressing satisfaction at the mode and result of the medical and surgical treatment adopted in the case related to the meeting, then offered as a solution of the propositions laid before the members the following. That primary treatment should be directed according to the natural attempts at resolution, which in essence was similar to the Sydenham method; the dietary being all important, and the medicine secondary only. Stated in a general way, the treatment should be directed towards controlling medically and supplementing surgically the automatic efforts of nature at resolution, not supplanting them. The symptoms of obstruction, if they are carefully analysed, enable us to use means which give the patient the best chance of escape

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from his difficulty. During the early period of obstruction he suffers principally from pain, thirst, vomiting, and loss of appetite. Then let the pain be neutralised, which must extend the patient's period of endurance of the disease. Thirst must be satisfied, and the liquid, if containing no ingesta, is of service in helping to remove the matter loading the bowels above the obstruction. The means used to allay the vomiting will allow the fluid to be retained long enough to mix with the regurgitated fæcal matter, and so assist in its expulsion by the mouth. The loss of appetite is accepted, and no food is offered; but should the appetite return ere our purpose has been secured, then the quality of the nutriment must be selected. Manipulation should under no circumstances be attempted. Concerning operative measures, it was his opinion that to operate for diagnostic purposes was only to endanger the many and perchance save the few. These cases belonged to the department of medicine, the surgeon was a mere assistant. The period for operation was when the physician observed that his remedies failed to beneficially influence the complaint all round. For instance, though pain might be lessened, vomiting moderated, temperature lowered, yet should the tongue appear brown and dry, and the pulse, despite the sedatives, decrease in volume although reduced in rate, then the surgeon ought to be requisitioned. In deciding when to operate, it was not a question of period, but a question of signs that should influence our decision to operate or not. An operation may be required in a few hours or it may not be required for weeks. If the Sydenham method was adhered to from the beginning of the illness, urgent signs never appeared before the third day. Cases in which the signs of obstruction were due to a sudden invasion of the peritoneal cavity of a septic fluid were exceptions to the foregoing rule; but even then, if the leakage were slow, they did not show early signs of urgency. The medical treatment of the past, which was mostly mechanical, ought to be credited with much of the ill success of operative measures for the relief of obstruction. Better medical treatment would be an advantage in place of hindrance to successful surgery. He considered that it was most difficult to arrive at a correct differential diagnosis; but this was of very little importance to the surgeon, and of still less to the physician.

Dr. CARTER thought it necessary to remember that Mr. Durham, whose statistics Dr. Greves had quoted, made on these statistics two most important observations—viz.: (1) That they did not represent the true proportion of mortality, as gentlemen were so much more ready to publish their successful than their unsuccessful cases; and (2) that though in nearly every one of the fatal cases the operation as such was successful and the obstruction overcome, yet the patient sank. From this he (Dr. Carter) thought that any anticipation of success based on Dr. Greves' single case would be unfounded, and that probably the next case, even though in every particular similar, would have a different end. Having looked over his own hospital post-mortem records he could only find one case where it was in the least likely that abdominal section could possibly have done good; while in several others, which he briefly sketched, it would certainly have hastened the inevitable death. The great difficulties were to determine the situation and the nature of the lesion, and whether it was simple or multiple. He deprecated strongly the use of enemata, illustrating their harmfulness from a hospital case which had occurred in 1877. He considered that rest, position (such as raising the end of the bed so as to diminish the pressure of the liver on the intestines), opium, a very restricted fluid diet, and warm applications to the abdomen should be first tried, but that if, notwithstanding these, the symptoms became more grave, abdominal section should be performed, provided that, after consultation, it was thought likely to give the patient a chance of life.

Dr. CATON remarked that so far as his experience extended, a majority of the cases of obstruction recovered, if kept quietly in bed, on a limited diet, under the influence of belladonna and opium; a minority, however, die under this treatment. He had had one case in which the autopsy showed that an operation might have saved life. The great difficulty is to know when to rely on the expectant and when to have recourse to the operative method of treatment. Diagnosis is made rather easier if a resistant solid body be discoverable in the abdomen. This may be a mass of impacted fæces, or a tumour, or an abscess, or a gall-stone, or other foreign body in the intestine, or it may be an intussusception. A consideration of the history, position, and characters of such solid mass will generally give much aid in determining its nature, and probably in none of these cases would operative interference be desirable unless, perhaps, in that of intussusception. On the other hand, there may be no solid body discoverable, or the abdominal cavity may be so distended with flatus that, if present, it is masked. The cause may in this case be one of the above-named conditions, but it is more likely to be strangulation, by the passage of a loop of intestine through a hole in the mesentery or omentum, or its capture by a band of lymph, or by a diverticulum, or by the vermiform appendix, with its free end tied down by adhesion; or it may be one of the forms of internal hernia. Under these circumstances the question is, Can the case wait? If the symptoms are urgent, with quick pulse, great pain and distress, and if the patient be young and healthy, it may probably be wise to open the abdominal cavity. But if it be possible to allay the symptoms by moderate doses of belladonna and opium, and thus to restore comparative quiet and comfort, more particularly when the patient is neither young nor vigorous, it is better to rely on these measures and to wait.

Dr. DAVIDSON said that while Dr. Greves' case was a very successful one, it was exceptional, and did not in his opinion justify the operation as a general rule. He was aware that some surgeons held that abdominal section should be the rule of treatment in cases of acute intestinal obstruction, notwithstanding the terrible mortality which had resulted from the operation according to past experience. They said that the previous mortality arose from the operation being resorted to too late; and they argued, moreover, that modern antiseptic surgery had made operations on the abdomen much more successful than in past times. He would reply that the successful abdominal surgery referred to was mainly for removal of the uterine appendages, and that the injury and exposure of the intestines in ovariotomy, and the consequent danger of peritonitis and septicæmia, were much less than where the intestines had to be tumbled about, and handled and examined in searching for the seat of an obstruction. Moreover, in ovariotomy the patient was carefully prepared for the operation, whereas the operation for intestinal obstruction had to be done when the patient, owing to the protracted constipation, was already affected by the absorption of poisonous material from the retained contents of the bowel. The two cases were not analogous, and the success obtained in ovariotomy could not be hoped for in intestinal obstruction. As to the propriety of operating early, he did not see how early abdominal section could be made the rule of treatment in most cases of acute intestinal obstruction, seeing the diagnosis of the cause of obstruction was so difficult and uncertain. Moreover, even the most unpromising cases not unfrequently ended in natural recovery.

(To be continued.)

THE PROGRESS OF CHOLERA.

IF we accept the official notifications issued as to cholera in Paris, the epidemic must be looked upon as over; but since the returns last issued showed that as many as 221 patients were still under treatment on the 23rd ult., the complete disappearance of the disease must be regarded as having been exceptionally rapid. Up to the same date there had been 900 fatal cases, 14 having occurred on the last day of the period referred to. But even if cholera does still linger anywhere in France, the cases are probably but few and far between, and it is to be hoped that no recurrence of the epidemic may now take place. Italy, too, may be regarded as free from cholera, unless indeed the rumour of a fresh outbreak in Treviglio and near Turin be true; and as a consequence the political aspects of the disease and of quarantine are once more in the ascendant. It is with reference to this, and to the tenacity with which Italy clings to the notion of establishing a special quarantine system in connexion with traffic through the Suez Canal, that a proposal is being made to erect a lazaretto at Brindisi at a cost of 7,000,000 lire. One thing, however, is tolerably certain—namely, that if passengers from India found that by the Brindisi route they were subjected to quarantine and all its vexations, the route would be forthwith altered, and Brindisi with its lazaretto would for the time be carefully avoided. Except in so far as

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Naples is concerned, there is as yet no detailed information as to a far more important expenditure of money—namely, in connexion with the removal of the conditions of filth, which in Spezzia and in other places enabled cholera to cling with such tenacity to the places it attacked. In Naples it is proposed to spend 100,000,000 lire, the expenditure to be spread over a period of twelve years.

Cholera still lingers in Toledo and Beniopa; there has also been a recent increase in Algeria.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Newcastle-upon-Tyne Urban District—Mr. Armstrong's reports on the health of this important city are always interesting, as showing that a large amount of sanitary work is steadily in progress year by year. In 1883 the birth and the death rates per 1000 living were 36·7 and 25·4 respectively. Under the system of compulsory notification of infectious diseases 2032 such cases were reported, these including 493 cases of small-pox, 90 of typhus, 216 of enteric fever, and 1152 of scarlet fever. The fact that so large a number of cases was brought under official cognisance gave a completeness to the inquiries as to infectious disease occurrence which had heretofore not been possible, even in a district where the investigations as to zymotic diseases had been exceptionally well conducted. Three hundred and eighty-four of the sick were removed to hospital, but the existing accommodation is not such as to meet the present requirements; two convalescents have contracted a second disease for lack of adequate isolation, and a new hospital is about to be erected. The authorities are also desirous to facilitate the isolation of paupers, and hence, in consideration of an annual allowance, they propose to receive all such cases free of extra charge. As many as 2045 cases of infectious disease have been inquired into with a view to disinfection, &c., a Washington Lyon's steam disinfector has been provided in addition to the Ransom's hot-air stove, and a large amount of disinfection and cleansing has been carried out. The dairies have received special attention; and owing to early notification four outbreaks of infectious disease in dairies came under notice, the necessary precautions were taken, and in no case did any spread of disease result. A very complete report has also been issued by Mr. W. George Laws, the city engineer, and Mr. Armstrong on the water-supply of the district. It commences with a history of the supply; it then enters into the principles which govern questions of water-supply generally, and goes on to describe in detail the existing works of the Newcastle and Gateshead Water Company. Mr. Laws arrives at the conclusions that the gathering-ground is a fairly good one, that certain reservoirs and aqueducts require additional protection from contamination, and that the increasing consumption makes it clear that an extension of gathering ground must take place. He also makes a few additional suggestions. Mr. Armstrong then deals with the subject from the point of view of health, and it is clear that he considers that the precautions at present taken to secure a water which shall be above all risk of contamination are not sufficient. He especially presses that conditions of drought are no excuse for an insufficient supply, and he recommends that the drought to be provided against should be one equal to only eighteen inches of rainfall per annum, such as occurred in 1850.

Southwell Rural District.—This rural district had a death-rate of 17·1 per 1000 in 1883; the zymotic rate being the lowest on record—namely, 0·6 per 1000. Five deaths occurred from fever, and in the old town of Southwell the presence of typhoid was found to be associated with the pollution of well-water by privy vault soakage. The report gives interesting information as to the principles which should govern sanitary work, and Mr. Wills supplies certain details as to action which has been taken.

Berkshire Combined Districts.—Dr. Woodforde's report on the sanitary condition of these combined districts is contained in one volume, and it is a record showing that careful supervision is maintained, and that steady progress is going on both as regards the construction of important sanitary works and the prevention of nuisances injurious to health. In the Abingdon urban district the population fail to avail themselves, as they should do, of the water-supply which has been laid on, still adhering to the use of wells sunk in the surface soil of the low-lying and ancient site on which so much of the borough stands. A wholesome supply, as also a sufficient supply for flushing, is thus wanting. Wherever the authority can do so—and in Abingdon not much difficulty should be experienced—they should insist on the use of the public service. Wallingford is also deriving its water largely from polluted wells, but some action has now been decided on. In other districts improved systems of scavenging and such matters are needed, but looking on the area as a whole it is evident that a vast amount of work has been carried out since Dr. Woodforde was first appointed, and also that further excellent measures tending to promote health are either in actual progress or in immediate prospect.

Ulverston Urban District.—Dr. Thompson reports a birth- and death-rate of 39·7 and 21·4 respectively per 1000 living. In connexion with certain fatal cases of enteric fever and diphtheria, it was found that the persons attacked with both diseases derived their milk from a common source, and it is pointed out that both diseases had simultaneously one common cause—namely, an infected milk-supply. It has often been suggested that enteric fever and diphtheria have much in common as regards causation, but we are not aware of any case in which it has been distinctly shown that a polluted milk was capable at one and the same time of producing both diseases. We could have wished, in view of the importance of the subject, that the histories of the cases had been given in much greater detail in so far as their etiology is concerned, and that proof had been adduced as to the exclusion of all other sources of infection. As to the cause of the enteric fever there is not much doubt, since that disease prevailed in the dairy farm, but with the diphtheria it is different.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5680 births and 3994 deaths were registered during the week ending the 29th ult. The annual death-rate in these towns, which had been equal to 20·9 per 1000 in each of the two preceding weeks, rose last week to 23·8, and exceeded the rate recorded in any week since the beginning of September. During the first eight weeks of the current quarter the death-rate in these towns averaged 21·1 per 1000, against 21·7 and 21·0 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 17·3 in Plymouth, 18·5 in Derby, 19·1 in Sheffield, and 19·4 in Brighton. The rates in the other towns ranged upwards to 28·7 in Manchester, 30·2 in Nottingham, 30·7 in Cardiff, and 31·6 in Bolton. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 369 and 391 in the two previous weeks, rose to 395 last week; these included 83 from measles, 76 from scarlet fever, 73 from whooping-cough, 53 from "fever" (principally enteric), 39 from diarrhœa, 37 from diphtheria, and 34 from small-pox. These zymotic diseases caused the lowest death-rates in Portsmouth, Plymouth, and Bristol; and the highest in Leeds, Preston, and Cardiff. The greatest mortality from measles was recorded last week in Bolton, Hull, and Cardiff; from scarlet fever in Leeds, Sheffield, and Salford; from whooping-cough in Oldham, Wolverhampton, and Preston; and from "fever" in Derby, Halifax, and Leeds. The 37 deaths from diphtheria in the twenty-eight towns included 16 in London, 6 in Liverpool, 3 in Nottingham, 3 in Cardiff, and 2 both in Birmingham and Leeds. Small-pox caused 50 deaths in London and its outer ring of suburban districts, 2 in Birkenhead, and 1 both in Leeds and in Cardiff. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had increased from 580 to 768 in the three preceding weeks, had further risen to 884 on Saturday last; the new cases admitted, which had been 233, 200, and 149 in the three previous weeks, rose again to 228 last week. The Highgate Small-pox Hospital contained 58 patients on Saturday last, 24 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 370 and 354 in the two preceding weeks, rose to 511 last week, and exceeded

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the corrected weekly average by 6. The causes of 108, or 2·7 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Newcastle-upon-Tyne, and in five smaller towns. The largest proportions of uncertified deaths were registered in Hull, Oldham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 22·3 and 26·2 per 1000 in the two preceding weeks, further rose to 28·6 in the week ending the 29th ult., and was 4·8 above the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 18·5 and 22·2 in Edinburgh and Greenock, to 31·9 in Perth, 32·1 in Paisley, and 36·9 in Glasgow. The 689 deaths in the eight towns included 30 which were referred to measles, 21 to diphtheria, 19 to whooping-cough, 14 to scarlet fever, 14 to diarrhœal diseases, 3 to "fever," and not one to small-pox; in all, 101 deaths resulted from these principal zymotic diseases, against 103 and 115 in the two preceding weeks. These 101 deaths were equal to an annual rate of 4·2 per 1000, which exceeded by 1·8 the rate from the same diseases in the twenty-eight English towns. The 30 fatal cases of measles, of which 21 occurred in Glasgow and 6 in Aberdeen, were fewer by 4 than the number in the previous week. The 21 deaths from diphtheria corresponded with the number in the previous week, and included 3 in Edinburgh, 3 in Leith, and 10 in Glasgow. The fatal cases of whooping-cough, which had been 16 and 27 in the two previous weeks, declined again to 19 last week, of which 12 occurred in Glasgow. Nine of the 14 deaths from scarlet fever, corresponding with the number in the previous week, were returned in Glasgow. Of the 14 deaths attributed to diarrhœal diseases, 5 occurred in Glasgow and 5 in Dundee. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 101 and 145 in the two previous weeks, further rose to 181 last week, and exceeded by 52 the number returned in the corresponding week of last year. The causes of 91, or more than 13 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had increased from 24·7 to 32·7 per 1000 in the four preceding weeks, further rose to 35·4 in the week ending the 29th ult., and exceeded the rate returned in any previous week of this year. During the first nine weeks of this quarter the death-rate in the city averaged 28·9 per 1000; the rate during the same period did not exceed 19·4 in London and 19·0 in Edinburgh. The 238 deaths in Dublin last week showed a further increase of 18 upon the numbers returned in recent weeks, and included 23 which were referred to the principal zymotic diseases, against 18, 25, and 39 in the three preceding weeks; 11 resulted from scarlet fever, 5 from diarrhœa, 4 from whooping-cough, 2 from "fever" (typhus, enteric, or simple), 1 from measles, and not one either from small-pox or diphtheria. These 23 deaths were equal to an annual rate of 3·4 per 1000, the rate from the same diseases being 1·9 both in London and in Edinburgh. The fatal cases of scarlet fever in Dublin, which had been 8, 10, and 16 in the three preceding weeks, declined to 11 last week. The deaths referred to "fever," whooping-cough, and diarrhœa also showed a decline. Four inquest cases and 6 deaths from violence were registered last week, and 82 deaths were recorded in public institutions, a higher number than in any previous week of this year. The deaths both of infants and of elderly persons showed an increase upon those in the previous week. The causes of 32, or more than 13 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: Deputy Surgeon-General Archibald Henry Fraser to be Surgeon-General, vice Alexander Smith, M.D., C.B., granted retired pay; Deputy Surgeon-General Herbert Taylor Reade, V.C., from half-pay, to be Deputy Surgeon-General, vice Archibald Henry Fraser, promoted; Deputy Surgeon-General John Hendley, C.B., to be Surgeon-General, vice Jones Lamprey, M.B., granted retired pay; Brigade Surgeon Stewart Aaron Lithgow, M.D., to be Deputy Surgeon-General, vice John Hendley, C.B., promoted; Brigade Surgeon William Skeen, M.D., to be Deputy Surgeon-General, vice Leonard Kidd, M.B., deceased; Surgeon Richard Henry Stewart Sawyer, M.B., has been placed on temporary half-pay, on account of ill-health.

INDIA OFFICE.—The Queen has approved of the transfer of Surgeon Francis Joseph Tuohy, M.D., of the Bengal Medical Establishment, to the half-pay list.

ADMIRALTY.—Fleet Surgeon William Harris Lloyd, M.D., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet.

The following appointments have been made:—Surgeon William H. Norman, to the *Reindeer*; Augustus W. Dalby to be Surgeon and Agent at Torquay and Babbicombe; Julius Cæsar to be Surgeon and Agent at Scrapegate, East-end-lane, Leysdown, and Shellness.

Correspondence.

"Audi alteram partem."

COCAINE.

To the Editor of THE LANCET.

SIR,—Cocaine as a local anæsthetic is at present attracting the attention of the profession. I venture to make a few observations on the subject, having been, as far as I am aware, the first in this country to extract this alkaloid from coca, and to investigate its physiological properties. In 1872 coca leaves were almost unknown in England except as botanical curiosities, and it was with great difficulty and at considerable expense that I obtained from Paris a couple of pounds of their concentrated extract. From this the celebrated chemists, Messrs. Macfarlan and Co., of Edinburgh, obtained at my request a few grains of cocaine. In the autumn of that year I presented a thesis to the University of Edinburgh entitled "Erythroxylon Coca," in which the physiological properties of coca and its alkaloid cocaine were fully investigated, and the conclusions detailed of an elaborate inquiry, the result of a series of experiments and observations conducted on a large number of living animals. An abstract of this research appeared in the *Edinburgh Medical Journal* of October, 1873, to which I refer those interested in the matter.

My object in now addressing you is to point out that the practical use to which cocaine has recently been put as a local anæsthetic completely harmonises with the physiological conclusions at which I arrived twelve years ago. The general result of the inquiry then conducted was to show that this substance when injected under the skin was a powerful poison, inducing a varied series of symptoms affecting the nervous, respiratory, circulatory, vaso-motor, and glandular systems. Without here entering into all the phenomena observed, it may be interesting, in connexion with the present practical application of the drug, to note the effects on the nervous system then determined. These shortly summed up are as follows:—1st. In small doses not ending fatally, cocaine causes partial general loss of sensibility. 2nd. In doses which are subsequently fatal, it induces, prior to death, complete general loss of sensibility. 3rd. It destroys the excitability of the posterior columns of the cord, and paralyses the entire system of peripheral sensory nerves; but the anterior columns and the peripheral motor nerves remain intact. 4th. It causes spontaneous convulsions; but, unlike those induced by strychnia, they are not excited by peripheral irritation, owing to the paralysis of the sensory nerves. 5th. Special experiments proved that the nerve endings in the skin and mucous membranes were rendered inexcitable apart from any action the drug had upon the nervous centres.

Thus physiological experiment has already demonstrated the local and general anæsthetic effects of cocaine. Although the present method of its application in practice had not then suggested itself, I at the time ventured to predict that the varied and potent properties of this substance would subsequently "prove a powerful and valuable agent in the hands of the physician for the treatment of disease."

In connexion with the local anæsthetic effects of cocaine

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which are at present occupying the attention of surgeons, there are certain facts which may possibly prove of practical value. While conducting my experiments with this substance, which is the active principle of the national beverage of Peru, I also turned my attention to the alkaloids of other popular drinks, such as tea, coffee, chocolate, and guarana. It had been before determined that theine, caffeine, theobromine, and guaranine were almost identical in chemical composition, and also somewhat allied to cocaine. By actual experiment I demonstrated that the physiological properties of all these substances when administered hypodermically were to all appearances the same. Should it be proved that they have also similar effects when applied externally to the mucous membranes, it would be of importance from an economic point of view, as cocaine is extremely expensive, while the others are comparatively cheap. I have myself no experience on this special point, but only offer as a suggestion that theine or caffeine should be tried for the same purposes for which cocaine has been found efficacious. The chief objection to their use will consist in the very sparing solubility of both, but this difficulty could doubtless be overcome. I am, Sir, yours truly,

Queen Anne-street, W., Nov. 30th, 1884. A. HUGHES BENNETT.

To the Editor of THE LANCET.

SIR,—I desire to add my testimony to the extreme value of the muriate of cocaine as a local anæsthetic in cases of operation upon the eye. I have now used it in a large number of cases, and if I state what, in my opinion, it can and cannot do, it may prevent disappointment in others who by exaggerated reports may have been led to expect too much from this drug.

First, I will state my own personal experience of a 4 per cent. solution as applied to my own conjunctiva. The first contact of the solution is rather painful, much the same as though a drop of weak spirit were placed in the eye. This, however, soon subsides, and is succeeded by a sensation of weight and dryness of the conjunctiva. At the end of five minutes the pupil begins slightly to dilate, and the conjunctiva becomes to a certain extent anæsthetic. If now another drop of the solution is added, in a few moments all the symptoms become materially intensified. There is a decided sensation of weight and numbness about the eye if the two eyes are exposed to a strong current of air, as by blowing upon them, or otherwise the sensation is not felt upon the anæsthetic side, and there is a feeling of vacancy if the globe is rubbed with the hand. At the end of twelve minutes my conjunctiva was perfectly anæsthetic. I could touch the cornea with a pointed instrument, and seize the conjunctiva with fixation forceps without experiencing any sensation. The pupil was midway between contraction and dilatation, but the accommodation was unaffected. At the end of fifteen minutes I applied a third drop of the solution. The anæsthesia remained the same, but the pupil began to dilate rapidly and the near point to recede. In twenty-five minutes from the first application there was complete paralysis of the accommodation, but without the same amount of pupillary dilatation as atropine would produce; beyond this, however, there was a slight but decided amblyopia, $V = \frac{6}{9}$ (my refraction is normal). I placed no further solution in the eye, and in half an hour from the last application sensation had perfectly returned. It was three hours before the accommodation was restored. Some pupillary dilatation and amblyopia were present when I went to bed at 10 P.M. (I had commenced my experiments at 3 P.M.), but the eyes were normal in every respect in the morning. I think the course of events as described in my own person are very much like what takes place in other persons. Children, however, as one would expect, are much more susceptible to the drug than elderly persons, and frequently one application will produce anæsthesia in them.

Now, I think the anæsthetic properties of the drug should not be exaggerated; its effects are quite superficial. It does not extend beyond the conjunctiva and cornea, and therefore it will not give complete success in any operation involving other ocular structures; nevertheless it unquestionably mitigates the suffering in all operations on the globe. I have performed several cataract operations perfectly painlessly: tapped the cornea, removed a pterygium, cauterised ulcers, &c., without any evidence of pain or inconvenience beyond what is experienced by the introduction of the speculum. In iridectomy the pain of excising the iris is not diminished, and in tenotomy of the ocular muscles and excision of the globe the pain is but slightly numbed.

One word more before I conclude. Apart from the question of the use of this drug in operations, I think therapeutically it is destined to play an important part in ophthalmic practice. Its application is attended with marked benefit in all painful corneal affections, notably in those cases of phlyctenular ulceration and extreme photophobia, which are so common in strumous children, and have hitherto proved a bane to the ophthalmic practitioner.—Yours truly,

C. S. JEAFFRESON, F.R.C.S.Ed.,
Dec. 2nd, 1884. Surgeon to the Eye Infirmary, Newcastle-on-Tyne.

To the Editor of THE LANCET.

SIR,—It may interest your readers to know that under the local influence of cocaine I applied to the tongue this morning fuming nitric acid. The tongue was dried, drawn out, and the 20 per cent. solution was painted over a surface about the size of a shilling. This was repeated three times within the course of ten minutes. At the expiration of the ten minutes the acid was applied to nearly the same extent as the anæsthetic so as to produce a definite eschar. The acid was applied two or three times, and as freely as I should have done it under chloroform. The patient, a well-known member of our profession, assured me that he had no sensation of pain during or after the process. There was no physiological effect produced, except a complete local anæsthesia. I am, Sir, yours obediently,

Stratford-place, W., Dec. 4th, 1884. THOMAS SMITH.

To the Editor of THE LANCET.

SIR,—It may be of use to record the fact that during the past month I have, under the influence of both 2 and 4 per cent. solutions of cocaine, kindly sent me by Messrs. Allen and Hanburys, removed small polypi from the tympanum, and applied chloro-acetic acid to the granulations both on the membrane and in the tympanic cavity, without the least pain. I applied it by simply dipping my aural probe armed with cotton-wool into the solution, and applying the wool thus wet to the previously dried and cleansed surface. I have just now, to a most sensitive patient, applied chloro-acetic acid without the least pain following. I allowed over five minutes' interval to elapse between each application of the cocaine, and then ten minutes before I removed the polypus or applied the acid. I am, Sir, yours truly,

Harley-street, W., Nov. 30th, 1884. H. MACNAUGHTON JONES.

To the Editor of THE LANCET.

SIR,—May I be allowed to add my testimony to the value of cocaine as a local anæsthetic in ophthalmic operations.

Through the kindness of Mr. Jakins I was able to excise a globe at the Western Ophthalmic Hospital on Saturday last. The patient had previously undergone two iridectomies. Ether was administered on each of these occasions. On this occasion a few drops of a 2 per cent. solution of cocaine was instilled, and as soon as practicable after anæsthesia was produced the operation was commenced. The patient said he felt something while the tendon of the internal rectus was being hooked up and divided, and a few more drops were then instilled, and he made no more remarks until the operation was completed. When he was told the operation was over, he announced it to be his opinion, and I regard it in the light of the opinion of an expert, that "it [cocaine] was a great deal better than that beastly ether."

I remain, Sir, yours very truly,

T. W. CARMALT JONES,
Dec. 1884. Assistant-Surgeon, Western Ophthalmic Hospital.

THE CONVICT BRIGGS.

To the Editor of THE LANCET.

SIR,—The case of the man Briggs, to which Mr. Bond calls attention, is interesting both on account of the medical evidence and the verdict of the jury founded thereon. The symptoms and post-mortem appearances in his wife's case, relied upon as evidence of starvation, are not such as I should expect to find in a case of starvation; and as to the

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convict himself, he is a feeble-minded, apparently harmless old man, who has not in the least the aspect of a criminal, while his physical defects would render him much more likely to be a victim than an aggressor. He has been treated at various London hospitals for disease of the eye, and when I saw him the pupil of the left eye was nearly closed, and the right eye so defective from large patches of retinal atrophy that he certainly could not, as he says, "see across the table whether his wife had any food on her plate or not." I have not seen the whole of the evidence in this case, but *a priori* I certainly do find it difficult to understand how a man like this could starve a woman to death who had property of her own and was free to come and go.

I am, Sir, your obedient servant,
CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Surgeon to the Nottingham and Midland Eye Infirmary.

MANCHESTER.

(*From our own Correspondent.*)

VICTORIA UNIVERSITY.

WHILST the London medical schools are complaining of the difficulties which surround their students in obtaining a medical degree the provincial schools are on the highway to solve this difficulty in a satisfactory manner. As already reported in your columns, at the last meeting of the court of the Victoria University the Liverpool University College was admitted as a college in the university, and its students are now on the same footing as ours of Manchester in regard to facilities for graduating in the Victoria University, and it is highly probable that not a long period will elapse ere other colleges will come forward to claim admission also. In the brief report which was allowed to become public of the proceedings of the court it was stated that considerable discussion took place before the proposal, which was submitted by Lord Winmarleigh and seconded by the Bishop of Manchester, to admit Liverpool as a college in the university, was adopted. It would have been more satisfactory to the general public, and particularly to those interested specially in the matter, if more publicity had been given to this discussion, as to the nature and extent of any objections which were raised. In the meantime could not some of the London schools, such as King's College and University College, in the absence of more facilities granted them at the London University, also take steps to become affiliated to the Victoria University, and thus afford their students a reasonable chance of obtaining a medical degree without the necessity of leaving London to take out the required residence in Scotland or Ireland, where now so many Englishmen have to go if they wish to write M.D. after their name?

THE HOSPITAL SATURDAY AND SUNDAY FUND.

At the annual meeting recently held in connexion with the Hospital Saturday and Sunday Fund the total amount raised was reported to be £8442, being an increase of nearly £1000 on last year's collection; but this increase was due to two large legacies of £500 and £315 received towards the fund. The Sunday collections realised £5505 and the Saturday contributions £2937. During the fifteen years that the movement has been in existence no less a sum than £106,789 has been raised.

THE HOMES OF THE POOR.

A very modest but most useful work has for some time been going on in connexion with the improvement of the homes of the poorer classes. "The Manchester Cottages Committee," chiefly composed of ladies, is a voluntary association which has for some time quietly laboured with the above object in view. They have taken a small block of houses, and by direct personal intercourse and supervision with the dwellers therein, they are endeavouring to raise both their physical and moral condition. The hon. sec., Mrs. Roby, appealed for help recently—help not so much of a pecuniary as of a personal character—"for volunteers, ladies of energy and leisure in the vicinity of Manchester who would be willing to devote some two or three hours weekly to the work." She says, "the work is neither dangerous nor difficult, though sometimes disagreeable." Such a practical endeavour to solve the difficult question of the better housing and accommodating of the poor deserves support.

VEGETARIANISM.

Many visitors to the "Healtheries" who patronised the vegetarian restaurant, whether from choice or curiosity, will be unaware that the Society under whose auspices it was conducted hails from Manchester. At the thirty-seventh annual meeting recently held here some interesting details were given by the manager of the exhibition restaurant. It was stated that a grand total of 107,982 dinners were served and 41,731 teas, and that the receipts during the last week were £228. We have here, in active operation, a very large vegetarian restaurant which is doing an extensive business, and there was lately registered a vegetarian restaurant company "for the purpose of establishing refreshment houses in which neither fish, flesh, nor fowl, nor any combination thereof, will be sold"; wine, ale, spirituous liquors, and tobacco being also amongst the articles tabooed. It was registered with a capital of £20,000 in £1 shares.

THE MEDICAL STUDENTS' ANNUAL DINNER.

On November 6th the annual dinner of the medical students was held at the Grand Hotel, which certainly was not given on the lines of the above prospectus. Upwards of 100 sat down, the greater number being actual students at present attending classes, very few older ones or qualified men being present. As visitors, some students from Liverpool came to represent the medical school there, and were received in a very cordial manner. Until this year it has been the custom to hold two dinners, one (that now alluded to) for students proper; the other the "medical dinner," attended by older men and practitioners of the district, but for some reason or other the latter has this year fallen through. This is rather to be regretted, as it formed a pleasant annual reunion for men who a few years since were fellow students, but are now separated and settled in practice, and has always been well attended.

EXTENSION OF THE SALFORD ROYAL HOSPITAL.

At the annual meeting of the subscribers to the Salford Royal Hospital it was resolved to proceed at once with the extension of that institution at a cost of some £8000 or £9000. At present there is accommodation for only fifty patients; when the extension is completed, room will be provided for 100 beds, and the hospital will then fulfil the conditions for recognition as a clinical hospital for the instruction of students.

THE PRESENT STATE OF THE LAW RESPECTING CERTIFICATES IN LUNACY.

At the last meeting of the Medico-Ethical Society, held on Nov. 28th, there was a large attendance of members to hear a paper by Mr. G. Mould on this subject. In the course of his remarks he brought forward instances where medical men who, after complying in a legal manner with the requirements of the Lunacy Laws, had yet had actions brought against them on charges of conspiracy or libel, although the number of such cases, when compared with the total number of certificates given by medical men, was very small; and he suggested, in order to relieve medical men of even this comparatively slight risk, that when a patient was found to be insane, instead of being committed direct to an asylum on the medical certificates, the patient should be taken before a commissioner of oaths, and that he, after receiving the medical evidence, should commit the patient to the asylum. The discussion which followed was somewhat prolonged.

THE RECENT M.B. LOND. EXAMINATION.

The names of six Manchester students appear in the pass list of the recent M.B. Lond. Examination, four being in the first division, four of whom appear in the honours list; Mr. W. Thorburn, son of Dr. Thorburn, our lecturer at the college on obstetrics, standing first with the scholarship in medicine, Mr. J. Jones taking fourth place; whilst in obstetrics Mr. Thorburn is second with the medal. These results will be received with much satisfaction by all who take an interest in the progress of our local school of medicine.

ONE HUNDRED GUINEAS are offered as a prize for an essay on the Physical and Moral Advantages of Total Abstinence from Intoxicating Liquors. The competitors must be *bonâ-fide* medical students at some recognised medical school in the United Kingdom. Particulars may be obtained from J. J. Ridge, Hon. Sec. of the British Medical Temperance Association, Carlton House, Enfield.

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NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE.

NOTICE has been served by the North-Eastern Railway directorate on the officials of the College of Medicine stating the company's intention, under its Parliamentary powers, to apply for the purchase of the College buildings for the purpose of the extension and improvement of the Central Railway station. It is supposed that, owing to the delay of the railway company in serving this formal notice, the College authorities have, up to this, been reluctant to take any active steps in providing a new building, so that we may now hope to see one erected at once suitable for its purpose, and an architectural feature in the city. The returns of practitioners notified to the medical officer of health show an increase in scarlet fever, no fewer than 115 cases having occurred in the last fortnight. The Newcastle Infirmary is at present sadly overcrowded. Last week the number in the house was 259, while the building only properly accommodates 219 patients.

A CURIOUS MINERS' CASE.

The members of the Northumberland and Durham Miners' Permanent Relief Fund have had before them a very curious and troublesome case, in which the difference of opinion has not been altogether on the medical side. The "Philadelphia" case (so it is called) had its origin in this way: A member of the fund was hurt by a fall of stone, but worked on until his shift was over. His injury then compelled him to be off for a few days; he afterwards returned to his work, but finally was laid up once more on what proved to be his death-bed. Then came the question, Did the man die of typhoid fever from which he was alleged to have suffered, or from the injuries which were caused by the accident? This was a serious question for the widow. In the former case she would be entitled to an allowance from the Permanent Fund, and in the latter case she would have no claim upon it. The medical evidence, although not altogether free from conflict, supported very strongly the view that the fever was at all events the cause of death. It was held on the other side that, although the fever was undoubtedly the immediate cause of death, it might be looked upon as the remote or finishing stroke of the accident, and that the patient might have fought typhoid successfully had he not been already weakened by the effects of the accident. The matter has been very warmly taken up and debated, and handed on from lodge to lodge, and there has been a disposition to err, if at all, on the generous side, provided the rules of the fund interposed no legal bar. The Washington Lodge advised that the widow should abandon the enforcement of the claim, and throw herself on the generosity of the members, leaving them to do their best for her, and this on all sides appears to be the best way of solving this curious and difficult case.

SERIOUS OUTBREAK OF SCARLATINA AT WOMBWELL, YORKS.

At the last meeting of the Wombwell Local Board, Dr. Millar, medical officer of health, presented an important report relating to the outbreak of scarlet fever of a serious type. He said about the middle of last month the disease seemed to abate, and for eight or ten days no new cases occurred; within the previous four days the severity of the attack had become greater, not so much from the numbers attacked giving anxiety, as from the rapidity with which a fatal result ensued, death often taking place within twelve hours and before medical aid could be of any avail. The number of cases, so far as he could gather, since the beginning was about 200, of which 37, or 18 per cent., had proved fatal. During the month ending Nov. 22nd there had been 33 deaths. The births registered during the month had been 30, and this was the first time he had known the birth-rate to have been below the death-rate. Everything had been done to check the disease, and he hoped the frost and cold weather would further diminish it.

THE LATE FATAL ACCIDENT FROM ELECTRICITY.

As to the accident at Messrs. Bolkow, Vaughan, and Co.'s, where a workman lost his life from touching the connexions, an inquest has been held, and Dr. Glen, who had been called in, deposed that death had been instantaneous, the body presenting all the appearances of a death from lightning. The hands were dreadfully scorched, as if the contact had been with hot iron. It was not a part of deceased's duty to interfere with the lights. The recklessness of workmen is sometimes astounding. A miner the other day was brought up before the magistrates and fined for drilling a hole in which there was a pound of gunpowder. The bit of course was steel, and a spark would have annihilated him and his companions. Worse than this almost, he shortened the regulation fuse, and not finding the charge exploding, he went near, to see "how it was getting on."

Newcastle-on-Tyne, Dec. 3rd.

PARIS.

(From our Paris Correspondent.)

THE CASE OF M. MORIN.

M. MORIN, the victim of the tragic scene that took place on Thursday last at the Palais de Justice, after having been shot by Madame Clovis Hugnes for slander, as reported by the daily papers, was immediately removed to the Hôtel Dieu in a very dangerous condition, owing to profuse hæmorrhage. Three bullet wounds were discovered on the patient; one on the back at the inferior angle of the left shoulder blade, the second in the right side of the neck, and the third at the top of the head; all were caused by bullets fired from a six-barrelled revolver. The wound in the neck was considered the most serious. The bullet entered on the right side about the level of the thyroid cartilage, and, wounding the larynx, lodged above the left clavicle, where it is distinctly felt, but which the surgeon (Dr. Peyrot) did not consider it urgent to remove, though there was some amount of emphysema in the parts. A second bullet entered the skull about eight centimetres above the left ear, the opening measuring about five millimetres. About three or four centimetres from this, on the top of the skull, was found another wound, and as the right hand of the patient was paralysed it was presumed that the brain, in the region indicated above, must have been wounded. At the visit next morning (Friday), Dr. Peyrot probed the wounds in the skull, and discovered a slight depression of the bone, which was evidently the track of the bullet, which he supposed must have escaped through the other opening. The patient was conscious the whole time. On Saturday morning he became unconscious, and was somewhat feverish; the paralysis of the right hand extended up the arm, which led the surgeon to suppose that there was deep-seated mischief going on in the brain, due to the depression of the fractured portion of the skull. He therefore decided upon trephining that part of the skull. The operation lasted about an hour, and was performed under chloroform, and on strict Listerian principles. An opening of two centimetres and a half was made through the skull in the site of the wound, and a fragment of bone of about the size of a half-crown piece was removed. The wound was then thoroughly explored, and the membranes were found to be intact. The wound was properly dressed, and the operation was thought to be entirely successful. A small artery, however, soon began to bleed, and gave trouble for fully half an hour. It then became a question whether the opening in the skull should not be enlarged, in order to arrest the flow of blood. The hæmorrhage, however, was finally stopped with pieces of cotton steeped in a hæmostatic fluid called "eau hémostatique de Pagliari," which is composed of alum, benzoin, and water. The operation was attended with some relief to the symptoms of compression of the brain, but on Sunday evening last those of encephalitis were observed, marked by a pulse of 118 or 120, temperature 39° to 40° C. The patient was restless, and the respiration irregular; both eyes inclined to the left, and were of a somewhat yellowish tint; urgent thirst. Consciousness was apparently preserved, but the patient was unable to answer questions put to him. The bullet which was lodged below the left shoulder blade was extracted at the same time that the trephining was performed. I am indebted for these details to my friend Dr. Nachtel, who witnessed the operation and followed the case from the beginning. Yesterday morning Dr. Peyrot, in redressing the wound, observed that the dura mater was rather tense, and slightly incised it to relieve the pressure on the brain. At the surgeon's visit at seven in the evening a change for the

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better was observed. The temperature went down by nearly 1 degree, the pulse was 100, and the expression of countenance of the patient was rather better; his strength is kept up with milk-and-brandy. Although there is some improvement in the condition of the patient, yet Dr. Peyrot is rather reserved in his prognosis. M. Morin seems conscious, but he is unable to utter a word, owing, as is supposed, to the bullet having wounded in its passage through the skull that part of the brain contiguous to the convolution which is looked upon as the seat of the faculty of speech.

Paris, Dec. 3rd.

MEDICAL NOTES IN PARLIAMENT.

Compulsory Vaccination.

IN the House of Commons on Monday, Dec. 1st, Mr. G. Russell, in reply to a question by Mr. Hopwood, stated that he was not prepared to assent to the view that because one child may have suffered owing to *malapraxis* or some accidental circumstance, all the other children should be deprived of the protection which vaccination affords. At the same time it was open to the justices in any such case to impose a nominal fine, or decline to make an order for the vaccination of the child, and he should hope that if any such case occurred it would be considerately and tenderly dealt with.

The Natural History Museum.

Mr. Shaw-Lefevre, replying to Sir H. Verney, stated that already fourteen acres of land had been secured for the extension of the Natural History Museum at Kensington, and this amount was considered quite sufficient. It was not, therefore, proposed to attempt to secure the grounds lately occupied by the Health Exhibition for the purpose.

Captain of Orderlies C. Cook.

On Thursday, replying to Mr. Justin M'Carthy, Sir A. Hayter, said that Captain of Orderlies C. Cook, "late" Army Hospital Corps, exercised the same command in the Medical Staff Corps that he exercised in the Army Hospital Corps. He has the pay assigned to his rank by former Royal Warrant, which Warrant did not provide for an increase of such pay; but it is open to him to accept the terms first offered in 1881, in which case he would attain the same rates of pay as the other officers who are his contemporaries as Captains of Orderlies, and who have accepted the new terms.

MEDICAL TRIALS.

PRINCIPALS AND ASSISTANTS.

SHARMAN AND OTHERS *v.* GILLIES.

THIS was an action tried before Mr. Justice Wills last week. It was brought by Messrs. Sharman, Harris, and Clark, medical practitioners of Lower Norwood, to restrain the defendant from practising within four miles of Oak-villas, Lower Norwood. Mr. Hugh Cameron Gillies, in March, 1883, made an agreement to act as assistant to the firm, the agreement being terminable at three months' notice, and by it the defendant agreed that on leaving the employment of the plaintiffs he would not practise within four miles of Oak-villas. In November, 1883, for certain reasons the plaintiffs became desirous of terminating the agreement, and on Nov. 29th, they gave the defendant three months' notice to leave them. It was, however, arranged that the defendant should leave at the end of two months, and the defendant accordingly left on January 29th, 1884, the plaintiffs paying him a month's salary on account of his leaving one month before the expiration of the notice. Upon his leaving the plaintiffs the defendant commenced practising at Zingari-terrace, which is near Oak-villas, having his name over the door. The plaintiffs commenced their action against him, and on February 8th he removed his name from the house, and ceased to practise on his own account. On February 11th the name of Dr. Hulleseburgh, of Maidstone, was put up at the house at Zingari-terrace occupied by the defendant, and the defendant's case was that he had on that day made an agreement with Dr. Hulleseburgh, who had in 1882 commenced to practise at Avenue-gate, Gipsy-hill, to act as his assistant. The agreement was not forthcoming, his solicitor, Mr. Wrightson, having lost it. The defendant declared that his line of conduct had been backed up by the junior member of the firm, Dr. G. B. Clark, who was then contemplating leaving the partnership. One clause of the agreement states that the defendant should practise at Norwood as the plaintiffs' assistant, and in another clause that the defendant on leaving the service of the firm should not practise within four miles of Oak-villas. The defendant submitted that he was not practising within the meaning of the last clause. His Lordship, referring to the evidence which had been given, and particularly to the facts that Dr. Hulleseburgh had left the neighbourhood in June and was now living at Maidstone, that there had not been any settlement of accounts, that drugs had been bought in the name of the defendant, that not more than seven of the patients in defendant's books out of 105 had been patients of Dr. Hulleseburgh, and that the house at Zingari-terrace was close to the plaintiffs' house at Oak-villas, but half or three-quarters of a mile from Dr. Hulleseburgh's, was of opinion that the agreement with Dr. Hulleseburgh was a merely colourable arrangement intended to enable the defendant to evade his agreement with the plaintiffs. If this had not been so, his opinion would still have been, having regard to the circumstance that Dr. Hulleseburgh was not himself practising at Lower Norwood, that the defendant was practising within the meaning of his agreement with the plaintiffs.

His Lordship granted an injunction with costs, leaving the question of damage sustained by the plaintiffs to be determined by the official referee of the Court. Mr. Finlay, Q.C., and Mr. Peile appeared for the plaintiffs, Mr. Terrell and Mr. Ghosh for the defendant.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 1st inst.:—

Gray, Thos. U., L.R.C.P. Lond., Essex-road, St. Barth. Hosp.
Mullis, George H., L.S.A., Northampton, Guy's Hospital.
Dickinson, J. J., L.S.A., Bow-road, London Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following have passed the first half of their examination for the diploma in Surgery of the College:—

Robert J. Adamson, Jeremiah Behan, Hugh A. L. Brenan, Charles Casey, Edward J. Good, Joseph W. Gallagher, Guy S. L'Estrange, William A. Mahon, James J. McGrath, Joseph C McFeely, Thomas J. O'Reilly, William Peacock, William J. Russell, William G. Toomey, James G. Westlake, Benjamin P. Young, Charles A. Young.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 27th:—

Childe, Charles Plumley, King's College.
Dutt, Upendra Krishna, St. Mary's Hospital.
Jolliffe, Albert Robert, Charing-cross Hospital.
Ladell, Mordaunt Percy, London Hospital.
Quartley, Selwyn Warner, Middlesex Hospital.
Reed, Henry Albert, Guy's Hospital.
Steer, Adam Wm. Thorburn, St. Bartholomew's Hospital.
Taylor, Charles Henry, King's College.

The following gentleman also on the same day passed the Primary Professional Examination:—

Gaerett, John Henry, University College.

THE Miller Memorial Hospital at Greenwich is to be opened for the reception of patients on the 17th inst.

ROYAL INSTITUTION OF GREAT BRITAIN.—Drs. George Mann Carfrae and James P. Harper have been elected members of the Royal Institution.

THE salary of Mr. A. Wynter Blyth, medical officer of health and analyst for Marylebone, has been increased from £400 to £500 per annum.

GEORGE PLUNKETT O'FARRELL, A.M., M.D., of Tangier Boyle, has been placed on the Commission of the Peace for the County Roscommon.

MOTHERS' LYING-IN HOSPITAL.—Mrs. Gladstone is to open the above home, situated in Juniper-street, Shadwell, E., to-day (Saturday), at 11.30 A.M.

THE Assembly of New York has passed a Bill prohibiting the sale of drugs by any persons except physicians and pharmacists. The grocers are indignant.

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ROYAL SOCIETY. — Professor Huxley has been elected President of the Society for the ensuing year, John Evans, D.C.L., LL.D., Treasurer, and Professors G. G. Stokes and Michael Foster, Secretaries.

ON the 28th ult. an inquest was held at the London Hospital on the body of a man who died during the administration of ether previous to an operation for stricture. The jury returned a verdict in accordance with the medical evidence.

THE Twickenham Local Board have resolved to ask the Local Government Board to receive a deputation to set forth the bad condition of the Thames above bridge, and to complain of the apathy of the conservators in the matter.

COUNCILLOR HOWELL, of Hastings, has offered two acres and a half of freehold land on the Cornwallis estate as the site for a new hospital for Hastings and St. Leonards and the district.

M. BAKENOW, a physician, has been elected president of the Provincial Assembly of Eastern Roumelia. M. Bakenow has been a member of the Assembly since its foundation.

PRESTON INFIRMARY AND THE OPERATIVES.—The operatives of Preston employed in the factories and workshops in the town have during the past year contributed about £1250 towards the working of the Preston and North Lancashire Royal Infirmary. This amount has been made up by weekly contributions of one halfpenny.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At the annual meeting of this Society, held recently, the following office-bearers were elected for the year:—President: Dr. Struthers. Secretary and Treasurer: Dr. Rodger. Librarian: Mr. William Fraser. Council: Drs. Beveridge, Jackson, Urquhart, Simpson, and M'Gregor.

THE HOWARD MEDAL.—At a meeting of the Statistical Society of London held on the 18th ult. the Howard medal and £20 were presented by the President, Sir Rawson Rawson, K.C.G.M., C.B., to Clement Dukes, M.D., B.S. Lond., Physician to Rugby School and Senior Physician to the Hospital of St. Cross, Rugby, for an essay on "The Preservation of Health as Influenced by Personal Habits, such as Cleanliness, Temperance, &c."

ROYAL ALBERT HOSPITAL.—The twenty-first annual meeting of the friends and subscribers of this institution was held at Devonport on the 17th ult. From the report it appears that the financial condition of the hospital is fairly satisfactory, the balance due to the treasurer, which at the commencement of the year was £280, being now only £29. The average number of patients daily under treatment has been 74·15, as compared with 74·68 in the previous year, and the average cost of maintenance has been £49 3*s.* per bed per annum.

DUBLIN HOSPITALS FETE.—The total receipts from the fête recently held were £491 12*s.* 4*d.*, and the sum available for distribution £410. On the principle laid down at the preliminary meeting of the committee—viz., that the twelve general hospitals should receive nine-tenths of the net proceeds, and that one-tenth be allocated among the five special hospitals—the amount received by each of the former was £39 17*s.* 10*d.*, and the latter £8 9*s.* 4*d.*

A MEDICAL SOCIETY FOR CARLISLE.—At a largely attended meeting of the medical men practising in Carlisle and its vicinity it was resolved that a Carlisle Medical Society should be instituted for the reading and discussion of medical papers and the exhibition of cases and specimens. On the motion of Dr. Campbell (Garlands), Mr. Page, the well-known northern surgeon, was appointed president for the first session. Afterwards Dr. Dowie was appointed secretary, rules were agreed to for the Society, and meetings were arranged to take place monthly from November to April inclusive.

LONDON HOSPITAL MEDICAL CLUB.—A very successful gathering of the London Hospital men took place recently at the Holborn Restaurant. Mr. Reeves was in the chair, and Dr. Langdon Down, Dr. Stephen Mackenzie, Dr. Charlewood Turner, Mr. Rivington, Mr. E. H. Fenwick, Dr. Bedford Fenwick, Mr. Ashley Barrett, and Dr. Milner Fothergill were among the company. The chairman, on giving the toast of the evening, "Success to the Club," said that he should be content if his chairmanship led to the members taking an active interest in the medico-political questions of the day—viz., first, the assertion of the rights of Members to a proportionate share in the government of the College; secondly, the formation of a good teaching university, which should also grant to London students the degree of M.D. or M.S. after a good average examination; and, thirdly, the question of a better representation of medical interests in Parliament. Some good speeches, music, &c., contributed towards a very pleasant evening.

LIVERPOOL MEDICAL INSTITUTION: GOOD *versus* WHITTLE AND OTHERS.—At a special general meeting of the Liverpool Medical Institution held on November 27th, (Dr. Gee, president, in the chair) it was unanimously resolved: "That the sympathy of their professional brethren is due to Drs. Whittle and Hutchinson in respect of the injury, anxiety, and loss sustained by them, owing to the trial of Good *versus* Whittle and others; and that by way of giving practical expression to this resolution a fund be opened towards reimbursing them the expenses which they have incurred in defending themselves." A fund committee was formed.

ROYAL MICROSCOPICAL SOCIETY.—At the last meeting of this Society, a new Lantern Microscope, the invention of Mr. Lewis Wright, worked out and manufactured by Messrs. Newton and Co., of Fleet-street, was exhibited by the oxyhydrogen light to an unusually large number of Fellows. The results obtained were, in the opinion of those present, greatly in advance of anything that has previously been obtained, far exceeding in definition the "Giant Electric Microscope" exhibited last year. This instrument was also exhibited at the recent meeting of the Quekett Microscopical Society, when the blowfly's tongue was shown from 6 ft. to 14 ft. in length, by the various powers, and the section of a dronefly's eye magnified 2500 diameters, or upwards of six million times.

HAMPSTEAD SMALL-POX HOSPITAL. — A largely attended meeting of the inhabitants of Hampstead, preceded by a torchlight demonstration, was held on the 3rd inst., to protest against the continued existence of the Small-pox Hospital which has been erected in the parish by the Metropolitan Asylums Board. A letter was read from the Hon. Sir John Day, Judge of the High Court of Justice, in which the writer stated that he fully sympathised with the objects of the meeting, and expressed his regret that his position as a judge precluded him from taking part in a public demonstration where litigation may be expected to follow. Resolutions favouring the immediate removal of the hospital, and approving a deputation to the President of the Local Government Board, were agreed to, and the meeting broke up with a vote of thanks to Viscount Enfield, who occupied the chair.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BROWN, JOHN, L.R.C.P.Lond. &c., has been reappointed Medical Officer of Health for the Bacup Urban Sanitary Authority, for the term of one year.

DUNN, THOMAS, M.B., has been appointed Assistant Medical Officer to Woodilee Asylum, Lenzie, vice William Gibb, M.B., resigned.

FRANCIS, LLOYD, B.A., M.B.Oxon., M.R.C.S., has been appointed Assistant Medical Officer to the St. Andrew's Hospital for Mental Diseases, Northampton.

HANDFIELD-JONES, M.B., M.R.C.P.Lond., has been appointed Assistant-Physician to the Chelsea Hospital for Women, vice London, resigned.

HARDIE, ROBERT, M.B., M.R.C.S., has been appointed Resident House-Surgeon to the Gateshead Dispensary, vice Robert Purdie, M.B., C.M., resigned.

HARPER, GERALD, M.D., has been appointed Additional Assistant-Physician to the Chelsea Hospital for Women.

JESSETT, F. BOWREMAN, F.R.C.S., has been appointed Surgeon to the Cancer Hospital, Brompton.

MACINERNEY, JAMES RICHARD, L.R.C.P.I., L.R.C.S.I., has been appointed Health Officer for the City of Collingwood, Victoria.

PESKETT, ALFRED F., M.R.C.S., L.S.A.Lond., has been appointed Assistant Resident Medical Officer at Stockwell Fever Hospital.

REYNOLDS, LEWIS WM., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the First District of the Wycombe Union, vice Rose, resigned.

SERJEANTSON, CHARLES P., M.R.C.S., L.S.A.Lond., has been appointed Surgeon and Chief of the Medical Department of the Blaenavon Ironworks, near Pontypool, vice Dr. Martin Quirk.

SMART, DAVID, L.R.C.P.I., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Bermondsey Workhouse, vice Cuolahan, deceased.

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SPRINGTHORPE, J. WILLIAM, M.D., M.R.C.P.L., has been appointed Assistant-Physician to the Melbourne Hospital.
STEPHENS, LOCKHART E. W., M.R.C.S., L.S.A.Lond., as been appointed House-Surgeon to the Bristol General Hospital.
STIRLING, CHARLES, M.B., C.M.Glas., has been appointed Medical Officer for the Second District of St. Olave's Union, vice Cuchahan, deceased.
STONHAM, CHARLES, F.R.C.S., has been appointed Assistant-Surgeon to the Cancer Hospital, Brompton.
WALSHE, EUSTACE JAMES, M.R.C.S., has been appointed Health Officer for the Shire of Bannockburn, Victoria.
WHITING, HENRY, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Shottermill District of the Farnham Union, vice Henry Clothier, deceased.

Births, Marriages, and Deaths.

BIRTHS.

KILNER.—On the 29th ult., at Guildhall-street, Bury St. Edmunds, the wife of Charles Scott Kilner, M.B., of a daughter.
LANDALE.—On the 31st Oct., at Colombo, the wife of Brigade-Surgeon Landale, M.D., M.S., of a daughter.
MOIR.—On the 28th ult., at Newhall, near Burton-on-Trent, the wife of Dr. J. Hay Moir, of a daughter.
SNOW.—On the 29th ult., at Norfolk-terrace, Bayswater, the wife of Herbert L. Snow, M.D. Lond., of a son.
THANE.—On the 23rd Sept., at her residence, Church-hill, Yass, N.S.W., the wife of P. T. Thane, L.R.C.P.Lond., M.R.C.S., of a son.
YARROW.—On the 30th ult., at Old-street, E.C., the wife of G. E. Yarrow, M.D., of a son.

MARRIAGES.

BEWES—WILLIAMS.—On the 28th ult., at St. John's Church, Notting-hill, W., Edward Anstis Bewes, M.R.C.S., L.R.C.P., younger son of the late Colonel Bewes, of Ladbroke-grove, W., to Emily Julia, daughter of J. Williams, Esq., of Bath.
HOSKIN—CHICHESTER.—On the 27th ult., in the Chapel Royal, Savoy, by the Rev. Henry White, M.A., Chaplain of the Savoy and Chaplain in Ordinary to the Queen, assisted by the Rev. Dr. Jones, Vicar of Curdworth, Birmingham, and the Rev. Dr. Macmillan, of St. Mark's, Dalston, Theo. Hoskin, M.R.C.S., L.R.C.P. Lond., Amhurst-road, to Grace Mildred Vernon, second daughter of the late Henry Vernon Chichester, of Amhurst-road. Australian papers, please copy.
NEWMAN—ASHE.—On the 26th ult, at the Church of St. Michael's-in-the-Hamlet, Liverpool, Horace Townsend, M.D. University of Dublin, youngest son of Adam Newman, J.P., Castle House, Monkstown, county Cork, to Harriet, eldest daughter of T. F. Ashe, Hankelow Hall, Audlem, Cheshire.
TYLECOTE—COLDWELL.—On the 27th ult., at Sandon, Staffordshire, John Horton Tylecote, M.D., to Millicent Lucinda, eldest daughter of the Rev. W. E. Coldwell, M.A., Vicar of Sandon.
WEBSTER—FARRAND.—On the 27th ult., at St. Leodegarius' Church, Basford, Nottingham, Alfred George Webster, M.R.C.S., eldest son of the late Joseph Webster, M.D., M.R.C.S., L.R.C.P., of Golcar, Huddersfield, to Mary Eliza, second daughter of Milnes Farrand, of Whitemoor House, near Nottingham.

DEATHS.

CLOTHIER.—On the 25th ult., at Haslemere, Surrey, Henry Clothier, M.R.C.S., aged 76.
DALGLIESH.—On the 25th ult., at Masham, Yorkshire, William Margaret Dalgliesh, M.D., aged 79.
DEW.—On the 28th ult., at Coleherne-road, South Kensington, Edward Dew, M.D., in his 81st year.
FARLEY.—On the 21st ult., quite suddenly, George Caldwell Farley, M.D., late of Henwick Lodge, Maidenhead.
FORSTER.—On the 25th ult., at 420, Old Kent-road, Jane Theresa, wife of Henry J. Forster, L.R.C.S.I. &c., after a lingering illness, aged 41. She was interred at Forest Hill cemetery.
SEYMOUR.—On the 28th ult., at his residence, Palace-square, Upper Norwood, Richard Seymour, M.D., aged 76.
STANWELL.—On the 13th ult., at Rochdale, William Stanwell, Surgeon.
THOMAS.—On the 26th ult., at Weymouth-street, Portland-place, Llewelyn Thomas, M.D., aged 86.
WADE.—On the 28th ult., at Hatfield, Broad Oak, Essex, Charles Wade, Esq., M.R.C.S., late of Banwell, Somerset, aged 40.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths*

BOOKS ETC. RECEIVED.

ASSELIN ET CIE, Paris.
Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris. Tome Vingtième, 2me Série.

BAILLIÈRE, TINDALL, & COX, London.
On the Healthy Manufacture of Bread. By B. W. Richardson, M.D., F.R.S. pp. 103.
Aids to Public Health. By J. L. W. Thudichum, M.D., F.R.C.P.L. pp. 52.

CASSELL & CO., London, Paris, & New York.
Elements of Surgical Diagnosis. By A. Pearce Gould, M.S., M.B.Lond., F.R.C.S.Eng. pp. 584.
Intestinal Obstruction: its Varieties, with their Pathology, Diagnosis, and Treatment. By Frederick Treves, F.R.C.S. pp. 515, with 60 Illustrations.
Insanity and Allied Neuroses, Practical and Clinical. By Geo. H. Savage, M.D. pp. 544, with 19 Illustrations.

CHURCHILL, J. & A., London.
Guy's Hospital Reports. Vol. XLII. Edited by Frederick Taylor, M.D., and N. Davies-Colley, M.A., M.C. pp. 490, with Plates and Woodcuts.
On the Origin of Anæmic Murmurs. By J. Kingston Fowler, M.D.Cantab. pp. 45.
Transactions of the Ophthalmological Society of the United Kingdom. Vol. IV. pp. 376.

CLARENDON PRESS, Oxford.
Scientific Papers and Addresses. By George Rolleston, M.D., F.R.S. Arranged and Edited by W. Turner, F.R.S. With a Biographical Sketch by E. B. Tylor, D.C.L., F.R.S. In 2 vols. pp. 497–447, with Plates.

CLOWES & SON, London.
Health Exhibition Literature. Printed and Published for the Executive Council of the International Health Exhibition and for the Council of the Society of Arts. Twelve vols.

GRIFFIN, C., & Co., London.
On Mammalian Descent. The Hunterian Lecture for 1884. By W. Kitchen Parker, F.R.S. pp. 229, with Addenda and Illustrations.
A Text-book of Human Physiology, including Histology and Microscopical Anatomy. By Dr. L. Landois. Translated from the Fourth German Edition, with Additions, by Wm. Stirling, M.D. Vol. I. pp. 514, with numerous Illustrations.

JANSEN, MCCLURG, & Co., Chicago.
Comparative Physiology and Psychology. By S. V. Clemenger, M.D. pp. 247, with Illustrations.

JOHNSTON, W. & A. K., Edinburgh & London.
Spinal Deformity in Relation to Obstetrics. By A. H. F. Barbour, M.D. &c. pp. 35, with 37 page Plates.

KEGAN PAUL, TRENCH, & Co., London.
Origin of Cultivated Plants. By Alphonse De Candolle. International Scientific Series. pp. 468.

LEWIS, H. K., London.
Elements of Practical Medicine. By Alfred H. Carter, M.D.Lond. Third Edition. pp. 440.

MATHIESON, F. C., & SON, London.
Mathieson's Vade Mecum for Investors for 1885. pp. 420.

NEW SYDENHAM SOCIETY, London.
Clinical Lectures on the Practice of Medicine. By the late R. J. Graves, M.D., F.R.S. To which is prefixed a Criticism by Prof. Trousseau. In 2 vols. Vol. I. pp. 673.

OLIVER & BOYD, Edinburgh.
The Transactions of the Edinburgh Obstetrical Society. Vol. IX. pp. 222, Illustrated.
Transactions of the Medico-Chirurgical Society of Edinburgh. Vol. III. pp. 234.

PENTLAND, YOUNG J., Edinburgh.
Diseases of the Spinal Cord. By Byrom Bramwell, M.D. Second Edition. pp. 359, with Illustrations.

SAMPSON LOW, MARSTON, & Co., London.
Plant Lore, Legends, and Lyrics. By Richard Folkard, jun. pp. 610, with Illustrations.

SIMPKIN, MARSHALL, & Co., London.
Evolution in History, Language, and Science. Four Addresses by Various Authors. pp. 158.

SOCIETY FOR THE PROTECTION OF ANIMALS FROM VIVISECTION, Victoria-street, London.
The Vivisector's Directory. Edited by Benj. Bryan; with a Preface by F. P. Cobbe.

WASHINGTON GOVERNMENT PRINTING OFFICE.
Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Vol. V.: Fiaecus—Hearth. pp. 1055.

WOOD & Co., New York.
A Theoretical and Practical Treatise on the Hæmorrhoidal Disease. By William Bodenkamer, M.D. pp. 297, with Plates and Woodcuts.

Our Medical Charities and the Working Classes; by Sampson Gamgee, F.R.S.E. (Cornish, Birmingham.)—Mimicismo ó Neurosis imitante; por J. A. y Tuset.—The Place of Physical Science in Education; by G. Gresswell (Cape Town).—Cassell's Illustrated Almanack, 1885.—Ein neues Fleischpepton; von Dr. W. Kochs. (Cohen, Bonn.)—Use of Ergot in Obstetrics; by P. C. Williams, M.D., Maryland.—Some Account of the Baths of Baden in Aargau; by E. Hamilton, M.D.—Des Fractures du Cubitus par Cause indirecte, et de la Fracture du Radius par Torsion; par le Dr. F. Brossard. (Baillière, Paris.)—The most delightful Voyage in the World; by A. Wilmot, F.R.G.S. (Richards, Glanville & Co., London.)—Statistics of the Army Medical Department—Officers; by Surgeon-Major J. P. H. Bolleau.—Longman's Magazine for December.—Eastward Ho! for November.—Correspondence with Sir T. Spencer Wells on Ovariotomy.—Oxygen as a Remedial Agent; by Wallian.—The Plaster-posterior Splint in the Treatment of Fractures of the Leg; by G. W. Gay, M.D.—Small-pox, its Diagnosis, Treatment, &c.; by Dr. W. Gregory.—Leisure Hour, Sunday at Home, Boy's Own Paper, Girl's Own Paper, Dec.—Good Words, Sunday Magazine, Dec.—Illustrated London News Christmas Number.—Reports of the Meetings of the Scientific Associations recently held in Montreal and Philadelphia as given in "Science."—Index Medicus, Vol. VI., No. 10.—Before I began to Speak; by a Baby. (Fleet Printing Works.)—Hints for Invalids and Travellers; by T. E. Maclean, M.B. (Lewis.)—Relations of Micro-organisms to Surgical Lesions; by H. O. Marcy, M.D.

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Medical Diary for the ensuing Week.

Monday, December 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL MEDICAL COLLEGE.—3 P.M. Mr. Jonathan Hutchinson: The Treatment of Wounds, &c.
THE PARKES MUSEUM OF HYGIENE.—4.30 P.M. Mr. Ernest Hart: Precautions against Cholera.
MEDICAL SOCIETY OF LONDON.—8.30. P.M. Mr. Treves will open a discussion on the Treatment of Intussusception.

Tuesday, December 9.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour: Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M., and on Fridays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Dr. Percy Kidd: On the Distribution of the Tubercle Bacilli in the Lesions of Phthisis. (Microscopic specimens will be on view at 3 o'clock.)—Mr. W. B. Dalby: Cases in which Perforation of the Mastoid Cells is necessary.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Sir John Lubbock, Bart.: Marriage Customs and Relationships among the Australian Aborigines.—Mr. A. W. Howitt: The Jeraeil, or Initiation Ceremonies of the Kurnai Tribe.

Wednesday, December 10.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL MEDICAL COLLEGE.—3 P.M. Mr. Jonathan Hutchinson: Retention Cases, Injuries to Viscera, &c.
THE PARKES MUSEUM OF HYGIENE.—4.30 P.M. Mr. Shirley Murphy: Precautions against Cholera.—7.30 P.M. Dr. Wm. B. Beatson: Sanitation at a Health Resort.
HUNTERIAN SOCIETY.—7.30 P.M. Council.—8 P.M. Mr. Mark Hovell will exhibit an appliance for removing false membrane from the trachea.—Dr. Alfred Carpenter: Alcoholic Drinks as Medicines.
EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Sir William R. E. Smart, K.C.S.: Old London; its Insanitary Conditions and its Epidemic Diseases.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. F. R. Cheshire: Some New Points in the Anatomy of the Bee.—Mr. G. F. Dowdeswell: Variations in the Development of a Saccharomyces.

Thursday, December 11.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8 P.M. Living Specimens.—8.30 P.M. Mr. H. Eales: Severe Retinitis Albuminurica affecting one eye alone.—Mr. W. A. Brailey: Hyphæma Secondary to some Deep-seated Intra-ocular Charge.—Mr. E. Nettleship: The Use of Cocaine in Ophthalmic Practice.—Mr. A. H. Benson: Further Observations regarding the Value of Hydrochlorate of Cocaine as a Local Anæsthetic.—Report of the Committee on the Influence of the Vapour of Bisulphide of Carbon and of Chloride of Sulphur on the Vision.—Mr. W. A. Brailey: The Condition of the Ciliary Nerves in Certain Diseases of the Eye.—Mr. J. Couper: An Improved Ophthalmoscope.—Mr. Priestley Smith: Ophthalmic Models used in Teaching.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Adjourned Debate on Mr. Morrant Baker's paper on Charcot's Disease. Prof. Charcot's specimens and others will be again on view.

Friday, December 12.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
PARKES MUSEUM OF HYGIENE.—4.30 P.M. Dr. Norman Chevers: Precautions against Cholera.

Saturday, December 13.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 A.M. by Casella's Instruments.)

THE LANCET OFFICE, December 4th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Nov. 28	29·84	W.	44	42	..	47	42	..	Overcast
,, 29	29·76	N.W.	37	36	..	40	36	..	Overcast
,, 30	30·03	S.W.	34	..	..	37	31	..	Overcast
Dec. 1	29·91	S.E.	36	35	..	39	30	·54	Raining
,, 2	29·87	S.E.	35	35	..	54	35	·01	Foggy
,, 3	29·43	W.	54	53	..	56	36	·16	Overcast
,, 4	29·24	W.	50	48	..	51	44	·15	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

Medicus.—The only public vaccinators in Scotland who are authorised to give certificates of proficiency in vaccination which are accepted in England and Wales as enabling the holder to become a public vaccinator are: Dr. William Husband, Royal Dispensary, Edinburgh Dr. James O. Affleck, New Town Dispensary, Edinburgh; Dr. Hugh Thomson, The Hall of the Faculty of Physicians and Surgeons, Glasgow; Dr. R. D. Tannahill, Royal Infirmary, Glasgow; and Dr. D. C. McVail, Western Infirmary, Glasgow. The Colleges of Surgeons and Physicians in London take no certificate except one given by the above, or by certified teachers of public vaccination in England.

Dr. J. H. Aveling.—Very soon.

"A NEW-BORN INFANT OF EXTRAORDINARY SIZE."

To the Editor of THE LANCET.

SIR,—In reply to the kind inquiries of Dr. Barnes respecting the above case, I have great pleasure in giving the following particulars:

The child was born alive, is still living, and is healthy. The mother had had two children previously, which were both of large size, but not weighed, and consequently their natal weight is unknown. The period of gestation was not thought to be protracted. The mother is a schoolmistress, aged thirty-three years, her diet consisting of very little flesh meat, and mostly of oatmeal porridge and milk. The delivery of the child was spontaneous, and without any laceration of the parts.

I shall be glad to answer any further inquiries respecting this case.

I am, Sir, yours faithfully,

Crewe, Dec. 2nd, 1884. GEORGE EDDOWES.

To the Editor of THE LANCET.

SIR,—While in Derbyshire I delivered a woman of male twins, the first weighing 17 lb. 8 oz. and the second 18 lb.; the placenta 4 lb., and an ordinary pailful of liquor amnii. Both were muscular, well-developed children. Before delivery, on placing the hand over the abdomen, the limbs of the children could be distinctly made out, and feeling as though there was but a sheet of brown paper between the hand and the children, giving the impression that it was a case of extra-uterine fœtation. The parents were of ordinary build, and about middle height. The mother had previously given birth to a boy of large size, but his weight was not taken; this boy was living at the time of the birth of the twins, and was a fine child. The mother progressed favourably, and at the end of a fortnight was up and as usual. The above was verified in the presence of another medical man.

I am, Sir, yours truly,

New Brompton, Kent, Dec. 1st, 1884. EDWIN C. WARREN.

To the Editor of THE LANCET.

SIR,—With reference to Mr. Eddowes' case, p. 941, and Dr. Barnes' observations, p. 985, may I be allowed to point out that several cases are noted in Section 1541 of the Medical Digest, where the weight at birth equalled or exceeded Dr. Eddowes' case.—Yours obediently,

Dec. 3rd, 1884. RICHARD NEALE, M.D.Lond.

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"FOR CHARITY PATIENTS."

MESSRS. BURROUGHS, WELLCOME, AND CO. have communicated to us their willingness to allow each medical practitioner in the kingdom to prescribe at their cost to one charity patient enough of any of the various medicines prepared by them to last one month; or, if the prescriber prefers, they will supply two such patients for two weeks each. Should the patient be unable to pay carriage, Messrs. Burroughs, Wellcome, and Co. express their readiness to prepay delivery charges to the address either of the medical man or patient, as directed. A list of medicines from which selection may be made will be sent upon application to them.

St. David.—The secretary is Dr. Pocock, The Limes, St. Mark's-road, North Kensington.

"THE INCOME-TAX."

To the Editor of THE LANCET.

SIR,—I can quite sympathise with "In Morsu Diaboli," and have no doubt there are many other practitioners similarly circumstanced. The only escape in these cases lies in appeal, and that supported by clearly kept books, and a knowledge of what may and what may not be done in such cases. Having had bitter experience in the matter of appeal against income-tax assessments, I enclose for the assistance of your correspondent and others similarly troubled a copy of a form of account which I have used on three occasions, and with which I have been always successful. All the items of deduction were keenly criticised by the surveyor, but were all passed. Of course, in this copy the figures are imaginary, and are only intended as a guide. "In Morsu Diaboli" would be entitled to deduct cost of assistant, but would, I fancy, if his gross income is only £600, lay himself open to a charge of extravagant working in keeping an assistant, two horses, &c., in such a small, or at any rate unremunerative, practice. Another plain inference which he would have to be prepared to disprove would be the *bona fides* of the £600.

I am, Sir, yours truly,

Nov. 26th, 1884. TAXES.

INCOME-TAX RETURN FOR 1883–4.

Schedule D.—Appointments.

Medical Officer of Union	£65 0 0	
Public Vaccinator	57 10 0	
Medical Officer of Health	45 0 0	
		£167 10 0

Schedule E.—Profession of Surgeon, &c.

Gross income as per books	378 10 0	
		£546 0 0

Deductions.

Surgery Account:—		
Proportion of rent for consulting-room and surgery	£7 15 0	
Proportion of rates and taxes	1 5 0	
Drugs, bottles, and surgical appliances	70 0 0	
Horse and Stable Account:—		
Rent and taxes for stable and coachhouse	9 0 0	
Groom's wages	52 0 0	
Licence for carriage and groom	1 10 0	
Hay for two horses	27 10 0	
Corn, beans, bran, &c.	34 0 0	
Straw for bedding	4 10 0	
Shoeing and veterinary account	7 10 0	
Tolls	4 15 0	
Repairs to carriage	6 19 0	
Repairs to harness and saddlery	3 10 0	
		229 15 0
	£316 5 0	
Deduct £120, abatement allowed on incomes of under £400	120 0 0	
Income-tax payable on	£196 5 0	

The deductions (£229 15*s.*) and abatement (£120) together amount to £349 15*s.*, or nearly 65 per cent. of the total income.

The assessment under the different Schedules should be—

Schedule D.—On £167 10*s.* (less 65% = £107 10*s.*)	= £60 at 5*d.*	= £1	5 0
,, E.—On £378 10*s.* (less 65% = £241 10*s.*)	= £137 at 5*d.*	= 2	17 1
		£4	2 1

M.B.—The demand is an unreasonable one. The case is one for friendly settlement; but if that is impossible, payment of the full sum should be resisted. The nurse should show what she has lost or presumably lost, which, with a notice of six months, cannot be much.

VENTILATION OF SCHOOLS.

To the Editor of THE LANCET.

SIR,—The School Board here (of which I am a member) being about to erect new schools, I have been requested to advise as to the ventilation. Could you therefore advise me as to the best source of obtaining a pamphlet or book upon such matters?—I am, Sir, yours truly,

Paignton, South Devon, Nov. 30th, 1884. H. COLLINS, M.D.

*** The general principles to be held in view will be found in the articles on Warming and Ventilation in Wilson's Handbook of Hygiene (Churchill), and "Our Houses" (Cassell and Co.). Mr. Robson, formerly architect to the London School Board, has issued a work on School Construction. See also Mr. C. E. Paget's work on Healthy Schools, prepared for the International Health Exhibition (Clowes and Sons).—ED. L.

ARSENIC IN TEXTILE GOODS.

A TRIBUTE has lately been paid to the judgment of the medical profession in Sweden by the manufacturers of Chemnetz (Saxony), who petitioned the German Government to make representations to the Swedish officials regarding the inconvenience to business arising from the researches of their chemists as to the presence of minute quantities of arsenic in textile goods. It was suggested that in such cases the medical authorities should decide whether the proportion of arsenic was injurious to health, instead of the presence of that substance in minute quantity bringing the goods within the scope of recent Swedish legislation.

Dr. J. Ellis (Anaheim).—A subscription for the purpose mentioned has not been spoken of as yet.

Dr. Hosack Fraser is thanked for the intimation.

"SUPPOSED CANCER OF THE RECTUM IN A BOY AGED NINETEEN."

To the Editor of THE LANCET.

SIR,—I am much interested in Mr. D. M. Douglas's letter published in your last issue. He questions the diagnosis of cancer of the rectum on the ground that his patient was only nineteen years of age, and concludes his letter by stating, "I believe a case of cancer of the rectum in one so young is not on record."

In perusing the literature of rectal cancer Mr. Douglas must have overlooked cases, for several are recorded at an earlier age than that mentioned in his letter. Amongst others, I may refer him to two instances mentioned by Allingham ("Diseases of the Rectum," fourth edition), one in a boy of seventeen, and another in one aged thirteen. Godin (Mollière's "Traité des Maladies du Rectum et de l'Anus") observed a case in a patient of fifteen; while Quain (Pathological Society's Trans.) narrates a case occurring at sixteen years of age. I have myself recorded an instance in a boy of seventeen. In this case the patient was brought to me by Dr. Forbes of Rock Ferry. The symptoms had only lasted two months, and the boy was in fair general health. The course of the case was subsequently very rapid, the patient dying within twelve months of the first onset of the symptoms. Some weeks before death Mr. Reginald Harrison performed colotomy for complete obstruction. At the time of operation Mr. Harrison tells me that the pelvis was blocked up with a large mass of cancer, so that the diagnosis was verified beyond the possibility of doubt.

Rectal cancer is doubtless rare before the age of twenty, but I have seen many examples of it between that age and thirty. Mr. Douglas may be perfectly correct in concluding that the tumour which he describes is not malignant, but he does not tell us what he considers it to be. Should he remove the growth it would be interesting to hear from him what its nature proves to be.

I remain, Sir, yours truly,

Stratford-place, Nov. 28th, 1884. HARRISON CRIPPS.

To the Editor of THE LANCET.

SIR,—Mr. D. M. Douglas, in your issue of the 29th ult., says that he believes a case of cancer of the rectum in one so young (nineteen) is not on record. This is, however, not correct, for according to the Pathological Transactions, vol. i., p. 67, Mr. Busk exhibited a preparation at a meeting of the Society in 1846 taken from a boy sixteen years of age, who died of acute peritonitis. He had a tight stricture of the rectum three or four inches from the anus; it was accompanied by ulceration of the mucous membrane, and was produced by a large deposit of "medullary sarcoma" external to the muscular coat of the intestine.

May I suggest that the case recorded by Mr. Douglas may be one either of polypus or an erectile tumour, as the symptoms of polypus after attaining a certain development are dysenteric, and Dr. Tuckwell has recorded a case of erectile tumour of the rectum, in the *Medical Times and Gazette*, vol. ii., 1868, p. 195, which resembled chronic dysentery. Anyhow, from the symptoms recorded and the age of the patient "cancer" of the rectum is, in my opinion, negatived.

I am, Sir, yours truly,

Bicester, Nov. 30th, 1884. EDWARD COTTERELL.

J.—There is no English periodical. The American is *Journal of Cutaneous and Venereal Diseases* (New York; Wood and Co.), and the French, *Annales de Dermatologie et de Syphilographie* (Paris: G. Masson).

A CORRECTION.

To the Editor of THE LANCET.

SIR,—Kindly allow me to correct a misstatement of some remarks made by me in the course of the discussion upon Anæsthesia at the Medical Society of London on Monday, Nov. 24th, and which you reported in your issue of Nov. 29th.

Speaking of the so-called bichloride of methylene, I am reported to have said, "It was brought before the public under false colours." Now, Sir, my contention was that since this substance has been shown to be a mechanical mixture, and not a compound, it falls under false colours when represented to possess properties other than those inherent in dilute chloroform, or an exemption from the dangers which attend chloroform narcosis. I had no wish or reason to impute want of candour to those who have introduced, and who still advise, the use of bichloride of methylene.—I am, Sir, your obedient servant,

Gower-street, W.C., Nov. 29th, 1884. DUDLEY W. BUXTON, M.D.

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MEDICAL CLUB TERMS.

Omega.—Concurrently with a less generous movement for extorting the greatest amount of work from medical men for the minimum amount of pay, there has been a creditable movement on the part of many of the older clubs to raise the remuneration of their medical officers from the old and quite inadequate figure of 2s. 6d. per member to from 4s. to 5s. We are sure that every member of a club would benefit by treating his medical attendant more liberally. When the family is included the terms should be less, but they should still be justly generous. Working people have no more valuable friend than their medical adviser, and they should give such terms as to keep good men.

Captain Tudor.—The line of treatment referred to has not been ignored by the profession. But no remedial measures are of equal efficacy in all cases and under all circumstances.

Mr. Lothbury should consult his solicitor. The question is a legal one.

VASELINE AS A SURGICAL DRESSING.

To the Editor of THE LANCET.

SIR,—I have seen, in your issue of Nov. 8th, under the above heading, an article by Mr. A. W. Mayo Robson of Leeds, and in your last issue his opinion confirmed by Dr. Herbert Stowers, London.

On looking over the cases enumerated by the former gentleman, I would beg to submit that it was probably not the use, but the abuse, of the vaseline which caused the irritation. In all these cases, with perhaps the exception of Case 2, I can quite understand the irritation being due to discharges pent up by the vaseline applied over the wounds. With regard to the second case, that of ophthalmia tarsi, I may state I have always taken the greatest care in using vaseline ointments in eye practice, owing to the frequency of its containing paraffin, and which I have myself seen frequently give rise to intense inflammation. It will therefore be seen that I submit that the dermatitis set up in the exceptional cases enumerated by Mr. Mayo Robson was probably due to the mechanical action of the vaseline, rather than to any chemical impurity, and that the same dermatitis might have been set up under the same circumstances by the application of lard, olive-oil, or tar, which might have no action beyond the confining of the discharge.

I am, Sir, yours truly,

Wigtown, N.B., Nov. 17th, 1884. WILLIAM J. PEDDIE.

To the Editor of THE LANCET.

SIR,—May I add a few words of further testimony to the irritating properties of vaseline? In different parts of the country—Yorkshire, Bucks, and Salop—I have met with several cases where its use as a dressing caused slight irritation of the skin. I have also found that some persons suffer from irritation and itching of the scalp if they use vaseline as a pomade. I have applied it myself on many occasions, and each time it caused a peculiar pricking itching, which lasted some hours. Vaseline is not so easily washed from the skin as are other greases and oils. Might it not, therefore, irritate by blocking the ends of the sweat or the sebaceous glands? Many of those employed in petroleum works are well known to suffer from irritation of the skin, and also from a form of epithelioma analogous to chimney-sweep's cancer. Has this fact any bearing on vaseline? I must add that I have used vaseline in hundreds of instances without any bad result. Indeed, mild stimulant properties may add to its value in certain cases.

I am, Sir, yours truly,

Leeds, Nov. 22nd, 1884. FRANCIS EDWARD CANE, L.R.C.P. & S.Ed.

To the Editor of THE LANCET.

SIR,—Will you allow me to support Mr. Mayo Robson's remarks upon this subject from an ophthalmic point of view.

I have noticed during the last year that acute irritation of the eye and eyelids has followed the use of vaseline as a base for the ointment known as "Pagenstecher's ointment" when applied to some cases of corneal ulcers. It is my practice to use this ointment in cases of corneal ulceration, and in rare instances I have noticed acute irritation follow its use, which was at once relieved by making up the ointment with lard instead of vaseline, each case being rapidly cured under this change. This accidental irritation seems to me to be so rare, and the great good in most cases to be obtained by compounding ointments in use for ophthalmic purposes with vaseline so undeniable, that I shall continue its use, expecting every now and then to have to change the base of an ointment from vaseline to lard.—Yours faithfully,

H. BENDELACK HEWETSON,
Honorary Ophthalmic and Aural Surgeon to the
Nov. 30th, 1884. General Infirmary at Leeds, &c.

A. W. will find what he requires, so far as the physiology of the subject is concerned, in the chapters on "Unconscious Muscular Movement" in Carpenter's work.

Dr. Eustace B. Thomson is referred to a letter in another column.

"M.B. PASS EXAMINATION, UNIVERSITY OF LONDON."

To the Editor of THE LANCET.

SIR,—A full account of the pathology, diagnosis, and treatment of Unilateral Hæmatokolpos will be found in *Fritsch's Diseases of Women*, an English translation of which can be had at Sampson Low's Library of Standard Authors.

I am, Sir, yours truly,

Newcastle Emlyn, Dec. 2nd, 1884. J. POWELL.

Mr. J. F. Allen (Pietermaritzburg).—The mixture is doubtless inexpedient, and may be productive of harm to tender stomachs; but we do not remember any reported cases of injury having resulted from the ingestion of the agents in small quantities.

AN APPEAL.

To the Editor of THE LANCET.

SIR,—The following is a copy of a letter I have sent to the Royal Medical Benevolent Society in the hope of obtaining for Mrs. Fenton of Whitgift the annuity of twenty guineas allowed to the widows of medical men in poor circumstances; and I am further desirous of supplementing this small allowance by getting up a subscription which would enable me to pay her a further sum of eight or ten shillings weekly for her few remaining years.

"The late Wm. Fenton practised in Bayswater for some ten years, and then removed to Whitgift, Yorkshire, where he was in practice for about fifteen or twenty years, and up to the period of his death, which occurred at the commencement of this year under the following painful circumstances. Whilst examining a broken portion of the brass harness fittings of his trap, before starting on his usual rounds, he very slightly scratched one of his fingers, but thought nothing of it. Shortly after he had to perform a minor operation upon a club patient suffering from malignant disease. This occurred on the Thursday; on the Friday and Saturday he was feverish and ill, with swollen arm, &c. Dr. Blair of Goole was sent for on the Sunday, and on Monday the poor fellow died from blood-poisoning, and I believe his club patient died about the same time. The practice was a small country one, and, sad to say, no provision had been made for the widow, who is left entirely destitute, and, had it not been for the kindness of one or two personal friends, might now have been in her grave or the workhouse. Mr. Fenton's estate became insolvent, and no purchaser has been found for the death vacancy, although advertised for sale and offered for £100. Mr. Williams, the vicar, and Mr. Blair of Goole will fully endorse all I have here stated."

I propose drawing up a concise statement of the case, and having 1000 copies printed and forwarded to those wealthy members of the profession who would be likely to sympathise with so distressing a case. I ought further to add that Mrs. Fenton is old, and has outlived every member of her family save one.—I am, Sir, yours faithfully,

JOHN BAKER, M.R.C.S.
Heidelberg House, West Brighton, and Abingdon Villas,
Kensington, Nov. 21st, 1884.

ANOTHER APPEAL.

To the Editor of THE LANCET.

SIR,—Three years ago a young surgeon practising in New Zealand died, nine months having elapsed since the death of his wife. Two little orphan boys, aged three and four years respectively, were at once sent home to England to their grandmother, the widow of a clergyman, herself in delicate health, with scanty means of support. With praiseworthy energy, this good old lady at once set about a vigorous canvass to get one of the lads into the Wanstead Orphan Asylum, and was, happily, successful. She is now most desirous, ere she dies, that the other little fellow may find a home in the same institution as his brother, so that the fatherless and motherless boys may at least know and see something of each other during their childhood. A sum of £180 will secure the fulfilment of this very natural wish, if raised before March next. The British Medical Benevolent Fund, which has already on two previous occasions given assistance, has to-day promised £20 if the remainder of the sum required is forthcoming, and I venture through your columns to invite others to take part in this good work. I shall be most happy to give fuller information to anyone desiring it, and to take charge of contributions which may be sent to me for the purpose I have named. I am, Sir, your obedient servant,

STAMFORD FELCE.
Kenmure Lodge, Elgin-road, St. Peter's-park, W., Nov. 25th, 1884.

CASSAN *v.* FYFE.

To the Editor of THE LANCET.

SIR,—The case of "Cassan *v.* Fyfe," to which you refer in your issue of Nov. 22nd, is one of those unfortunate and unpleasant affairs that ought never to occur. Mr. Cassan has been at considerable loss in his efforts to clear himself from imputation cast upon him; and I am making this appeal through you to the profession thinking that it would be desirable to assist our professional brother in the expenses to which he has been necessarily subjected. I know there are those who will gladly respond; and I shall be most happy to receive for him any such expression of sympathy, which will be duly acknowledged, as well as in your pages, if you will permit.—I am, Sir, yours faithfully,

H. F. LANCASTER, M.D.
Neston Lodge, 275, Lewisham High-road, S.E., Nov. 25th, 1884.

To the Editor of THE LANCET.

SIR,—Who will be the rescuer? Our profession has well earned the title "noble." How more nobly can it vindicate its claim to that proud distinction than by upholding the reputation of an injured son? Who will help Cassan? Given the opportunity, there are, I feel certain, many who from their abundance will spare a trifle for this cause. You have already won a heap of thanks by your congratulations and your assurances that the sympathy of the profession will be given so generously to him. With many thanks for what you have already done in this case, and for your readiness at all times to maintain the dignity of our calling, I am, Sir, yours faithfully,

Nov. 24th, 1884. DUM VIVO VIVAT.

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OVERCROWDING IN NEW YORK.

FROM a report which has recently been presented to the Tenement House Commission of New York City, it appears that 562 tenement houses visited by the inspector contained 5050 families and 20,117 persons—an average of nine families and over thirty-five persons to each house. In many of the houses the occupants reached four times this number. In 90 per cent. of them the closets were in foul condition, 10 per cent. being most dangerous to the health of the inmates.

Filter is referred to the report on the subject in THE LANCET of 1867—Jan. 12th, March 23rd, and July 6th.

"MEDICAL EDUCATION IN AMERICA."

To the Editor of THE LANCET.

SIR,—In your issue of Oct. 18th mention is made, in one of your annotations on the articles written for *Le Progrès Médical* by M. L. Thaon, of the state of medical education in America. You were rather misled by the papers in question when you state that medical education receives no support from the Government here. Some years ago the National Government set apart a large amount of land, the income of which goes to endow one university in each State, the university to consist of five departments—viz., a college of literature and the sciences, a college of the fine arts, a college of agriculture, a college of law, and a college of medicine. The result of this is that many States have medical colleges supported by the Government; for although the income from these lands is considerable, it is not sufficient, and the State Governments appropriate more or less every year to support the different departments of the university. These medical schools are all practically free. Among them I might mention one at Boulder, Colorado, a town of about 6000 people; Iowa City, Iowa, a town of 10,000; Lincoln, Nebraska, a town of 18,000; Ann Arbor, Michigan, a town of 15,000. There are two or three others supported by the Government—that is, by the State. With one exception, the ones mentioned above are absolutely without any hospital advantages. The time demanded generally is three years, although some of these State supported schools, like many others, grant the M.D. degree after attendance on two courses of lectures. I need not say that there is more theory than practice taught in these schools—I am, Sir, yours truly,

GEO. H. SIMMONS, M.D., L.M.Dub.

Lincoln, Nebraska, U.S., Nov. 6th, 1884.

Dr. Angus Macdonald.—No doubt we shall be able to comply with the request of our correspondent.

"NOTE ON TRACHEOTOMY."

To the Editor of THE LANCET.

SIR,—On reading my Note on Tracheotomy, which you were good enough to insert in your last issue (page 951), I see that, when alluding to Dr. Ewart's suggestion, I omitted to say that he recommended the mouth to be rinsed out "with oil." Will you kindly allow this my correction to appear in your next number, and oblige yours truly,

Cavendish-square, W., Dec. 1st, 1884. JOHN W. OGLE, M.D.

Mr. F. P. Atkinson.—The drug has, we believe, been already employed for the purpose suggested.

Dr. C. C. Tite (Nashville) will find the notice on page 855 of THE LANCET for Nov. 8th.

A QUERY.

To the Editor of THE LANCET.

SIR,—Can you or any of your readers inform me where I shall find a record of Dr. Freud's experience of the uses of cocaine in dipsomania, &c.?

I am, Sir, your obedient servant,

Nov. 30th, 1884. T. G. T.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Durham, London; Messrs. Steel and Jones, London; Dr. J. Ellis, Anaheim; Mr. Maitland Coffin, London; Dr. Hitchcock, Bootham; Dr. Collins, Paignton; Mr. G. Meadows, Hastings; Dr. A. Macdonald, Edinburgh; Mr. H. Cripps, London; Mr. H. Turner, Norwich; Dr. Jas. Murphy, Sunderland; Dr. Macnaughton Jones, London; Mr. Roger Williams, London; Mr. B. Hewetson, Leeds; Dr. J. W. Ogle, London; Dr. J. Ward, Driffold; Mr. Sparke, Mansfield; Dr. Suckling, Birmingham; Mr. R. Potts, Cambridge; Mr. Easton, London; Mr. Rice Morgan, Morriston; Messrs. Nelson, Dale, and Co., London; Mr. W. Wallis, London; Dr. Illingworth, Clayton-le-Moors; Mr. Lathbury, Brereton; Dr. Elder, Nottingham; Mr. Cotterell, Bicester; Dr. H. Weiss, Vienna; Mr. W. Howard, Littleport; Dr. C. B. Taylor, Nottingham; Mr. Hopkins, London; Mr. Powell, Newcastle; Messrs. J. Marston and Co., Birmingham; Mr. Crouch, London; Mr. S. Snell, Sheffield; Mr. C. H. Willey, Sheffield; Dr. Barraclough; Mr. N. E. Davies, Sherborne; Dr. Hosack Fraser, Hanwell; Mr. C. T. Aveling, Clapton; Mr. Belcher, Burton-on-Trent; Dr. Renton; Mr. McGill, Leeds; Mr. D. Murray, London; Messrs. Brady and Martin, Newcastle; Dr. Talpedá, Rutland; Mr. Ogden, Fareham; Dr. Bowes, Wimbledon; Mr. Elliott, Carlisle; Messrs. Loeflund and Co., London; Mr. Offord, London; Messrs. Macfarlane and Co., Edinburgh; Mr. C. Maekesom, London; Dr. James, Winslow; Mr. Todd; Mr. Rendle, London; Mr. C. J. Jeaffreson, Newcastle-on-Tyne; Mr. E. C. Warren, New Brompton; Mr. T. W. C. Jones, London; Mr. Clouting, Thetford; Captain Tudor, Brading; Dr. Campbell, Garlands; Mr. E. W. White, Chartham; Dr. Bralley, London; Mr. Walsham, London; Dr. Neale, London; Dr. Johnson, London; Dr. Fenwick, London; Dr. Withcall, St. Paul; Mr. Blair, Leeds; Mr. Glover; Dr. Goodhart, London; Mrs. Warren, London; Mr. Giles; Mr. Atkinson, London; Mr. Jesse, Henbury; Dr. Waters, Liverpool; Dr. Saville, Algeria; Mr. Jessop, Leeds; Mr. Poole, Dublin; Mr. Creed, London; Mr. Graham, London; Dr. Groves; Mr. Gurner, London; Mr. Lee, Swansea; Dr. M. McKenzie; Mr. Freeman, London; Mr. Blore, Leeds; Dr. Fite, Nashville, U.S.A.; Dr. Ridge, Enfield; Mr. Umney, Sydenham; Dr. Hardwick, Rottierham; Dr. Adams; M.R.C.S. of 1845; Medicus; Alpha; A. W.; Fairplay; A Wanderer; Matron, Middlesbrough; A. S.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Dunnie; Mr. Webb, Bury; Mr. Armstrong, Harpurhey; Mr. Telford, Bury; Mr. Roux, Hyères; Mr. White, Bayswater; Dr. Faussett; Mr. Pratt, London; Dr. Douglas, Banbury; Mr. Moir; Mrs. Clark, Tunbridge Wells; Dr. Eberle, Thirsk; Dr. Palmer; Messrs. Mackay and Co., Edinburgh; Messrs. Gillon and Co., Leith; Messrs. Hartley and Co., Worcester; Mr. England, Cork; Mr. Cook, Ipswich; Mr. Cornish, Manchester; Mr. Mayo, Yarmouth; Mr. Swann, South Normanton; Dr. Tylecote, Sandon; Mr. Andrew, Stockport; Dr. Barnes, Axminster; Dr. Squire, London; Mr. Iliffe, Coventry; Dr. Woakes, London; Mr. Martindale; Mr. Kerr, Glasgow; Mr. Pentland, Edinburgh; Mr. Sampson, York; Mr. Conyers; Rev. Dr. James, Aylesbury; Mr. Shote, London; Dr. Jones, Welshpool; Mr. Howard, Twickenham; Dr. Davies, Sandbank; Messrs. Maclachlan and Co., Edinburgh; Dr. Dow, Fyfe; Mr. Hulme, Birmingham; Dr. Wright, Derby; Miss Wardell, Stanwell; Dr. Gwynne; Mr. Coste, St. John's-wood; Mr. Wibley, Southampton; Ozone; Medicus, Huddersfield; M.D.; M.B., Truro; Medicus, Manchester; Gorphwysfa; Medicus, Basingstoke; P. H., Dover; C. L. G.; H. R. Welham-green; S. H., Edinburgh; A. P. S., Peckham; Physician; X. Y. Z., Liverpool; H. E.; X. X., Eastbourne; Delta, S. Molton; St. David; S. N.; Percy; M.D., Swanage.

Church of England Temperance Chronicle, San Francisco Newsletter, California Exchange and Mart, Temperance Record, Night and Day, Edinburgh Daily Review, Catholic Times, Melbourne Argus, Port Elizabeth Telegraph, Times of India, Richmond and Twickenham Times, &c., have been received.

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"Bradshawe" Lecture

ON THE

PATHOLOGY OF CANCER.

DELIVERED AT THE

ROYAL COLLEGE OF SURGEONS,

On Thursday, Dec. 4th, 1884,

BY WILLIAM S. SAVORY, F.R.S.,

SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

"WHAT'S in a name?" Not very much, perhaps, in the sense in which Shakespeare puts the question into the mouth of Juliet. No great danger, probably, or source of error, when the matter under consideration is as simple and clear as the odour of a rose; but it is surely otherwise when ideas involving far larger and more complex issues come to be expressed by a single term. It is often said, and indeed with truth, that for one's self it is no matter what you call a thing so long as you understand the subject or nature of it; but this always signifies very much to others who may not so clearly comprehend it. It would be easy enough to illustrate the tyranny of phrases in the study of pathology and in the practice of surgery; for here the power of words for mischief is sometimes seen in a twofold aspect. Not only in the perpetuation of error, but in the maintenance of confusion too. Certain terms and titles have not only given the stamp of currency to false doctrines, but by the changes they are prone to undergo, and have undergone in their meaning, they signify different things at different times, and at the same time different things to different persons. I say it would not be very difficult to find abundant illustrations of these remarks, but I will take now only the one that is to be found in the terms "local" and "constitutional." In a general sense, perhaps, these are sufficiently intelligible, as when we speak of constitutional disturbance from local disease. When neither the patient nor the surgeon can detect any evidence of mischief, except in a limited portion of the body, such affection may very well be termed local. When the patient is conscious, or the surgeon can discover, that the functions in general are disturbed, the condition is very fairly expressed by the term constitutional. But when these same terms, local and constitutional, are employed more definitely, and in relation not to phenomena merely, but to the nature and origin of disease, difficulties soon appear which lead to error and confusion. The oldest, the largest, the plainest, and most popular division of tumours is into innocent and malignant growths; and, although it has always been easy to show that these two great classes often approach very closely, and even pass into each other, still, in the main, the several broad and well-defined lines of demarcation have been sufficiently obvious. Not only surgeons, but the public, have come to understand the great point of distinction. The crucial question is continually asked, if the tumour is removed, Will it come again? But then, of course, to those who think on these things, the further question inevitably rises, Why are tumours in their nature and history thus different? Whence the cause of such a contrast? What does it mean? And these deeper questions have been replied to, over and over again, by the phrases local and constitutional. The innocent tumour is a purely local one. There is no extension, save by the growth of the sensible mass. Its substance and whole influence lie within a small space of the body, which can be clearly defined. To this place it is strictly limited, and if it be removed from this, it is gone for ever; but of the malignant tumours none of these conditions can be affirmed. Whatever may be true, at any given time, of the sensible mass, the existence of the disease is not so limited; and thus, in contrast to innocent ones, malignant tumours have been called constitutional. But then, when the inquiry is carried further, and some explanation of constitutional, in this sense, is demanded, when it is asked in what way the word constitutional advances our knowledge beyond the term malignant, it must be confessed that the answer is not altogether a satisfactory one.

Many of us can remember the celebrated discussion on cancer at the Pathological Society, and the fact that seems to stand out in it most clearly is, that then, as usual, the term constitutional was employed by different speakers in widely different senses. And, moreover, I think it might be shown that the different ideas which different speakers associated with the term constitutional were mainly due to the relative importance which each speaker respectively attached to certain features of malignant tumours. Of cancer, it was at the outset affirmed that the all but certainty of its recurrence, remove it as we will, its hereditability, its frequent association with other forms of irregular growth, its often rapid diffusion, its power of infecting the system—all, in fact, that we see in the life of cancer—naturally lead to a belief that the disease must, from the first, be more than a mere local tissue change. But then, again, in view of the hereditariness of cancer, of the constancy and of the method of its recurrence, and of the insusceptibility of bodies generally to the inoculation of cancer, the word constitutional was held to be equivalent to the total constitution of the body, that the constitution is, in short, the man; all that gives to him his individuality. But, again, the assumed facts that in cancer there is no distinct or specific anatomical or structural element, that neither plurality of tumours nor the property of recurrence *per se* is destructive, that cancer is all-pervading and appears as a disease, the one essential character of which is dynamical, such facts suggest strongly to some that cancer is a disease of the blood, or even that hereafter it may be found to be in close alliance with the so-called zymotic affections. In favour of this view has been added the observation of the mode in which secondary cancerous tumours grow; not as mere grafts undergoing increase, but as a definite sphere of the secondarily affected organ undergoing changes in its own elements, and growing, by way of such elementary changes, into the likeness of the primary tumour. Furthermore, this view appears to be strengthened by a comparison of cancer with syphilis. Taking, on the other hand, a chancre inoculation, say of the lip, with affection of the lymph glands, followed after a certain number of years by gummata throughout the body, and taking, on the other hand, an epithelial cancer of the lip with its secondary affection of lymph glands, and subsequent identical affection of, say, the lung or liver, it is asked, Can we affirm that these two cases differ more than we might reasonably expect two species of morbid poison to differ? This is even suggestive of a contagium from without. And yet further, in the manner in which it is inherited, a resemblance has been found to syphilis, gout, and tubercle. Once more. In face of the fact that the hereditary transmission of cancer must mean that it is conveyed from parent to offspring, through the ovum or spermatic fluid, it must exist in the individual before the formation of the blood. And it has been maintained that the term constitutional, or all-pervading, may be true enough in regard to the ovum, but that it ceases to be true of the adult, because then we can realise the "condition of localisation" in the various tissues of the body.

Thus, with such different interpretations from such high authorities of the term constitutional, it cannot be allowed that it has any precise or definite signification for us, and furthermore, I fear it must be admitted that when the several grounds on which these various forms of belief are based, are critically examined—as, indeed, some of them were in the discussion alluded to—they will hardly be found adequate to the purpose in view. For example, that a disease is hereditary is no proof that it is constitutional in any of the senses in which the term has been employed. Otherwise the term constitutional must be given to every form of tumour which has been shown to be occasionally hereditary; and thus the significance of the expression, at least in its relation to cancer, would be lost. Neither does it appear to me that the view is supported by the manner in which cancer often proves to be hereditary. Although the fact of the occasional hereditary transmission of tumours is common to all of them, it has been pointed out that there is a difference in the manner of transmission of tumours which are called local and of cancers; that when a local or innocent tumour is transmitted it reappears in the same tissue, if not in the same place, in the offspring; whereas no such limitation is observed in cancer. But the difference in this respect seems to me to be more apparent than real, and, such as it is, I think may be

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explained by the nature of the cancer substance, of which I shall speak presently. When innocent tumours are transmitted, they often appear in the offspring in widely different parts, although, for obvious reasons, somewhere in the same tissue; and cancers, when transmitted, have a strong tendency to reappear in the same part; perhaps in half the instances in the breast. The difference, after all, appears to be one only of degree, and if the current view of the relation of cancer to epithelium, and of sarcoma to connective tissue, be correct, of a degree perhaps not very significant. For it may be said that no kind of tumour which is hereditary is limited to a particular place, and every kind of tumour which is hereditary is limited to a particular tissue. Then its recurrence after removal and its dissemination—the features which place it in such striking contrast to the tumours called innocent—in a word, the signs that are generally held to indicate an affection of the system—cannot be shown, I think, to be the usual attribute of cancer in the earlier stages of its history. If, in its course, cancer becomes thus all-pervading, this does not involve the admission that it was constitutional at the outset; for a disease may be local at one time and constitutional at another; and this is a point which, I venture to think, requires to be carefully distinguished. The characters which a disease presents at an advanced stage of its progress is one thing; its mode of origin is quite another; and, in the case of cancer, I shall try to show that this distinction is a necessary one, and of fundamental importance. Nay, even in a disease which in an early period of its history is emphatically recognised as constitutional may, I suppose, in the earliest stage of all be considered local. For in whatever relation the induration of a chancre may stand to the infection of the system in syphilis, it will, I take it, be generally allowed that after inoculation and certain local changes consequent thereon a sensible period, though it may be a very short one, elapses before the poison becomes all-pervading. If the arguments in favour of the view that cancer is a constitutional disease be examined, it will appear, I think, that many of them are valid only in regard to the more advanced stages of cancer. The evidence in favour of the view that when cancer first appears in a body it is as a constitutional disease seems to me far less clear and cogent.

Now, let us discard for a moment these terms local and constitutional, and let us approach the study of cancer from another point of view. Amongst the many attempts at an adequate classification of tumours there is one which is founded on their structure, on the character of the elements of which they are built up. The fact is sufficiently clear that various tumours are composed of structures or tissues, which, in sensible characters, are completely identical with some one or other of the normal tissues or structures of the body. Fatty and fibrous tumours are familiar examples of these. I suppose portions of fatty or fibrous tumours may be placed under the microscope side by side with portions of natural adipose or fibrous tissue, and no histologist, who understood his work, would venture to say that he could distinguish between them. But, again, it is clear that certain tumours present structures which are not identical with any of the adult structures of the body, but which may be distinguished from any of these by competent observation. Hence the famous classification of tumours into homologous and heterologous growths. But further explanation is necessary here. In this view the term heterologous has been commonly employed in its full meaning; to signify that tumours so-called do not in their structure resemble any of the natural tissues of the body; it should, I think, be as I have already said—any of the adult or fully formed tissues of the body; for in truth, and this is of the first importance, these heterologous tumours, in their sensible structures, do resemble some natural tissues when in an embryonic or immature state. Just as portions of homologous tumours may be mounted side by side with portions of certain adult tissues, and no distinction between them can be discovered, so portions of heterologous tumours may be mounted side by side with portions of certain embryonic tissues, or tissues in course of development, and no distinction can be drawn between them. Let me be understood in this. I am not referring to the arrangement of the elements in a tumour, but to the sensible characters alone of the ultimate elements. A carefully prepared section of cancer or sarcoma in a typical state has characters, of course, by which it may be distinctly recognised. These characters of arrangement have been described over and over again, and are now familiar to all. But to these I do not now refer. My remarks here are confined to the primary forms themselves; to the physical characters of the ultimate elements of structure, not to the mode in which they are arranged; in short, to the so-called cells, either in their typical form or in some of the earlier changes they undergo. So, then, of cancer and its allies, of the various forms of sarcoma, it may be affirmed that they consist of structural elements which in their sensible characters correspond to certain natural structural elements in a rudimentary state.

Now, if we pass, for an instant, from the study of tumours to a comparative view of the phenomena of life, either in the vegetable or animal world, we must remark in various individuals of either kingdom a wide diversity of structure; not only a wide diversity in separation of organs, or in complexity of combination, but a diversity yet wider, even more general, in truth universal, in the ultimate anatomical elements of which they are constructed. From a simple cell, or cluster of cells, we pass through various tissues which have been reached by further stages of development, until we arrive at the most elaborate, or highly specialised structures; for instance, at the spiral vessels of plants and at striated muscle of animals. Again, by such a survey, the fact is revealed that there is the widest difference in the power of multiplication, or propagation, among the various forms of animal and vegetable life; and, furthermore, that a relation may be observed between the simplicity of original structure or degree of development and this power of reproduction; that the creatures whose structures and mode of formation are simplest, which are most akin to the primary elemental form, can increase and multiply with most rapidity and ease. On the contrary, in those creatures called highest, which consist of structures and organs most elaborately formed and highly specialised, the power of growth and reproduction is most limited. And yet, further. In such a study a deep difference is observed in the relation which such different creatures hold to the conditions under which they live. There is, of course, a constant action and reaction between them, and what are called the external agents of vital action, both material and dynamical. All are dependent on, and influenced by, food, air, and the operation of the physical forces; but this in widely varying degrees. While the higher or more complex creatures are less influenced in their character by these than are the lower or simpler, the lower or simpler are less dependent on these than are the higher or more complex. The simpler forms can exist, can maintain life, under far more variable conditions than the more elaborate ones. Their power of endurance is manifestly far greater. Who needs to be reminded of illustrations of this in either the vegetable or animal kingdom? Compare the power of endurance of exposure, deprivation, and extreme change of the simplest plants, with the tenderness and susceptibity of the more elaborately developed ones. In the animal kingdom, even among invertebrata, compare the simpler with the more elaborate forms of life, in their power of sustaining deprivation of food, and air, and heat; and, above all, witness the striking contrast in this respect between fishes and reptiles on the one hand, and birds and mammalia on the other.

Now, this great law of nature, for such it seems to be, governs not only the various individuals of the living kingdom, but it is in force also in the several tissues and structures of the same individual. Note now how widely they vary, not only in design and pattern, but in their degree of elaboration or complexity. Compare, for a single instance, fibrous tissue and striated muscle; and now note, too, the wide difference between these various tissues in their power of reproduction. The simplest of them may be said to be capable of perfect reproduction. Witness, on this side, the result of the division of a tendon; witness, on the other, the result of the division of muscle. It is doubtful perhaps whether, in such circumstances, muscle can ever be perfectly restored. It is certain that, as a rule, it is not; but that, in repair, its place is supplied—and observe the significance of this fact—by the lower or simpler form of tissue, the fibrous. Then, further, observe the relation in which this power of repair or restoration stands to the mode of original development, whether in the creature as a whole, or in the several tissues of which it may be composed. There is surely a relation, but an inverse one, between the extent of change through which any individual or structure passes in the course of its development and, when fully formed, in its power of reproduction after mutilation. In the vegetable kingdom compare, in their power of recovery after mutilation, the simpler cellular

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plants with the higher exogens and endogens, and in the animal kingdom the like power in polyps, worms, and amphibia with that of birds and mammalia. And let me remind you here of the significant fact that this power varies, not with type of organisation, but with grade of development; not with the relation to each other of parts and organs, but with the nature and extent of change through which the several creatures in the course of their development pass. And what is true of creatures as a whole is also true of the several tissues of which they are constructed. Compare the power of recovery of the cellular tissue and woody fibre of plants, or of the fibrous tissue or even nerve and muscle of animals with their mode of development. It would seem indeed that in proportion to the amount of force engaged in original formation, so is the power of subsequent repetition reduced; or otherwise, that there is an inverse proportion between the power of attaining a high grade of development and the power of reproduction. So that while on the one hand, from a knowledge of the mode of development, one might foretell the capacity for repair after mutilation of an individual or tissue; on the other, from a study of the capacity of repair, whether in the individual or tissue, one might be able to judge of the degree of change through which it passed in the course of its original development. And it may be affirmed of individuals and their tissues that the lower the grade of development the greater is the power, not only of reproduction, but of endurance of life; that in proportion to the extent of change which any individual or tissue passes through in the course of its development, so not only is its subsequent power of reproduction limited, but so also is its maintenance of life dependent on the special conditions under which it exists.

Now of tumours, it may be remarked in the first place that, various as they are in structure, they almost invariably consist of one or more of the simpler tissues—of tissues of comparatively simple structure, and whose mode of formation does not involve any very elaborate series of changes. Among the tumours called homologous, or those which consist of adult or fully formed tissue, fibrous tissue in its various forms and adipose tissue are very common; muscular tissue very rare. When muscular fibre appears in the substance of a tumour the plain, or unstriped, or simpler form of fibre is far more common than the more elaborately developed striated fibre, and perhaps in most of the instances when either of them is found their presence is due rather to the inclusion of normal tissue in the tumour during its growth than to an independent formation or distinct outgrowth of muscle. Again, in glandular tumours, which are by no means uncommon, it is the acinous portion of the gland, that which in original development is first of all formed, which is chiefly represented in the substance of these tumours; ducts which are more complex are not very often completely produced. Still the tissues which compose these innocent tumours, comparatively simple as they are, nevertheless are wont to obtain their mature or adult condition; so that although, being of a comparatively low grade of development, they are readily produced, and can therefore grow almost without limit, yet withal, being fully specialised structures, their life more immediately depends on certain external conditions. But the structure of cancer and its allies is characterised by the presence of the lowest and simplest of living forms. The so-called cancer cells, the structural elements of cancer, are the very type of the rudimentary or embryonic form of tissue; and beyond this early stage the typical cancer cell seems never to pass. Both in positive and negative characters it corresponds to the simple animal or vegetable cell. In its indifferent endowments, in the total absence of any special function, in its tenacity of life and endurance of change of external circumstances, it very closely resembles it. If one were asked to enumerate the characteristic properties of the lowest and simplest forms of life, of the cell, I think reference would be made to rapidity of growth, to power of reproduction, to wide extension and dissemination. And do not these characters form the prominent features of cancer in its worst or most malignant form? The absence of any attempt at what is termed differentiation or specialisation is in accordance with its surpassing power of multiplication and tenacity of life; and, as we pass from cancer through the more malignant to the less malignant forms of sarcoma, we find a departure from the typical form of cell to be associated with more limited power of mischief. As the elements of a tumour become fusiform or spindle-shaped, as the first steps in development towards the formation of some special kind of tissue are taken, so is the property of dissemination, or the power of living under various conditions, restricted, until, as we pass further on to the production of distinct fibres, as the power of individual development advances, the attribute of indifference to surrounding conditions, or to its environments, disappears, and the elements of the tumour become limited to a particular place. It is from first to last local, or what we call innocent.

But one word further on the so-called cell of cancer. The history of this word cell, in its relation to physiology and pathology, is not without interest and importance. When the famous cell theory was first set forth, a cell was very clearly and accurately described. Schwann, and many of his successors, in their definition of a cell, took care to leave no doubt on what they regarded as its essential structure. At length, however, certain facts were established which were fatal to the cell theory as it was then understood and accepted by all. It was shown, for instance, that in the development of muscular fibre cells had no share, and it then appeared how deeply rooted in the minds of physiologists this great doctrine had become. To me, at least, it seems that mischief has arisen from the proceeding by which an attempt has been made to evade the fatal objection opposed to it by facts. The scarcely ingenious scheme has been devised of modifying or enlarging the definition of a cell so as to make it include structures which really can have no claim whatever to the title of cell in any fair signification of the word. Cells have more recently been described as mere masses of protoplasm, each around a nucleus, and the existence of a wall or limitary membrane as an integral part of a cell has been quietly ignored. To me it seems, in all candour, that no better reasons for applying to such a structure as this the term of cell can be given than that such compromise is essential to the maintenance, in some shape or other, of a so-called cell theory. It is affirmed indeed that "the existence of animal cells destitute of envelope, although more insisted on of late years, has been all along recognised in the study of cell development, and was expressly pointed out by Schwann himself." But although it is true that Schwann admits, in more than one place, that the presence of a cell membrane cannot always be demonstrated—as, for instance, in the following passage: "Many cells, however, do not exhibit any appearance of the formation of a cell membrane, but they seem to be solid, and all that can be remarked is that the external portion of the layer is somewhat more compact"—yet, I think, a candid study of what he has written will show that he never contemplated, by his theory, the inclusion of such facts in development as appear to be now established. If it were true, as Schwann and his more immediate successors believed, "that there is one universal principle of development for the elementary parts of organisms, however different, and that this principle is the formation of cells," then it would be all very well to admit the occasional existence of such structures imperfectly formed without doing much violence to the doctrine. But it is altogether different when, in the development of certain most important tissues, no cell in any form appears, to persist in applying the term to simple fragments of protoplasm, a term which has been long and properly associated with a definite and different structure. It may be suggested that the alternative of throwing over an exploded doctrine is preferable to the confusion which must inevitably result from such vague and inaccurate employment of words. Surely the cell theory, as it has been long understood by all, is no longer tenable. Why attempt to avert its fate by what cannot be characterised otherwise than as a perversion of language?

And this question of the constitution of these so-called cells points to the further fact which I believe to be at the root of the erroneous view of their nature: the changes in aspect and character which living substances undergo at death. The conclusion has, for the most part, been too hastily and unconditionally accepted that the characters presented by tissues after death, and even after treatment by powerful reagents, are those that naturally belong to them during life. The structural changes which ensue on the cessation of life have, indeed, been long recognised in certain nerve fibres, but hardly, I think, anywhere else; yet I believe it to be, in some degree, common to all tissues. There can be no doubt, I think, of the fact of great change in striated muscular fibre; and some years ago I tried to show that the nucleus of the red blood cell in those vertebrata in which it is supposed to be constant has no existence during life and health. And I believe that the same fact is true of many forms of the

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nucleated cell; of the cancer cell, for instance, here. During life these are but fragments of simple protoplasm, the substance of which, uniform during health and vigour, separates at death into cell wall, nucleus and contents, after the manner of the coagulation of the blood and the rigor mortis of muscle. Now, I say, this seems to apply with especial force to the pathology of cancer. Its elements are, in truth, not differentiated even into complete cells. When fresh and unaltered there is no distinction of cell wall and cell contents. In the living particle I doubt whether there is even the distinction of a nucleus. In short, they are, I believe, but separate fragments of protoplasm equal to, but not higher in rank than, the amœba or white blood cell or the utricle of the plant. I say this view especially concerns us in its relation to the pathology of cancer. Cancer, strictly so named, we have been taught is the outcome of the epithelial tissues. Now, fully formed or mature epithelium is undoubtedly composed of cells, of individual structures showing distinctly enough cell wall and nucleus. And yet even here development into a complete cell is through the shortest and simplest changes. Then see how even this contrasts with the so-called cell of cancer, for these fragments of cancer protoplasm are but the embryonic or rudimentary form of a cell of epithelium. Their power of individual development does not reach even to this level. Judge, then, what their power of endurance and of multiplication must be. Then, again, this concerns the relation which the cancer cells bears to some cells of natural structures. If the cancer cell were really a complete and fully formed cell in the proper acceptation of the term, it might be argued that in this view it should have no further power of malignancy than, say, a fat cell. But herein consists the difference. A fat cell, although a comparatively simple structure, is yet one thoroughly specialised. It is no longer indifferent substance, but its life is devoted to a particular function. It is fully formed, adult, mature. So, again, with the cells of secreting glands. They probably are not, and, I think, for the same reason, so far removed from cancer cells as are fat cells. But still, gland cells are not in a state of indifference. They are so far specialised that they have a definite function, and clearly the whole purpose of their life is devoted to its fulfilment. I will only add, as reference to this matter, that I believe the same view may be carried into the structure of sarcoma. The characters which the elements present after death, still more after the action of various reagents, are not those which belong to them during life. The so-called fusiform and spindle-cells are, again, but separate fragments of protoplasm, altering their shape in the first step towards the production of some definite tissue.

Seeing that no satisfactory explanation of the clinical facts of cancer can be given by way of the constitution or blood or germ, some have sought to find it in the mobility and dispersion of the cells. To account for the infection of neighbouring and distant parts, and ultimately the contamination of the system, attention has been called to the fact that the cells are dispersed around a cancer tumour, and that the direction and rapidity of dispersion will vary according to the density of the tissues, and the abundance of connective tissue spaces, or of lymphatic or vascular networks in which it lies. We have been reminded that cancer is, for the most part, a structure infiltrating itself amongst the tissues in which it grows, not surrounded by a capsule or limitary membrane of any sort, as are so many non-infecting tumours. Once set free, it has been argued, the cells may travel either along the lymphatics to the glands, or through the surrounding tissues in the direction of the least resistance; or they may pass through the bloodvessels into the general current of the circulation. At times, too, they may pass through cavities by gravitation. No doubt such physical conditions as those alluded to may have some influence on the rate and direction of the distribution of cancer, but all of them together will surely not suffice to explain the clinical facts. A comparison of the dissemination of cancer with the wandering of white blood cells, which, indeed, has been brought forward to support the view, seems to me, when considered, to destroy it. The white cells wander freely, but they do not form new and distinct growths composed of masses of white blood cells over the body; but they soon change, are either developed into some form of existing tissue, or otherwise disappear. It is, on the contrary, in the very nature of the cancer cell not to advance in development, but to multiply. Moreover, it has been pointed out that there are cancers and sarcomas which multiply themselves in distant and dissimilar parts, whose physical condition looks as unfit for travelling as any that could be named. It is quite true that, in the typical forms of cancer proper, the cells themselves are free and mobile in the spaces within which they are enclosed. But when we study malignant tumours as a class, and compare them with innocent ones, it cannot, I think, be affirmed that there is anything like a constant relation between the rate and extent of their distribution and the mobility of their cells. Again, the attempt has been made, by Cohnheim, for example, to explain malignancy by assuming that the physiological resistances to invasion are somehow diminished. He argues that germs of cancer implanted into fresh tissue are sure to perish when the changes which go on in the tissue are normal. Their development implies that the tissue changes in which they live and grow have ceased to be normal. But there is no evidence of this in relation to tumours, and even, if established, it would not afford any adequate explanation of the malignancy of cancer. Why should it not apply to other tumours which are innocent? It does not touch the question of distinction between these and cancer.

The phenomena of cancer, then, the facts of its clinical history cannot be adequately explained by any reference to the constitution in any of the senses in which the phrase constitutional has been employed. The arguments in favour of this view in any form fail from want of precision. In the sense that an original flaw or defect exists in the vital endowments of a part it may be admitted to be true; but in this sense innocent tumours must be admitted to be constitutional, and so must every individual feature be which is hereditarily transmitted. Neither can the clinical facts of cancer be explained by regarding it as an affection of the blood. Inasmuch as this view has some advantage over the other in precision, so it fails more conspicuously to cover all the phenomena of the disease. Nor can the malignancy of cancer be explained by the mere mobility of its elements, for ceaseless change and constant transmission is the law of life everywhere. All fluids, all solids, the loosest and the firmest textures, are in continual motion. Look where we will we know full well that the appearance of stability and endurance is illusory. Vital action is inevitably associated with molecular movement. Freely, then, to cancer we may grant great mobility of its elements; but to explain its clinical facts we require much more. And I, at least, believe that what is wanting here is to be found in the nature and vital attributes of its so-called cells, or of the formless plasm out of which they come. For this matter, or these fragments, possess an ability of living after the fashion of the lowest and simplest forms of life. When we call these structures embryonic, it must never be forgotten or overlooked that this term has reference only to their position in the scale of life, to their grade of development. They resemble, indeed, during the whole period of their individual existence embryonic substance in the simplicity of their physical characters. But they differ in the widest possible way from embryonic structures in their vital attributes and life history: in the almost, if not quite, complete absence of change of structure or of endowment; and it is in this contrast that their power of evil becomes manifest. The great feature of embryonic tissues is in the advance from a simpler to a more complex state; to the formation of a higher structure, with more exalted or, at least, with more special functions. In short, their great vital endowment is the power of development. But the protoplasm and fragments of cancer are just what they are, because they have none others. They cannot "rise to higher things," and, according to a law of nature, they obstinately retain life and, in unbroken force, the power of propagation. Their power of growth is inversely to their power of development, and growth here is but synonymous with multiplication; for, as in the lowest and simplest forms of animal life, in structures composed of simple cells or fragments of protoplasm, no distinction can be drawn between extension of the individual and multiplication of individuals. And withal combined with these characters of life is, after the manner of their kind, their independence of special environments. Thus, upon their increase follows their dissemination. They are not bound by the conditions of their existence to be local; but they can invade various parts and flourish still. It would appear, then, that much danger lurks in the designation "embryonic" to cancer substance, and that it is of the first importance to beware of this. Malignant growths are heterologous in structure, unlike in this respect any adult tissue. But their substance resembles in physical characters embryonic tissue. It is only

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on a level with it too, and this is of prime significance, in grade of development. But it contrasts strikingly with it in this—that while the destiny of tissue which is truly embryonic is to a higher form of structure, this, which has no such power, retains in full measure the primitive capacity of reproduction and its comparative indifference to the conditions under which it exists. Although, as we all know, it is not correct to say that the higher animals, in the course of their development, pass through states identical with those of the adult condition of the lower, it is not incorrect to say that the higher animals, in the course of their development, pass through successive stages which in grade correspond to or are on a level with the ultimate stages of the lower. It is thus, and thus only, that we compare cancer substance to embryonic tissue.

This view seems to me to be strengthened by some facts which at first sight may appear to be in direct contradiction to it. Cartilaginous tumours, for example, are homologous structures—that is to say, they resemble generally certain of the normal tissues of the adult body; yet cartilaginous tumours, although usually innocent, occasionally behave, as everyone knows, like malignant growths. They grow with rapidity, and they reappear in distant and various parts. They are indeed singular among tumours in the respect that apparently the same structure will in different cases be endowed with such different attributes. But then it should be remembered that there are two kinds of normal cartilage, distinguished not so much by their structure as by their life history: the one called temporary, the other permanent cartilage. The one form does not throughout its life pass beyond the condition of cartilage; the other passes, sooner or later, into bone. There must therefore be something fundamentally different in the nature of these two forms of cartilage. Now, the enchondromata, which in their nature resemble the former kind, are localised, are innocent. They may be, and often are, multiple, and sometimes grow freely, and this quite accords with the simplicity of their structure. But the enchondromata which in their nature resemble the the latter kind are more or less malignant. They remain on a level only with structures which are fœtal, and with the absence of further development is associated the power of increase and of dissemination. It may be said that the cartilaginous tumours which are innocent show no advance of structure beyond those which tend to malignancy, none indeed that we can yet discover; but then neither do some forms of permanent cartilage differ in this respect from fœtal cartilage, yet we must regard the one as fully formed tissue, and the other as only in a more rudimentary state. In such microscopic structures it is not always practicable to discern the grade of development in the permanent aspect. The grade of a fat cell or of a gland cell must be interpreted rather by the specialisation of its functions than by its obvious structure. And let me observe that this attempt at explanation is not affected by the view we take of the nature of the transformation of cartilage into bone. Whether we regard it as an act of development or of degeneration, whether we regard bone or cartilage as the higher structure, still in the passage from cartilage into bone there is metamorphosis, further change, a tissue still further removed from the embryonic grade. In truth, the relation of cartilage to bone is by no means a peculiar one. Before we can determine to call any change either development or degeneration, we must become clear on the meaning of these terms; but it seems to me that any just view which will lead us to call ossification of cartilage an act of degeneration will lead us also to consider the several stages of the formation of other tissues as acts of degeneration. In this view the germ is the highest of all structures, for of all structures it possesses the greatest capacity for the highest phases of vital action. As we pass from the general to the special this power dies out, and at length there is only the power, and this to a limited extent, of self-maintenance. In the qualities in which cartilage can be said to be above bone all young structures are above adult ones.

I suppose it must be admitted that the present classification of tumours is not altogether a satisfactory one; but it was undoubtedly a great step onward when those tumours which, although not cancer proper, possess some of the worst features of malignancy, and which as a class are distinguished by the obstinacy of their disposition to recur, were brought together into the great group under the title of sarcoma. The title itself is an unfortunate one, but, nevertheless, our knowledge of the subject of tumours becomes clearer if we understand the chief marks of distinction, both pathological and clinical, between cancer and sarcoma, even without reference to the doctrine of their respective origins from epithelial and connective tissue, or rather from structures derived from the epiblast and hypoblast on the one hand, and from tissues derived from the mesoblast on the other. But under the term sarcoma is included a large class which may be very fairly subdivided into orders that for the most part differ strongly from each other; and this must of necessity be so if the view on which I have ventured to insist be well founded, for the sarcomas, in truth, represent the several connecting links which pass between the two extremes of cancer on the one hand, and quite innocent tumours on the other. The worst of the sarcomas are almost or altogether as bad as the worst cancers, and in their structural elements they very closely resemble them. Nay, in some instances they overlap or even pass to the other side. The clinical history of some forms of melanotic sarcoma is far worse than that of some forms of epithelial cancer; while some of the outgrowths which still fall within the class of sarcoma, as, for instance, the common nasal polypus, or myxoma, as it is called, may fairly claim by its behaviour to be ranked amongst tumours which are innocent. And as in the clinical history, so in the structural elements of sarcoma, the same gradation prevails. In this class, we pass through all degrees, from the scarcely altered cell, or fragment of protoplasm, through oval, spindle, and fusiform cells, to the fully formed fibre. These three great classes of tumours, then, are distinguished by the grade of development of the structures which constitute them. Those tumours which are recognised as innocent ones are constituted of elements which, for the most part, are on a level in grade of development with many of the fully formed or adult tissues of the body, and therefore in physical characters they are identical with them. Those tumours which are included in the class sarcoma are constituted of elements of various grades of development, being on a level with the successive stages of formation of some of the normal tissues. And those tumours which form the most malignant cancers are constituted of quite rudimentary elements, those of the lowest grades of development being but on a level with the embryonic stage of normal structures.

With reference, however, to this classification, it must be remembered that some tumours are of what may be called mixed or compound constitution—that is to say, that they consist of different structures in different parts. In some parts they consist of tissues like the mature normal structures, in other parts of more or less rudimentary forms; and, of course, their clinical characters will vary accordingly. Hence, unless an examination of such a tumour is very thorough and complete, any inference drawn from it may be very erroneous. Perhaps most tumours present, in some degree, differences of this kind. But, then, when structures of some low grade of development are discovered the question which is of cardinal importance still remains to be answered, Whether these are on their way to further development, or whether they have already reached their level and live only to multiply and invade? Another point of importance in reference to such a classification is to beware that we do not confound mere shape or form of these structural elements with their nature and attributes or rather to be cautious in drawing any inference of the one from the discovery of the other; for example, epithelioma of the lip and carcinoma of the breast are both composed essentially of what are called cells. But most of the cells of epithelioma are properly so-called. They are more or less mature. But the so-called cells of carcinoma are, as I have said, but fragments of protoplasm, and never reach to the level of true cells. To be sure, the grade of development in each case is low enough, and therefore both kinds of growth are malignant; but still there is a marked difference of grade in the two cases, and therefore an obvious difference in degree of malignancy.

I would venture to insist upon the significance of the fact that the present classification of tumours, which has been gradually worked out as the result of long and patient investigation, but without any reference to the principle I have been endeavouring to set forth, should nevertheless be in such accordance with the laws which govern the phenomena of life in general. It is suggestive enough that two paths of inquiry, separately pursued—that of clinical study and that of histological research—each lead at length to the same conclusion; that different degrees of malignancy of character should correspond with different grades of develop-

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ment of structure; that in morbid structures, as in normal forms of life, there should be an inverse relation between the capability to increase and extend, and the power of passing, by development, from the general to the special. And in the examination of a tumour, with the view of forecasting its clinical history, it appears to me that this is the chief question which should be taken into consideration. It will assist us less to know that any given tumour belongs to this or that particular class and order than to ascertain its own exact nature from a thorough investigation of its substance. Of course help in this, to a greater or less degree, may be derived from all the circumstances which pertain to it, not only by considering it in reference to the group to which it may belong, but also by reviewing its own previous history. But withal, when corrected or adjusted by such considerations as these, and others, too—such as its situation and mode of growth, and the local and general conditions to which it is subject—the first place may be given to a complete investigation of its anatomy. I say complete investigation, because of the fact already referred to that some tumours are of mixed characters, and their potency for mischief has perhaps to be estimated by the worse rather than by the better parts of them. I think if in a doubtful case I had to depend for prognosis on one source of knowledge only, I should choose to have this: the family and personal history of the patient, his or her own age or period of life, the physical characters of the tumour and its relation to surrounding structures, its place and previous history, especially its rate of growth, and, beyond all, its disposition to affect neighbouring and distant parts. Of course these together, and some of them alone, oftentimes speak clearly enough; and would, and should, with our present knowledge, outweigh any evidence derived from anatomical characters only. But when serious discrepancy occurs, as, indeed, it sometimes does, between clinical and anatomical evidence, this is due, I venture to think, rather to deficient examination or defective interpretation of what is seen than to any fallacy in the principles involved in it.

It is in accordance with our knowledge of the relations of the lowest individuals to the conditions under which they exist that malignant tumours should be very largely influenced by these. Look, for instance, at epithelioma of the tongue. Epithelioma, as a rule, is not reckoned as the most malignant form of cancer, and yet what a terrible history is that of epithelioma of the tongue! And may not this, at least in great part, be explained by its place and the conditions to which it is exposed; to the great vascularity of the tissues among which it lives; to the warmth, moisture, and continual motion; to say nothing of repeated, though perhaps slight, injury and inevitably frequent irritation? Yet, after all, what is the sum of the effect of these causes here upon diseases of a totally different nature? Surely the life history of cancer, as of any normal individual, is determined, in the first place, by its own endowments, which are the outcome of its structure.

Tumours are living structures, distinct outgrowths in some part or other, of the body; local or limited to a particular place in inverse ratio to the capability of their elements to adjustment to different conditions of life. Like the natural structures and organs, they have an independent life of their own, which is more or less influenced, modified, and controlled by the life of the body. Like natural structures, they have an inherent power of maintenance, but this power is regulated by the condition of the body in general. Tumours, by certain members of their class, approach very nearly to normal structures, and, indeed, between some of these and what may be fairly called local hypertrophies of these no well-defined line of demarcation can be drawn. Some of the chronic mammary or glandular tumours illustrate this. But, even in such outgrowths, the first departure from normal type is shown, not only in the formation of their substance, but also in the fact that they are not in such close physiological relation with normal structures as these are with each other. The sympathy which universally prevails between the several structures and organs of the body, and which is maintained either through the blood or by the nervous system, or in both ways, varies in degree among normal structures. But between all these tumours of the lowest organisation is found; they rise and [illegible] with the [illegible] of general life, and they are [illegible] by [illegible] structures. Thus, by the [illegible] and [illegible] and [illegible] and

elements of the organ, or by the development anew of additional elements. The organ may become larger by an increase in the size or in the number of its elementary structures. Thus we have what is called simple hypertrophy, and what is called numerical hypertrophy or hyperplasia; and I think there can be little doubt that increase by hyperplasia is at least the more common process. In many cases this is clearly revealed, as in epithelial structures generally, and glands more particularly. Now, surely, the transition from a local hyperplasia to a distinct tumour is not a very abrupt one. Nay, is it not, I repeat, sometimes very difficult if not impracticable, as in the instance of certain masses in the mammary or prostate gland, to draw any line of distinction between them? The mystery, then, which enshrouds the origin of tumours appears to envelop also other eccentric modes of vital action which are nevertheless more akin to some of the normal processes of life. Before we shall ever be able to answer the question why or how do tumours form, it seems to me that we must be able to solve the problem of normal growth and development, and to answer the question why or how it is that these continue up to a certain point, and then suddenly cease.

Clinical Lectures
ON
CASES OF DIFFICULT DIAGNOSIS.

By SAMUEL FENWICK, M.D., F.R.C.P.,
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(*Concluded from p. 990.*)

IT will be remembered that there is a considerable difference in the symptoms in the two cases which occurred in our wards and which I have selected for our consideration. In the first the patient was suddenly attacked with severe pain of the abdomen, which was more or less present until death; whilst in the second scarcely any pain was complained of, and diarrhœa formed the first and the prominent symptom throughout. Then it must be remembered that the perforation occurred in the former case whilst the patient was in perfect health; in the latter it presented itself in a person labouring under chronic phthisis. Now, this distinction holds good when large numbers of cases are examined. I have collected eighty-five cases in which the first symptoms are recorded, and of these sixty-three, or 73 per cent., complained of abdominal pain as having ushered in their illness. The onset of the pain was in almost every case sudden; in thirty-two it was referred to the abdomen generally; and in twenty-one it was located in the right iliac fossa or in the hypochondrium. According to my own experience where abscess only is the result of the perforation the pain is at first confined to the lower portion of the abdomen, and is often of a colicky character; but when general peritonitis is developed from the first the pain is more severe and more generally diffused. In one case the symptoms are recorded as those of "gravel," and I have myself seen frequent and painful micturition form the earliest indication. In two instances the more dangerous symptoms were preceded by tenesmus. In eight well-marked rigors preceded the pain, but this symptom has not fallen under my own notice. Vomiting is recorded as being present in the commencement of the illness in eighteen, having generally shown itself immediately after the pain. Collapse is only noticed in four, showing a striking contrast to the frequency with which it presents itself in perforation of other parts of the gastro-intestinal canal. Constipation was only noticed in eight cases as a primary symptom, probably because the accident so frequently occurs in persons in good health, and in whom the action of the bowels has been regular. Diarrhœa was noticed in nine out of eighty-five, but in almost every case the patient was suffering from phthisis, from typhoid, or some eruptive disorder. In two cases the initial symptoms were so obscure that they are stated to have resembled typhoid fever. If, then, we look again at these figures, we shall see that the most general symptom that ushers in the illness in a person previously healthy is a sudden and severe pain of the abdomen or of the right iliac region, generally attended by vomiting, and in some cases by rigors; but that where it occurs in those suffering from phthisis or typhoid, pain is often slight or altogether absent, and diarrhœa is then the prominent initial symptom.

We found that perforation of the appendix was capable of producing very different effects according as it might lead to adhesion between the injured part and some of the neighbouring organs, or might give rise to general peritonitis or to localised abscess; and it is evident that the symptoms presenting themselves during the life of the patient will vary according to the pathological conditions that may have arisen. We must therefore, in order to obtain an accurate clinical picture of the disease, examine cases of each kind by themselves as far as it is possible to do so. First, then, let us look at the symptoms that present themselves in cases that terminate by adhesion. A man, thirty years of age, was admitted under my care complaining of severe pain in the right iliac region, increased on pressure, vomiting, and obstinate constipation. Four years before he had a similar attack and was ill for three months, but he perfectly recovered, and remained well until two days previous to his admission, when he exerted himself at a game of cricket. On reaching home he began to vomit, and pain of the right side suddenly attacked him. The man died, and we could not obtain a post-mortem; but there seems little doubt from the symptoms and the physical signs that he had perforation of the appendix, and that in his exertion of the abdominal muscles he had ruptured some old adhesions and thus induced peritonitis. There are some similar cases on record, in which rupture of adhesions of the appendix were proved by examination after death to have taken place, and the previous illness had been described as "typhlitis"; so that in all probability the symptoms that present themselves in the cases that terminate in this favourable manner cannot be distinguished from those of inflammation of the cæcum. The occasional occurrence, however, of such cases should lead us to warn patients not to subject themselves to undue exertion for some time after any severe attack of inflammation in this region.

Whenever general peritonitis is excited the symptoms indicative of that condition present themselves, but in many cases they are considerably modified, as in other cases of suppurative inflammation of a serous membrane. Thus it is not unusual for the pain to lessen for a day or two, and the patient to express considerable relief, although the disease may be progressing. In some instances, probably from the appendix becoming surrounded with lymph, the patient appears to be convalescent, when he is again suddenly prostrated by an accession of inflammation induced, we may suppose, by an escape of a portion of the inflammatory products into the peritoneal cavity. A case of this kind came under my notice a short time ago; a gentleman suffered from the usual symptoms and physical signs of perforation of the appendix, from which he gradually recovered; but when apparently convalescent, he was again attacked by illness, and rapidly sank.

Tenderness on pressure is experienced over the whole abdomen, but is always most severe in the right iliac or the hypogastric region. This is the case even when the pain is chiefly referred to the epigastrium, or near the umbilicus, and it often affords a clue to the real seat of the mischief—for instance, a sailor was suddenly attacked with pain in the epigastrium, followed by vomiting, and when admitted under my care he presented the ordinary symptoms of acute peritonitis; but although the abdomen was everywhere tense and tender, it was chiefly so in the region of the cæcum, and after death we found he had perforation of the appendix. The pain, in many instances, radiates downwards, and in five out of sixty-two cases it was chiefly experienced in the right thigh; and in one case it is said to have been felt near the anus. Vomiting generally occurs, and often at an early period; but it is, I think, more readily kept in check by opium than when it accompanies peritonitis arising from other causes. As a rule, constipation is present, but can be relieved by the use of enemata; in twelve cases out of sixty-two diarrhœa was a prominent symptom. You must here bear in mind that we are now speaking of peritonitis produced by perforation in persons previously healthy, for, as we shall shortly see, severe diarrhœa almost always accompanies the disease when it occurs in phthisical individuals. The pulse is usually quick from the first, and remains so, even if the other symptoms seem to be ameliorated. It is worthy also of remark that the temperature is rarely very high, even in non-phthisical cases; and I have

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known this coolness of the skin lead practitioners to doubt if the case was such a dangerous one as it otherwise appeared. In the last four cases that have occurred at this hospital we find the temperature varied; in one case from 100° to 101°, in the second from 97·6° to 99·8°, in the third from 98° to 99·6°, and in the fourth from 97·5° to 99°. Now, it must be remembered that the disease occurs for the most part in young persons, in whom we should expect any serious inflammation to light up very high fever, and we must be, therefore, on our guard against allowing the coolness of the surface to mislead us as to the gravity of the case. Death always takes place from exhaustion, and is not unfrequently preceded by delirium.

When an abscess only results from the perforation of the appendix the progress of the disease, as well as its duration, greatly differ from those in which it is followed by general peritonitis. We shall see this best by contrasting the following case with those previously related.

CASE 3.—A man, aged twenty, was admitted into my wards complaining of severe pain and swelling of the right side of the abdomen. Six weeks before, when at Newcastle, he was suddenly attacked with pain in the right side, which was at first slight, but gradually increased to such an extent as to compel him to leave his work. Shortly afterwards he noticed a swelling in the right iliac region, which became very hard and increased in size in proportion as the pain became more severe. On examination, a large area of dulness could be made out by percussion occupying nearly the whole of the right side of the abdomen, a swelling also presenting itself in the right lumbar region; it was very tender on pressure, but no fluctuation could be discovered. The temperature was 102·8°; the pulse 136; tongue dry and furred; appetite bad; bowels confined. Four days afterwards he is reported to have been much worse, was in great pain, perspired freely, and the temperature was 101·5°. On the sixth day he was only semi-conscious. Temperature 100°; abdomen greatly distended, and the following morning he died. At the necropsy the appendix was found to have been perforated and communicated with a large abscess. General peritonitis was also present, but seemed to be of recent occurrence.

You will be at once struck with the slow progress of this case as compared with those in which peritonitis had immediately followed the perforation, and you will observe that, on account of its longer duration, there was a more distinct appearance of tumour during life than in the two cases formerly quoted. Of sixteen of the cases I have collected in which an abscess only was present, the existence of a well-marked tumour is mentioned in 40 per cent., but in only 20 per cent. could fluctuation be discovered, and in only six of the sixteen was pain in the abdomen a prominent cause of complaint. We found constipation was generally present where general peritonitis had occurred; but when there is abscess alone diarrhœa is more common, five out of the sixteen having suffered severely from it.

In the case just quoted peritonitis eventually occurred, but in other instances a more favourable result is observed, on account of the abscess bursting externally, or into some of the neighbouring organs. I have before mentioned a case admitted into my wards three years ago, in which an abscess formed on the right thigh, and fæces were evacuated when an opening was made into it; others are recorded in which pus was discharged into the cæcum or into the rectum, as occurred a few years ago in a person admitted into this hospital. In the following case a communication had probably taken place between the appendix and the vagina.

CASE 4.—A lady, about thirty years of age, consulted me on account of very severe attacks of colic, and on examining the abdomen a large scar was observed over the cæcum, which, from the bulging below it, seemed to be adherent to the large intestine. She stated that at the age of twelve she had been suddenly attacked with pain in the right iliac region, which confined her to bed for many months, and which was eventually relieved by the bursting of a large abscess on the site occupied by the scar. Since that period she had also observed a slight discharge of a brown colour from the vagina, and occasionally small seeds presented themselves in it. On examination a minute opening was detected in the upper part of the posterior wall of the vagina, and small particles, evidently of a feculent character, were found. She was relieved of the colic by careful regulation of the bowels, and the opening into the vagina was permanently closed by the application of the galvanic cautery.

It will be remarked that the second case I quoted differed considerably from the first in the very slight amount of pain, the depression of the temperature and the persistence of severe diarrhœa, and that the patient was suffering from chronic phthisis when attacked by the perforation. If therefore we wish to obtain an accurate clinical picture of the disease, we must consider such cases separately, for we shall find that in the invasion and the symptoms they are essentially different from those occurring in healthy individuals. I have collected eight cases of phthisis in which this accident occurred, and in six persistent diarrhœa is mentioned as the prominent symptom. In one there was no suspicion during life that perforation had taken place, in three it is expressly remarked that pain was not complained of, and in three a certain amount of pain was experienced in the lower part of the abdomen, but it was not severe. Tenderness of the hypogastric region is only mentioned in one case. No mention is made of the temperature in any of the above cases, but in Case 2 it will be observed that it was generally below the normal point. The question naturally occurs, Why should there be this difference between the symptoms of the same disease occurring in a phthisical and a healthy individual? In the first place, we must remember that in the former the perforation is produced only by an ulceration, and that therefore no concretion or decomposing material is suddenly introduced into the cavity of the peritoneum, so that time is given for the localisation of the mischief by adhesions to the surrounding structures; and in the second place, inflammation is not so readily lighted up in a person whose strength is reduced by long illness as in one who is in a robust state of health.

With the exception of the few cases in which the appendix becomes adherent, or in which the abscess is discharged into some of the neighbouring organs or bursts externally, death almost always results from perforation of the appendix; but the duration of the disease varies greatly according to the pathological conditions that have been produced by it. Thus of fifty-seven cases the date of whose deaths is recorded, forty, or 70 per cent., died within the first week of illness; eight died in the second week, three in the third week, and the remainder lingered from nine to twenty-one weeks. As regards the deaths in the first week, four died within twenty-four hours of the perforation taking place, six on the second day, four on the third day, five on the fourth, three on the fifth, eleven on the sixth, and seven on the seventh day. All the deaths occurring in the first week were from peritonitis; in the second week four died out of ten cases with abscess only, two died of abscess in the third week, one in the tenth week, and three lived more than thirteen weeks, and eventually died with abscess unaccompanied by peritonitis.

The physical signs presented in cases of perforated appendix vary in different cases, but they are so important that you will scarcely be able to arrive at a correct diagnosis unless you take them into careful consideration. When general peritonitis is present there is, of course, considerable distension of the whole abdomen; but when abscess only exists there may be only a slight fulness in the hypogastric or iliac region, and the rest of the abdomen may present no appearance of enlargement. There is almost always a feeling of increased resistance to pressure in the iliac or hypogastric region, but at an early period you can detect no distinct tumour; when, however, it is a chronic case, an undefined tumour can be usually distinguished in the affected part of the abdomen. It is very rare for fluctuation to be felt on account of the depth at which the pus is situated. Pressure always gives rise to more or less pain, and this is more especially the case when abscess alone is present. In many cases you can detect through the rectum, as in Case 1, a tumour, which is formed by the adhesion of a number of intestinal coils enclosing pus. The percussion note is tympanitic in all parts of the abdomen, but at an early period it is less distinctly so over the site of the abscess. At a later period the dulness becomes more complete, but you should remark that the line of dulness does not alter with the position of the patient, so that you know the exudation is not free in the peritoneal cavity. I have mentioned in Case 1 that percussion over the cæcum elicited a clear note, but it also produced a gurgling sound, as though a cavity filled with air and fluid was situated under the finger. This sign has been observed in other instances, and is likely to be of use in difficult cases, but, unfortunately, it is not always present.

The diagnosis is of course most important, inasmuch as the treatment must be based upon a clear conception of the

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pathological conditions present in each case. The chief points to be borne in mind are: the suddenness of the attack of severe pain in a person previously in good health, the more or less rapid supervention of peritonitis, the increased tension and tenderness in the right iliac fossa and in the hypogastrium, the diminished resonance on percussion in this region, often attended by a gurgling noise, and in some cases the presence of a tumour in the pelvis, ascertained by an examination made by the rectum. You may easily mistake perforation of the appendix for a number of other acute and chronic diseases.

In intussusception we have, as in perforation of the appendix, sudden attack of severe pain, vomiting, constipation, and tumour of the abdomen; but the pain in the former is more colicky and intermitting, the vomiting and constipation more severe, the tumour is better defined, harder, less tender, and there is almost always either hæmorrhage or the passing of blood and mucus, whilst there is an absence of the tension and tenderness, of dulness and gurgle on percussion in the hypogastrium or right iliac region, as in perforation of the appendix.

In typhlitis you have also pain and tenderness in the right iliac region, together with the presence of a tumour; but it differs from the ordinary cases of perforation of the appendix in its onset being more gradual, in the pain, tenderness, and constitutional disturbance being comparatively trifling, in the absence of frequent vomiting, and in the tumour being well defined. But where perforation has taken place in an appendix situated close to or behind the cæcum, it may be impossible to distinguish between it and ulceration commencing in the cæcum itself. But you should remember that the latter is very rare excepting in phthisical subjects. Judging from my own experience, I should advise that whenever you observe the tumour in a case of typhlitis very slow in disappearing you should suspect perforation of the appendix and watch the case most narrowly.

There is a form of acute tubercular peritonitis, of which you have lately seen an example in our wards, which may be confounded with perforation of the appendix; for you have pain and tenderness of the hypogastrium, dulness on percussion, and fever. In the former the onset of the disease is more gradual; the pain and tenderness are more general; there is no distinct tumour or increased tension in the hypogastrium; if there is dulness on percussion, the line generally varies with the position of the patient; diarrhœa is urgent; and there are, in most cases, some signs of consolidation in the lungs. The absence of tumour in the iliac region or in front of the rectum is, however, the chief point; for, as we have already seen, where perforation occurs in phthisical subjects there is generally very slight pain, and severe diarrhœa is often the only prominent symptom. We have lately had two cases in the wards which might, perhaps, give rise to doubt; one being an instance of inflammation of the connective tissue of the pelvis, the other of retro-uterine hæmatocele. In the first, the patient, a female, had been suddenly attacked with pain in the side, followed by fever and a sense of fulness and great tenderness in the iliac region, with flexure of the thigh upon the pelvis. But, as is most general in such cases, the left side was the seat of the mischief, the symptoms came on after a miscarriage, and, on examination by the vagina, a soft, diffused, painful swelling was discovered to the left of the uterus. An abscess shortly after this formed in the left side and was opened. Such cases would only give rise to doubt, when they occur on the right side, and where, as occasionally happens, the perforation of the appendix produces an abscess around the cæcum, and involves the structures in the iliac fossa; but a careful examination by the vagina and rectum, which should never be neglected, would at once reveal the true nature of the case. In the second case, which was one of hæmatocele, the patient had been suddenly attacked with pain in the abdomen, and on admission a painful swelling was detected on the right side of the hypogastrium. But the symptoms had appeared at the catamenial period, the patient was very anæmic, and on examination by the vagina a large swelling was found blocking up the pelvis, pushing forward the uterus, and compressing the rectum. Such a case could only be confounded with perforation of the appendix by the practitioner neglecting an examination by the vagina. You will probably think it unnecessary to discuss the probability of a disease of the right ovary being mistaken for perforation of the appendix, but the chance of such an error has been mentioned by some authors. The examination by the rectum or vagina would in most cases suffice to settle the question, for the clear, well-defined edge of an enlarged ovary is very unlike the diffused, elastic swelling arising from local peritonitis, and in addition to this the ovarian disease is a chronic malady, the other is acute. Still more unlikely is it that you should confound an enlarged kidney with the disease in question. Renal diseases of this kind are always chronic, the tumours formed by them lie deeply behind the colon, and can be traced backwards to the loin, and the urine contains blood or pus. In one case, however, I met with a renal tumour lying behind the cæcum; but there was little pain or tenderness, no vomiting or constipation, and the urine contained blood.

In the earlier cases of perforation of the appendix placed on record venesection seems to have been generally trusted to as the only means of cure, under the impression that the disease was of a purely inflammatory character. It is scarcely necessary to say that such treatment proved of little benefit, inasmuch as the inflammation was the result of the introduction into the serous sac of a decomposing, or at any rate of an irritating, material which no amount of bloodletting could remove. Its only effect was to lower the vital powers of the patient, and thus to diminish his chance of recovery by adhesion of the injured part to some of the neighbouring organs. Other cases were treated by the use of drastic purgatives, on the supposition that the symptoms resulted from intestinal obstruction; but although in most cases the bowels were readily opened, the fatal termination of the disease was not thereby obviated. On the contrary, the use of aperients proved to be so detrimental that they were entirely abandoned in this as in other forms of peritonitis. Of late years opium has been generally employed, but there has been no diminution in the mortality of the disease. I have prescribed it in every case that has come under my notice for some years, either alone or along with belladonna; it has always relieved the pain, lessened or altogether subdued the vomiting, given sleep, and proved an immense comfort to the patient, but in no single case has it appeared to avert the fatal termination.

Another plan of treatment has, however, been successfully adopted—viz., that of laying open the abscess formed around the perforation and allowing the pus to escape. The earliest case on record is one performed by Mr. Hancock, which ended in the recovery of the patient. Twenty years afterwards Dr. Parker of New York operated upon a case successfully, and Dr. Gordon Ruck of New York has collected thirteen cases of this operation, of which twelve recovered and only one died. I have twice advised this procedure; in the first case it was not performed until the patient was evidently sinking, but pus was found and evacuated; in the second, which was a very chronic one, the abscess was opened and recovery ensued. I have before mentioned that fluctuation can rarely be distinguished in abscesses of this kind, and out of ten recorded by Dr. Ruck it could be felt in only one, proving that there is no necessity to wait until this sign of abscess can be discovered. None of the above cases were operated upon before the seventh day, and, with one exception, the operation was not attempted until between the seventh and the fifteenth day; but we have already seen that forty out of fifty-seven cases died during the first week of illness, so that if the rule should be followed, as has been hitherto laid down, of waiting until the pus is completely localised by adhesions, the operation will be restricted to a very small number of those who are attacked with this formidable malady. Theoretically it would seem to be much better if we could cut down upon the appendix as soon as the diagnosis was tolerably certain, tie it above the seat of the perforation, and remove from its neighbourhood any concretion or decomposing material that might be the cause of irritation. The only objection that I can see to an early operation is that adhesions to the neighbouring organs might be prevented; but when we reflect how very rarely the fortunate termination occurs, and how certainly death follows if it does not take place, we may, I think, dismiss the objection from our consideration. But even when adhesion does result from perforation, the fatal issue is in most cases only postponed, for, as we have before shown, the adhesions are often torn asunder by some undue exertion of the abdominal muscles, and fatal peritonitis ensues.

Two methods of operation have been pursued: in one an incision has been made directly into the suppurating part and the pus at once evacuated; in the other the incision has only been carried down to the fascia, and either the pus has

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been allowed afterwards to escape spontaneously or an aspirator has been passed into the most depending portion of the swelling and the contents thus evacuated. It is evident, however, that if an operation were performed at an early period the incision must be carried down directly to the injured part; for we cannot suppose that pus would be formed and localised until many days after the perforation had taken place.

The choice of the method of operation must of course be left to the discretion of the surgeon, and will probably require to be varied according to the circumstances of each case. Of one thing we may be quite certain, that no drugs are likely to be of much avail; for your common sense will tell you that when you have an irritating material suddenly introduced into a large serous sac the only chance of giving relief is to remove it, and thus put a stop to the original cause of the mischief. The office of the physician, therefore, will most likely become restricted to diagnosis, and it is only by carefully watching the first symptoms and the physical signs of the disease and by comparing them with those of other disorders that may simulate it, that we shall be able to arrive at such a correct judgment as may justify the employment of surgical measures at an early period of the case.

CHOLERA.

BY MAX VON PETTENKOFER, M.D.,
OF MUNICH.

(*Continued from page 994.*)

I DO not doubt that instances may exceptionally be found amongst infectious diseases in which the behaviour is essentially the same as that of cholera on the ships going between Europe and New York. But the question is, How do such cases generally, not exceptionally, behave? Vaccinated persons may be brought into contact with cases of small-pox without fear of infection; and at times, individuals who have not been vaccinated may come in contact with small-pox without taking the disease. As a rule, however, small-pox on board ship behaves very differently from cholera. We shall pass in review an instance of a severe epidemic of cholera on board ship, notwithstanding that it favours the views and theories of the contagionists. The following specimen is chosen, for the reason that it occurred on a man-of-war, and as there are many such vessels the advantage of comparison exists. The *Britannia* was in the spring of 1852 equipped as an admiral's ship, and was generally stationed off Malta for the first year; in August, 1853, it went to Besika Bay, and in October to Constantinople, where it remained the whole winter; and, after the declaration of war, went in March, 1854, to Varna. With the exception of a brief expedition to Odessa and Sebastopol, it remained at Varna all through the summer. In August cholera broke out, and first of all amongst the troops on shore. The ship and the whole fleet were up to this time perfectly healthy. It was believed that the French had brought the cholera with them from the Dobrudscha, whence some regiments had been sent from Varna. A few of these returned, but the majority met with their death either from cholera, typhus, or marsh fever in the low country of the Donau. After the cholera had begun to subside on land it appeared in the fleet, amongst which it was, however, unequally distributed. At Varna there were assembled fifty-four ships of the line, belonging to the English, French, and Turkish fleets, without reckoning the smaller craft. The *Britannia* lay on August 20th in the bay of Cavarna, fifteen miles by water from Varna. About 100 paces from it were lying two other English three-deckers, the *Trafalgar* and *Queen*, both, like the *Britannia*, manned by 1040 sailors. The *Britannia* lost 139 from cholera, the *Queen* and *Trafalgar* 4 and 6 respectively. On the French and Turkish ships it was the same. Strange to say, the French admiral's ship, the *Ville de Paris*, like the *Britannia*, was most numerously affected; there were 162 deaths, of which 3 were of officers. During the disease the French vessel lay at anchor off the coast with the rest of the fleet. The *Britannia* went to sea in the delusive hope of staying the course of the disease. That cholera should rage on the *Britannia* without causing the death of, or even attacking, one of the sixty officers on board is for the contagionists an inexplicable circumstance. We must now inquire into the reason why cholera was so rife on the *Britannia* whilst the *Trafalgar* and the *Queen* were so mildly attacked. If the outbreak were due to the presence of cases of cholera, or to the linen from cases of cholera, on the ship, it might be urged that this circumstance was common to all the ships. Dr. Milroy has attempted to explain the epidemic on the notion that it was not due to the specific infective material, but to the individual predisposition to cholera. In the night it was found necessary, on account of the cases of diarrhœa and cholera, to close the hatchways on the lower decks while the ship was at sea. Dr. Milroy says: "The men appeared to be poisoned by the foul air which they had to breathe at night.....A more striking example of the deadly effects of impure air during the period of an epidemic, and of the most infallible means to check the evil, cannot be imagined. The immunity of the officers was, on this occasion, unquestionably due to the greater space for breathing purposes which the officers enjoyed." That is an explanation which must satisfy the practical physician. I also believe that impure air is harmful, but I do not think impurity of air sufficient to explain such an explosion of cholera as that above referred to. It must not be forgotten that the *Britannia* went to sea on account of the general poverty of its hygiene. We ought to inquire into the condition of other ships also attacked with cholera, but in which the hatchways of the lower decks were not shut. My witness, who was on board the *Britannia*, assured me that the air was by no means so impure as Dr. Milroy made out. Another mistaken notion which I had taken up was also set right. I thought hitherto that the closing of the hatchways of the lower decks was occasioned by the stormy weather. On this point my informant writes to me thus: "The matter was not quite as you seemed to have imagined, and it will perhaps be best if I give a brief description of what actually took place. The day following our departure from Cavarna Bay a calm overtook us, and instead of the desired cool breeze a burning sun poured down on our sick ship. Then there came a swell on the waters, but no wind. In consequence the ship was so violently tossed that the hatchways of the lowest deck where the crew slept had to be closed, and then followed the worst night, during which fifty-eight men died, a night without wind and without the slightest movement of the superheated air. Nothing was said of a storm. If we had but had one! That the shutting of the hatchways had any influence I do not believe; for owing to the heat the men were allowed to lie about where they pleased, and most of them betook themselves to the uppermost deck in the free air and slept on the floor. The physicians had consented to this arrangement, and under the canopy of heaven the bulk of the fatal cases occurred. In this connexion it must also be observed that the *Ville de Paris*, which did not go to sea, yet suffered as much as we did, in spite of the fact that the hatchways were not shut." So much for the explanation which regarded the shutting of the hatchways and the impurity of the air as the cause of the epidemic. The view of the contagionists meets with no better fate. That a cholera patient should arrive on board with his stools or soiled linen explains nothing, since this circumstance was common to many other vessels without being followed by such consequences. If the infective material were brought in the food and drink on to the *Britannia*, how is that only the crew and not the officers suffered? On this point my informant says: "Provisions came daily from the shore, even during the time we were fifteen miles away, but the officers ate the same meat, the same vegetables and fruit as the crew. The only difference was that the crew drank rum-and-water, whilst the officers had wine." Thus in the drinking water no difference obtained. Ballast might have been a vehicle of infection, and for this purpose sea sand and shingles, and other material, were taken from the shore. But I have been informed "that on the *Britannia*, as well as other English men-of-war, the ballast consisted only of so-called pig-iron, four-sided pieces, which were wedged together in the lowest part of the vessel, and never touched." We have yet to consider the different habits of the men and the officers while on shore before the outbreak of the epidemic. On this matter my informant writes:—"The sufferers, not only of the *Britannia*, but of the rest of the ships of the fleet, had frequent communication by daily visits with the shore as we lay off Varna, and the crew without doubt betook themselves to those poisonous liquors, and still worse places of pleasure, which had sprung up on shore

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like mushrooms." It may be understood that the company of one ship would, like men of the same regiment, visit places of pleasure together and imbibe the same drink, and so it might happen that a particular crew visited a certain place where cholera prevailed, whilst other crews might have unconsciously kept clear of the places from which it is supposed cholera was taken. It remains doubtful whether the infection was derived through the air, water, or food. If these circumstances be viewed in an unprejudiced light, it will be seen that local conditions may account for the infection and spread of cholera on board ships. On emigrant ships the matter cannot be otherwise, and it is necessary therefore to inquire into the previous history of those who were taken ill on board. I have shown that the eleven cases of cholera which occurred on the *Westphalia*, bound for New York from Hamburg, came exclusively from two German families, and that an epidemic as vast as that which befell the crew of the *Britannia* might be explained if we supposed that a majority of it came from the same district or were placed under the same conditions as the two German families prior to their going on board. The exceptional outbreaks on emigrant ships prove that such an occurrence is possible. That the *Britannia* as a ship was not a place of infection is shown by the freedom from cholera enjoyed by the sixty officers. These points may possibly be cleared up by the appointment of a commission to inquire into the presence and etiological factors of cholera on board ship during epidemics of cholera. Koch has spoken of the occurrence of cholera on ships, and has attempted to reconcile matters on the basis of his doctrines of contagion. He has studied those ships which ply between North America and Calcutta. This line has not escaped my attention, and I have stated the main facts in my paper on "Cholera in India," 1871. Koch comes to the same conclusions as I did. Of 222 vessels which made the voyage during ten years cases of cholera only appeared on thirty-three ships, although they started from a district where cholera is endemic. It appeared to Koch only to be of importance that cases of cholera continued to occur more than twenty days on sixteen ships; therefore these cases could not have originated at Calcutta, but must have been derived from infective material on board ship. If cholera is acquired from the infective material on board ship, how is it that the infective matter is, as a rule, so ineffective and acts only exceptionally? If cholera lasts more than twenty days on board ship, then there must be other causes than those which prevail on land. Let it be assumed that the infective material proceeding from human beings can call forth the disease after the third day and up to the twentieth day. Now, cases of cholera have occurred on board ship as long as forty days after leaving port, of which fact I could give many examples. But these are very exceptional. May it not be assumed that in such cases the infective material might be brought on board and kept effective in some form or other, and that individuals might constantly come in contact with the infecting agent? For exceptional circumstances exceptional causes must be assumed. Properly considered, it will be found that cholera behaves on ships pretty much the same as ague does. When ships leave a malarious district cases of ague occur on board, but when further out at sea they cease to occur. As a rule the illnesses happen only in those individuals who come from shore, though exceptionally the disease shows itself in individuals who have never been ashore. But epidemics of ague have occurred on ships, as Hirsch has recorded in his work on "Malariakrankheiten," where the infection of the crew on shore appears to have been quite impossible, as on a ship which went from an Eastern seaport to England, and yet no one has ventured to say that ague is not dependent on the soil, or that it spreads on ships by contagion from man to man where the people have not been infected on land. The sweat of the sufferers from ague may be likened unto the stools of cholera patients. If the infectious disease, ague, were as dangerous as cholera, it is not unlikely that many more observations on contagion from cases of fever, and on the presence of ague on ships, would have been made and recorded. Any exceptional occurrence in the way of ague on ships would almost certainly be more likely to be recorded if they happened on men-of-war or emigrant ships than if they occurred on merchantmen, on the ground that the rare event is witnessed by a large number of men, and because the state of health of men-of-war and emigrant ships is more carefully registered than is the case with smaller vessels.

(*To be concluded.*)

THE EXTINCTION OF CHOLERA EPIDEMICS IN FORT WILLIAM.

BY A. C. C. DE RENZY, C.B.,
DEPUTY SURGEON-GENERAL, BENGAL ARMY.

PROFESSOR PETTENKOFER, in his paper published in THE LANCET of Nov. 22nd, page 904, writes as follows:—"Koch was further strengthened in his views from the fact that after Fort William was supplied with water no more cases of cholera occurred there, although it had formerly been ravaged by the disease. The gentlemen in Calcutta, however, had not told Koch the whole truth. It was a fact that cholera had begun to decrease in Fort William since 1863, and yet the fresh water-supply was introduced as late as March 25th, 1873." A statement substantially similar to this is made by Deputy Surgeon-General Marston, in his letter published in THE LANCET of Sept. 20th, page 520. In a paper which I read last year before the Epidemiological Society, I referred to the case of Fort William as confirming, with almost the completeness of a demonstration, the opinion long held in this country that somehow or other cholera is mainly communicated through the medium of water. The opponents of this view now find it necessary to deal with this case, and their method of doing so is shown in the extract already given. It is impossible to deny the fact that Fort William was ravaged with cholera at short intervals for upwards of a century, and that for the last eighteen years the disease has abated to such an extent that though it was rarely entirely absent, it has never assumed an epidemic character. Fort William was formerly one of the most unhealthy stations in India. The death-rate of the British troops for a long series of years as given by the Royal Commission on the Sanitary State of the Army in India was 68·96 per 1000, and for the ten years ending in 1856 it was 102·35 per 1000; in the eighteen years ending in 1882 it was only 12·35 per 1000. This extraordinary transformation will appear more striking if it be remembered that during the latter period cholera has again and again prevailed with terrible virulence in the villages in close proximity to the fort, and also in many parts of Calcutta itself. I think it of great public importance that the facts of this case should be placed clearly and indisputably on record. Professor Pettenkofer says that while the cholera in the fort had begun to decrease in 1863 the fresh water-supply was only introduced in 1873, and therefore the two events could not have been related as cause and effect. But the Professor seems quite unaware of the fact that changes in the water-supply began even earlier than 1863, that they had been carried out to very considerable completeness by 1865, and that in 1872 the existing state of things was attained when the Calcutta municipal water was laid on in pipes all over the fort.

I now propose to show by extracts from official reports what was the state of the water-supply in the time of the cholera epidemics, and what were the subsequent changes made in it in the period corresponding to the cessation of the epidemics.

In the appendix to the Report of the Royal Commission on the Indian Army (1860), page 10, the water-supply of the fort at that time is thus described:—"11. The water used for drinking is brought from a large tank on the glacis by native water-carriers. The tank is filled by surface drainage; it is kept perfectly clean, and is *generally* free from foul drainage surface impurities. From the well-known careless habits of 'bhistis' (water-carriers) and native servants, it may not be unfairly assumed that water is sometimes taken from nearer and impurer sources of supply in the ditch." In connexion with this last remark, it must be borne in mind that all the water required for the use of the troops had to be conveyed, in many cases to a considerable distance, by human labour, in leather skins, and that consequently the temptation to resort to a near source of supply was very strong. The ditch-water was largely tainted with the sewage of the fort; it was the most convenient for use, and it was not submitted to filtration of any kind.

The improvements contemplated are thus described in the Royal Commission Report (par. 12):—"The supply of water available for the station is sufficient for drinking and washing, but not for bathing. In consequence the Fort William Special Committee have recommended a steam pump for the purpose of bringing into the fort from the river a due supply

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of water for all purposes. The number of gallons was fixed at 30 per head, and provision was to be made for filtering 90,000 gallons. The river being unsuitable for six weeks annually, masonry tanks within the fort, having a storage space for two months' supply of pure water for drinking and culinary purposes, have been recommended." Such was the plan proposed, but a different one was adopted. The rainfall on the "maidan" or plane in front of the fort was collected by means of a system of surface drains into two tanks situated at the foot of the glacis.

Dr. Macnamara, the well-known chemist, who took such a distinguished part in urging the importance of improving the water-supply of Calcutta, in his report on the analysis of potable waters, describes the fort supply as follows:—"The tanks are large, and well kept and guarded. Between the tanks is a masonry cistern, which on the opening of sluice-gates can be connected with both or either tank, but before entering the cistern the water has to pass through a considerable thickness of sand and broken brick. From the cistern the water is raised by means of a pump worked by a steam engine to a cistern on the ramparts, and is thence distributed to the stand-pipes placed about the fort. In order to raise water to the level of the upper storeys of the barracks, it is during a part of the day forced up to a lofty syphon-pipe, the level of which is above the level of the barracks." This system, which took some time to carry out, was completed in 1865.[1] Dr. Macnamara, in speaking of the results of his analysis of the water, says, "The dissolved organic matter in the tanks is small in amount, and the water is evidently improving. In September, 1866, a gallon of the water held in solution 13·7 grains of inorganic matter. This September [1867] I found that quantity reduced to 7·7 grains. The water was refiltered in the barracks through the old style of filter. Great attention was paid to the filtering during the time the 3rd Brigade of Rifles garrisoned the fort, and the filtered water was always when I examined it physically good, but the filters added slightly to the amount of the oxidisable organic matter."

In 1868 there appears to have been found a marked deterioration in the water of one of the tanks. Dr. Palmer, the analyst, in his report says, "The water of both tanks having been collected under precisely similar circumstances from the same gathering ground, it would be supposed that the examination of each would be attended with similar results. While, however, the water of the old tank yielded 170 grains of impurity per million, that of the new tank contained 260. The greater impurity in the latter case arose from the presence of soluble materials in the newly dug soil, and that much of this material had its origin in decayed animal matter is proved by the great excess of nitrates and chlorides found in the water." Dr. Macnamara also, in writing of this year, says, "There can be no doubt that the water of the tanks which supply Fort William needs, especially during the continuance of the rains, very efficient filtration to render it thoroughly wholesome. The present filters of sand and broken brick are insufficient, for the water of the stand-pipes in the fort is at all times far from being transparent. The filters, too, altogether failed during the rains." After this the filtering process appears to have improved greatly, for whereas in 1868 the water contained 1·6 per million of albuminoid matter, the proportion ranged subsequently between 0 31 and 0 88 per million.

From what has been stated it will have been seen that during the period of the prevalence of cholera epidemics the water-supply was subject to very little supervision, that it was taken from very dangerous sources, and distributed in a barbarous way. By 1866 the supply had been placed under strict supervision and control. Elaborate arrangements had been made to secure the tanks from pollution, and although the results had not been as satisfactory as was desirable, the standard of purity was immeasurably higher than it had been in the epidemic era. Such being the facts of the case, it appears surprising to me that a man like Deputy Surgeon-General Marston, who had ample means of making himself acquainted with them, could imagine that the question of the improvement in the health of the garrison being the effect of the improvement of the water-supply was to be disposed of by saying that an Order in Council exists refusing to sanction the introduction of the municipal water, and that the health of the garrison had been good for some years before that water was brought into the fort. He altogether ignores the improvements that had been in progress for at least seven years in the source of supply, in filtration, and the system of distribution. It is quite true that the Order in Council referred to was issued. As the introduction of the purer municipal water involved an outlay of Rs. 15,000 for fittings, and an annual charge of Rs. 23,000, the Sanitary Commissioner advised the Government not to sanction it, but wiser counsels afterwards prevailed. To ensure the efficient working of the old system, unremitting vigilance was indispensable, and it was seen to be safer that the fort should be supplied with municipal water, the purity of which was guaranteed by the supervision of highly trained officers exclusively occupied with that particular duty.

As Professor Pettenkofer finds it difficult to surrender the opinions he has so long advocated with such ability, he tries to discover an explanation of the cessation of the epidemics in Fort William in some other condition than the improvement of the water-supply. In continuation of the passage I have quoted from his paper, he says, "Moreover, it was not true that the only improvement effected was the water-supply, for many other changes were carried out, the fortress being made a model of cleanliness. Alterations in the drainage of the soil were effected in and around the foundations of the buildings, which was before nothing but a morass during the rainy season." Now there can be no doubt that there has been great improvement in surface cleanliness since the epidemic era, but there has been the same improvement in other stations without any corresponding change in the prevalence of cholera. I challenge Deputy Surgeon-General Marston, who knows India well, to say whether Fort William is a bit cleaner than Mianmir, Lucknow, Fyzabad, and other stations which are notorious for cholera. For many years the stations of Upper India have been models of cleanliness, but in spite of this they frequently suffer terribly from cholera.

Then as to the alterations in drainage, I do not know on what authority Pettenkofer writes. All I know is that in the long series of reports by the Sanitary Commission, extending from 1864 downwards, no mention is made of such works. A drain may have been cleared out here and there, but no subsoil drainage of any kind was carried out, nor was any such scheme proposed by the committee which drew up the replies to the queries of the Royal Commission. The fact is, there are insurmountable difficulties in the way of drainage owing to the lowness of the site, which is only one foot above the mean level of high water of the Hooghly during the rains. The site is surrounded by rice fields and vast swamps which it is utterly impossible to drain. It was to these swamps, which remain to-day as they were thirty years ago, that the committee referred to attributed the malarious influences that affected the troops in the fort. But there is striking proof that the cessation of cholera epidemics among the British troops was not due to any alterations in drainage, for in 1866 the native troops, who had not at the time overcome the prejudice against pipe water, lost 26 per 1000 of strength from cholera, while the British troops lost only 2·0 per 1000; and in 1869, again, the native troops lost 4·8 per 1000, while the British troops entirely escaped. Since the native troops have taken to the use of the new water they have shared in the improvement in health which has been so conspicuous in their British comrades. Moreover, cholera occurs in a most distinctive form at stations where the soil is singularly free from moisture. I instance the case of the Peshawar cantonment, so notorious for cholera, and where the subsoil is perfectly dry to a depth of 100 ft. from the surface. Anyone who knows Mianmir, too, will see the absurdity of attributing the terrible epidemics which have visited that station to defective drainage. The subsoil is so utterly devoid of moisture that no trees can be got to grow without abundant artificial irrigation. On the other hand, Fort William is now free from epidemic cholera, in spite of bad drainage and in spite of being hedged in on all sides by villages that are never free from cholera. The troops have free access to those villages, and there are few years in which two or three cases of cholera do not occur among them, but the disease is no longer capable of assuming epidemic proportions. For upwards of a century the fort was scourged with cholera; for the last eight years it has suffered very little, while during the same period other stations quite as cleanly and with better barracks, better drainage, and an infinitely better climate, have suffered severely. How is this fact to be explained? It is due, in my opinion, to the fact that the fort has had a fairly good water-supply, while in the other stations of Upper India the supply is taken from sources exposed to innu-

[1] Vide Report of the Sanitary Commission for 1865.

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merable contaminations, and is distributed in a barbarous fashion, which would render a water taken from a pure source dangerous for use. Being fully acquainted with the sanitary condition of every station in the Punjab, I feel confident in stating that no epidemic of cholera has occurred at any place in that province where the water-supply was even moderately good. I am aware that statements contrary to this have been often made in official reports, but I could, if necessary, give details and descriptions of the water-supply in each case that would amply corroborate my assertion. Bad water is a condition common to all the places infested with cholera, however widely they may differ as regards soil, climate, drainage, elevation, or other sanitary conditions.

In the late Afghan campaign the water-supply arrangements could hardly have been worse if they had been specially designed to favour the propagation of a water-borne disease, and to that and that alone the terrible losses of the troops from cholera are attributable. In view to the prevention of such calamities in future, I would strongly urge that the case of Fort William should be investigated by an independent Commission, whose report would carry weight with the Government

Years.	Death-rate per 1000 from cholera.	Death-rate from all causes, cholera included.	Remarks.
A long series of years, as given by the Royal Commission	—	68·96	—
Ten years ending in 1856	—	102·35	—
1859	6·87	25·94	—
1860	33·39	51·75	—
1861	8·52	21·78	—
1862	14·77	35·23	—
1863	5·37	22·82	—
1864	2·53	21·52	—
1865	1·27	13·94	New water-supply completed.
1866	2·32	17·42	—
1867	2·71	10·83	—
1868	5·83	24·47	—
1869	None	18·81	—
1870	2·29	12·57	—
1871	None	10·0	—
1872	1·21	14·49	Municipal water introduced.
1873	1·16	9·31	—
1874	1·05	15·72	—
1875	None	6·51	—
1876	3·21	10·71	—
1877	1·17	12·87	—
1878	2·13	9·56	—
1879	None	5·33	—
1880	None	11·55	—
1881	1·08	4·32	—
1882	1·04	13·50	—

and the public. I believe the case is full of instruction as to the measures necessary for the prevention of cholera epidemics. In many up-country stations the death-rate of British troops has in recent years been as high as 70 per 1000, and in some it has been as high as 100 per 1000; while in the eighteen years between 1865, when the water-supply was reformed in Fort William, and 1882, the latest year for which returns are available, the average death-rate of that station was only 12·35 per 1000. What has been accomplished in Fort William might surely be effected in the healthier stations of Northern India. Nor does the case of Fort William stand alone. At Bombay, Nagpur, and in the European quarter of Calcutta there has been a marked decrease in the prevalence of cholera following closely on the improvement of the water-supply. It is most desirable that it should be authoritatively settled how far those phenomena are related as cause and effect. My firm belief is that with a well-managed water-supply the British troops all over India would be *almost entirely free* from cholera, and would have very nearly as low a death-rate as the troops quartered in the United Kingdom. The above table shows the death-rate amongst the British troops in Fort William previously to and subsequently to the improvement of the water-supply.

AN UNUSUALLY SEVERE CASE OF

SYPHILIS ACQUIRED WITHOUT ANY PRIMARY SORE.

BY STENSON HOOKER, L.R.C.P., &c.

THE subject of the following case, whom I will call A. B——, is a medical man, aged thirty, practising in a small country town where cases of acquired syphilis are anything but common.

A. B—— has always led a strictly sober and chaste life. He was in his usual health in February last, when a gentleman's servant presented himself at the surgery to be treated for a thin, watery discharge from the urethra and nocturnal emissions. There was a very insignificant sore under the glans penis, so small indeed that it could only be called an excoriation. A. B—— examined this carefully, and resolved to leave it to take care of itself, the result being that it healed up in a fortnight. The other symptoms were treated, but not syphilitically, and the patient so far improved that towards the end of the month he ceased to attend. In about seven weeks after this, A. B—— began to suffer from very severe frontal headache, both night and day, but worse at night. This increased in severity, and soon partook of a constant stabbing, lancinating character. It was thought that he needed rest and change. No idea of the real nature of the case was as yet suspected. Had he had a scratch on the finger, to say nothing of a sore, the true cause of the pain would probably have been divined; but he emphatically avers (and the averment may be implicitly relied upon) that for some years past he has not had any lesion of the skin in any part of the body, and has run no chance of being syphilitically infected excepting by the servant mentioned above. He now went to the seaside, and a few days afterwards general periostitis of the skull set in, and was so aggravated that the whole head was a mass of nodes of the size of walnuts, the pain being most excruciating. At this time he was closely questioned by a medical friend as to any possible way whereby his system might have been poisoned with syphilitic virus; but after what has been said I need scarcely add that the malady could not be traced to a primary sore. General cervical cellulitis appeared next, with great enlargement of the post-cervical glands; there was now also (about six weeks after the commencement of the headaches) a lichenous rash which covered in a uniform mass the whole of the trunk and extremities; simultaneously with this the tonsils were badly ulcerated, and it was not till then that A. B—— could be got to acknowledge that he was suffering from many of the symptoms of that protean disease syphilis. Iodide of potassium was now taken vigorously, and the pain gradually abated. He was at this time returning to his work, and on his way consulted in London one of the greatest authorities on this particular disease, the throat being still ulcerated, and the rash only beginning to fade. This gentleman told him that there was not the slightest doubt as to the nature of the malady, and carefully examined him for evidence as to primary sore, but none, of course, could be detected. Mercury-with-chalk pills were ordered, and under this treatment the throat rapidly improved and the rash disappeared by desquamation; but for the next twelve months A. B—— suffered from deep fissures and recurrent ulcerations of the tongue, with congestion of the ciliary vessels of the eye, and loss of hair.

Now I can most conscientiously aver that this medical man presented himself as a sad example of one in whom, in spite of all his symptoms, there had never been any primary affection; through what particular channel the poison was absorbed is still, and must as far as I can see, remain a complete mystery; that he never had a chancre I can again most positively aver. A. B——'s patient, it should be said, returned for treatment, this time suffering from the same unmistakable syphilitic symptoms.

Midhurst.

AT Bow-street Police-court, on the 4th inst., Dr. John Cran was charged with a contravention of the Act for the Regulation of the Care and Treatment of Lunatics by unlawfully receiving two or more lunatics in his house without procuring the necessary licence. The case was adjourned.

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A DEMONSTRATING VAGINAL SPECULUM.

BY H. MACNAUGHTON JONES, M.D. &c.,
EXAMINER IN OBSTETRICS, ROYAL UNIVERSITY OF IRELAND, ETC.

THE desirability of having such a speculum as would enable the surgeon to demonstrate to a student or students the os uteri and infra-vaginal cervix, in a different manner from that now adopted, and without exposure of the patient, often struck me in hospital work. By such an appliance as that made for me by Messrs. Maw, Son, and Thompson, this can be perfectly achieved. The drawing (Fig. 1) shows the

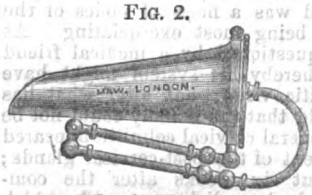
FIG. 1.



One-fourth size.

appliance attached to a speculum. It consists of a nickel-plated steel bracket with three joints, as shown in the figure, which are so constructed as to enable the mirror to be placed at any angle or plane to the orifice of the speculum, from which it is twenty-five centimetres distant. A ring with a groove receives the mouth of the speculum, and will fit any large-sized speculum. The ring is clamped by means of a screw. (This clamp I am having improved.) But this may be so arranged that any sized ring can be applied so as to embrace a smaller speculum. At the other end of the bracket is a mirror, which works in a universal joint. It is three inches in diameter. If it be wished to get a magnified image, a slightly concave mirror can be attached. The entire appliance is shown folded in Fig. 2. It fits into a leather case, and is quite portable.

FIG. 2.



One-fourth size.

By means of this instrument the lips of the os uteri can be seen, either by sunlight or artificial light, several feet away. The patient need not be in the least exposed during the demonstration. The teacher having introduced the speculum and having caught the reflection of the uterus at the plane required, turns the mirror so that anyone standing behind him or at the side, and looking into it, can see both the os uteri or any application which is made to it. It is not necessary to expose more than the orifice of the speculum.

Harley-street, W.

ON NERVI, NEAR GENOA, AS A WINTER HEALTH RESORT.[1]

BY EDWARD HAUGHTON, M.D., B.A., &c.

NERVI is situated about seven miles and a half east of Genoa, just at the head of the gulf, and is well sheltered on the north and east against cold winds. In Cook's Guide to the Riviera it is spoken of as having "come into repute recently as a winter residence owing to its mild climate and sheltered position." It is also briefly described by Dr. C. T. Williams, in his "Climate of the South of France," in the following words: "Nervi, on the Eastern Riviera, about an hour's drive from Genoa, stands on a ledge of level ground which descends in rocky masses into the Mediterranean, here affording boating, bathing, and tolerable fishing. The place is well sheltered to the north and east by wooded hills, on whose sunny slopes the orange and lemon flourish. Olive-groves besprinkled with villas and picturesque hamlets rise about the village, and the view from this spot of the Bay of Genoa and the Col de Tende range is exceedingly beautiful. A good hotel and boarding-house (Hôtel d'Angleterre) with well-sheltered grounds, pleasant walks and rides, and its short distance from Genoa, render Nervi attractive to invalids, many of whom have safely wintered here."

For some unexplained reason the number of English visitors seems to have diminished, and their place to have been supplied by Germans, the proprietors of several of the hotels and boarding-houses being of that nationality.

Not being satisfied with getting accounts at second-hand about the climate and capabilities of Nervi, I determined to pay a personal visit to the place, which I did about the middle of last February, leaving snow and sleet behind me in Basle and Lucerne and several of the northern Italian cities. I also made a point of visiting Pegli on the same day, and then returning to sleep at my hotel in Genoa, so as to make a really satisfactory comparison of the amount of shelter from cold winds afforded by the three localities respectively. The result was that the wind, which was bitterly cold at Genoa, was much milder at Pegli, especially in the valley behind the town, whilst it was perfectly calm and even warm at Nervi, so long as the headlands which protect the place were not rounded by the visitor, who literally has a haven of refuge there, which he should remain within so long as the wind blows persistently from the north or east. It is probable that Nervi remains, so to speak, in an undeveloped state as a health resort from one or two causes which are not likely to be permanent. In the first place, the through traffic to and from Rome goes past it without stopping, or at inconvenient hours for alighting, and the sanitary arrangements of the place, although it has been hitherto absolutely free from epidemics, will need a little overhauling before they are quite agreeable to noses and eyes polite.

The scenery of Nervi is in some parts beautiful in the extreme. As for instance, if we climb the hill at the back of the town and look down on the valley beneath, or stroll along the sea shore, and listen to the murmuring of the waves amongst the rocks, which are here permitted to retain some of the wildness which constitutes one of the principal charms of the neighbourhood. It is to be regretted that the principle of *laissez-faire* is carried so far as to permit strangers to be annoyed by lazy mendicants, and to allow all kinds of refuse to lie about exposed to the sun amidst the very loveliest part of the walk by the sea shore. Various circumstances have convinced me that a bright future lies in store for this pretty watering-place; and I hope, when sanitary zeal is really developed amongst its population, that its authorities may not copy too exactly or servilely the methods adopted in other fashionable localities. Warnings abound on every hand against such a course. First, we have sporadic cases of typhoid at Cannes, then an actual epidemic at Nice, just in the midst of an International Exhibition, and after an immense expenditure of money on "drainage" in both localities. It seems as though many engineers disbelieve altogether in the use of traps of the good old-fashioned S-shape; whilst almost all are afflicted with the superstition that it is only necessary to convey solid refuse into the sea, or even into a lake, in order effectually to get rid of it for ever. It is true that the shores of the British Islands are daily washed by a strong tide which dilutes, if it does not always remove, the more noxious and offensive refuse which we continually pour into it. But to attempt to carry out the same idea on the shores of a Swiss lake, or even the Mediterranean sea, is likely to lead to more lamentable consequences than would be believed if we did not see them actually taking place. There is abundant and unimpeachable testimony as to the horrible accumulation of sewage of the most offensive character in and around the harbours of both Toulon and Marseilles, the very places which are now (August, 1884) enduring the scourge of cholera, and which will probably act as centres whence this vile result of inhaling concentrated filth will be propagated over a large portion of France, and possibly even of Europe at large. Some of the most fashionable of the resorts of the Western Riviera have adopted wrong methods of disposing of their sewage; and it is only a question of time how long their popularity can possibly last. They are also intolerably dear, and treat the unhappy valetudinarian as though he were their natural prey. Are we to be accused of fickleness if we respectfully decline to be fleeced? Those places which give the best value may reasonably expect the most custom, and there is no good reason why accommodation of a very excellent kind, with

[1] Read at the last meeting of the British Medical Association in the Public Health Section, August, 1884.

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sea-bathing in a mild climate and charming scenery, should not be accessible within forty-eight hours to all who are willing to endure a couple of hours' sea passage between Dover and Calais. The train service is good, and there is no reason in the nature of things why the expense of living at Nervi on good wholesome diet should exceed the cost of London living to the great majority of invalids.

I will not give a list of diseases for which I consider the climate adapted, but content myself with saying that nervous and dyspeptic cases are likely to be quite as much benefited as those in which the chest is affected; whilst in kidney affections the best results have been obtained without any special regimen, and without the alternative of unlimited swallowing of nauseous mineral waters.

Upper Norwood, S.E.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tam alterum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF SPINAL CONCUSSION, WITH PROBABLE FRACTURE OF THE CERVICAL SPINE; RECOVERY; REMARKS.

(Under the care of Mr. THOMAS SMITH.)

FOR the following notes we are indebted to Mr. Alfred G. Francis. See THE LANCET, July 5th, 1884, for two cases under the care of Mr. Bryant at Guy's Hospital.

Richard D——, aged twenty, a waiter, was admitted on June 1st, 1883, into Rahere ward. He was with some friends at a swimming-bath, and dived from a distance of seven feet off a spring-board into the bath, which was seven feet deep at that spot. According to his own account he struck the vertex of his head violently against the bottom of the bath in the region of the fronto-parietal suture, and immediately lost all control over his limbs. He was lifted out of the bath by his companions, who dressed him and conveyed him in a cab to the hospital, taking no special care to prevent movement of his head.

On admission, the patient was quite conscious, and had been so ever since the accident, which he described with some minuteness. He had not been sick, pupils were natural, there was no deafness, no hæmorrhage from the ears, no facial paralysis, no strabismus, no loss of sensation over head and neck; he spoke fluently and distinctly, there was no loss of memory, there was no bruise, swelling, or tenderness over the part said to be struck, but the patient is an expert diver, and persisted in his statement. Sensation was much impaired in the hands and feet, which were cold, bluish, and numb; he complained also of burning and tingling pain in the upper extremities, extending from the fingers to the shoulders; sensation was apparently not impaired in any other part. Respiration was nearly entirely diaphragmatic, the intercostal muscles apparently hardly assisting at all; there was some slight facial cyanosis. He had lost all control over both arms and the right leg; when these limbs were raised they fell helplessly again; over the left leg he had more control, but the power of movement was much impaired. He had not micturated since the accident; there was priapism on passing a soft elastic catheter, and on touching the skin near the penis; patellar-tendon reflex was not impaired; there was no ankle clonus. There was occasional aching pain at the back of the root of the neck in the median line, not very circumscribed; this was increased by movement of the head from side to side, and from before backwards, and on pressing the head downwards on the spinal column; there was also great tenderness in the same region, but no swelling, bruise, or apparent displacement; but a very complete examination was not made.

The patient was placed on his back upon a hard mattress with a pad under the back of the neck, and the head and neck were kept immovable by means of heavy sandbags. He was ordered milk diet and beef-tea.

June 2nd.—Had a sleepless night; urine natural, drawn off by a soft elastic catheter.

3rd.—Slept fairly well after a subcutaneous injection of morphia; urine drawn off, natural.

4th.—Feels a little better; slept after a morphia injection; can pass his urine now; no priapism; urine natural.

5th.—Sleepless night without morphia; can cough, but with difficulty.

6th.—Better; good night after a morphia injection; increased power over limbs; pulse 56.

7th.—Restless night without morphia; has not defecated since the accident (seven days); tongue slightly coated with white fur; pulse 70.

8th.—Bowels open freely; good night after morphia draught.

11th.—Restless night without morphia; aching pains in lumbar back and between scapulæ, more acute at night; temperature 99·6°; tongue coated with white fur; pulse 56. Left leg normal; can raise right thigh and keep it flexed for a short time; if the left forearm be flexed he can keep it in that position for a short time, and move the left arm from the side. There is no improvement in the right arm.

14th.—Respiration now slightly thoracic; less pain in the back; slept fairly well after morphia draught; appetite improving; bowels not open for three days; temperature 99°; tongue clean; power over limbs less impaired; left leg natural; right leg natural excepting the toes, which cannot be flexed and are cold and numb; left arm much better, can flex elbow and abduct shoulder-joint, and when the limb is raised it can be kept in that position for a short time, the shoulder-joint can also be slightly flexed; right arm, flexion of elbow improved and slight power of flexion and abduction of shoulder-joint; hands are powerless; the tingling, burning, and numbness of upper extremities are better and confined to the hands; they have been kept wrapped in cotton-wool, the tingling disappears if the hands are well rubbed, but it is increased by cold and washing; the neck can be slightly flexed by the patient, and there is freer rotatory and lateral movement, but all movements are still attended by pain.

July 14th.—Has steadily improved in every way; though weak is rapidly gaining strength; has been up for some time and goes out of doors daily; paralysis is limited to right arm and hand; there is no tingling; the neck is supported by a firm leather collar which keeps it immovable; there is still slight pain in the region of the fracture. Patient is on full meat diet.

Aug. 8th.—There is now only some stiffness in the movement of the right hand, which cannot be so quickly and firmly closed as the left, but the grasp is fairly strong. There is stiffness on turning the head and slight pain in the neck, as before. He is much stronger, and attends as an out-patient. The collar is still worn.

The temperature has never been above 99°, except on two occasions soon after admission, when it rose at night to 100·8°.

Remarks.—This case is especially interesting as an example of spinal concussion resulting from a blow on the head. As M. Duret has pointed out in these cases, there were symptoms especially referable to lesions of the medulla oblongata, which suffers from the resistance it offers to the sudden passage of the cerebro-spinal fluid from the cranial cavity to the neural canal. In addition to the concussion of the cord from the increased tension of the cerebro-spinal fluid, there was probably some additional injury to the cervical portion of the cord, with a special train of symptoms. This might be accounted for by supposing that there was a fracture of some part of the cervical spinal column, and the physical signs present on admission would to a certain extent support such an hypothesis. The absence of any evidence of a blow on the vertex, although uncommon, as well as the slight character and short duration of those symptoms especially referable to the general concussion of the cord, may be justly ascribed to the buoyancy of the water, which lessened the severity of the blow; those symptoms which depended on the severer lesion caused by the fracture, although temporary, were of much longer duration.

QUEEN'S HOSPITAL, BIRMINGHAM.

CASE OF PRIMARY ENCEPHALOID GROWTH OF LUNG; NECROPSY; REMARKS.

(Under the care of Dr. SUCHLING.)

FOR the following notes we are indebted to Mr. Sidney C. Lawrence, M.R.C.S., L.R.C.P. Lond., house-physician.

T. C——, a man, aged sixty-one, was admitted on Aug. 5th, 1884. There was no history of phthisis or cancer

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in the family. The patient had never had any previous illness except rheumatic fever twenty years ago. When in good health he weighed 14 st. About twelve months ago his friends noticed that he was getting thin, and at that time he found the slightest exertion tired him. He had no pain, but suffered from shortness of breath and cough, with profuse expectoration of whitish phlegm. He attended the hospital on June 16th as an out-patient, and on examination dulness was found over the lower lobe of the right lung, with amphoric râles and pectoriloquy. A mitral systolic bruit was also heard. There was slight œdema of the legs. He was treated as an out-patient for a month, but not improving, was admitted into the hospital, having had several attacks of hæmoptysis shortly before.

On admission he was greatly emaciated, the expectoration was profuse, viscid, could scarcely be poured out of the cup, and resembled red-currant jelly. Under the microscope leucocytes, epithelioid cells, and red blood-corpuscles were seen in abundance. There was no visible enlargement of the right side of the chest, but it was found that the circumference of the right side was eighteen inches and a half opposite the nipple, while that of the left side was seventeen inches. Vocal fremitus was absent over the lower lobe of the right lung. Elsewhere it was well-marked. The cardiac impulse was in the fifth space, just internal to the nipple-line, and there was a mitral systolic bruit. The respiratory movements on the right side were greatly diminished. The percussion note above, over, and below the right clavicle was impaired, absolute dulness being reached at the fifth space in the nipple-line and at the fourth space in the mid-axillary line. In the right supra-spinous fossa and inter-scapular region the percussion note was much impaired, absolute dulness being reached at the eight rib and extending to just below the costal arch. Friction was heard under the right clavicle, and at the right base amphoric breathing with amphoric râles. Friction was also heard at two or three points in the inter-scapular and supra-spinous regions. At the left apex expiration was prolonged, and there was a little crepitation. The liver was pushed down to the level of the umbilicus; it was evidently not enlarged, for the anterior border was thin and could easily be grasped; it descended very little on a deep inspiration. The spleen was not enlarged. No enlarged glands or engorged veins could be seen, nor were the intercostal spaces obliterated.

A hypodermic needle was passed into the pleural cavity just below the inferior angle of the right scapula, and a syringeful of serous, flaky fluid, with a sanguineous tinge, was with difficulty obtained.

On Aug. 28th a needle was again introduced, but no more fluid could be withdrawn. At this time absolute dulness extended to the fourth rib in the nipple-line, but had not extended upwards in the axillary or infra-scapular regions. The breath sounds were more distinct. The hæmoptysis continued, but in diminished quantity—about two ounces daily.

Sept. 4th—The patient was in much the same condition, but the liver was not so much depressed. Vocal resonance over the back of the lower part of the right lung was well marked, but the vocal fremitus was very slight. His weight at this date was 9 st. 1 lb. The line of absolute dulness in the nipple-line reached the third space, in the axilla the fifth space, and at the back to the sixth space. Friction and crepitant râles over the dull urea still persisted.

11th.—Patient weaker, though quite free from pain. Sputum more copious and blood-stained. Pulse 98; respiration 30.

14th.—Bronchial breathing, amphoric râles and pectoriloquy were well marked, and it was evident that there was a cavity at the right base. The vocal fremitus at this time was well marked.

20th.—Patient had gradually been losing strength, and was now very feeble. Pulse 102, small and irregular. He stated that he had no pain at all, but only feels exhausted. Had had diarrhœa for a few days, which was checked by bismuth.

The patient died on Sept. 21st from pure exhaustion.

The temperature during the first month that the patient was in hospital was of a continued type, averaging 100°; but during the last three weeks of his life it was generally normal, with an occasional elevation. The urine contained a trace of albumen, but was otherwise normal.

Necropsy (Sept. 22d).—Body much emaciated; rigor mortis slightly marked. The right lung was covered with rather a thick layer of recent lymph; no effusion in the pleural cavity. The pleura was much thickened, the base of the lung being firmly attached to the diaphragm. The right lung weighed 90 oz.; the outline was well preserved, but it was nearly solid. On section three cavities were found, one at the apex as large as a walnut, and two at the base, each as large as a small orange. Miliary tubercles were scattered throughout the lung. The lower lobe of the lung was occupied by a very large patch of yellowish firm material; surrounding this mass were a number of secondary foci of similar tissue. The patch had softened in two places. The left lung weighed 42 oz., was adherent to the chest wall, and was œdematous; it was studded with small patches of a white colour, as in a catarrhal pneumonia, but of a firmer consistence, each containing a bronchus in its centre. The heart weighed 10½ oz.; all its cavities contained coagula; the segments of the mitral valve were thickened and the orifice dilated; the left ventricle was a little hypertrophied. The aorta was atheromatous. The liver weighed 70 oz., was much congested, and "nutmeggy" in appearance. The mesentery was studded abundantly with miliary tubercle, but there was no peritonitis. There were well-marked tubercular deposits at numerous points in the small intestine. The spleen was normal. The kidneys were both congested and with diminished cortex, but were not typically granular. Microscopically, a section of the growth in the right lung was made, and therein were to be seen large and irregular epithelioid cells with well-marked nuclei crowded in definite alveoli, within whose walls were smaller cells. Some of the large cells were granular, and apparently undergoing fatty degeneration. An examination of the sputum revealed the presence of the tubercle bacillus in considerable numbers.

Remarks by Dr. SUCKLING.—Primary encephaloid disease of the lung is exceedingly rare. The case at first was supposed to be one of phthisis; but when in hospital the enlargement of the right side, together with the displacement of the liver, suggested some new formation. The sputum was like red-currant jelly, and this is said to characterise malignant disease of the lung. The physical signs—viz., absolute dulness with abolition of vocal fremitus, and displacement of the liver—were those of pleuritic effusion, but there was very little fluid. This was also characteristic of malignant disease of the lung, the new growth filling up the air cells and bronchi, and so obliterating the vocal fremitus. The softening, which took place rapidly, altered the physical signs. The complete absence of pain in this case is remarkable and unusual. The enormous enlargement of the lung could only be due to a new growth. Cancerous disease and phthisis are usually supposed to be antagonistic, and certainly are rarely combined. In this case the tuberculosis seems to have been set up by the inflammatory softening in the right lung. The increased weight of the left lung was chiefly due to its congested condition.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Distribution of Tubercle Bacilli in the Lesions of Phthisis.

AN ordinary meeting of this Society was held on Tuesday last, Dr. Priestley, Vice-President, in the chair. The following gentlemen were elected Fellows:—Mr. J. F. Bullar, Mr. Lovell Drage, Dr. W. A. Duncan, Mr. F. Swinford Edwards, Mr. Kendal Franks, Mr. C. C. Fuller, Mr. H. T. Griffiths, Mr. C. E. Jennings, Dr. J. Johnston, Dr. J. S. Keser, Dr. A. Oakes, Mr. G. R. T. Phillips, Dr. E. Stewart, Mr. J. Raglan Thomas, and Mr. Bilton Pollard.

The discussion on Dr. Kidd's paper was adjourned to the next meeting, January 13th, 1885.

Dr. PERCY KIDD read a paper on the Distribution of the Tubercle Bacilli in the Lesions of Phthisis. The present paper was based upon an examination of eighty cases, and included two cases of malignant disease of the lung, two cases of sacculated bronchiectasis, and one case of dysenteric ulceration of the intestine. With these exceptions all the cases may be described as "tuberculous." In more than half the cases the lung was examined, in twelve cases the larynx or trachea, in thirteen the intestine, and in thirteen the lymphatic glands. Various other parts were examined in a few instances. With regard to the lung, the object

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kept in view was to examine the various lesions comprised in the phthisical process, and to ascertain their connexions with the development of the tubercle bacilli. These bacilli are invariably found in pulmonary cavities, and in nearly all cases in softening caseous material, provided that the morbid process be associated with a tuberculous affection. On the other hand, the fetid contents of a cavity in two cases of saccular bronchiectasis contained numerous micrococci, but no tubercle bacilli. In most instances these bacilli were detected in the nodular lesions of phthisis, though their number was almost always small, whereas in the three cases of acute miliary tuberculosis examined they were in many nodules very abundant. It is probable that in all cases, whether of acute miliary tuberculosis or phthisis, some stage of the growth of the nodules is associated with the presence of these micro-organisms. The distribution of the bacilli in the so-called caseous pneumonia appears to be very irregular. Generally speaking, where the caseation is uniform and firm no bacilli can be found. But where the caseous process is commencing, or where softening is going on and microscopical cavities are present, bacilli are often seen in great numbers. Where the caseation is recent bacilli are usually scattered among the caseating epithelioid cells, whereas in the later stages they are more often collected in groups, and their distribution is very circumscribed. In this, as well as in the nodular form, the bacilli are usually situated in the caseating alveoli, more rarely in the alveolar walls. Both in the nodular and caseous pneumonic forms bacilli are often found in the infiltrated walls of the small bronchi. Where fibroid induration was pronounced no bacilli were found. Their presence or absence in caseous material seems to depend mainly on its age. The older the caseation the less is the chance that bacilli are present, unless softening occur, when their appearance is certain to take place sooner or later. It is probable, as Koch suggests, that the spores of the bacilli may lie dormant for a very long time, and when suitable conditions are provided may develop into mature bacilli. In the larynx, intestine, and lymphatic glands the presence of the bacilli seems to depend on similar conditions. The fact that the same micro-organisms are found in tuberculous disease of such remote parts as the pia mater, peritoneum, lung, intestinal and genito-urinary tracts, shows that their association with tuberculosis can be no mere accident.

Dr. CREIGHTON thought that the investigations of Dr. Kidd and others ought to remove all doubt of the statement that rod-shaped organisms are universally found in tubercular lesions. Dr. Kidd confirmed most of Koch's original statements. The bacilli were wanting in dry caseous matter, and were much more numerous at the growing periphery of tubercular material. The bacilli were most abundant where the degenerative process is going on in the way of softening of the consolidation. In all forms of granulomata it may be said rod-shaped organisms are to be found. Recently Lustgarten, working at Leipsig (*vide* THE LANCET, *ante* p. 1017), had found the rods in syphilitic gummata. These facts pointed to a general law that all nodular new growths which had great tendency to generalisation formed a favourable nidus for the development or presence of rod-shaped organisms. In some of Dr. Kidd's specimens spherical organisms were to be seen in small cavities. Klebs and Toussaint had found that in cultivating media the spherical organism abounded if inoculation be made with bacilli. Rod-shaped organisms, if cultivated in fluid media, grew into micrococci. The separation of one micro-organism from another was the object of Koch's demonstration at the International Medical Congress of 1881. Koch, however, made no use of the dry method of cultivation in his latest researches. Koch adopted commonplace devices to prevent the presence of the bacteria of putrefaction. If the gelatine became fluid the test-tube was thrown away on the ground that the tube had become contaminated with tubercle bacilli. Mr. Cheyne made no attempt to test the validity of Koch's method, for he used the same material from Berlin as Koch used. Koch, therefore, relied on successive inoculations to obtain a pure breed of tubercle bacilli, and in this method fallacies might lurk.

Dr. C. T. WILLIAMS thought that the previous speaker had wandered from the subject. Koch seemed to prove his point carefully so far as Dr. Williams knew. Where bacilli are most abundant is amongst the giant cells, according to Koch, but this doctrine Dr. Kidd was unable to substantiate. The ring of bacilli at the periphery of a giant cell seemed to show that nature endeavoured to defend herself against the invading bacilli. The mode of spread by inhalation required further investigation. The spread of bacilli by blood-vessels and lymphatics would probably account for some of the ascertained facts. Spread by direct continuity was another method of dissemination. Ribbert had made observations on the fowl (THE LANCET, vol. ii., 1883, p. 190). Four zones were described in the tubercular lesions; the bacilliferous zone was the third, reckoning from the centre, and also many bacilli were seen in the outermost or vascular zone, and here they projected into the veins. If tuberculous material be injected into the trachea, then the lungs and mesenteric glands only were affected; whilst if the virus were inoculated subcutaneously a generalised tuberculosis resulted.

Mr. BLAND SUTTON said that in the liver of fowls he had detected enormous numbers of giant cells which abounded in bacilli. The daphnia or water-flea inhabited fresh water ponds, and possessed an external shell similar to that of an ordinary lobster. The bacilli penetrated by the alimentary canal, and were immediately beset by white blood-corpuscles, which corpuscles, coming together, became fused and formed a giant cell. A struggle for existence then took place between the bacilli and the giant cells, with different results in different cases.

Sir ANDREW CLARK congratulated Dr. Kidd on his interesting and important paper, which formed a substantial addition to our knowledge on the subject. He could not concur in the statement that the bacillus was sufficient to explain all the lesions of phthisis. He defined phthisis as the assemblage and progression of states associated with or dependent upon ulcerative or suppurative destruction of more or less circumscribed non-malignant deposits or consolidations of the lungs. And under this definition chronic interstitial pneumonia or fibroid phthisis would also fall, for there occurred ulcerative or suppurative destruction of tissue, together with the symptoms, which could not be distinguished from those of ordinary phthisis, and yet in the lesions no bacilli were to be found. In eleven cases of ulcerative interstitial pneumonia or fibroid phthisis no tubercular bacilli have been found though carefully investigated by himself and his house-physicians. A case of dry pleurisy, which lasted for a period of eighteen months, in a gentleman, was narrated. Eighteen years after the pleurisy osteo-arthritis set in, and the signs of a contractile disease in the left lung were made out. There were signs of dry cavities in the lungs, and asphyxia terminated death from hæmoptysis. Here there was no evidence of tubercular bacilli in microscopic sections of the diseased tissues. It must be remembered, also, that no bacilli were found in some cases of acute miliary tuberculosis; and further, that in some cases no bacilli were to be detected until softening had taken place, so that these facts led him to doubt the causal connexion of the bacilli with phthisis. Again, cases of caseous pneumonia had a life history which was totally different from the life history of what we call tuberculosis. The true criterion of disease was to be found in the whole and complete life history of a malady, and not in the anatomical lesions which were induced by something lying behind and working beneath them.

MEDICAL SOCIETY OF LONDON.

Intussusception.

AN ordinary meeting of this Society was held on Monday last, Mr. Arthur E. Durham, President, in the chair.

Mr. F. TREVES read a paper on Intussusception. Thirty per cent. of all forms of obstruction (except hernia and congenital malformations) were cases of intussusception. Of the anatomical forms of intussusception, 30 per cent. were enteric, 18 per cent. were colic, 44 ileo-cæcal, and 8 were ileo-colic. The enteric forms were most common at the lower part of the jejunum and were small; the colic forms were mostly to the left of the transverse colon. A description was given of the ileo-colic and ileo-cæcal forms. The colic forms were as a rule chronic. The other forms were acute or subacute. The ileo-colic was as a rule acute in its course. Of the clinical forms, four kinds were described. The ultra acute was very rare, and terminated fatally in twenty-four hours; the acute, lasting from two to seven days, numbered about 48 per cent. of all cases of intussusception; the subacute, lasting from seven to thirty days, were about 24 per cent.; and the chronic, lasting over thirty days, occurred

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about 18 times out of every 100 cases. The disease occurred mostly in children, as the table of ages showed :—

Proportion at Various Ages.

Before	11 years	... ...	53 per cent.
Between	11 and 20 years	... ...	12 ,,
,,	21 and 40 ,,	... ...	20 ,,
,,	41 and 60 ,,	... ...	11 ,,
Beyond	60 ,,	... ...	4 ,,

Fifty per cent. of all cases occurred under ten years of age. Acute forms were most frequent in the young, and chronic kinds between the ages of twenty and forty. The pathological changes were chiefly of two kinds : first, obstruction of the bowels ; and secondly, strangulation of the intussusceptum. The two changes need not coexist ; mere invagination does not of necessity involve either, as, for example, in the early stage of chronic intussusception. In strangulation of the intussusceptum there was compression of the mesenteric or meso-colic vessels and constriction at the neck of the intussusceptum. Obstruction of intestines might be due to four factors :—(1) The orifice of the intussusceptum becoming converted into a slit, and getting opposed to the intussuscipiens : (2) the inner and middle cylinders becoming bent ; (3) these cylinders may become enormously thickened ; and (4) the lumen may become plugged by blood, &c. The intussusception may be irreducible owing to adhesions about the neck or over the whole surface ; these adhesions cannot be diagnosed ; they may be absent in cases of six weeks' duration, and present in others of three days' duration ; they are met with in 80 per cent. of chronic cases, and 40 per cent. of acute ones. Swelling of the intussusceptum, bending or twisting of the middle cylinders, and the valvular constriction in some cases of the ileo-colic form were other causes of irreducibility. Spontaneous cure by elimination cannot occur in certain cases of the chronic form, and certainly not in the ultra acute form, but it may occur in the gravest case when the patient is *in extremis*. Spontaneous elimination takes place in about 40 per cent. of all cases, but this is no guide to the mortality, for the whole of the forty do not live. Spontaneous elimination occurs in the ileo-cæcal form in 20 per cent., in the colic form in 28 per cent., and in the enteric form in 61 per cent., so that it is most rare in the most common form. It occurs in 2 per cent. under two years of age, in 6 per cent. between two and five years, in 38 per cent. between six and ten, in 40 per cent. between eleven and forty, in 44 per cent. between forty-one and sixty, and in 46 per cent. beyond sixty years of age, so that it is most rare in patients among whom intussusception is most common. Spontaneous elimination has occurred at the end of the third or fourth day, and as late as the sixth or seventh month. The great bulk fall between the tenth and thirtieth day. In over 40 per cent. of the subjects of elimination death follows from effects arising out of the original lesion or the elimination. The general mortality of intussusception is 70 per cent. Between the ages of eleven and twenty it is 28 per cent., between twenty-one and forty 32 per cent., between forty-one and fifty 36 per cent., between fifty-one and sixty 50 per cent., and beyond sixty 85 per cent. The mortality is highest when spontaneous elimination is most common. In a hundred cases of intussusception in children under eleven it may be reckoned that not more than twelve will undergo cure by elimination. Spontaneous reduction or the formation of a fistula above the invagination (one case) are other modes of spontaneous cure. The treatment was discussed for acute and subacute cases only. Opium first, as it gives rest to the intestines, relieves pain, and diminishes shock. Nothnagel produced all the various forms of intussusception in animals by means of electrodes. Opium gives better effect to the subsequent treatment. Feeding is of no moment in acute cases; thirst may be relieved by enemata. Enemata with a view to reduction should be adopted as soon as the patient is under the influence of opium. In really acute cases they do no good after the second day. Chloroform should be administered in children. The best positions were the knee and head or knee and elbow ; sometimes the lateral abdominal. Inversion was no good. A tumour could be felt either through the parietes or per rectum in nearly 50 per cent. of the cases, and the effect of enemata on the tumour should be watched. Massage, electricity, carbonic acid, enemata, and metallic mercury were useless and wasted time. Laparotomy should be resorted to without delay, and should be a first, not a last, resort. The mortality of the operation was high, but would probably be much less if performed earlier, and when the patients were less exhausted. In really acute cases operation should be performed within forty-eight hours, and in infants, if possible, within twenty-four hours. The *modus operandi* was next discussed, the median incision being recommended in all cases. The general mortality was 72 per cent. in thirty-three recorded cases ; when reduction was easy it was 30 per cent., and when difficult it was 91 per cent. Resection should be done if the intussusception be irreducible or gangrene have set in.

Dr. HABERSHON spoke of the difficulties of diagnosis and of the best plan of treatment. The treatment naturally followed the clinical course—acute, subacute, and chronic. Medical treatment was only available in the acute cases. Belladonna and the injection of free diluents have been followed by success. When failure is experienced in the employment of medical agencies, then operation should be done. He asked Mr. Treves to give the precise time at which operations had been performed. The introduction of a bougie in the rectum had been of value in starting reduction. Intussusception was a gradual process, and hence the importance of securing early treatment.

Dr. W. H. DAY narrated a case of intussusception in which the use of belladonna combined with four copious warm water enemata resulted in success.

Mr. BERNARD PITTS gave an outline of a case of a child aged five who suffered from acute intussusception. The intussusception could be felt in the rectum ; in this case manipulation followed by inflation of the bowel was combined with inversion of the patient, and attended with success.

Mr. BOYCE BARROW remarked that the application of ice over the intussusception was of much importance.

Mr. PICKERING PICK considered that intussusception and strangulated hernia were not identical. It had always been difficult for him to advise early abdominal section when he remembered that there were rational chances of recovery without operation. Allusion was made to the difficulty and occasional impossibility of returning the bowel in the abdominal cavity. He would rather resect the intussusception than perform abdominal section and make an artificial anus.

Dr. C. H. ROUTH advocated the use of belladonna in obstruction of the intestines, and especially in cases of intussusception in children.

Mr. ROYES BELL related two cases which had been under his care. The first case was a fatal one ; reduction was impossible, even after abdominal section. The second case recovered after ineffectual attempts at reduction by means of inflation.

Mr. W. ROSE confessed that he had never understood statistics better than those brought forward by Mr. Treves. Early operation in young children was most necessary. The operation was, no doubt, one of great difficulty. He preferred excision of an irreducible intussusception to the formation of an artificial anus.

Mr. PEARCE GOULD asked by what data the clinical nature of the case could be recognised. How long is opium to be given before resorting to other means? We should be careful to apply remedies thoroughly on a first occasion, and if failure resulted other measures should be tried. Enemata set up violent peristalsis, and ought not to be resorted to as a means of feeding the patient. He preferred opium to belladonna.

Dr. RADCLIFFE CROCKER was convinced that for belladonna to be of use much larger doses must be employed than those recommended by Dr. Day and Dr. Routh.

Mr. TREVES, in reply, preferred opium to belladonna, as there was not time to use many drugs. Mere vague rubbing of the abdomen was practically useless. M. Grisset had extensively tried ice in every way, but the action of ice was, in animals at least, to increase the peristaltis. As to the chance of recovery *versus* laparotomy, it must be remembered that the fatality of laparotomy would probably be much less if the operation were performed early. The severity of the symptoms might indicate the acuteness or subacuteness of the clinical course. Enemata were perfectly useless after the second day.

EPIDEMIOLOGICAL SOCIETY.

AT a meeting of this Society, held at Chandos-street, Cavendish-square, on Wednesday, Nov. 12th, Dr. NORMAN CHEVERS, the President, delivered the inaugural address. He commenced by saying that since the Society last assembled, death had taken from the Association one who,

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although younger than most of them, was second to none as a man of science. The daily business of the life of John Netten Radcliffe was epidemiology, and when that life closed so prematurely there was not in Christendom any investigator of disease to whom the title of "epidemiologist" was more justly due than it was to him, an inquirer as honest as he was able, upon whose brief and by no means painless, mundane existence the divine light of truth was bountifully shed. Dr. Chevers then brought before the Society, in the form of questions, several observations on the subjects of endemic quinsy, inflammation of the external meatus of the ear, diphtheria with mumps, and boils in India. Having also related remarkable cases of jaundice and colic, he made some observations on herpetic fever and concluded with some remarks on dysentery. In the address delivered at the opening meeting in 1883 he had made some allusion to the occurrence of dysentery in London, showing that the last prevalence of dysentery occurred between the years 1840 and 1847. The details were recorded by Dr. Baly, and Dr. Chevers in his own person had convincing evidence that the malady was true dysentery. The almost complete subsequent immunity of London from this disease is proved by the fact that two distinguished hospital physicians of middle age lately said they had never seen a case of dysentery originating in London. Nevertheless, the Registrar-General's returns, as cited in the public press, state that "119 [deaths occurred during the week ending 18th August, 1883, in London] from *diarrhœa and dysentery*." In one week in the previous month of July the newspaper gives 351 deaths from dysentery. Making due allowance for inaccurate citation by non-professional reporters, this assertion of the occurrence of a multitude of deaths from dysentery in a city whose physicians have never seen English dysentery will naturally appear somewhat perplexing. Dr. Chevers said that the Registrar-General was as wrong in massing together cases of these perfectly distinct maladies, dysentery and diarrhœa, as an ornithologist would be if he classed the owl with the sparrow. He had lately spoken on this matter to a very high non-professional authority, who considered that the anomaly probably arose from a prevalence of cases of "dysenteric diarrhœa," a disease of which Dr. Chevers then heard for the first time, and in the existence of which, either at the present or any other time, he confidently disbelieved, diarrhœa and dysentery being two perfectly distinct entities always to be differentiated by observing the symptoms and washing the stools. The erroneous belief in the existence of "dysenteric diarrhœa" probably arose from the fact that grave dysentery is not always attended with severe pain. A careful search for indigenous dysentery in London and its suburbs would probably lead to the discovery of genuine cases.—In the discussion which followed Sir Joseph Fayrer, Sir W. Guyer Hunter, Surgeon-General Gordon, Surgeon-General Murray, Inspector-General Lawson, and Drs. Pringle and Saunders took part.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of this Society held on Friday, Nov. 1st, at 1, Adam-street, Adelphi, Dr. T. O. Dudfield, President, in the chair,

Mr. ALFRED SPENCER, of the Metropolitan Board of Works, read a paper on the Supervision of Noxious Trades. Mr. Spencer referred to the effect of the Metropolitan Building Act of 1844, Sect. 65 of which prohibited the erection of any dwelling within fifty feet of a building used for the businesses of a blood-boiler, bone-boiler, fellmonger, soap-boiler, tallow-melter, tripe-boiler, slaughterer of cattle, sheep, or horses, and any other like business, offensive or noxious. It was also forbidden to carry on any such business within forty feet of any public way and fifty feet of a dwelling; and any existing business of this character within these distances was to be abandoned at the end of thirty years. By themselves these clauses would have led to the abolition of such places within thirty years, but a later section gives the justices power to mitigate the penalty, provided the best means were adopted for preventing nuisance. In 1874 an Act was passed which repealed the last section, and thus certain businesses came to be prohibited, while others could only be established by consent of the local authority. The Metropolitan Board of Works, under this Act, made regulations for slaughter-houses, which have been very beneficial in their operation, and as many as 620 out of 1429 have been abolished. Offensive businesses are mostly situated in Bermondsey, in Belle Isle, Islington, and Southwark. A second set of bye-laws under this Act deals with the businesses of a blood-boiler, bone-boiler, a manure manufacturer, soap-boiler, and tallow-melter. The means for preventing nuisance in these businesses was stated in detail. Mr. Spencer then dwelt on the qualifications necessary in the inspector for influencing the masters and men engaged in them. A short account was then given of trades dealt with by the Alkali Works Regulation Act of 1881, which takes cognisance of works for sulphuric acid, for gas liquor, for nitric acid, and sulphate of ammonia. Other businesses were then briefly considered, such as brick and ballast burning, cement making, &c., and in conclusion Mr. Spencer claimed that the London of to-day is far more free from nuisance resulting from trades in consequence of the restrictions under which they are placed than formerly.—In the discussion which followed, the President, Drs. Saunders, Gwynn, Iliff, Kelly, and Corfield, Mr. Rogers, and Mr. Shirley Murphy took part.

Reviews and Notices of Books.

A Practical Treatise on the Medical and Surgical Uses of Electricity. By GEO. M. BEARD, M.D., and A. D. ROCKWELL, M.D. Fourth Edition. London: H. K. Lewis. 1884.—This treatise, as our readers probably are aware, emanates from America, and for this last edition Dr. Rockwell is solely responsible. It is very large, and deals at length, if not exhaustively, with every phase of electro-therapeutics. In fact, the author manages to fill nearly 800 octavo pages. The book, it may be urged, is not so big as the last edition of Duchenne's classic treatise on "L'Electrisation Localisée," but then the large bulk of the latter was due mainly to the additions made by its author to scientific medicine. Duchenne used electricity as a means of treatment it is true, but still more largely he used it as a means of investigation, and if Duchenne's work grew in bulk, its bulk was never disproportioned to its scientific value. Dr. Rockwell is a great believer in the therapeutic value of electricity, and the size of the book is proportioned to the extent of his belief. It is not unlikely that English readers may come to the conclusion that many of Dr. Rockwell's patients might have recovered even without his aid, or by means of therapeutic measures other than electricity. It may be laid down as a rule of medical ethics that while we do well to be sceptical in accepting new statements as to the value of all new modes of treatment, we are especially bound to use our scepticism in those methods of treatment which necessitate on the one hand the repeated visits of the physician to his patient, and on the other hand the constant "refreshing" (to use a legal phrase) of the physician by his patient. A glance through this work will show that Dr. Rockwell recommends the use of electricity for many conditions for which it is not applied to any great extent in this country. It is true that electricity may be used in a great many conditions in which a local stimulation of the tissues is indicated, but we cannot but feel that in the best interests of the profession as well as patients something should be left for time to accomplish, and to be brought about by what Lord Beaconsfield called "the magic of patience." We can only hope that the general reader will not be carried away by Dr. Rockwell's statements, and that he will carefully study and verify them before he begins to make an almost invariable use of electrical currents for all the protean forms of disease. To such as have a knowledge of neuro-pathology, Dr. Rockwell's work may prove of value for occasional reference, but, notwithstanding its size, it does not seem to us to be particularly well filled with references to the latest and most trustworthy authors on the subjects of which it treats. For example, Durham and Forster's cases of hydatid tumour successfully treated by galvano-

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puncture are given at p. 698, but no mention is made of Dr. Fagge's subsequent experience of similar benefit derived from simple puncture. There are many practical hints and details scattered throughout the book, which will certainly prove of service to those who are wishing to use electricity for the benefit of their patients. This is the strong point of the book, and we do not hesitate to say that while the sanguine reader is likely to be often disappointed when he comes to put Dr. Rockwell's treatment into practice, the reader with judgment and knowledge will get many valuable practical hints from a perusal of the work.

A Manual of Diseases of the Throat and Nose. By MORELL MACKENZIE, M.D. Vol. II.: Diseases of the Œsophagus, Nose, and Naso-pharynx. London: J. and A. Churchill. 1884.—Some of the special features of this work are its wealth of accurate reference to related literature; its carefully planned histories of the various diseases; the conciseness and clearness of its language, and the thoroughness of its pathology so far as that is possible. It is needless to say that the volume, whilst bearing the impress of Dr. Mackenzie's authorship, could hardly have been the labour of one mind when we remember the time which is likely to have been at the disposal of the author for the past twelve years during which the work has been in progress. Indeed, Dr. Mackenzie expresses his thanks to several friends and assistants who have aided him in clinical investigations and literary researches, and in particular he acknowledges his deep obligations to Mr. C. L. Taylor for his invaluable help during the past four years. The poverty of real information concerning acute œsophagitis, more especially in infants, is obvious from a perusal of this section of the volume. We are convinced that the greatest nonsense is talked in connexion with inflammatory affections of the œsophagus amongst infants. Listening to one class of physicians, whose experience we cannot but think is not the result of observation of cases either during life or after death, we hear that the œsophagus is a desert in respect of disease. Now, in our view there can be no doubt that certain degrees of inflammatory action are by no means uncommon both in infants and others; and the cause of such irritative disturbance will probably be found to be the illegitimate use of spirits and many other irritant articles of ingestion. It is a fact requiring further explanation than we can find for it that the more specific diseases of the neighbouring organs do not greatly tend to propagate themselves along the œsophagus. Dr. Mackenzie has seen but two fatal cases of diphtheria of the gullet, one in a child aged three, and the other in a boy aged six. In the chapter on Rupture of the Gullet Dr. Mackenzie relates some experiments which seem to prove that the lower third of the œsophagus is the region of least resistance; that rupture from direct pressure applied within the gullet always takes place in a longitudinal direction and that the mucous membrane offers greater resistance to strain than the muscular covering. The work has been well indexed by Mr. Mark Hovell.

Diseases of the Spinal Cord. By BYROM BRAMWELL, M.D., with 183 Illustrations. Second Edition. Edinburgh: Young J. Pentland. 1884.—We have already fully reviewed this excellent book (THE LANCET, 1882, vol. ii., p. 745). The author is to be congratulated on the appearance of a second edition. The original plan of the work has been for the most part adhered to, though every page has been subjected to careful revision. The sections devoted to the pathology of individual lesions have been placed under the special diseases, the functional affections have been more fully considered, and a considerable space has been given to the important and difficult subject of concussion of the spine, and the method of examining "railway cases." Many of the old illustrations have been redrawn, and a large number of new figures, both woodcuts and chromolithographs, have been added. The excellence of the chromolithographs calls for the highest commendation. The second is a still better guide than the first edition, good as that was.

Fat and Blood. By S. WEIR MITCHELL, M.D. Third Edition, revised, with additions. Philadelphia: J. B. Lippincott and Co. London: Southampton-street, Strand. 1884.—This little book of 162 pages ought to be carefully studied by every practitioner of medicine. Although the treatment, which is here considered in all its aspects, has special reference to the methods of renewing the vitality of feeble people, yet we are convinced that many hints which have a wider application may be gathered from the pages of the work. We shall content ourselves with a single quotation, from which will be gathered much that we could hardly express in better terms:—"As regards the acceptance of this method of treatment I have to-day no complaint to make. It runs, indeed, the risk of being employed in cases which do not need it and by persons who are not competent, and of being thus in a measure brought into disrepute. As concerns one of its essentials—massage—this is especially to be feared. It is a remedy with capacity to hurt as well as to help, and should never be used without the advice of a physician, nor persistently kept up without medical observation of its temporary and more permanent effects."

Elements of Modern Chemistry. By ADOLPHE WURTZ, Senator, Member of the Institute, &c. Second American Edition. Translated and edited, with the approbation of the Author, from the Fifth French Edition, by W. H. GREENE, M.D., Professor of Chemistry in the Central High School, Philadelphia, &c. London and Philadelphia: Lippincott. 1884.—It is not wonderful that Professor Wurtz's little book has run quickly through edition after edition, for it is clear and simple, and the author's name is illustrious. Dr. Greene is an excellent translator, and the American edition is printed on good paper and in good style. This very considerable allowance of praise is all we can afford. We find no element of novelty in the book, and can see no reason why it should be selected as an elementary text-book in preference to a good many others which might be mentioned. It is indeed so like the ordinary run of books of the class that we should find little to say of it even if it were a first instead of, virtually, a fifth edition.

The Journal of Anatomy and Physiology. Conducted by Professors G. M. HUMPHRY, W. TURNER, and J. R. M'KENDRICK. Vol. XVIII., Part IV.—This part contains the following memoirs:—Cleland: Terminal Forms of Life. Sutton: Rickets in Wild Animals. Dobson: The Presence of Peyer's Patches in the Cæcum and Colon of certain Mammals. Lockhart Gibson: The Invisible Blood-corpuscle of Norris. Marcus Gunn: The Eye of Ornithorhynchus Paradoxus. D'Arcy Thompson: On the Nature and Action of certain Ligaments. Ainslie Hollis: Researches into the Histology of the Central Grey Substance of the Spinal Cord, Medulla Oblongata, and Pons Varolii. A. Thomson: Varitions of the Thoracic Duct associated with Abnormal Arterial Distribution. W. Stirling: The Ferments or Enzymes of the Digestive Tract in Fishes. Walter Colman: The Minute Structure of the Spinal Cord of a Human Fœtus. Sheridan Delépine: Contributions to the Study of Nucleus Division.

Notes on Materia Medica and Pharmacy. By FREDERICK T. ROBERTS, M.D., B.Sc., F.R.C.P. London: H. K. Lewis. 1884.—Dr. Roberts points out that the duration of the course of lectures on materia medica required by the examining boards is so short that it is difficult to do justice to the whole subject. He has accordingly compiled these notes in the hope that their publication will in future enable him to devote his entire course to therapeutics. Much of the information is arranged in a tabular form, and seems well

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adapted to the requirements of students preparing for examination.

Materia Medica, Physiological and Applied. Vol. I. London: Trübner and Co. 1884.—This is a work of over seven hundred pages devoted to a consideration of the action and uses of some half dozen remedies, including aconite, digitalis, nux vomica, and bichromate of potassium. The historical notes on aconite and the collection of cases of poisoning by aconitia will be read with interest.

Transactions of the Clinical Society, Vol. XVII. London: Longmans, Green, & Co.—The most important papers in this volume are:—Three Cases of Peritoneal Abscess in Children, by Dr. Goodhart; an Anomalous Case of Disseminated Cerebro-spinal Sclerosis, by Dr. Bastian; a Case of Spreading Obliterative Arteritis, by Mr. Pearce Gould, and a similar case by Dr. Hadden; a Case of Tuberculous Tumours of the Larynx, by Dr. Percy Kidd; a Remarkable Case of Tubercular Meningitis, by Dr. Angel Money; a Case of Gluteal Aneurysm, by Mr. G. R. Turner; Case of Acute Intestinal Obstruction caused by a Diverticulum and successfully treated by Abdominal Section, by Mr. H. H. Clutton; Multiple Abscesses of the Liver treated by Incision, with Recovery, by Dr. S. West; a Case of Dislocation Backwards of the First Lumbar Vertebra, which was successfully reduced under ether, by Mr. Davies-Colley.

Orthopædic Apparatus. By F. GUSTAV ERNST. Pp. 58. London: Sprague and Co. 1883. — This work consists of a series of illustrated plates, with corresponding descriptions of the various forms of mechanism employed in the treatment and cure of the numerous deformities of the human body, and the author has in it enabled a medical man readily to see what appliances are made for various deformities, and to determine which would be the most suitable for the case under his care. It is obvious that in such a manual as the one under notice it is impossible to represent every apparatus that may be found necessary for such deformity, every case having its own individual aspect; but it certainly contains a capital selection of modern instruments such as are daily recommended and used, and which form the base of all apparatus.

Christmas and New Year's Cards.—Messrs. BIRN BROS., Fine Art Publishers, of Milton-street, City, have submitted to us a packet of Christmas and New Year's cards, some of which are of distinctly novel design, whilst all are more or less remarkable for beauty and harmony of colour. We have also to acknowledge the receipt from Messrs. DAVIDSON BROTHERS of some very pretty specimens of the same class of publications, consisting of floral groups, coloured photographs, &c.

THE LATE DR. MAHOMED.

A MEETING was held on Dec. 10th at Guy's Hospital, Dr. Wilks, the senior physician, in the chair. In addition to many of the staff of Guy's, St. Mary's, and the Fever Hospitals, the following, and many others of those who sympathise with the movement, were present: Dr. Chadwick, Dr. Hare, Dr. Hughlings Jackson, Dr. Dyce Duckworth, Mr. Macnamara, the treasurer of Guy's Hospital, and Mr. Burdett.

Dr. Wilks having referred to the great loss sustained by the profession, explained how impossible it was for Dr. Mahomed, owing to his sudden and untimely death, to have made any provision for his wife and family.

The following resolution was next moved by Dr. Pavy and seconded by Mr. Field: "That a memorial fund be raised for the benefit of the widow and children of the late Dr. Mahomed."

Dr. Hare then proposed, and Mr. Aikin seconded, the following: "That a committee be formed to represent the staff of Guy's, St. Mary's and the Fever Hospitals, the University of Cambridge, the British Medical Association Collective Investigation, and personal friends."

The third resolution, proposed by Mr. Macnamara and seconded by Mr. Herbert Page, was to the effect that a circular letter be drawn up and issued by a subcommittee inviting subscriptions from all who have known Dr. Mahomed, or from those who have been in a position to appreciate his untiring energy in the furthering of scientific medicine. The members of this committee are Dr. Wilks (chairman), Mr. A. E. Durham (treasurer), Dr. Cayley, Mr. Field, Mr. Macnamara, with Dr. Goodhart and Mr. Jacobson as secretaries.

Strong and unanimous expressions of opinion were made to the effect that Dr. Mahomed deserved well of the profession; Mr. Burdett, while supporting the first resolution in sympathising terms, drew attention to this fact, and said that this was an occasion which called for special and strenuous efforts.

The following subscriptions, amounting to over £600, have been already promised or received:—

	£	s.	d.
Professor Humphry ..	50	0	0
Mr. Field (in 4 instals.)	100	0	0
Mr. Burdett makes himself responsible for ..	100	0	0
Dr. Wilks	26	5	0
Mr. Durham	50	0	0
M.D	25	0	0
F.D.	25	0	0
Dr. Chadwick (in 6 mths.)	50	0	0
Dr. D. Hood (in 4 instals)	50	0	0
Dr. C. Grigg	20	0	0
Dr. Cayley	21	0	0
Dr. C. T. Williams	10	10	0
Dr. M. Skerritt, Clifton	10	0	0
T. Bryant, Esq.	10	0	0
Dr. Dyce Duckworth ..	10	10	0
C. Bader, Esq.	10	10	0
C. A. Aikin, Esq.	10	10	0
Dr. E. Clifford Beale ..	10	10	0
Dr. Goodhart	15	15	0
Mr. Jacobson (in thirds.)	15	15	0
Dr. Bright, Forest-hill ..	5	5	0
Dr. N. Moore, Brighton	5	5	0
G. Lawson, Esq.	5	5	0
Dr. Coupland	5	5	0
C. Woolridge, M.B. ..	5	5	0
C. Macnamara, Esq. ..	15	15	0
H. Page, Esq.	10	10	0
The President of Guy's Hospital	5	5	0
The Treasurer of Guy's Hospital	5	5	0
Dr. Isambard Owen ..	5	5	0
Dr. Douglas Powell ..	3	3	0
Dr. Pitt	3	3	0
Dr. Sharkey	2	0	0
Dr. S. Smith, Clifton ..	1	1	0
G. Eastes, M.B.	1	1	0
A. B. R. Myers, Esq., Scots Guards..	1	1	0
T. Eastes, M.D., Folkestone	2	2	0
J. W. Barnes, Esq. ..	1	1	0
A. Jackson, Esq., Sheffield	1	1	0

We are asked to state that subscriptions should be sent to Mr. Durham (treasurer), 82, Brook-street, W.; or to one of the secretaries, Dr. Goodhart, 25, Weymouth-street, W.; Mr. Jacobson, 41, Finsbury-square, E.C.

To the Editor of THE LANCET.

SIR,—I think your readers will be interested to read some of the many expressions of regret and sympathy at the death of the late Dr. Mahomed, which I have received from the members of the International Committee for Collective Investigation.

Professor d'Espine, of Geneva writes: "I hasten to express my sincere sympathy for the sad loss that you have just sustained in the person of Dr. Mahomed, whose eminent qualities I had an opportunity of appreciating at the Congress of London."

Professor Trier, of Copenhagen, writes: "With full and sincere sympathy I have received the information of the loss the profession of your country has sustained by the death of our excellent collegue. I beg you to receive the expression of my feelings on this occasion, and to communicate them to Sir William Gull and to Professor Humphry."

Professor Lepine, of Lyons, says: "I learn with the most lively sorrow the death of our colleague, Dr. Mahomed. I shall devote a few lines to him in the forthcoming number of the *Revue de Médecine*. Personally I am very grieved; for science it is a great loss, and for our committee as well."

Letters to similar effect I have received from Professors Ewald and Bernhardt, of Berlin; from Professor Bouchard, of Paris; and from Professor Lange, of Copenhagen.

I am, Sir, yours very truly,

December 10th, 1884. ISAMBARD OWEN.

THE SURGICAL AID SOCIETY.—From the report which was read at the twenty-second annual meeting of the friends and subscribers of this charity, on the 6th inst., it appears that during the past year 5357 patients have been relieved, comprising 1946 men, 2585 women, and 826 children. There was a total increase of 725 patients over the number relieved during the previous year, and this made an average of 103 per week. No less than 46,385 persons have been relieved since the foundation of the Society, and the number of surgical appliances supplied during the same period is 61,644, of which number 8101 have been supplied during the last twelve months. The total income during the year was £6380, and the expenditure amounted to £6310.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 13, 1884.

THE NON-MEDICAL DEGREES OF THE UNIVERSITY OF LONDON.

IN our last number we pointed out how little attention had been given by the Senate of the University of London to the suggestions of teachers in regard to medical studies and examinations, and how little hope there was, from the peculiar constitution of the Senate, of a remedy. The teachers in arts and science in our large colleges and schools are also greatly dissatisfied with the present position of their subjects in the University. When started in 1837 the University of London was merely an examining body, with power to grant degrees to certain affiliated colleges, such as University and King's, some other colleges for higher education, and the medical schools in London and the provinces. But this unimportant position as an examining board for these colleges and schools only did not satisfy the aspirations of the members of the Senate; they objected to be bound to teaching bodies, and so, on the experience of a short life of about twenty years, they determined to widen their portals, throw over the colleges and affiliated institutions, and give their degrees in Arts and Laws to any candidates who could pass the examinations, no matter whether they were taught or untaught. This step led to a large increase in numbers for the degrees, and private study appeared more and more frequently in the lists; but the professoriate were alienated, affiliation became a nonentity which might as well have been struck out of the Calendar, and most students, who were not debarred by pecuniary or religious objections, were now recommended by their teachers at affiliated institutions to proceed to the older universities. From that time, the representative pupils of many first-class schools and certain of the collegiate institutions have not presented themselves at the University, unless they felt sure of a monetary equivalent in the shape of a scholarship or exhibition, when their names might appear among the run of sectarian candidates and those taught privately. Since 1860, with only two exceptions, wranglers from Cambridge have taken the mathematical scholarship and gold medal at the B.A. Honours Examination. The University of London has kindly given £150 to the best mathematical student at Cambridge who will condescend to be examined and be styled University Scholar in Mathematics; and the Chancellor, as the representative of the Senate, is so pleased with this result that he almost always refers to it at the Commemoration as a singularly satisfactory feature in the University. The Matriculation Examination, "with its smattering of every subject and thoroughness in none," seems to be the *terminus ad quem*, and private tuition the main characteristic, in the non-medical faculties. At the end of 1883, 26,629 candidates had presented themselves for matriculation, 2696 (about 1 in 10) had obtained the B.A. degree, 1016 that of M.B., and 381, 523, and 11 those of science, laws, and music respectively, many of the latter being, of course, already Bachelors of Arts. Arts and Laws having been turned over to private study and private tuition, Science had, of course, to follow suit, and so when degrees in this faculty were instituted no course of training was laid down. Fortunately for students in science, laboratories are necessary for their instruction, and so, although this is ignored by the authorities of the University, they cannot escape from a certain amount of training under a professor or teacher. Professorial teaching, although reduced to a minimum, cannot be so absolutely divorced from the mere examination in Science, as is the case with Arts and Laws. Still, even now, on applying for an appointment, a young scientific man is more frequently asked where, for how long, and under whom he has studied his branch of the profession, than whether he has taken the B.Sc. Lond. degree. The inconsistency of the University authorities cannot be better shown than by their suspension of all regulations for non-medical degrees, and their rigid insistence on the stringent and unnecessary regulations laid down so minutely for candidates for the degrees in Medicine. Why do they not pursue their principles to a logical conclusion, and remove all restrictions except the examination test from the medical student also? The secret or avowed hostility of the best teachers in literary and scientific subjects to the examination and the system was merely a question of time after their sympathies had been thus alienated. Owens College, backed by the earnestness of Manchester in desiring a local, or, at any rate, a northern university, brought into more prominence the demerits of the University of London from the standpoints of arts, laws, and science, and now the promoters of a teaching University in London are closely following in its steps and for similar reasons. The teachers urge that their courses of study are cramped and made much less effective by the fact that another body, on which they are unrepresented, practically rules their curriculum; that this body lays down no reasonable plan for a suitable education, especially in the literary subjects, but picks out books and authors here and there in an irresponsible and unmethodical fashion, and that no one has any power to revise its omissions or commissions. Active professors are conspicuously absent from the Senate; the only representatives in arts and science who are at present engaged in teaching are Prof. HUXLEY, Dr. HIRST, Prof. WILLIAMSON, and Dr. ROUTH, and two of these have declared in favour of a teaching university. Can these be accepted as the only guiding spirits of a modern university and as an adequate representation of a professorial body such as the Senate ought to consist of? Even of these, only one really teaches at an affiliated college. The association of teachers with past and present examiners and the special committees of the Senate to form Boards of Studies, is the only method by which a proper governing body can be formed, one which will secure training by the best teachers, and uniformity of examination at a constant standard. Such a possible organisation seems to have hardly occurred to the authorities of the University of London, and hence a teaching university has become a possible alternative, and will, we suspect, prove a dangerous rival.

THE politicians are at length taking a leaf out of the book of the physicians, and trying consultation instead of contradiction. The change has not come a day too soon. The political engine had very nearly come to a deadlock, and

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men of all creeds were beginning to feel disrespect, not to say contempt, for the discussion of public questions in a way that evoked from public men the rudest contradiction of all their opponents said, and resulted in a minimum amount of legislation, and much of this of the feeblest order. The flood of talk and the facilities for preventing the accomplishment of the most needed legislation, and that upon which there was the greatest consensus of opinion and desire, had really become intolerable. Parliamentary government itself seemed to be in danger. In no other sphere of work would such a system have been tolerated so long. Fancy it applied to the profession of medicine. Suppose Sir WILLIAM JENNER and Sir ANDREW CLARK, brought to the consideration of a case, to fall to and call each other names, and before and in the audience of the patient to denounce each other's suggestions, whether of diagnosis or treatment. The fate of an unhappy patient under such circumstances would be sealed; and not less disastrous would be the consequences to the name and fame of the profession. Some politicians, who care for their party more than for the State, are exhausting their energies in trying to demonstrate that all the credit of this new departure in politics rests with their particular leader, and all the advantages with their particular party. We take no such one-sided view of the matter. We give equal credit to Mr. GLADSTONE and Lord SALISBURY. We accord to both of them the discovery that things could not go on as they were, and that the interests of the State actually and urgently required that this system of contradiction should be controlled. It is to be assumed that Parliament is a body for the transaction of public business, then the precedent which has just been supplied in the fruitful interviews of the leading members of opposite parties will have to be much followed.

Our own observation of attempts at medical legislation has given us the worst opinion of the present system of governing. A subject upon which not a dozen members of either House can have any sound knowledge is thrown into the arena of discussion at the fag end of an August night. The will of the profession and the recommendations of a Royal Commission count for nothing. The hapless minister in charge is confronted with sixty or seventy trifling obstructive amendments, each of which can be spoken on indefinitely. A quasi-representative of the profession damns the measure with faint praise and in terms of apparent approval, and with many plausible platitudes, misleads the helpless House. This process has been gone through, not once, but five or six times in the last twelve or fifteen years, alike under Lord BEACONSFIELD and Mr. GLADSTONE, until everyone concerned, except the Bodies interested in the *status quo*, is disgusted and begins to think that any system of Government is better than the present. If there is any virtue in the new departure, for which Mr. GLADSTONE and Lord SALISBURY deserve equal praise, it will soon appear by the application of the new method to other or to all questions. A consultation of six intelligent and independent members from each side of the House would dispose of such a question as medical reform in the first week of the session.

Il Morgagni for October publishes a memoir on Nephrectomy by Dr. C. SPADARO, from which we gather that the operation has been performed in Italy ten times, with six recoveries. In Professor D'ANTONA'S last case, the clinical history of which is the basis of Dr. SPADARO'S communication, the patient, E. C——, aged thirty-four, had suffered from nephritic colic at various periods during the last ten years. The symptoms during the last eighteen months pointed to a purulent collection in the right kidney. On palpation the right flank was full and tender; the enlarged kidney extending upwards under the rib, downwards into the iliac fossa, and forwards to within two fingers' breadth of the median line. The surface of the tumour was equable and tense, but neither hard nor fluctuating. From long suffering the patient was anæmic and emaciated. Removal of the kidney having been resolved upon, as the only means of saving life, Professor D'ANTONA performed the operation on the 24th of April last. The right kidney having been exposed through the lumbar incision, a medium-sized trocar was pushed into the organ, and through it some ounces of exceedingly fetid pus were evacuated. In consequence of peri-capsular sclerosis the kidney was closely adherent to the surrounding tissues; and to facilitate enucleation the free extremity of the twelfth rib was broken and everted. The kidney and its capsule having been brought through the wound with necessary care, the pedicle proved to be short, thick, and hard. The artery and vein were included in one ligature, the ureter being tied separately; a third ligature beyond these included the whole pedicle, which was allowed to fall in, after the kidney had been detached, and PAQUELIN'S cautery applied to the free surface of the stump. The cavity was well dried, after being washed out with a 5 per cent. solution of sulpho-carbolate of zinc (*zinco solfo-fenato*). Two points of twisted suture were inserted in each angle of the wound; two drainage-tubes, free dusting with iodoform, and a bandage completed the dressing. The operation, which was performed under the carbolic spray, lasted an hour and a half. On section of the kidney, a large purulent cavity was found in its centre. The wound was dressed daily, but as it looked unhealthy and discharged fetid matter, the pedicle was exposed on the fifth day. As it was softened and had an offensive smell, a portion of it was removed, and the remainder treated with perchloride of iron. By the mouth and rectum every endeavour was made to nourish the patient, but he died from inanition on the tenth day after the operation.

Now that happily the cholera epidemic in Paris has almost died out, it seems advisable for us on this side of the Channel to see if we cannot learn some practical lessons from the experience of those who had to deal with it there. In the first place, it is clear that our arrangements must be all ready to hand. Though there is now no doubt that cases of true Asiatic cholera had occurred as far back as the first week in August, yet this was officially denied, and the outburst in November therefore came upon the authorities so suddenly that nothing was ready, and cases had to be dealt with as best they could. Secondly, the hospital accommodation was most imperfect. It was at first intended that there should be one hospital in the North and one in the South. It was, however, very soon found, as one would naturally expect, that this arrangement would not work. It was perfectly impossible to remove a patient suffering

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from cholera for any distance without running a very serious risk of his dying in transit. This actually occurred in several cases, and the idea of using these two hospitals had to be abandoned. It was therefore necessary to set aside wards in every hospital in the neighbourhood of which there were any cases, and to isolate them as far as possible. This having to be done quickly, could not, of course, prove very satisfactory. It is not an easy matter at a short notice to completely "insulate" a portion of a general hospital, and to provide for a separate staff, administration, &c. Disinfection was found to be a very difficult matter to carry out efficiently. In cholera the evacuations are liable to be conveyed in all the clothing and bedding, and in addition to these the vomit, often ejected with great violence, is thrown upon walls, the ground, and the floor of rooms. The most thorough attempt to deal with the bedding and clothing was that adopted at the Hôpital de la Marimère, where a large vessel was provided in which the "infected" goods were boiled at a pressure much above that of the atmosphere. At the Hôpital St. Louis, where some wooden huts were used as cholera wards, an attempt, which proved partially successful, was made by Dr. LAILLY to burn the evacuations. They were first partly dried in a chamber at the top of a small stove, and finally thrown upon the fire itself. There seems no reason why this should not be far more efficiently carried out by receiving such of the evacuations as it is possible to collect in vessels containing charcoal. More charcoal could then be thrown on the top, and a more or less pasty mass would be formed which would be perfectly inoffensive, and could be placed directly in a small furnace, where the charcoal would materially assist in promoting its destruction. There would still, however, remain the evacuations which pass into the bedding and clothes, and these would have obviously to be dealt with specially. As regards treatment, there seems to be little if, indeed, anything new. In the stage of collapse it does not appear that any one remedy has been found to be efficacious, and the routine seems to have been simply to watch the case with a view to treating complications, while in the later stages the ordinary remedies were employed.

Annotations.

"Ne quid nimis."

THE ROYAL COLLEGE OF PHYSICIANS.

AN extraordinary Comitia of the College was held on the 9th inst., Sir W. Jenner, Bart., President, in the chair. In opening the proceedings the President made a feeling allusion to the loss sustained by the College in the death of Dr. Mahomed, and stated that Dr. J. F. Goodhart, the friend and colleague of the deceased Fellow, had consented to deliver the Bradshawe Lecture, for which Dr. Mahomed had been nominated. A communication was read from the General Medical Council requesting opinion on several important matters connected with the medical curriculum. It was referred to the Committee of Management for the Examining Board in England. Mr. Bowker, L.R.C.P. (before 1859) of New South Wales, having requested to be placed on the list of Members, his request was complied with. A report was read from the Committee of Management for the Examining Board in England, stating that arrangements had been made for commencing the scheme in January next, that the dates for holding examinations had been fixed, and synopses and schedules prepared. The committee proposed that candidates for the M.R.C.S. and L.R.C.P. who commenced study before Oct. 1st, 1884, should be admissible to further examinations under the new scheme, and that any who had passed the first or second examination at either College should be exempt from either of the examinations of the Board. The report and its recommendations were adopted. A report from the Finance Committee was also adopted. It referred, among other matters, to a proposal to procure a site on which to build examination rooms. Such a site was now available, convenient of access from either the College of Surgeons or the College of Physicians; and a Building Committee was nominated to confer with a committee of the former College upon the subject. An alteration of the bye-law relating to the appointment of examiners, rendered necessary by the formation of the new Board of Examiners, was proposed for the first time.

WELLINGTON COLLEGE.

THE recent melancholy occurrence at Wellington College of two deaths within a few days of each other—one that of a master, and the other of a pupil—has again brought prominently before the public the important question of the health of that great school. They both arose from diseases which are believed to have an intimate connexion with blood poisoning, and this cannot but give rise to a strong feeling that there is something wrong in the sanitary condition of the College or its surroundings. It will not be disputed, we presume, that it is the duty of the governors of a great institution like Wellington College to see not merely that the education of the pupils is of the best quality, but that due regard is paid also to their physical condition, and that all preventable sources of disease are removed. And on this point it appears to us that some evidence is required to prevent a charge of neglect being brought against the governors of Wellington College. At the end of last year their attention was called by the medical officer to the unsatisfactory state of health of the boys as evinced by the prevalence among them of disease of an apparently malarial type, in several instances of a severe and fatal character, and attributed by him chiefly to malaria arising from the want of subsoil drainage of the grounds surrounding the College—an opinion also held by Sir Wm. Gull. It is but fair to suppose that some steps were taken to remove, or at least ameliorate, the insanitary conditions which were thus brought under notice, but, so far as we are aware, no information has been afforded as to the measures then adopted. It would tend greatly to remove the fears which this recurrence of disease has not unnaturally excited in the minds of those having boys at the College if the governors would make known what steps they have taken and under whose advice they have acted, and if they would also furnish a numerical return showing what has been the state of health of the boys during the past year. But it is of still more importance that some guarantee should be given that the sanitary condition of the College and of the masters' houses shall be examined and reported upon by competent experts, and that the measures they may deem necessary will be carried into effect. To impart any value, however, to such a report, it is essential that it be made by persons conversant with sanitary work, and also independent of the College authorities. With this view it would be advisable on the part of the governors either to appoint a committee consisting of two medical men who have made sanitation their special study, and two first-class engineers; or, as we formerly suggested, to apply to the

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Secretary of State for War to permit them to avail themselves of the services of the Army Sanitary Commission to make an exhaustive inquiry into the causes of these outbreaks of disease in the institution, and the means best adapted to obviate their recurrence. Unless some such course is adopted, and the cause of this morbific condition is fully investigated, it can hardly be doubted that the College will seriously suffer. The failure on the part of the governors to remove the cause of this prevalence of disease of a serious character indicates the necessity for some more searching inquiry than has yet been made into its nature. It would also be greatly to the advantage of the College if the suggestion we formerly made were adopted, that the medical element should be introduced into the governing body. One or more retired army medical officers who have made sanitation their study would be invaluable in keeping a watchful supervision over the health of the school, and advising their colleagues on all questions relating to the physical welfare of the boys.

"MORBID RELIGIOUS AFFECTION."

WE regret to have wounded the susceptibilities of our respected contemporary the *Tablet*, and because we are sincere in our regret, and because we do not for a moment question the sincerity of the organ of Catholic opinion, we can forgive the spirit in which the censor attacks and condemns us. We are "dogs," and "holy things" must not be exposed to us. The *odium theologicum* is as strong upon our contemporary as if he lived in the Middle Ages, and it is evidently fortunate for us that our lot has been cast in these more peaceful times. So distraught is the *Tablet* that it not only waxes wroth and calls names, but altogether mistakes both the facts and the arguments. This is how our contemporary delivers himself:—"It is not our intention to vindicate the use of the most sacred and most affecting of religious images. The reproach of the cross is as old as Christianity, and we are quite content to bear it; we desire nothing better." Now, nothing could possibly be further from our wish or thought than to condemn the use of "the cross" as a symbol or religious image. It was to the crucifix we took exception, and the "reproach of the cross" has nothing whatever to do with the matter. We will not yield place to the *Tablet* in respect for the idea symbolised or the symbol itself. We spoke not of use but of abuse; and if an Apostle could say, "If meat make my brother to offend, I will eat no flesh while the world standeth," it can scarcely have been "abominable" to ask the *Tablet* to disuse the crucifix, or in some way to control its use so as to prevent serious moral abuse, because it *is* a cause of offence, and very terrible offences too, on the part of too many who misuse it. What so grievously exasperates our contemporary and gives the acridity of extreme bitterness to his attack upon us is the inference that we must needs be disciples of "a brutal philosophy" and profess "materialism of the coarsest character," because we have remarked that "the mischief which results from thinking and speaking of the mind as something apart from the body, as more than brain function, cannot be over-estimated." We cannot expose to the writer in the *Tablet* unnecessarily scientific things. It would clearly be profane to do so. He is manifestly a philosopher who has so simply fixed his intellect on his own science as to have forgotten the existence of any other; and in this forgetfulness he is unable to perceive the difference between science and sentiment, fact and faith. We have not a word to say against any man's belief. Outside the known, there may be much that is knowable, as well as much that is unknown and unknowable, at present at least. We are *not* of those who dare to affirm a negative; to assert that because science is unable to recognise anything outside or behind organised matter there is nothing more. The scientist, as a scientist, must needs be agnostic. He has no place or right to question the elements or subjects of faith. There is nothing in the strictest science that forbids or prevents the exercise of faith. By faith a man may enter within the veil and live another life. His intellectual position is simply and logically that of the mathematician who lays aside the rigid methods and inexorable laws of his science to indulge in the pleasures of the imagination, or the laborious historian who turns from his severe study of facts to romance and poetry. We will go further, and admit that the intellectual nature requires imagination and romance and poetry for the perfect development of its parts. What we had to say, and must repeat, is that very great confusion and much mischief results from treating the mind as if it were not what it is—namely, brain-function, and that consequently the brain is reflexly influenced by particular descriptions of mental activity, and may be weakened and depraved by the cultivation of those ecstatic states which are supposed to be religious. We do not wish to wound the susceptibilities of our contemporary needlessly, or there is much that might be added to what has been already said in these columns; and we have reason to know that, if not the *Tablet*, high ecclesiastical authorities, to which even the *Tablet* would bow, have perceived the peril against which we have warned our readers, together with other besetting dangers whereto both the clergy and their flocks are exposed. We have no desire to lift the veil; we simply throw out the hint, and the warning having been given, the subject may, so far as we are concerned, be allowed to drop. Only this would we whisper in the ear of our contemporary, in all friendliness, *Prius quam incipias, consulto.....opus est.*

LECTURESHIP IN HUMAN ANATOMY, OXFORD UNIVERSITY.

THE delegates of the Common University Fund will shortly proceed to the election of a Lecturer in Human Anatomy. It will be the duty of the lecturer to lecture and to give instruction as demonstrator in conformity with the requirements of the Royal College of Surgeons and of the Examining Board for England, and he will be subject to any regulations which may be made by the delegates. The lecturer will receive a salary of £300 a year, and will not be entitled to take fees. He will be appointed for a period of five years, and will be capable of reappointment. He will not be allowed to engage in practice during his tenure of office. Candidates for the lectureship must hold the diploma of a College of Surgeons in Great Britain or Ireland. Preference will be given to candidates who have served in the office of demonstrator at an established medical school. Applications, endorsed "Lectureship in Anatomy," should be sent to the Secretary to the Delegates of the Common University Fund, New College, Oxford, not later than February 1st, 1885.

THE DIAGNOSIS OF GASTRIC DISEASE.

METHODS have been adopted from time to time with a view of determining the digestive activity of the gastric juice outside the body. Van der Velden elaborated a method for carrying out this plan by getting patients to swallow a dry sponge enveloped in a gelatinised capsule. Leube used to wash out the stomach with about 300 cubic centimetres of iced water. Recently M. Beaumetz has adopted the principle of aspiration in order to obtain some gastric juice. There appears to be no need for the practical physician to acquaint himself with the details of the procedure nor with the minutiæ of the apparatus concerned. Van der Velden said that in cancer of the stomach the secretion from this organ contained no hydrochloric acid, and thus believed that an easy way was open for him to

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distinguish between cancer and other chronic gastric disorders. Leube concluded that the degree of acidity of the gastric juice would give us some idea of the degree of the dyspepsia, and he drew no other conclusion from his careful study of the subject. A certain colouring matter derived from coal tar, and known as orange-poirier No. 4 or tropeoline, undergoes a change to a clear violet-red tint when a one per cent. solution is brought in contact with muriatic acid, whilst it does not lose the yellow tint with lactic and other acids. This tropeoline has been employed in testing the condition of the gastric juice. The above information is interesting, but as yet cannot be said to possess any value for clinical medicine.

SMALL-POX IN LONDON AND OTHER LARGE ENGLISH TOWNS.

THE recrudescence of small-pox mortality in London is an undoubted fact, but, speaking generally, the prevalence of the disease in other parts of England and Wales is very slight and shows no sign of increase. The deaths from small-pox in London and its outer ring of suburban districts were respectively 69, 344, and 269 in the first three quarters of the year, and in the first ten weeks of the current quarter, ending the 6th inst. 346 fatal cases were registered. The weekly returns of the Metropolitan Asylum Small-pox Hospitals afford a valuable gauge of small-pox prevalence in the metropolis. At the beginning of this year only 100 cases of the disease were under treatment in these hospitals, but by the beginning of July they had increased to 1368, after which, under the influence of the hot weather, they steadily declined to 471 on Sept. 20th, increasing again slowly to 580 on Nov. 1st. During the following five weeks ending the 6th inst. a rapid increase occurred, and on the last-mentioned date the number of cases under treatment was 1027. In the twenty seven provincial towns dealt with in the Registrar-General's weekly return, and having an estimated aggregate population of nearly five millions of persons, no such increase of small-pox mortality has taken place, such mortality having steadily declined throughout the year. The deaths from small-pox in these twenty-seven towns were 145, 121, and 56 in the first three quarters of this year, and but 22 were recorded in the first ten weeks of the current quarter. According to the Registrar-General's last quarterly return, the whole country, except the metropolitan district, was unusually free from small-pox mortality up to the end of September. Since that date only one outbreak of small-pox has been noteworthy. This occurred at Durham, where 25 fatal cases were recorded during October and November.

ADULTERATION OF DRUGS.

ATTENTION is once again being called to the fact that our drugs are as a rule largely adulterated. From the returns of the public analysts it would appear that once in four times on an average a prescription made up at a chemist's shop is not compounded of pure drugs prepared in strict accordance with the directions of the British Pharmacopœia. One out of four, at all events, is the average of samples of drugs purchased by private individuals for analysis which are found to be adulterated; but as the authorities of the Local Government Board point out, it is probable that a purchaser's suspicions have been pretty strongly aroused before he goes to the trouble and expense of having the matter investigated. Of samples purchased indifferently by the officers appointed under the Adulteration Act the proportion is much smaller, being only one-seventh; but it is sufficiently large to suggest unpleasant reflections, when we take into consideration the importance to the patient of getting exactly what is prescribed for him by the physician. Many drugs are not only adulterated or "sophisticated," but have, in addition, undergone deterioration by exposure or long keeping. The result, as the Board points out, is "that a prescription compounded of such drugs may fail altogether to produce the effect which would have been produced by drugs of proper quality." In other cases preparations of expensive drugs are unduly diluted, or a cheaper drug is intentionally substituted. That these disgraceful practices exist, and that they are of common occurrence, is well known to every chemist. In the interests of the sick and suffering we feel bound to revert to the subject, and shall not hesitate to do so until legislative action is taken in the matter. Some four years ago Mr. C. Lewis Deehl presented a report to the American National Board of Health which is worthy of careful consideration. That paper deals with a great many questions, and concludes with certain suggestions for limiting the sale of so-called "patent medicines." It is shown that the most energetic agents of the materia medica enter into their composition, often in doses which no physician with any regard for the welfare of the patient would prescribe. These dangerous doses are necessary to produce the decided and prompt manifestion on which much of their popularity depends. It is a subject for congratulation that these crying evils will before long receive attention at the hands of the Government.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE subject of the tubercular bacillus has at length been brought before the notice of our leading Medical Society. A paper, based upon a most extensive and laborious research of the lesions of phthisis, with especial reference to the presence and distribution of the bacilli, was communicated by Dr. Percy Kidd on the 9th inst., and gave rise to a discussion which will doubtless be extended over the whole of the next meeting. For we cannot agree with one of the speakers that the debate should be strictly limited to the subject of the paper. It is impossible to avoid the wider bearings of the question, such as was attempted by Dr. Creighton, whose remarks implied a belief that "rod-shaped organisms" find in tubercle and in the allied infective "granulomata" a favourable nidus for their development. It was a bold thing for him to criticise as he did Professor Koch's procedure, for the wide reputation obtained by Koch is based upon his singular care and foresight in all his experiments. Dr. Creighton's contention that Koch, by the method he employed, did not prevent the introduction into his culture tubes of tubercular virus, apart from the micro-organisms, will, we hope, be met by those who have practically worked at the subject. It is of course the keystone of the whole matter as regards the proof or disproof of the specific character of the bacillus and its causal relation to tuberculosis. Besides this question, the points raised by Sir A. Clark respecting the nature of pneumonic and fibroid phthisis will open up ground for debate, which certainly could not have been exhaustively treated by prolonging the meeting last Tuesday. We may, then, anticipate a thorough discussion of these important pathological questions at the next meeting, and will reserve any further comment until that has taken place.

LOVE OF LIFE AS A DEFENCE OF CANNIBALISM.

IT would have been a bad day for the fame of English law, and a worse one for the rare fame of British sailors, if any other verdict than one of unmistakable murder had been delivered in the High Court of Justice in the case of the Queen *v.* Dudley and another, of the *Mignonette*, for killing, for the purpose of preserving their own lives, the cabin-boy without drawing lots and without his consent. Life on the high seas is surely full enough of terrors and hardships. To add to these the dread that in extremities the weakest and the youngest will be liable to be sacrificed to appease the hunger

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and thirst of those whose glory it has always been to protect them in their helplessness, will be to make new demands on human hardihood—even the hardihood of one who

"Nec timuit præcipitem Africum
Decertantem Aquilonibus,
Nec tristes Hyadas, nec rabiem Noti."

We are not insensible to the sufferings of Captain Dudley and his companions. But we are none the less of opinion that their act was at once a capital crime and a deep blot on the humanity and pity of the class to which they belong, which stands out in the history of this nation and of all nations for its unselfishness, its endurance, and its consideration for the weakest even when the storm is at its worst.

THE OBSTETRIC DEPARTMENT OF THE QUEEN'S HOSPITAL, BIRMINGHAM.

THE resignation of Mr. John Clay, after a full term of active service, has placed the authorities of the Queen's Hospital in an awkward position as to the appointment of a fit successor in this important department. The committee, in view of the more perfect filling up of the vacancy, resolved to disconnect the obstetric duties of the department from the work of operating, the holder of the former office having charge of the out-patients and the midwifery, while the incumbent of the latter was to have the beds and do the operations of abdominal section. With this object before them they ascertained the willingness of the senior surgeon to the Hospital for Women to take the more responsible appointment, and called a meeting to alter the laws in accordance with their purpose. In the meantime the authorities of the Hospital for Women made it known to their senior surgeon that his election to this post would involve the probable loss of the one he at present held in connexion with their institution. This led to a correspondence in the *Birmingham Daily Post* on certain matters which it seems inadvisable to discuss in the general press, between the chairman of the Medical Committee of the Queen's Hospital on the one hand, and one of the surgeons of the Hospital for Women on the other. The outcome of this has been that the Queen's Hospital authorities have called another meeting, in which they have rescinded the law passed a short time since, and have resolved to fill up the junior vacancy only at present. It seems that there is no law at the Hospital for Women to prevent any of its officers holding an appointment at another hospital, but it is said that steps will be taken to pass one to this effect at the annual meeting of governors. In the meantime we see an unedifying spectacle—the authorities of one hospital apparently stultifying themselves in the passing and rescinding of a law to serve a particular purpose, whilst the authorities of the other hospital assume a position equally illiberal in bringing pressure to bear upon one of its officers to prevent him from exercising his judgment in the acceptance of duty in another hospital. In either case the position is a disagreeable one, and not conducive to the interests of the profession or the public.

QUEBEC LUNATIC ASYLUMS.

IT is satisfactory to learn that the damaging report made by Dr. Hack Tuke on the lunatic asylums of the province of Quebec have been fully endorsed by the Medico-Chirurgical Society of Montreal, which at a recent meeting passed a series of resolutions in support of his statements. A hope may be expressed that a thorough investigation of the system of management of the insane poor in this province may follow, and may result in the establishment in the lunatic asylums of the authority of the physicians, whose influence has hitherto been powerless to prevent the existence of the abuses which Dr. Tuke has brought to light.

THE HAMPSTEAD HOSPITAL CASE.

THE agitation against the Hampstead Hospital was the first protest which was made against the establishment of centres of small-pox in populous localities, and the continuance of the protest is evidently based upon a conviction that the present small-pox hospital in that locality is a distinct source of danger to the health of those living in its vicinity. The Metropolitan Asylums Board, in their anxiety to carry out their functions in such a way as not to raise opposition, have materially reduced the number of small-pox patients at each metropolitan centre, and it yet remains to be seen what will be the total outcome of this new departure. That its sufficiency is looked upon with suspicion seems evident from the renewed inquiry which the Local Government Board have instituted with regard to the Western District Hospital, Fulham; and, unless we are very much mistaken, the decision of Mr. Justice Pearson in the case of Fleet *versus* the Managers, will, notwithstanding the fact that it was in favour of the defendants, give a decided impetus to the opposition which already exists against isolation hospitals for small-pox inside the metropolis. That judgment drew a line between small-pox hospitals in such a place as London and similar institutions in country districts, and the Judge expressed a strong conviction that when there is an epidemic of small-pox in London, there is a special increase of the disease in the neighbourhood of small-pox hospitals. This has, of course, been conclusively proved as regards both Fulham and Homerton, and in consequence of this proof great efforts have been made in order to prevent such extensions in the future; especially have efforts been made to avoid mischief from ambulances and otherwise along the lines of traffic. It is, therefore, to recent experience that we must mainly look, and at the trial adverted to the evidence went to show that notwithstanding all these changes the establishment of a small-pox hospital in London means the radiation of the infection to the area around. Dr. Gwynn of Hampstead has indeed shown that so recently as during the present year the small-pox mortality in the vicinity of the Hampstead Hospital has been about ten times as great as in the parish as a whole. We believe the dissemination of the poison to be aerial, but it is a matter of indifference to the people affected whether it comes in one way or another. The contention of the Hampstead people is that the mischief remains much as it has always been since the small-pox centre was established in their midst; and so far the evidence seems to be strongly in favour of their contention.

THE AMBULANCE SERVICE IN PARIS.

THE service for disinfecting premises and for removing patients after cases of cholera in Paris has been organised, so far as the intervention of the public authorities is concerned, by M. Besançon, chief of the Second Bureau at the Prefecture of Police. This gentleman is also entrusted with the management of the fire brigade and other public services of a similar description. Dr. Dujardin-Beaumetz, with the assistance of Prof. Pasteur and many other eminent medical men, conducted a series of experiments at the Cochin Hospital; and, having concluded in favour of disinfection by means of sulphuric acid gas, M. Besançon was called upon to carry out the instructions of the Council of Hygiene in this respect. With great difficulty he secured the services of a few men as public disinfectors, to whom comparatively high wages had to be paid. The medical men, however, who in different districts of Paris lent their aid, had very responsible duties imposed upon them, for which they received no sort of remuneration. At all hours of the day and night these voluntary medical officers were called upon to visit suspicious cases, and decide whether removal to the hospital and disinfection were necessary. It is only within the last

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two years that special means of conveying infectious cases to the hospital have been organised in Paris; and these, for a population exceeding two millions, consisted of not more than five ambulance carriages. Of course this provision proved utterly inadequate when cholera broke out, and we have just been informed by M. Besançon that the number of ambulance carriages has now been raised to forty. The cold weather necessitated the installation of a warming apparatus in each of these conveyances, and blankets had also to be found. We trust that this service, hastily extemporised in view of the cholera, will be maintained as a permanent institution, and that the medical men who have so generously volunteered their services in a moment of exceptional danger will be offered a permanent position and an adequate stipend as medical officers of health in their respective districts. Without any special epidemic, forty ambulance carriages are not too many to meet the requirements of a population as large as that of Paris, if the practice of isolation in cases of infectious diseases became more general. We trust also that the disinfecting corps will not be allowed to disband, but that they will now be employed to purify houses where other diseases besides cholera could be stamped out by energetic action. If this be done, the cholera epidemic will not have visited Paris in vain, and in the long run the result will show an economy rather than a loss of human life.

THE MILLER MEMORIAL HOSPITAL.

WE stated last week that this hospital will be formally opened at Greenwich on the 17th inst. It has been founded to commemorate the late Canon Miller's connexion with Hospital Sunday; and the opening ceremony will be performed by the Lord Mayor as President of the Fund. This is the first hospital built on the circular system which has yet been opened, and additional interest attaches to it from the fact that Greenwich is the first of the metropolitan boroughs which has yet attempted to provide hospital accommodation for the poor who reside within the borough boundaries. At a meeting of the committee held on Tuesday last, to the great credit of the gentlemen composing that body, it was almost unanimously decided that the hospital should, if possible, be self-contained, and that the honorary surgeons should be Fellows by Examination of the Royal College of Surgeons of London or Dublin, or graduates in Surgery of a British or Irish university. South-east London has, therefore, determined to encourage members of the profession with the highest surgical attainments to reside in that district, and from the outset there should be no difficulty in filling up the three surgeoncies from amongst those who reside within two miles of the hospital, although the Committee have wisely provided that one of the surgeons may come from a distance.

INVALID KITCHENS.

A FORTNIGHT ago we referred to a project for the institution of invalid hotels for the accommodation of strangers during illness, and explained the circumstances and conditions under which we should consider such establishments most likely to work with profit to their owners and with benefit to the general and professional public. Following in the footsteps of this scheme comes another under the auspices of Lord Brabazon, which is certainly not less worthy of support—namely, one for the formation of invalid kitchens. It need hardly be said that these are intended to meet the wants of the sick poor only. They constitute an extension and improvement in medical treatment on the lines of the convalescent fund, now a well-known feature in the working arrangements of our hospitals and dispensaries. It is rightly urged in their support that many of the patients attending the hospital waiting-room need food in a digestible and palatable form infinitely more than medicine, while others require it not less as giving that constitutional purchase in support of medicinal treatment without the aid of which the latter may be lavished without result. The kitchens are to be placed in the neighbourhood of the various hospitals, and the certificate of one of the physicians to the effect that a patient requires invalid diet will enable him, if his case be found in other respects to be one for charitable relief, to have such food as he needs daily for a time in his own home. A small sum will be charged wherever the applicant is not too destitute. The proposed measure, if well supported and discreetly executed, will do much to remove a difficulty which has long been felt to forbid the full result of medical skill amongst the poor, and with which probably no hospital machinery will ever be able to cope with the same effect as outside voluntary effort. Contributions in aid of this deserving object may be sent to Miss Nicholson, the honorary secretary, 15, William-street, Albert-gate, S.W.

MEDICAL CHARGES AND DEATH CERTIFICATES.

THE papers have contained somewhat lengthy reports of an inquest on the body of Emily Sarah Harding, aged eighty-one, an old lady, with a limited income, who lodged at 9, Ormond-road, Hornsey-rise, and who before her death was attended for two days by Mr. Henry Foster Burnes, who called Dr. Wight into consultation. The old lady was of penurious and somewhat dirty habits, kept herself to herself, as such old ladies are apt to do till they drift into very dreadful states. In this case there was, according to Dr. Wight, a very debilitated and filthy condition with bedsores. A good inquest into the way in which she came to drift into that state would have been of public interest, and would have illustrated a large number of similar cases. But the inquest took another shape, and not unnaturally. It arose from some hitch in the granting of the certificate by Mr. Burnes. According to the nephew of the lady Mr. Burnes demanded thirty guineas as a condition of giving the certificate, enforcing his demand by telling the nephew that "otherwise an inquest would be held, which would be published in every paper in the kingdom." According to Mr. Burnes he only objected to give the certificate because the nephew did not know his aunt's exact age, and the thirty guineas were a charge which he considered "trifling" for his two days' attendance. It is rare to find a general practitioner in these days of low charges appraising his services at fifteen guineas a day! The jury seemed to find a sort of threat in Mr. Burnes's terms, and passed the following verdict:—"That the deceased died from exhaustion and old age, following extensive bedsores and partial paralysis;" adding, "We are further of opinion that the certificate of death should have been given by Mr. Burnes quite independently of the question of his medical charges. We sympathise with Mr. Harding, nephew of the deceased, and find that in every way he acted rightly and properly." As the coroner rightly pointed out, the jury had nothing to do with any dispute about medical charges between Mr. Burnes and Mr. Harding, but the demand for unusually large fees before giving a certificate was, to say the least, unfortunate, and requires explanation. Mr. Burnes must know that for this sum the old bedridden woman might have had the services of two or three skilled nurses and two or three leading consultants. We think that Mr. Burnes ought to have an opportunity of defending his conduct before the profession, though, by the way, his name does not appear in the Medical Register. It would not have been at all unreasonable

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to have refused a certificate and to have demanded an inquest in such circumstances; but on his own showing he did not make this stand, but introduced money considerations, which have scandalised the public not a little and placed the medical profession in a questionable light.

PROFESSOR TYNDALL ON THE GERM THEORY OF DISEASE.

THE distribution of prizes to the successful students of the Harris Institute, Preston, was the occasion of an address by Professor Tyndall on three chief principles of modern science. The doctrine of evolution, the principle of the conservation of energy, and the germ theory of epidemic disease were the important topics on which Professor Tyndall dwelt with all his well-known powers of oratory and exposition. Of Professor Tyndall's right to discuss all these principles of science we can make not the least objection, but whether his complete acceptance of the views implied in the germ theory of disease may be regarded as a matter for congratulation or not is possibly open to doubt. But it is hardly consonant with what is really known on the matter to assert absolutely that the germ theory is proved for all the diseases which the Professor passed under review. We need only add that no new light was thrown on the question.

MILITARY HYGIENE.

A YEARLY report is issued by Dr. W. Roth which is unquestionably a valuable collection of materials bearing on the subject of sanitation amongst the armies of all countries. The current volume of the "Jahresbericht über die Leistungen und Fortschritte auf dem gebiete des Militär-Sanitätswesen" contains much that is of interest to epidemiologists as well as to general physicians. Taking some of this interesting information almost at random, we find, for example, that an epidemic of mumps was reported by Guasco to have happened at Toulouse. The local symptoms generally appeared towards the termination of the illness; the fever did not go beyond 39° C., and lasted no longer than twenty-four hours. In a fifth of the cases orchitis came on, and then the temperature rose in from twelve to twenty-four hours to 39° or 40° C.; the temperature remained at this height with marked morning remissions for from three to five days. After the swelling of the testicle had reached its height the temperature sank in from two to four days to the normal.

GEORGE SMITH OF COALVILLE.

REWARD for service done is a standing principle of equity. It does not necessarily follow, however, that the reward is proportionate to the service. It cannot always be said, indeed, that the principle itself has been honoured in the acts of those who ostensibly administered it. The kind of service which receives the highest common encouragement is usually that which we describe as interested; it is done as a matter of trade profit and for the sake of its return to the doer, not so much on account of conscience or for its yield to the general good. Perhaps it is even done unconsciously, as it often is done quite selfishly. On the other hand, the discoverer, the reformer of abuses, the educator, and the liberator, laborious as they are in great measure or entirely disinterested, have often had to work for no visible gain to themselves, or it may be only for hazard and injury. The world about them is all for its tangible profit, as far as it understands it; it has all along been content to move chiefly by the blind interlocking of circumstances; it considers, as little as it may, causes, reasons, intrinsic truth, justice, and ideas generally, whether right or not. With this material eye it has lately looked upon the faithful service of a far-sighted and far from idle man more wise for others' benefit than his own advantage. On professional and public grounds we regret to learn that neglect has overclouded the generous efforts of Mr. George Smith of Coalville. Of him it may be said that the Brickyards and Canal Boats Acts are his work. By them many thousand children have been lifted out of a cruel drudgery into liberty and intelligence. His service therefore has been patriotic and practical. It has no doubt been the aid rendered by an irregular to the Legislature. Still it represents good, valid, and directly political work. Yet he is destitute. The State, for reasons unexplained, has not rewarded him with the oversight of his work. Nothing has been given him but a sum sufficient for temporary relief out of the Royal Bounty Fund. An application that he should be placed on the Civil List was made some years ago, but it would seem to have been so languidly pressed by its supporters that its importance was not recognised. Now we learn that the *Pall Mall Gazette* has taken up the matter, and receives subscriptions towards a testimonial fund in aid of this unselfish benefactor. We may surely expect that the Government will, on their part, not fail to requite the services of a valuable auxiliary by a suitable and sufficient remuneration from the civil fund or otherwise.

THE CHOLERA COMMISSION.

IT is announced that Drs. Klein and Gibbes have presented a preliminary report upon their investigations into cholera, which are said to be "altogether subversive of Dr. Koch's theory." The comma bacillus was not found in all cases of cholera, and never in the blood or tissues; and stress is laid upon the failure to inoculate the lower animals. We must await the publication of the full report before attempting to contrast its statements with those of Dr. Koch. It may be remembered that success has been obtained by Nicati and Rietsch and by Koch in transmitting the disease by the direct introduction of cultures of the bacillus into the duodenum; and it will be interesting to learn whether similar experiments were made by Drs. Klein and Gibbes.

DEATH AFTER REMOVAL OF THE LARYNX.

THE patient whose larynx Mr. Jordan Lloyd removed at the Queen's Hospital, Birmingham, on the 22nd ult., and whose favourable progress was noticed in these columns, had a normal temperature, and was perfectly comfortable, in the evening of the 26th. Unfavourable symptoms then set in, the temperature rose rapidly to 102°, and death ensued from pneumonia on the sixth day after the operation. The condition of the wound was throughout most satisfactory. Thirty ounces of milk were injected into the stomach morning and evening through an elastic tube, and every four hours an enema consisting of half an ounce of brandy and three ounces of milk was administered.

EXPERIMENTAL THYROIDECTOMY.

WHILST the subject of the relations of the thyroid gland to myxœdema and allied affections is attracting so much attention both at home and abroad, it will be useful to give an abstract of the results of a series of experiments performed by Schiff, who is one of the foremost workers in this field of inquiry. All the animals from which the thyroid gland had been removed died within from four to twenty-seven days after the operation; and those animals that survived more than sixteen days died after the wound had completely healed. Somnolence and indifference, slowness and hesitation of volitional movements, fibrillar contractions of the muscles, alteration of the respiratory rhythm (so-called

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respiration cardiaque), sensations of itching of the skin, and diminution or disappearance of tactile sensation, were the chief phenomena observed. The excitable area of the brain did not react to the most powerful galvanic stimulation. As death approached the arterial blood-pressure underwent an extraordinary fall owing to the dilatation of bloodvessels. The muscular tremors disappeared on section of the motor nerves supplying the affected muscles. The symptoms observed in different animals varied considerably. Schiff has concluded that the thyroid gland exercises a great influence over the nutrition of the central nervous system.

A "LUNATIC" KILLED (?).

WE trust the Commissioners in Lunacy will be competent and willing to sift to the bottom a very serious case of manslaughter which the medical superintendent of the Kent County Lunatic Asylum, at Barming-heath, Maidstone, has brought under the notice of the authorities, and which the Greenwich Board of Guardians has referred to the Commissioners. A man was arrested by the police on account of "extraordinary conduct in his own house," and subsequently, strapped down and sent to the asylum, where he was placed in a strait-waistcoat and confined in a padded room. He died, and *after death* it became known that his breastbone and certain ribs were fractured. The inquiry now to be instituted is to ascertain when, by whom, and how these injuries were inflicted. The need of a searching scrutiny is evident. The investigation must not be either carelessly or only formally carried out.

A MEDICAL SOCIETY IN HARROGATE.

WE are glad to notice that a Medical Society has been established in Harrogate. The first meeting took place on the 27th inst. at the Prospect Hotel. It was opened with an inaugural address by Dr. Myrtle, President. The address was followed by a paper read by Dr. John Gordon Black. After an animated discussion the members partook of supper, and dispersed, feeling that a step had been taken towards the establishment of kindly feeling and professional and scientific intercourse.

THE HEALTH OFFICERSHIP TO NOTTINGHAM.

IN the annotation on this subject which appeared in our last issue we inadvertently omitted the names of Dr. A. Campbell Munro, M.B., D.S.C. (in the Department of Public Health), M.R.C.P.E., C.M.Edin., Medical Officer of Health for South Shields and Jarrow-on-Tyne; and Dr. R. Bryden Hill, M.D., L.R.C.S.E., B.Sc. Edin., S.Sc. C. Camb., Medical Officer of Health for Oldham, who, in addition to those mentioned last week, are candidates for the vacant post.

THE COST OF THE MEDICAL COUNCIL.

THE last meeting of the Medical Council may be reckoned to have cost the profession £1650. This is rather a big sum to pay a body for *not* doing the work of supervising medical education and examinations.

THE BACTERIA OF THE MOUTH.

WRITING in the *Deutsche Med. Wochenschrift* (Nov. 27th), W. D. Miller claims that in 1882 he described the curved bacilli in the buccal mucus to which Dr. T. R. Lewis has drawn attention as resembling the comma bacillus, and he contributes further particulars concerning the various bacterial organisms found in this region and in the alimentary canal. The curved bacilli and spirochaete forms he has been unable to cultivate in various media, and therefore they do not resemble in all respects the comma bacillus. Another organism is one which occurs in the form of short plump rods, often in pairs, and it grows rapidly in gelatine. Another variety is curved, and by the conjunction of two or more individuals produces S-shaped or circular forms. This organism never produces spores, and grows very slowly in gelatine.

CONFECTIONERS AS DRUGGISTS.

AN "accident," which might easily have become a great disaster, has occurred at Chester, in consequence of the manufacture of cough lozenges by confectioners. Obviously makers of sweetmeats ought not also to compound dangerous drugs. In this case the cough lozenges contained morphia, and many children were poisoned by eating of the contents of a bag stolen by some boys. Happily none of the cases proved fatal.

PROFESSOR MARIANO SEMMOLA, the distinguished representative of the Neapolitan Medical School and also of the city of Naples in the Italian Parliament, having communicated to the Academy of Medicine in Paris a monograph, "Sulla cura fisiologica del Colera" (on the Physiological Cure of Cholera), Professor Dujardin made it the subject of a lecture at the Hôpital Cochin, and maintained that of the various methods of treating cholera Dr. Semmola's had yielded the most satisfactory results.

IT is stated that a young physician in Vienna, accused of the unscientific treatment of a sore finger, was recently fined and sentenced to repeat his examinations. His appeal against the verdict was passed on to the College of Physicians; but the unfortunate man, without waiting for the final decision, committed suicide by drowning himself in the Danube. The College of Physicians, after inquiry, decided that his treatment had not caused the loss of the finger, and the High Court acquitted him.

AT a recent meeting of the Anatomical Society of Paris M. Babés read a short paper (*Progrès Médical*, Dec. 6th) on the comma bacillus in cholera, based on observations made in M. Cornil's laboratory from material obtained during the recent epidemic. His observations, which relate to the morphology of the bacillus and its behaviour in cultivation, are for the most part confirmatory of those of Koch. He did not succeed in finding the bacillus elsewhere than in the intestine.

NOTHING is as yet known respecting the appointment of a successor to the late Sir Alexander Grant. Several names have, however, been mentioned in connexion with the vacant office, amongst them being those of Professor Maclagan, Turner, Campbell Fraser, Calderwood, Thomson, Sir William Thomson, Sir Alexander Christison, Principal Tulloch and Sir Lyon Playfair, the latter of whom, however, stated, declines to come forward.

ON the 9th inst., Sir Charles Dilke attended the meeting of the Chelsea Vestry, of which he is a member, and asked the Honourable Conrad Dillon permission to state that the Local Government Board were pledged to appoint a committee on the subject of overhead wires, and that it was hoped that on the report of that committee a Bill would be brought in by the Government early next session.

DR. G. S. ROY, Professor of Physiology in the University of Cambridge, has been admitted to the degree of M.A. Camb., *honoris causâ*.

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A MEETING of the present and past students of the London Hospital will be held in the College Library on Tuesday next the 16th inst., at 1.15 P.M., to consider what steps should be taken towards making some presentation to Mr. James E. Adams on his retirement from the staff of the hospital through ill-health. Dr. Stephen Mackenzie will preside.

THE Broca prize of the Anthropological Society of Paris has been awarded to Dr. Leo Testut of Lille for his work entitled "Muscular Anomalies in Man explained by Comparative Anatomy; their importance in Anthropology."

THE QUEEN has been pleased to confer the honour of knighthood on Henry Enfield Roscoe, Esq., LL.D. (Cambridge and Dublin), F.R.S., Professor of Chemistry in the Victoria University, Manchester.

OUR American exchanges announce the death of Dr. Samuel Bemiss, Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Louisiana, aged sixty-three.

THE second and final report of the Royal Commission on Metropolitan Sewage Discharge has just been issued, and will receive attention at our hands next week.

DR. LESLIE OGILVIE has been appointed Physician to the Royal Academy of Music.

SMALL-POX is stated to be spreading with rapidity in Sydney.

THE man from whose brain Mr. Godlee recently removed a tumour continues to make satisfactory progress.

COCA AND COCAINE.

THE alkaloid cocaine was produced by Niemann in 1860 from the leaves of the Erythroxylon coca. Professor Schroff was probably the first to mention the fact of its anæsthetising effect on the mucous membrane of the tongue. The credit of rescuing cocaine from the oblivion into which it had fallen, and of giving it a practical application, unquestionably belongs to Koller, as was first announced in this country by THE LANCET of Oct. 4th. The next occasion of its public appearance was given in THE LANCET of Oct. 18th in the report of the Ophthalmological Society, where Messrs. Benson, Marcus Gunn, and Nettleship spoke of its use in ophthalmic surgery. Since that time cocaine has by a bound leaped into professional favour. The great excellences of cocaine consist in the limitation of its action to the tissues to which it is applied. No doubt other symptoms at a distance do result from the external application of the anæsthetic, but they are for the most part insignificant and by no means dangerous. In some measure cocaine may be compared with curare. The one agent paralyses the termination of the sensory nerves, whilst the other paralyses the termination of the motor nerves. Aconite would seem to act in a manner the very reverse of cocaine. The contemplation of a few facts of this kind leads one to think of the Ultima Thule of anæsthetics as likely to be not one of the least splendid triumphs of science. During the past few weeks we have published numerous letters bearing on the question, and we must refer our readers to those stepping-stones in the development of the usefulness of cocaine. Last week we published Koller's paper, which was read on October 17th at the meeting of the Vienna Royal Imperial Society of Physicians. No doubt much remains to be worked at before the full value is given to this latest addition to our armamentaria, and before a full explanation of the mode of action of the drug in the one particular respect for which it is in so great demand can be given.

Coca leaves are the produce of Erythroxylon coca, Lamarck, a shrub cultivated on the slopes of the Cordilleras of Boliva, Peru, and Columbia. The Spanish conquerors of Western South America became well acquainted with the use of coca by the aboriginal Indians. Nicolas Monardes, a Spanish physician, published at Seville in 1565,[1] a History of Medicinal Simples brought from the New World, in which he gives a description, obtained from the commentaries of Pedro Cieça and others, of coca leaves, their mode of collection and drying, and states they were their most important article of commerce, being used for barter or exchange in place of money among the South American Indians. He also describes their use of coca as being threefold. (1) It was chewed and mixed with the powder of calcined shells of oysters and other shellfish; this paste after being allowed to ferment was formed into boluses or troches, and dried; during long journeys these boluses were sucked, and under their influence hunger and thirst were alleviated and bodily strength was sustained. (2) When eaten for producing pleasure or intoxication the coca was chewed by itself; and (3) it was mixed with tobacco and smoked. Among others the following travellers have written on coca: Pöppig, Weddell, and Markham; of pharmacologists, Quincy, Pereira, and Hanbury do not mention it, nor has it been official till the last French Codex and United States Pharmacopœia. As a theme for the poet, Milton, who drew many of his similes from tropical plants and scenery, appears not to have known of it, as he does not mention it. Cowley, later, thus writes:

> "Our Varicocha first his Coca sent,
> Endow'd with leaves of wondrous nourishment,
> Whose juice suck'd in, and to the stomach ta'en,
> Long hunger and long labour can sustain;
> From which our faint and weary bodies find
> More succour, more they cheer the drooping mind,
> Than can your Bacchus and your Ceres join'd.
> Three leaves supply for six days' march afford;
> The Quitoita with this provision stor'd,
> Can pass the vast and cloudy Andes o'er."

The coca shrub grows to a height of from four to eight feet, and resembles our blackthorn in appearance. It has small white, short-stalked, drooping flowers, in clusters upon the branches in places where the leaves have fallen. The leaves are closely placed, alternate, about two inches long, oval oblong, entire at the margin; sometimes they are acute but usually blunt and emarginate, with a small apiculus in the notch at the apex, rather thin but opaque, smooth with a prominent midrib, and on each side a curved line running from the base to the apex, showing its mode of vernation. When fresh the upper surface is bright dark-green in colour, the lower is paler and strongly marked with veins. The carefully dried leaves have the odour of tea, but if dried less perfectly they have a bouquet of their own which is very unpleasant in the breath of those who chew it. They have a somewhat aromatic and bitter taste, and are more active when freshly dried. By permission we have tasted a fresh leaf in the Botanic Gardens, and the benumbing effect on the tongue—dulling its sensibility—was apparently much greater than that of a number of dried leaves.

The plants are raised from seeds, and the cultivation, at an elevation of from 2000 ft. to 7000 ft. above the sea level, is carried on with great care, as described by Dr. Weddell, who supposes the name *coca* to be derived from an Indian term signifying *the* tree or plant. Its original habitat is doubtful. It has been acclimatised in Ceylon. Botanical specimens were first sent by Joseph de Jussieu to his brother in 1750; these Antoine-Laurent de Jussieu referred to the genus Erythroxylon, and finally they served as types for Lamarck to give the plant his designation "Erythroxylon Coca" in his "Encyclopédie." The coca shrub yields three or four crops of leaves annually, from the age of eighteen months to forty years. The produce has been estimated at from thirty to forty million pounds yearly. Its value on the spot varies from amounts equal to from one to five shillings per pound English. The most productive plantations, or "cocals," are in the province of La Paz in Bolivia, but our principal imports come from Lima.

Coca was used in the religious rites of the Incas; it was by them treated with great reverence, and by their conquerors with some superstition. A Council of Bishops at Lima in 1569 condemned its use, and stated that the belief entertained by the Indians that the habit of chewing coca gave

[1] A Latin translation, by Carolus Clusius, published at Antwerp 1582, 8vo, is in the library of the Medico-Chirurgical Society.

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them strength was an illusion of the devil. By the Indians working as miners or at other occupations, coca is still chewed with a paste made of the ashes of certain plants or with lime. They become more or less slaves to the habit; opinions differ as to the ill effects of this chewing on them. On Europeans who became accustomed to, but had not been addicted to, its use from youth, Dr. Weddell noticed that it did sometimes produce evil consequences, and that in some a peculiar aberration of the intellectual faculties occurred, indicated by hallucinations. His view of its action was that it deceived or lulled hunger and fatigue. The Indians who accompanied him on his journey chewed coca during the whole day, but at night they filled their stomachs like fasting men. Dr. Mantegezza of Milan, who practised in South America, further tried and wrote on its marvellous properties, as did Sir Robert Christison. Mr. G. Dowdeswell also tried it, but came to negative conclusions as to its action. Except by the force of advertisements of French specialties made from it, coca has of late received little attention in England; but now, again, the observations of Herr Koller on the local anæsthetic action possessed by its alkaloid, cocaine, have brought it to the front.

Cocaine was, as we have stated, first isolated by Niemann in 1860; he obtained it by exhausting the drug with alcohol aciduiated with sulphuric acid, neutralising this liquid with lime, and filtering; the filtrate was again acidified with sulphuric acid, and the alcohol evaporated off. A semi-liquid greyish mass was obtained, containing the cocaine as a sulphate; from this solution it was precipitated with carbonate of soda, and purified by crystallisation from ether and alcohol. It is in shining monoclinic prisms, has a bitterish taste and a benumbing effect on the tongue. It requires 704 parts of water to dissolve it, it is more soluble in alcohol, freely so in chloroform, ether, and oil of cloves, and 1 in 20 respectively of melted vaseline and castor oil. The last two solutions have proved serviceable in eye cases. Manufacturers inform us that coca leaves yield only from 0·02 to 0·2 per cent. of cocaine. The leaves also contain hygrin (a volatile principle having the odour of trimethylamine) with ecgonine, coca-tannin, and coca-wax. Ecgonine (together with benzoic acid and methyl-alcohol) may also be obtained as a derivative from cocaine when the latter is heated with strong hydrochloric acid. Of its salts, the hydrochlorate has been most used; it occurs in small slender white crystalline needles, but in commerce looks like an amorphous powder. It usually has a peculiar odour, more marked than the alkaloid itself, probably due to a trace of hygrin as an impurity. Its action on the tongue and mucous surfaces is more intense than the alkaloid itself. It is soluble in one in four of water, and freely soluble in spirit. It is an antiseptic—a 5 per cent. aqueous solution delays the putrefactive changes in an extract of meat. The citrate of cocaine is in deliquescent small white crystals, and has been recommended for the use of dentists. Salicylate of cocaine, in minute snow-white crystals, has been preferred by some oculists, as it forms a solution which keeps well. An extract of coca, said to be an active preparation, is imported from South America, and a fluid extract, pastils, and wines of coca are also sold b chemists.

Before the discovery of cocaine, it was thought the alkaloid contained in it would probably prove to be identical with caffeine, or at least, like theobromine, allied to this. But chemically cocaine is quite distinct; it is much less soluble in water than caffeine; it is a strong base, which caffeine is not, and its chemical constitution and derivatives are quite distinct.

TREATMENT OF INTESTINAL OBSTRUCTION.

A DISCUSSION AT THE

LIVERPOOL MEDICAL INSTITUTION.

Dr. GEE, President, in the chair.

(*Continued from p. 1020.*)

DR. GLYNN considered that it was hardly necessary to discuss the medical treatment of intestinal obstruction; the general principles for the treatment of such cases had long been laid down, and every student even ought to be familiar with them. He necessarily thoroughly concurred with the remarks made on the inappropriateness of the administration of purgatives and enemata, on the importance of the withdrawal of almost all food, and on the value of opium. He doubted, however, whether the beneficial effects of opiates in cases of obstruction were due to their checking peristalsis. They undoubtedly lessened the vermicular movements of the intestines, but he did not believe that they could be prevented. When a dose of opium in health caused constipation, could it be supposed that it did so by virtue of its hindering the peristaltic action of the bowels, digestion being continued all the while? Moreover, in cases of obstruction of long-standing, where the intestinal walls were hypertrophied, the movements of the bowels, through the upheaving of the abdominal walls, could commonly be seen after large doses of opium or hypodermic injections of morphia. In acute cases, rumblings from the passage of flatus were frequently heard after the administration of sedatives, showing that the intestines were not at absolute rest. Dr. Glynn considered that opium should not be given with the idea of suspending the intestinal movements, as he believed that impossible. The entrance of the smallest amount of liquid food into the stomach would probably excite a flow of gastric juice, bile, and other fluids, and peristalsis be initiated. He considered opium should only be administered to relieve pain or check vomiting if excessive. With regard to operation for the relief of obstruction, he was of opinion that it could rarely be resorted to owing to the difficulty of making a diagnosis, and he thought surgical interference as a method of exploration hardly justifiable. He might illustrate the difficulties which attended making a correct diagnosis by referring to two cases which had been under his care in the Royal Infirmary. The first was that of a young man who had always enjoyed perfect health, and who was suddenly seized with pain in the right iliac region, followed by absolute constipation and incessant vomiting. On failure of the ordinary treatment to relieve the obstruction he was, at the end of three days, operated on by Mr. Reginald Harrison, when it was found that the trouble was caused by an inflammation in the neighbourhood of the cæcum, due to the eruption of a concretion from the vermiform appendix. In the second case the patient was an adult about fifty. He had been seized with sudden symptoms of obstruction without a history of any previous bowel trouble. The propriety of an operation was discussed, but no surgical interference resorted to, owing to the collapsed state of the sufferer. After death a cylindrical epithelioma of the cæcum was found, and the immediate cause of the urgent symptoms was the giving way of one of the several ulcers above the narrowed bowel.

MR. DAMER HARRISON thought it a significant fact that two or three of the previous speakers who had had a wide experience upon this subject had prefaced their remarks by stating that they had very little to say, and the debate so far had been remarkable for an entire absence of statistical information as to the results of treatment in acute cases. He had been looking through the post-mortem book of the Northern Hospital, and found that during the last four years there had been three acute cases. In the first case the obstruction was caused by a fibrous band, in the second by a loop of intestine being matted together, and in a third by the cæcum being displaced inwards beneath the free border of the mesentery. The last case was a very good illustration of the great difficulty which was met with in the diagnosis of these cases. It was that of a man who was admitted into the Northern Hospital under his care, with a history of having fallen from a height of five yards, alighting on his feet, and then again falling heavily upon his back. He complained of great pain across his back upon admission. His bowels were moved upon the two following days, but in the afternoon of the second day he began to vomit. He then gave a history of several attacks of vomiting during the previous six months, and in consequence of the history and surrounding circumstances attending the case the diagnosis was not made out until the fourth day, when the case had progressed beyond the point at which operative interference could be of any avail. With regard to treatment by laparotomy in acute cases, he could hardly agree with the statement of Mr. Thomas, "that providing a case was treated by the 'Sydenham' method it would remain in a condition favourable for operation until the third day," for he remembered two cases in which intestinal distension became troublesome in that time. Operative interference must be attempted, if at all, before any distension was present, and he therefore preferred not to accept any given time as the proper one to elapse before considering the advisability of

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operation, and thought that each case should be judged of individually. With regard to how far operative treatment might be attempted in acute cases, he believed it was impossible to arrive at any conclusion until we had obtained a large amount of accurate information as to the results of treatment, and he would therefore not attempt to indicate under what circumstances abdominal section should be resorted to.

Dr. BARR highly approved of the papers read by Dr. Greves and Mr. Pughe, and was much pleased with the bold and successful line of treatment which they adopted in the very interesting case which they brought before the Society. Dr. Barr was of opinion that if surgeons were called in at an early stage of the case and operative interference more frequently practised, many valuable lives would be saved, and that the operation would not be attended by such a fearful mortality as follows it when merely used as a *dernier resort*; or like a drowning man catching a straw. He confined his remarks to cases of acute intestinal obstruction, the symptoms of which are well-marked in pronounced cases; but he thought that different practitioners attached different values to symptoms in any given case, and hence we find that the disease seems to be very common in some men's practice, while with others of equal, if not greater, experience it is comparatively rare. If you look upon all cases where you have got severe pain in the abdomen, constipation, and vomiting, with, perhaps, more or less shock, as cases of intestinal obstruction, then, no matter what line of palliative treatment you adopt, you ought to have a very good percentage of recoveries; but if you belong to a more exclusive school, and in your anxiety for accurate diagnosis, eliminate all cases of colic, constipation, enteralgia, &c, then you will find that you have a terrible disease left, which tends more frequently towards a fatal issue than to recovery. No doubt many very severe cases, under judicious treatment—rest, starvation, opium, hypodermic injections of morphia or combined with a small quantity of atropia (which prevents the sickness and depression which morphia often occasions when administered alone),—undergo spontaneous recovery; the bowel gets out of its knot or twist, or frees itself from its constricting band, or the impacted fæces soften, and the inflamed and paralysed portion of the bowel recovers its tone, or in cases of intussusception the invaginated portion sloughs away. But these are exceptional cases rather than the rule. Dr. Barr did not advocate indiscriminate operation, in fact he was strongly adverse to operation unless there were reasonable grounds to suppose that the patient could not otherwise recover. The physician should arrive at as accurate a diagnosis as possible; the surgeon should be called in early, and then if an operation were deemed necessary, there was no use delaying it until the bowels were all glued together by peritonitis, or the patient dying of septicæmia. He was puzzled to know why acute intestinal obstruction occurring within the abdominal cavity should receive different treatment from that which it receives when arising at some of the abdominal rings. Why should an internal abdominal hernia be treated by palliatives while an external receives powerful operative interference? In the latter case, if you fail to reduce the hernia you promptly cut down and divide any constricting band. Why not, then, in suitable cases of acute occlusion adopt a similar course, even though the operation be more grave? The cases are desperate, and justify a heroic remedy. Mr. Banks had spoken in a very guarded manner about operative interference, but Dr. Barr was pleased to think he was a more bold operator than his remarks would seem to imply, as last winter Dr. Barr sent a case of strangulated hernia into the Royal Infirmary, under the care of Mr. Banks, who in the operation cut away about twelve or fourteen inches of gangrenous bowel, stitched the edges of the two portions of sound intestine together, and the patient made a perfect recovery. Dr. Barr hoped that in future such excellent surgery would extend more deeply into the abdominal cavity.

Mr. RUSHTON PARKER considered the present discussion an advance on those of past years, and also thought that Dr. Greves and Mr. Pughe were to be congratulated upon their case, which they had so skilfully managed throughout. Their treatment was justified by the result, though he agreed that good luck as well as good management were on their side. The discrepant opinions that resulted from the study of restricted varieties of case, the differences in cause, and the similarity in symptoms, alike pointed to the difficulties of diagnosis for differential purposes. The recognition of symptoms of obstruction was easy enough, but why was the separate indication of their cause so difficult? No power had yet succeeded in making this generally possible, nor was it likely that any power ever would, owing to the very nature of the cases themselves. They might be classed under the following heads:—(1) The cases where symptoms of intestinal obstruction attended acute peritonitis, due to gradual escape of fæcal matter following perforation of intestine, frequently of the vermiform appendix. In these cases the patient died of septic poisoning, though the symptoms were those of obstructed intestine. Treatment was hopeless from the first, but we did not know that until afterwards, because the obstruction symptoms were similar to those arising from other causes, and might even be palliated by appropriate treatment; but in vain, for all these symptoms were subsequently overshadowed by the fatal virulence of the poisonous absorption. (2) The cases of pure functional obstruction, a numerous class, the symptoms of which were found, as in other classes, presenting every degree of acuteness or chronicity, severity or mildness, but which under the palliative treatment that we now all profess to approve were capable of recovery in a majority of instances. (3) An intermediate class of cases of internal strangulation, including intussusception, volvulus, band, and the like, not necessarily fatal, yet largely so, though a small minority recover spontaneously, under varying and even conflicting treatment, or after abdominal section. Among these cases there were no certain methods of distinguishing the varieties at first, and under operative treatment the successes were not more numerous than without. Even to open the abdomen was to run the risk of meeting with one out of the class just referred to, and operating both unnecessarily and harmfully. The careful adoption of expectant and palliative treatment would here enable us to save cases in which recovery was occasionally possible without sacrificing some in which that result would otherwise be attained with facility. He agreed with Mr. Davidson that there was no comparison between abdominal section undertaken for ovarian or other tumours and that practised for intestinal occlusion. While the advances in operative method, dressing, and after-treatment were shared by both sets of cases, the patients in obstruction cases did not seem equally capable of recovery, whether that were due to the previous state of the bowels or to some other cause. In the first class of cases to which he had referred all treatment was futile, in the third a small minority might be assisted by palliative treatment to undergo spontaneous recovery, but the second consisted of cases of which a majority were capable of easy recovery if not improperly treated, and often if let alone. Upon these his hopes were based, and it was in the interest of these that he recommended the assiduous adoption of palliative measures uniformly in all cases, after the plan laid down by Sydenham and fully elaborated by Mr. Thomas.

(To be concluded.)

THE BRIGHTON WATER-SUPPLY.

ON the 6th inst. a representative body of the water interest visited the waterworks at Brighton, the extension of the works being now completed after engaging the attention of the Town Council for some time past. Previously to 1853 Brighton obtained its water-supply from a well sunk in the chalk and from private wells in the town. In that year, however, Mr. James Easton advised the sinking of other wells and the cutting of tunnels at right angles to the fissures in the chalk, by means of which the surplus water had made its way to the sea, so as to intercept the water and carry it to the pumping station. This was done, and the tunnels were extended from time to time as more water was needed. From this source the whole town was supplied until 1865, when, owing to the rapid increase of population, a greater demand for water arose, and it was determined to construct another pumping station. A well was accordingly sunk to the west of the town, where a naturally formed basin occurs, and tunnels were driven to the extent of about a quarter of a mile across the valley parallel to the sea and intersecting the fissures in the chalk. From these sources a copious and constant supply of the purest water is obtained. It is found that the fluctuations are very slight, the difference of quantity of water being felt rather by the impossibility of the pumps lowering its level than in its rising higher. The area of the district supplied is considerable, being about

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seven miles in length by five miles in breadth, the ground surface being of an undulating character. It has therefore been divided into four zones or services, each fed by its own reservoir with its own system of main pipes. Each reservoir is placed at a proper level relatively to the zone it supplies, so that, while a high pressure is given, over-pressure is avoided. The various services, however, form, together with the pumping stations, one complete system, each being only disconnected from the rest by valves and stopcocks. The reservoirs are covered, and the water is in no way exposed to any contaminating influence before it runs from the taps.

Up to within a few months ago the length of the main tunnel was about 2000 ft., but it has now been lengthened some 600 ft. more, besides being deepened, thus giving more than half a mile of intercepting galleries; these additions have been effected in eighteen weeks. The total available daily supply of water is now five and a half million gallons, but of this two million gallons are daily pumped into the sea, the present demand only reaching three and a half million gallons. Considering that the company have power to widely extend their workings if necessary, it would seem that, increase as it may, Brighton can never fail in its water-supply.

THE PROGRESS OF CHOLERA.

CHOLERA cannot yet be regarded as extinct in Paris; indeed, the latest weekly record which was published on the 4th inst. is to the effect that seventy-four deaths from that disease had occurred in the city during the preceding week. The announcement is, however, accompanied by an assurance that the prevalence is really dying out. From Spain come continual reminders that although the disease fails to assume an active form, yet it still lingers in that country. Four deaths have recently occurred at Vergel in the province of Alicante, and two more are reported from Toledo. A recrudescence of cholera is also announced from Italy, fifteen cases being reported as having occurred in the province of Salerno to the south of Naples; and the rumour appears to have some grounds, since, concurrently with it, we learn of the postponement of the abolition of quarantine measures in Sardinia and Sicily.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Godmanchester, by Dr. PARSONS.—Godmanchester was inspected by Dr. Parsons in 1880; the cottages were found to be old, dilapidated and overcrowded; the sewers were of defective construction; the water was from wells liable to pollution, and some houses had none at all; offensive midden and cesspit privies prevailed; and there was much nuisance from filth and lack of scavenging. After a lapse of three years the only improvement that has been effected is that the worst houses are no longer inhabited, and that others have been supplied with eavespouts. But the first improvement is not apparently due to the sanitary authority; it has been brought about by a decline of population. In such a district, low-lying, damp, liable to floods, and all but absolutely neglected from a sanitary point of view, diphtheria finds a foothold. The population is just over two thousand, and there were six diphtheria and two croup deaths in 1883. The recommendations urged in 1880 are again repeated in 1884, and an analysis is appended showing that the water from a well which was deemed to be least of all liable to pollution, and which the Town Councillors pronounced to be very good as the result of a draught which they took at one of their sittings, contained so much chloride and ammonia as strongly to indicate sewage contamination. On the whole we think that Godmanchester would not lose by being merged into the rural sanitary district, instead of having independent sanitary existence.

Diphtheria at Huntingdon, by Dr. PARSONS.—Huntingdon, like Godmanchester, was visited by Dr. Parsons in 1880, and as a consequence some action was taken. New sewers, shafts were constructed for ventilation purposes, house-drains were disconnected, and pan-closets have replaced some old and offensive midden-privies. But some of the latter still remain in unwholesome proximity to houses and wells, and the arrangements for the removal of house refuse are unsatisfactory. There has been an extension of the town water in the place of local wells, and the old pest-house has been adapted to certain isolation purposes. Two deaths occurred from diphtheria in 1883, but not much information could, at the date of the inquiry, be elicited as to them. Some of the houses in which they were situated were in confined situations shut in by other buildings; some were in close proximity to offensive privies, and others had such means of drainage as to admit of their pollution by drain air. On the whole Huntingdon had made some substantial sanitary progress since the first inspection, but a further extension of the town water to houses still resorting to wells, the substitution of cleanly closets for the filthy privies that remain, and a better system of scavenging, are measures still needing to be carried out.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bethnal Green.—This important parish, with an estimated population of 128,370, had in 1883 a death-rate of 23·9 per 1000, the birth-rate being 33·9, and the death-rate under one year 162 per 1000 births. Scarlet fever was the most fatal infectious disease, and it caused 174 deaths. From the account given it is evident that good work is proceeding under the recent statute as to bakehouses. Unfortunately, as regards bakehouses occupied before June 1st, 1883, closets communicating directly with the bakehouse cannot be dealt with apart from their having produced nuisance, but an inspection of 137 such places is already leading to substantial improvement in Bethnal Green. The bread bakeries are not the worst; it is in the hidden recesses of the pastrycooks' and eating-house premises that the most objectionable conditions have been discovered. The cow-sheds are also carefully looked after, and, speaking generally, they are now in fair condition. With regard to the housing of the people, Dr. Bate urges the demolition of certain courts and alleys, for, many of them being built on the vicious back-to-back system, it is impossible to secure for them adequate ventilation. He also advises automatic trough closets for such localities. The report contains a special and full account of the comparative efficiency of certain disinfecting apparatus, and it concludes by advocating Lyon's high pressure steam machine. All interested in this subject would do well to read what Dr. Bate says on this point.

Hastings (Urban). — It appears from the quarterly return of the medical officer of health for this urban sanitary district (Mr. C. Knox Shaw) relating to the three months ending September last (only just to hand) that the birth-rate was 23·7, and below the average for the corresponding quarter in recent years; while the death-rate was 17·7, and exceeded the same average. It is stated that nearly 17 per cent. of the deaths in the borough during the quarter "occurred amongst non-residents or visitors"; and it is further noted that under the heading "deaths of visitors" are returned all deaths of persons who may be "temporarily sojourning in the borough." It would be well if further and more definite explanation of the term "visitor" were added in future returns, as "temporarily sojourning" is susceptible of somewhat wide interpretation. The return before us has two very unsatisfactory features, although the gross death-rate is comparatively low. Infant mortality, measured by the deaths of infants under one year of age to births, was equal to 19·9 per cent., which is exceedingly high for such a population as that of Hastings. This excess is, to a considerable extent, due to the other fact that the zymotic death-rate for the quarter was equal to 4·97 per 1000 of the population. The deaths referred to the principal zymotic diseases included 14 from measles, 14 from whooping-cough, 2 from diphtheria, and 28 from diarrhœa. Watering-places are exceptionally liable to infection from these zymotic diseases, but a high rate of mortality from such diseases cannot, even among watering-place populations, be disregarded as evidence of unsatisfactory sanitary condition.

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VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5370 births and 4102 deaths were registered during the week ending the 6th inst. The annual death-rate in these towns, which had been equal to 20·9 and 23·8 per 1000 in the preceding two weeks, further rose to 24·4 last week. During the first ten weeks of the current quarter the death-rate in these towns averaged 21·4 per 1000, against 21·9 and 21·1 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 18·4 in Portsmouth, 21·3 in Wolverhampton, 21·7 in Leeds, and 21·8 in Bristol. The rates in the other towns ranged upwards to 30·2 in Blackburn, 30·9 in Sunderland, 32·5 in Preston, 22·7 in Halifax, and 38·7 in Oldham. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 391 and 396 in the previous two weeks, were 391 last week, and included 80 from measles, 76 from scarlet fever, 69 from whooping-cough, 52 from "fever" (principally enteric), 42 from diphtheria, 37 from small-pox, and 35 from diarrhœa. These zymotic diseases caused the lowest death-rates last week in Wolverhampton and Nottingham, and the highest in Derby and Cardiff. The greatest mortality from measles was recorded last week in Bolton and Cardiff; from scarlet fever in Sunderland and Brighton; whooping-cough in Oldham and Leeds; and "fever" in Salford, Birkenhead, and Plymouth. Of the 42 deaths from diphtheria in the twenty-eight towns, 29 occurred in London, 3 in Liverpool, and 2 in Nottingham. Small-pox caused 52 deaths in London and its outer ring of suburban districts, while no death from this disease was recorded in any of the twenty-seven large provincial towns. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had increased from 580 to 884 in the preceding four weeks, had further risen to 1027 on Saturday last; 263 cases were admitted during last week, against 149 and 228 in the previous two weeks. The Highgate Small-pox Hospital contained 80 patients on Saturday last, 35 cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 354 and 511 in the preceding two weeks, declined to 499 last week, and were 11 below the corrected average. The causes of 102, or 2·5 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Salford, Bradford, Plymouth, Derby, and Cardiff. The largest proportions of uncertified deaths were registered in Oldham, Hull, and Wolverhampton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 22·3, 26·2, and 28·6 per 1000 in the preceding three weeks, further rose to 31·8 in the week ending the 6th inst., and exceeded by no less than 7·4 the mean rate during the same period in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 22·1 and 25·2 in Edinburgh and Perth, to 35·3 in Dundee and 37·3 in Glasgow. The 768 deaths in the eight towns included 42 which were referred to whooping-cough, 34 to measles, 25 to diphtheria, 14 to diarrhœa, 13 to scarlet fever, 12 to "fever" (typhus, enteric, or simple), and not one to small-pox; in all, 140 deaths resulted from these principal zymotic diseases, against 115 and 101 in the preceding two weeks. These 140 deaths were equal to an annual rate of 5·8 per 1000, which was no less than 3·5 above the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 27 and 19 in the previous two weeks, rose to 42 last week, and included 15 in Glasgow, 6 in Dundee, 5 in Edinburgh, and 5 in Leith. Of the 34 deaths from measles, 17 occurred in Glasgow, 12 in Aberdeen, and 5 in Dundee. The 25 deaths attributed to diphtheria included 8 in Glasgow, 6 in Dundee, 4 in Edinburgh, and 3 in Paisley. The 14 deaths from diarrhœa corresponded with the number in the previous week; while the 13 from scarlet fever (of which 11 occurred in Glasgow) showed a further decline from recent weekly numbers. Of the 12 deaths referred to "fever" (principally enteric), 4 occurred in Glasgow, 2 in Edinburgh, and 2 in Leith. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 101, 145, and 181 in the preceding three weeks, further rose to 231 last week, and were more than double the number (115) returned in the corresponding week of last year. The causes of 116, or more than 15 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had steadily increased from 24·7 to 35·4 per 1000 in the preceding five weeks, declined to 33·2 in the week ending the 6th inst. During the first ten weeks of the current quarter the death-rate in the city averaged 29·3 per 1000; the rate during the same period being only 19·7 in London and 19·8 in Edinburgh. The 228 deaths in Dublin last week showed a decline of 15 from the high number in the previous week, and included 25 which were referred to the principal zymotic diseases, against 39 and 23 in the previous two weeks; 9 resulted from scarlet fever, 4 from measles, 4 from whooping-cough, 3 from "fever," 3 from diarrhœa, 2 from diphtheria, and not one from small-pox. These 23 deaths were equal to an annual rate of 3·7 per 1000, the rate from the same diseases being 2·3 in London and 3·4 in Edinburgh. The deaths from scarlet fever in Dublin, which had been 16 and 11 in the previous two weeks, further declined to 9. The fatal cases of measles, which had been but 1 in each of the previous four weeks, rose to 4 last week. The numbers from the other zymotic diseases did not materially differ from those in the previous week. Six inquest cases and 2 deaths from violence were registered; and the 60 deaths in public institutions showed a decline from the numbers in the previous two weeks. The 69 deaths of elderly persons exceeded the number returned in any previous week of this year. The causes of 42, or 19 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

WAR OFFICE.—The Queen has been pleased to issue a new Commission of Lieutenancy for the City of London, constituting and appointing, amongst others, the undermentioned to be Her Majesty's Lieutenants within the said City—viz., William Sedgwick Saunders, Esq., M.D.; Thomas Boor Crosby, M.D.

ARMY MEDICAL STAFF.—Surgeon-General Richard Gilborne has been placed upon retired pay; Deputy Surgeon-General Adam Graham Young is granted retired pay, with the honorary rank of Surgeon-General; Surgeons-Major William Jobson, M.D., Richard Turner, M.D., and John Murray, M.B., are granted retired pay, with the honorary rank of Brigade Surgeon.

INDIA OFFICE.—The Queen has approved of the retirement from the Service of Surgeon-Major William Edward Allan, of the Bengal Army.

The undermentioned Officers are granted a step of honorary rank on retirement:—Brigade Surgeon George Vernon Currie, of the Bengal Army, to be Deputy Surgeon-General; Surgeon-Major Henry William Graham, of the Bengal Army, to be Brigade Surgeon.

ADMIRALTY.—The following appointment has been made: Frederick A. Saunders to be Surgeon and Agent at Crail and Fifeness.

SANITARY ASSURANCE ASSOCIATION.—Professor F. De Chaumont, F.R.S., presided at the third lecture on Sanitary Assurance at the Parkes Museum on the 10th inst. when Dr. Beatson lectured on "Sanitary Assurance at a Health Resort," with special reference to Bath. He said the grisly phantom of cholera had cast its shadow this year over some of the fairest places in Europe; places beautiful without, but from want of sanitation, full of uncleanness within. We were told that it would find no foothold in our island. He hoped it might be so, but were there not insanitary houses in every town and city with doors open ready to receive it? In the discussion which followed, Sir Joseph Fayrer, F.R.S., Mr. F. B. Jessett, F.R.C.S., Surgeon-General Ringer and Mr. Melton Gibbs, architect, took part. The lecturer next Wednesday will be Mr. Mark H. Judge, A.R.I.B.A., and his subject "Public and Private Responsibility in Sanitary Matters."

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Correspondence.

"Audi alteram partem."

DR. LOWSON'S CASE.

To the Editor of THE LANCET.

SIR,—The remarkable case of diabetes following diphtheria, which I now enclose to you, is related by the sufferer himself, Dr. Lowson, of Hull, then of Huddersfield. As Dr. Lowson received the Albert Medal for his heroism in dealing with the diphtheria in the first instance, I think I need not publish the case anonymously. Diabetes being not unknown as a sequel of diphtheria, I had little hesitation at the outset in giving Dr. Lowson a favourable prognosis.

Yours faithfully,

Dec. 7th, 1884. T. CLIFFORD ALLBUTT.

"Wycliffe House, Anlaby-road, Aug. 26th, 1884.

"DEAR DR. ALLBUTT,—The following is, I believe, an accurate description of my case:—On the 12th of November, 1679, sent for in haste, I went to see a child six or seven years of age, living about 300 yards from the surgery. Having suffered three or four days without professional assistance, I found her in a very critical state. Inspiratory laryngeal dyspnœa, with exaggerated inspiratory effort, cyanosis of the lips and face, and unconsciousness, showed me that she could not live long without help. I fetched with all speed the ordinary tracheotomy case, and opened the windpipe in the usual manner below the isthmus. Respiration did not improve sufficiently to remove the cyanosis; and as I had no pipette with me, and the danger being imminent, my only resource was to suck the wound. I need scarcely say that I gargled and washed out my mouth well at the time with water, and later on with carbolic acid solution. The child improved for a time, but died on the fourth day with diphtheritis of the wound and extensive and hard filtration for a considerable distance around. On examining the throat of the child after the operation, no false membrane was to be seen anywhere; but after a forcible expectorant effort I found that a piece had been expelled through the tracheotomy tube, and had adhered to the front of my coat. It somewhat resembled colourless fibrin clot, but was hardly so friable. On the evening of the 16th, notwithstanding my disinfectant gargling, I found myself with high fever, and, thinking I had caught cold, I took a lamp-bath and went to bed about 11 P.M. My temperature was 102°. Sore-throat followed, and soon a membranous patch made its appearance on the left tonsil. This spread along the margin of the palate, including the uvula. A smaller patch appeared on the other tonsil, and a narrow strip along the margin of the epiglottis. Separation easily occurred, and no renewed deposition took place. One night a piece hanging from the uvula, and tickling the top of the larynx, kept me a long time awake till it was expelled by retching. The throat was very sore and raw, and deglutition painful for several days after. Nothing remarkable occurred in convalescence till about the end of December, when, on testing my urine for albumen, it struck me I might as well look for sugar, and to my surprise a strong reaction resulted. I had used the ordinary sulphate of copper test, and freshly prepared Fehling gave the same result. The quantity of urine did not rise much above normal, except during the first fortnight after the discovery of the sugar. There was no diabetic thirst, and the appetite remained poor. Morphia was now taken in small doses, and a decrease in the strength of the reaction gradually took place. The whole of January my health was bad, and the spirits were depressed or apathetic. About the beginning of February I noticed a difficulty in swallowing. I had to make two or three grasps at the morsel before I could push it from the pharynx into the more lively œsophagus, and I became afraid of liquids, and had to drink slowly and with sudden gulps made with an effort. This paretic symptom did not become marked or severe, and it was, I believe, considerably aggravated by nervousness, for I gradually seemed to gain confidence, and then it disappeared; about this time the glycosuria also became intermittent. I was pleased one day to find no reaction at all. I now became careless with the sodipine, either omitting it purposely or forgetting to take it. Finding, however, that this was followed by restless, fidgety, and sleepless nights, with return of the golden precipitate, I became again more regular with my dose. The last appearance of the complaint was about the middle of April, probably due to two days' omission of the morphia mixture. In May I embarked on a two months' voyage up the Mediterranean. This worked wonders. My health improved daily at sea, and though tested many times since then, no more sugar has been detected in the urine. I have therefore been now four years free from all trace of the disease. With regard to diet, I was strict only for a fortnight. Eating gluten bread is not my *forte*, and fortunately the sugar did not increase on returning to my normal food. Besides being tested by myself, my urine was also examined by Dr. Churton at your request, when the reaction was slight, but sufficiently marked; and by Dr. Coutts (Waterfoot, Lancashire), who found a large quantity of sugar present.

"I am sorry now that I did not follow the symptoms with greater care, and that I did not make any volumetric analysis. I see that Oertel (in 'Ziemssen') mentions congestion and small hæmorrhages in the brain and cord, as well as softening around these points; also the development of lymphoid nuclei and cells and increase of areolar tissue, to the primary compressing influence of which he attributes the paralyses. As the centre of deglutition lies in the floor of the fourth ventricle, the part influenced by the diabetic puncture cannot be far off (vagus centre). May not the same cause to which the diabetes was due have also slightly affected the deglutition centre by continuity? I am afraid my case will not satisfy you, but if you wish to ask anything more I shall do my best to answer you, and if the pruning knife is required, I hope you will use it as required.

"D. LOWSON."

COCAINE.

To the Editor of THE LANCET.

SIR,—As it is only by recording clinical facts in regard to this new agent that we can arrive at just conclusions as to its value, I trust you may be able to afford me space for a brief *résumé* of some of the cases in which I have used it.

CASE 1.—W. S——, aged thirty-three, from Sleaford. This patient came under my notice in July suffering from a wound of the cornea and cataract caused by the impact of a piece of steel; no foreign body was to be seen, and his medical attendant concluded that the metal had rebounded. By means of a strong magnet, however, I discovered and extracted a large piece of steel, and subsequently removed the cataract. Last week he applied to me to be treated for closed pupil, which followed the last operation. I proposed to make an artificial pupil, operating as before without either ether or chloroform; but the patient, who on former occasions had exhibited great fortitude, appeared now to have completely lost his nerve and would not submit without an anæsthetic. I applied cocaine, assuring him that he would not suffer; he, however, insisted on an anæsthetic, and my colleague, Mr. Worth, therefore proceeded to administer ether. After a few inhalations he became alarmed, struggled violently, declared we were killing him, and refused to take more. I said, "You have had quite enough, you must feel it now," and proceeded to operate, fixing the eyeball and excising a portion of iris without the least manifestation of pain on the part of the patient. On interrogating him subsequently he declared that in comparison with former operations the sensation on this occasion was absolutely [illegible].

CASE 2.—Mrs. B——, aged seventy-four, [illegible], near Leicester. Extraction for cataract in left eye. [illegible] per cent. solution of cocaine was dropped into the eye three times at intervals of five minutes. The operation, including a slight iridectomy, was completed without [illegible] and the patient declared she suffered but very little pain.

CASE 3.—Ann C——, aged seventy, from [illegible]. Extraction for cataract in right eye. Operation successful, with but slight evidence of pain.

CASE 4.—David C——, aged sixty-five, from [illegible]. Extraction for cataract in right eye. Operation successful; he said he felt very little pain.

CASE 5.—William W——, from [illegible]. Double extraction for cataract in right eye, [illegible] instilled as in the first and other cases [illegible]. The patient bore the operations remarkably well [illegible], but said the operation on the left [illegible].

CASE 6.—W. U——, aged eighty-three, [illegible].

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This patient was quite blind in the right eye from retinal disease, and in the left from cataract. I extracted on the left eye as in former cases, using cocaine. The patient was absolutely immobile, and declared that he felt no pain.

CASE 7.—C. L——, aged seventy-two, from Alfreton. Iridectomy preliminary to extraction for cataract; cocaine instilled as in former cases. In this case the patient was very unruly, and complained quite as much as though no cocaine had been used.

CASE 8.—Anne R——, aged fifty, from Retford Union. Iridectomy for glaucoma in the left eye; right eye lost from the same disease six years ago. Cocaine was instilled as in former cases, but the patient complained so much of the speculum and attempts to fix the eyeball that it was necessary to administer ether before excising a portion of the iris.

CASE 9.—Sam. M——, aged seventy, from Old Bursley. Extraction for cataract in the right eye. Operation completed without misadventure. Patient said he "felt very little pain."

The above cases, which I have treated within the last three weeks, together with numerous other minor operations, such as the operation for squint, removal of tumours, probing the lacrymal duct, &c., appear to me to afford conclusive evidence of the value of cocaine as a local anæsthetic. It causes dilatation of the pupil, which I obviate when desirable by using eserine at the same time. This dilatation is, however, unlike that occasioned by atropine and other mydriatics, unaccompanied by impaired accommodation, and it will therefore take the place of atropine in cases where such dilatation is desired merely to enable us to examine the fundus of the eyeball. It will probably be also much safer to use in cases where there is any threatening of glaucoma. Cocaine acts splendidly in cases of strumous ophthalmia accompanied by great intolerance of light, and is a useful adjunct to other treatment in all painful affections of the eyeball.—I am, Sir, your obedient servant,

CHARLES BELL TAYLOR, M.D., F.R.C.S. Edin.,
Dec. 1884. Surgeon to the Nottingham and Midland Eye Infirmary.

To the Editor of THE LANCET.

SIR,—My experience of the value of cocaine as a local anæsthetic for ophthalmic operations corresponds with that of Mr. H. Power and other writers in THE LANCET.

In the early part of October the drug was procured for my use at the Sheffield Infirmary, but in consequence of the "faint praise" accorded to its efficacy at the meeting of the Ophthalmological Society on October 9th, it was just then but little employed. During the last fortnight it has been extensively tested, and the accompanying list of operations have been performed with its aid during that period, and it will be seen that they embrace a large variety. Among the largest number of cases a 2 per cent. or 4 per cent. solution has been employed; in two instances a 20 per cent. was used.

Extraction of cataract was performed on two men, aged fifty and over seventy; in another man, aged fifty-seven, opaque capsule was needled. In the first two instances no speculum was employed; in the latter, both speculum and forceps were used. A little boy, aged two, also had opaque capsule (after congenital cataract) needled. The first three operations were quite painless; no iris was removed in the extraction cases. In the case of the child, as far as could be judged, the effect was equally satisfactory.

An iridectomy for closed pupil was performed on a man, aged sixty-seven; no pain until the excision of iris.

A woman, aged about forty-five, was operated on for conical cornea, by removal of a small flap from the apex. She had several months previously had the other eye similarly and successfully treated without chloroform. The cornea, after instilling the cocaine solution twice before the operation in about eight minutes, was quite insensitive, and the operation was completed without pain to the patient.

A little boy, with sloughing ulcer of cornea; pain was relieved after dropping the cocaine solution into the eye, and the ulcer was cauterised with platinum cautery, without suffering.

Two cases of squint, one in a boy aged eleven, and the other in a girl aged eight, have been done. The former was operated upon in one eye one week and the other eye in the next week. The suffering was nil until the division of the tendon, and was altogether so slight that he at once after the first operation consented to a second if necessary. The girl asserted she had felt very little pain.

Tarsal cysts have been operated upon in three instances. The primary incision has appeared to cause less pain, but the introduction of the curette into the interior has occasioned the usual discomfort. A man, with hypopyon ulcer of cornea, for which keratotomy was performed, derived comfort from the use of cocaine. On the day this is written a man with pterygium has undergone operation for its cure. During the eight or ten minutes preceding the operation a 4 per cent. solution of cocaine was instilled twice, and at the time of operating the cornea and conjunctiva had become quite insensitive. A speculum was inserted, the conjunctiva seized by forceps, the pterygium separated from the cornea, and, lastly, a suture was inserted, and at the end the patient declared he had felt nothing. It should be added that during the progress of the operation the cocaine was again dropped into the eye.

Foreign bodies have been removed from the cornea in five instances; two were from lads aged thirteen and fourteen. Of the latter, a boy aged fourteen, it is stated that in four minutes after using the 4 per cent. solution the foreign body was removed without pain. In ten minutes sensation was returning. No dilatation of the pupil was observed during the time. A 20 per cent. solution was employed in one of these cases of foreign bodies in the cornea. The patient was a man aged forty-five; anæsthesia came on immediately, and in one minute after the cocaine solution was instilled the piece of metal was removed without pain. The cornea and conjunctiva remained insensitive, but in twenty minutes sensation had returned and the pupil was dilated.

This strong solution was used also in one of the cases of tarsal cysts. It appears that the strong solution acts more rapidly, and that the effects last longer than the weaker, but perhaps generally speaking a 4 per cent. solution is sufficiently powerful.

The effects on the pupil have not been so carefully noted, but I should be disposed to regard its action in this way as uncertain. In a man for whom for ophthalmoscopic purposes the drug was instilled, 4 per cent., at the end of twenty minutes there was no appreciable effect on the pupil. It remains to be seen how atropine will act in his case. In other instances, also, when the cocaine has been used for its anæsthetic effects mydriasis has not been noted; but, of course, our observations in these cases may not have been sufficiently prolonged. On the other hand, in the conical cornea, and the man for whom the needling was performed, the pupil had dilated decidedly after the lapse of the few minutes from the time of instilling the solution to that of the operation. In the girl with squint, also, at the end of eight minutes mydriasis was decidedly marked.

It should not be omitted that in a woman with extensive burn involving the lower eyelid and ocular conjunctiva the instillate of the cocaine always gave her comfort, and, when it was necessary to tear through any adhesion, lessened the pain of doing it.

In aural surgery, I believe, the drug will be of service. A few days since I pressed on to a small polypus a portion of cotton-wool soaked with a 2 per cent. solution, and on touching it afterwards sensation was distinctly deadened. It may be of use in some cases of earache, and may render aid in posterior rhinoscopy.

The effect of cocaine on the skin, as others have stated, appears to be *nil*. I have placed on the front part of my forearm a piece of lint soaked with a 20 per cent. solution of cocaine, and covered it with gutta-percha tissue. After eighteen minutes the skin was still as sensitive as the surrounding parts.

My experience has satisfied me that the drug has a real value, and that an extensive use lies before it in surgery. I am indebted to Mr. J. R. Turner for the records of my cases.

I am, Sir, yours faithfully,

SIMEON SNELL,
Ophthalmic Surgeon to the Sheffield General
Dec. 1884. Infirmary.

SCOTCH MEDICAL EDUCATION AND EXAMINATIONS.

To the Editor of THE LANCET.

SIR,—As considerable misrepresentation has latterly appeared in the London medical papers with reference to Scotch medical education and degrees that has been altogether unfair and illogical, I venture under the circumstances to

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submit to your consideration the following facts. In surveying the history of British medical education for the last 100 years, it will be plainly evident that the Scotch have been decidedly in the van. The Scotch universities have not only insisted on an efficient curriculum, but have allowed none to take their degrees without undergoing a competent examination in the four essentials of medical practice—viz., medicine, surgery, midwifery, and medical jurisprudence. If we turn to England we find a different state of things prevailing there. The chief examining body—the Royal College of Surgeons—has been so considerate to the community as to allow those to qualify who had a knowledge of surgery alone, the qualification practically enabling them to undertake all the branches of the profession, with total ignorance, perhaps, of the principles of medicine and midwifery. It is only necessary to investigate the pages of the Medical Directory in order to verify this fact. It is only within the last few years that this august body have awakened from their lethargy to the due appreciation of their obligations to the public.

With regard to the relative severity of the examinations of the two countries, it will only be necessary to state the following:—Taking the University of Edinburgh as an index of the Scotch, and the Royal College of Surgeons as an index of the English, and submitting the two to the cold evidence of statistics, we find the following:—

EDINBURGH UNIVERSITY.

First Professional Examination	....	50 per cent. rejected.	
Second "	"	 50	" "
Final "	"	 40	" "

This shows that in the aggregate about 85 per cent. are remitted for their degree. The Royal College of Surgeons' Primary and Final Examination show, in their results, a percentage of failures of about 65 per cent.

Nearly every professor in the University of Edinburgh has been, or is, an examiner in the University of London—viz., Professors Turner and Cunningham, Anatomy; Professor Rutherford, Physiology; Professor Crum Brown, Chemistry; Professor Fraser, Materia Medica; and Professor Balfour, Botany—and they will severally tell you that the standard in the London University is no higher than that of Edinburgh.

In conclusion, I may state that the University of Edinburgh had a chair of Pathology fifty years before that of any other medical school in the United Kingdom, and that now it is the only examining body that sets a separate paper on Pathology. Apologising for trespassing on your valuable time,—I remain, Sir, yours faithfully,

E. K. CAMPBELL, M.B. Edin., M.R.C.S.

Nov. 22nd, 1884.

CASES OF SEVERE DIARRHŒA AT THE BOOTHAM LUNATIC ASYLUM.

To the Editor of THE LANCET.

SIR,—I beg to forward you the following notes, which you may consider sufficiently interesting to record.

On the morning of the 13th ult., very numerous cases of diarrhœa of a severe type were reported to me as having occurred during the previous night among patients and attendants. In the worst cases the diarrhœa was accompanied by severe colicky pains and cramp; several (females only) were sick as well as purged; a few had severe griping pains but no diarrhœa. In the majority of cases the diarrhœa commenced at nightfall and had ceased by 10 A.M. Those affected with griping pain were relieved on the evacuation of the bowels after a dose of castor oil. The after-effects were that some patients habitually constipated said they felt better than usual; in a few the diarrhœa continued and recurred at times for a week or more; several were somewhat enfeebled for a few days; the majority were not affected in their general health.

After careful inquiry into every article of food and drink, I came to the conclusion that the roast beef which had been the almost universal dinner at midday on the 12th ult. was the only substance which could have caused the attack. I found that 158 persons had beef, or beef gravy; of these 135 had severe diarrhœa, or diarrhœa and vomiting; nine had slight diarrhœa or griping pains; thirteen (including some doubtful cases where the patients were demented and unable to give information) were not affected. Ten persons had milk diet, or minced mutton; all these were unaffected. The gravy appears to have been especially harmful; for twenty-three persons had other meat but with the beef gravy, and all these, except one who took no gravy, were similarly affected. The same beef eaten cold without gravy was not injurious. The cook had thought the beef a little dark coloured, and that the gravy did not flow freely from it when cooked. Some uncooked joints which I saw seemed to be from a well-fed beast; the fat was a good colour; the lean somewhat red and not of a bluish tinge when fresh cut, but not sodden or unhealthy looking, nor of a bad odour; the meat of the cold joints was perhaps a little dry, but nothing unnatural in smell or taste. The beast from which the meat was taken was as usual bought in the market on the Thursday previous, taken to our own slaughter-house, and there killed and cut up.

I found that the beast was a well-fed, healthy ox, which had been brought up at a farm four miles from here, where it had always been kept in company with another beast; that on the morning of Thursday it was attempted to drive the beast to market without its stall companion; the animal resisted so much, and got so wild, that after the drover had got it half way he was obliged to turn it into a field by the roadside whilst he returned to the farm he had started from, and fetched the companion beast. He then drove the two beasts together to market, and they travelled well enough. The beast was bought in the market, and on its being driven to the Asylum Farm, to the slaughter-house there, it again became furious, and the drovers had difficulty in getting it into the yard, and when shut up it continued beating itself about, and was very excited. At the time it was slaughtered the butcher noticed that the blood did not flow from the carcass as freely as it should have done, but all the parts of the beast and its internal organs were perfectly healthy.

I remain, Sir, yours truly,

CHARLES KNIGHT HITCHCOCK.

The Lunatic Hospital, Bootham, York, Nov. 1884.

"OVER-PRESSURE IN EDUCATION."

To the Editor of THE LANCET.

SIR,—Your article of Nov. 15th, on the above subject, is crushing in its clearness and force, and it is a pity that the ay press do not quote more from your journal when matters of such momentous interest to the present and rising generation are being discussed in its columns. We all know that the authority of THE LANCET in matters medical is in the end supreme, and though it may suit some officials to ignore the voice of the medical press for a time, their capitulation is eventually certain.

There is one argument against "forcing" the brain by overwork, and often useless work, in early life, and I fancy a very strong one, which I should like to point out, and it is this: that according to all we know of that organ, it is the last to reach perfection of growth and maturity of any in the body, and therefore of all others the last that should be overworked in childhood, when its specific gravity and development are utterly incomplete and unfitted to bear overstraining. Whereas the body ceases to grow after the age of twenty-five years, the brain, we know absolutely, grows in bulk for fifteen years longer; and if the mind is any index of its perfections, it certainly increases in strength and capacity for sustained work for fifteen or twenty years after that. The functions of the brain may be as stunted and crippled as those of the body often are; they may be cramped, dull, introspective, or precocious; and accordingly they require intellectual work in proportion to their development. And more than this, the functions of the brain are as much dependent on the consumption of matter in the shape of food as are those of the body; therefore it is absurd to expect the half-starved child to do the same amount of work as the well-fed one may be put to do with impunity

It is a well-known axiom that early maturity, physical or intellectual, means early decay, and if the present mode of education, by doing this, deteriorates the brain and nervous system of the rising generation of children, how much worse will it be for the next one, the produce of an enervated and morally and physically enfeebled race. The days for whipping children to death in schools are gone—let us hope never to return again. We are more refined now; we whip their brains to death instead; and if the brutality is not so repulsive to the looker-on, or so palpable, it is equally efficacious in the end, and far more cruel, as the process is slower

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and its ultimate consequences are more serious, for they affect generations yet unborn.

YOUR correspondent, Dr. R. Macpherson, in last week's LANCET, has given a graphic account of the evils of the present system of education, and I do not believe that there is a medical man practising in England who cannot recall cases illustrating this evil of over-pressure, especially among the children of the poor.—I am, Sir, yours, &c.,

Sherborne, Dec. 1st, 1884. NATHANIEL EDWARD DAVIES.

THE LONDON UNIVERSITY.

To the Editor of THE LANCET.

SIR,—Many hard things are being said just now about the University of London, some of them indeed just, but others very unjust. The most amusing suggestion, however, comes from Manchester, and is set forth under the heading "Victoria University," and is supplied by your correspondent there. He suggests that King's College and University College should take steps to become affiliated with the so-called "University of the North." Now, Sir, while the whole body of the profession is yearning for some "conjoint scheme" we are meanwhile saddled with a twentieth licensing body, and while it seems to be the fashion to grumble at the exclusiveness and so-called tyranny of the London University, nothing is said about the intolerance and illiberality of the newest of the universities. The gateway to the Victoria is if anything more strongly guarded than that of the London, and there is added, besides, that antiquated humbug of exclusiveness which is included under the offensive word "affiliation." The medical students of King's and University Colleges will be quite capable of taking care of themselves in the matter of examinations, which are not less stiff in the northern university than the proverbial ones held at Burlington House. In the name of justice and common sense how is it that the one university is perpetually abused while the new one is pursuing vigorously unheeded the same policy to a much greater degree.

I am, Sir, yours obediently,

WILLIAM DYSON, B.A., M.D. Lond.

Sheffield, Dec., 1884.

EXAMINATION OF ARMY MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—With reference to my letter in your issue of the 22nd ult., wherein I advocated the desirability of allowing surgeons-major to take the examination for promotion to the rank of brigade surgeon at an earlier period than after twenty years' service, I find that the revised War Office circular of Nov. 1st has omitted the words "after twenty years' service," thus leaving the time when a surgeon-major may be examined perfectly open in future. I should fancy every such officer who wishes to pass will be afforded the opportunity between his fifteenth and twentieth year of service. This is as it should be, and the new examination, by inviting officers of this standing to take stock of their experience and to correlate it with the latest advances in military medical science, will tend to make them very accomplished indeed in this their specialty. I have been afforded an inspection of the papers given at the recent examination, the first of its kind. The questions are, as I anticipated in my previous letter, eminently practical. Every officer of any experience should, I would say, be able to give satisfactory replies to most of them. The wisdom which comes from experience, not from books, has been asked to show itself, and I do not doubt that on this first occasion it has done so.—I am, Sir, yours &c.,

December, 1884. G.

LIVERPOOL.

(From our own Correspondent.)

THE RECENT CASE OF GOOD *v.* WHITTLE AND OTHERS.

THE hardships inflicted on medical practitioners in the regular and legitimate discharge of their duties are well illustrated in the recent case of Good *v.* Whittle and others. That the defendants believed themselves to be thoroughly justified in the course they took is beyond dispute. That they had good and sufficient grounds for their belief is clearly shown by the charge of the presiding judge (Justice Cave) and the verdict of the jury. And yet the defendants' costs amount to upwards of £630, of which they will have to pay £470, one-fourth (Dr. Mould's share) having been borne by the asylum authorities. The plaintiff, as is very frequently the case, being unable to pay, the costs fall upon the defendants. A fund is being raised (as noticed in the last issue of THE LANCET), and subscriptions have already come in. It may happen to any practitioner to be placed in the defendants' position, and it is greatly to be desired that the whole amount may be raised. Dr. Nevins is the treasurer, and subscriptions may be paid to him or to the Whittle and Hutchineon Fund, North and South Wales Bank, Hardman-street, Liverpool.

THE MAYOR AND THE ROYAL SOUTHERN HOSPITAL.

For upwards of forty years it has been the custom for the newly elected Mayor to attend the morning service in state at St. Barnabas Church on the second Sunday after his election, when a sermon is preached and a collection made on behalf of the Royal Southern Hospital. In accordance therewith the Mayor (Alderman David Radcliffe) attended on the 23rd ult., when a sermon was preached by the Bishop of Sierra Leone, and a collection made which amounted to £102. After service the Mayor, accompanied by Lord Claud Hamilton, M.P., and others, visited the hospital and went through some of the wards, accompanied by members of the medical staff.

HEALTH OF LIVERPOOL.

At the weekly meeting of the Health Committee on the 4th inst. the medical officer stated that there were fourteen cases of small-pox in the new hospital, also that twenty-three cases of scarlatina had been reported, which latter were not confined to any particular locality, but were spread all over the city. The death-rate was equal to 27·5 per 1000 of the estimated population.

THE LOCK HOSPITAL.

For some months past the wards of the Lock Hospital, both male and female, have been unusually full, and the number of beds being very limited the cases are mostly syphilitic, the exceptions being gonorrhœa with severe complications, or chancroids which, from neglect, dirt, and drink, have assumed a sloughing character. Of the latter there have been several instances lately, these cases always occurring in groups; the same remark applies to cases of orchitis and epididymitis, and the more severe forms of syphilis. Dr. Bernard has recently had in his ward several cases of glassblowers, all of whom had contracted constitutional syphilis by using the blowpipe of an infected fellow-workman. The cases commenced with chancres on the lips, accompanied with enlargement and induration of the submaxillary glands, and the subsequent appearance of roseola. The genital organs were entirely free from any appearance of disease, and there could be no doubt as to the source of infection. Dr. Bernard's clinical class has been well attended.

DEATHS FROM HOMICIDAL STRANGULATION.

At the recent assizes two cases of murder by strangulation were tried before Mr. Justice Day. One occurred in Manchester, the deceased being the wife of the prisoner. She was found dead by the neighbours, whom the prisoner called in, and with certain marks of violence on her neck, which were quite inconsistent with the prisoner's statement—viz., that "she had fallen into the fender while they had a bit of a bother." The body was seen first by Mr. Berkeley, assistant to Dr. Sutton, and the prisoner was taken in custody. Dr. Sutton made the post-mortem examination, and attributed the death to asphyxia from strangulation. Dr. Cullingworth, Professor of Medical Jurisprudence at Owens College, who also examined the body, gave as his supposition that death had been caused by pressure on each side of the neck, where bruises were visible just over the course of the internal jugular vein and carotid arteries. The cerebral veins were very much congested, so also were the lungs, but not so much so as in ordinary cases of strangulation, where the windpipe has been compressed. The prisoner was convicted and executed on Monday last, having previously fully confessed his guilt. In the other case, which arose out of a drunken Irish row at Upholland, near Wigan, Dr. J. L. Molyneux gave evidence. The appearances of strangulation were well marked. The prisoner was found guilty of manslaughter, and sentenced to twelve years' penal servitude.

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NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

DR. ZUKERTORT, THE CHAMPION CHESS PLAYER.

DR. ZUKERTORT has been astonishing all chess-players in this neighbourhood (and our own *confrères* number a few of the best) by his fine play at the Art Gallery in this city last week. He played sixty games, winning fifty-one; he also played twelve of our best amateurs blindfold, winning or drawing all. Our phrenological citizens are nonplussed, as Dr. Zukertort is said to have no especial development of locality or individuality. The psychology is possibly no more difficult than that of a retentive memory for words; Dr. Zukertort's is for forms, pictures, and changes. I have been told by a very skilful player that he can play almost any number seeing, that there are certain openings and certain rules for moving, and that they most assist in remembering the changes and position of the pieces. To a casual observer his most wonderful feat is that of repeating, as I witnessed, all the moves of himself and opponents in a series of games played several hours before, and without a single mistake. It is quite evident that a remarkable memory for positions and combinations is required for such feats, and persons not having that memory could not by any practice excel any more than a dull prosaic man could by practice become a poet. Memory, concentrativeness, judgment, and locality appear to be at the base of Dr. Zukertort's very fine blindfold and ordinary playing.

DEATH FROM THE EFFECTS OF MORPHIA.

The city coroner held an inquest at the Infirmary, Carlisle, upon the body of a farm-servant, on Nov. 29th, the young man having died the same morning. It appears he was admitted to the infirmary on the previous Thursday suffering from a lacerated hand, sustained while working at a threshing machine, which necessitated amputation at the wrist. Under the influence of ether this was done on the Friday, and he appeared to have borne the operation well. The same evening it was deemed advisable to give him a subcutaneous dose of morphia, and by direction of the house-surgeon the resident pupil injected a quarter of a grain of morphia about half-past ten at night. About a quarter to six o'clock on the next morning the nurse on duty observed such a change in the patient's appearance that she called up the house-surgeon. The man was found to be in a dying state, and evidently from the effects of morphia. The medical evidence attributed the cause of death to some peculiarity in the system, causing morphia in such a dose to take an unusual effect. The jury returned a verdict of "Death while under the influence of morphia," adding that no blame could be attributed to any one.

GATESHEAD DISPENSARY.

This week an election took place for the vacant office of house-surgeon at the Gateshead Dispensary, when the choice of the governors fell upon Dr. Robert Hardie of this city, who was selected from a list of fifty-eight candidates. The salary is, I am told, 200 guineas per annum with apartments, and some other advantages; but I believe the appointment has been heretofore principally sought as a capital and legitimate stepping-stone to general practice.

SMALL-POX IN DURHAM.

The medical officer in charge of the small-pox hospital in the city of Durham states that since the hospital was ready for patients (November 13th) the total number of cases admitted was sixty-three, ten of whom have been discharged well. There are now in hospital forty-nine patients, six of whom are convalescent. The usefulness of the Barracks Small-pox Hospital is being constantly demonstrated, its efficient management and kind treatment of patients having obviated all reluctance to enter it by persons when stricken with the disease. The disease is also reported as having appeared in the neighbouring towns and villages, including Bishop Auckland, Lanchester, Chester-le-Street, &c.

THE DISTRESS IN THE NORTH.

The distress in the north arising from want of employment shows as yet no signs of abatement, and it is much to be feared that our working classes here will have a bad time of it this winter. So far, the weather has been generally mild, which is a very great advantage to the poor. From Sunderland and other of our maritime towns, where so much depends on shipping and shipbuilding, complaints are very loud. The private efforts to mitigate the wants of the poor are most praiseworthy and persistent, and, except in the township of Southwick, Sunderland, I do not hear of any unusual amount of illness. At Southwick, however, principally owing to epidemics of measles and scarlatina, the mortality amongst children has been excessive.

Newcastle-upon-Tyne, Dec. 10th.

IRELAND.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS.

AT present the Examiners of this College are prohibited from being either private teachers or lecturers; but as it is thought that this may prevent otherwise eligible candidates from coming forward, an alteration of this rule, so far as lecturers are concerned, is by some thought advisable. A good deal may be said on both sides of the question, but the matter must be fully discussed and brought before the Fellows for their sanction before the proposed change can be adopted.

QUEEN'S COLLEGE, CORK.

The President, in his annual report recently issued, states that the total number of new students for the academic session 1883-4 was 67, and that the total number on the books of the College for the session was 298, of whom 278 were matriculated and 20 non-matriculated. As was expected from the disturbing effects of the dissolution of the Queen's University and the establishment of a new University with which the College had no official connexion, the number of new students last session was smaller than that of the preceding year, when, as was pointed out in the last report, the number had been abnormally increased by the premature entrance of a number of students who had been preparing for the College in order that they might secure the protection provided by the Act of Parliament for students of the Queen's Colleges. The total number of students was, however, considerable when we take into account the disorganising effects of the recent changes and the uncertainty and doubt created in the minds of students about to commence their University studies.

DUBLIN HOSPITAL SUNDAY.

It is believed that the collections made last month for the Dublin hospitals have been very successful, and that a considerable increase on the previous year may be confidently expected. In 1883 the sum realised amounted to £4212, and this year it is thought that £4500 may be obtained.

CASE OF ACCIDENTAL POISONING.

A Poor-law guardian named O'Dwyer, of Bansha, Tipperary, died recently from taking in mistake a dose of ammonia and camphor, which was intended to be used as a liniment. Although the medical practitioner gave verbal directions, he neglected to place a label on either bottle. The coroner's jury brought in the usual verdict of "Accidental death," and no one to blame for the occurrence.

MATER MISERICORDIÆ HOSPITAL, DUBLIN.

On last Sunday a meeting took place at this hospital for the purpose of obtaining funds to build a new wing, at an estimated cost of £18,000. In 1871 the western wing was completed, and the eastern wing, which it is now proposed to erect, will provide the accommodation which is found to be so urgently required. This will include a maternity and school for training midwives. The subscriptions promised at the meeting amount to upwards of £1000.

BEQUESTS TO MEDICAL CHARITIES.

The late Mr. Robert Billing, of the County Dublin, bequeathed £15,000 to the following charitable institutions—viz.: The Meath Hospital for Incurables and City of Dublin Hospitals, £3000 each; Rotundo Lying-in, Adelaide, and Cork-street Fever Hospitals, £2000 each. The late Mr. Gorman left nearly £50,000 to various charitable institutions in Dublin, but as the will is disputed the case will be tried on the 23rd proximo.

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ENTRIES AT THE DUBLIN MEDICAL SCHOOLS.

In last week's issue, by a printer's error, the number of students who have entered for the present session were stated to have shown a decrease of nine as compared with last year. It should have been an increase of one.

Dr. McIntyre, late medical officer of Coleraine dispensary district, has been refused a retiring allowance by the guardians; Dr. Traill has given notice of motion to rescind the resolution of the board but as the matter has been decided on three occasions I fear that there is but slight hope of a satisfactory settlement.

Dublin, Dec. 9th.

PARIS.

(From our Paris Correspondent.)

DEATH OF M. MORIN.

M. MORIN, whose case was reported in my letter of last week, died on Sunday night about half past ten o'clock. The slight improvement that was noticed in the latter part of my letter was not maintained, for he gradually got worse, and on Sunday morning the thermometer marked 41° C. in the axilla. The patient seemed not to have lost his consciousness entirely, for although unable to speak he followed with his eyes the movements of the surgeon who was dressing his wounds for the last time on the morning of the day of his death, and appeared to be grateful for what was being done for him. At noon of the same day his body was covered with a cold perspiration. About 10 A.M. vomiting had set in. At 6 P.M. the patient was still conscious, and seemed to recognise the Sister of Charity and others who were attending him. He drank with avidity all that was given him, which, however, was immediately rejected. The pangs of death began soon after this, and although the patient would be regarded by some as a worthless character, yet those who surrounded him in his dying moments were much affected by his sufferings, and felt that death would be a relief to him. His body has been removed to the Morgue, where it will be subjected to examination, and in all probability the question will arise as to whether death was caused by bullet wounds or by the effects of the operations. Since her incarceration Madame Clovis Hugues, the heroine of the tragedy, has been making daily inquiries respecting the condition of her victim, and on hearing of his death was very much affected. She has since been in a depressed state of mind, at which one cannot be astonished.

INQUIRY INTO THE NATURE OF CHOLERA.

I have just received a circular letter signed M. Camescasse, Prefect of Police, forwarding a paper containing a series of questions with the view of elucidating, if possible, the nature of cholera and the origin of the late epidemic of the disease in this country. The questions which have been forwarded to every medical man in the French territory have been drawn up by a Commission of the Academy of Medicine, composed of MM. Besnier, Brouardel, Fauvel (since died), Noël-Guéneau de Mussy, Legouest, Marey, Pasteur, Proust, and Rochard. The paper is drawn up somewhat on the principle of the collective investigation system employed in England, but would be too long to be transcribed here. I may, however, give some of the heads on which the answers to the questions are to be based. In the preface of the report of the Commission it is observed that it has been ascertained from documents referring to previous epidemics that the transmission of cholera may be effected in different ways, but which do not present the same degree of danger. The contagious element seems to reside particularly in the fæcal matter, but its potency is altered according to the vehicle which conveys it. The handling of linen soiled by choleraic dejections, the drinking of water contaminated by such dejections, constitute two sorts of danger, the reality of which is demonstrated by numerous observations, and against which we must be on our guard. It is of the greatest importance to fix the duration of the stage of incubation of cholera, for the protection afforded by quarantine measures can only be efficacious if the latter are based on the knowledge of the maximum of this duration. The minimum duration is equally important to know, with the view of ascertaining as to whether any aggravation in the intensity of an epidemic could be connected, as cause and effect, which might have preceded it at a longer or shorter interval, such as the appearance of a storm, &c.

THE WATERS OF LA BOURBOULE.

In my letter headed "French Health Resorts," which was published in THE LANCET of Nov. 8th, I mentioned that the waters of La Bourboule contained as much as twenty-seven milligrammes of arsenic to the litre. I have since learned that this is an error. They are stated to contain seven milligrammes of the metalloid, and twenty-eight milligrammes of the arseniate of soda, or ten milligrammes of arsenious acid.

ELECTIONS AT THE ACADEMY OF MEDICINE.

Dr. Bergeron has been elected Vice-President of the Academy of Medicine, in the room of Dr. Fauvel, deceased; and Dr. Charpentier, Member in the Section of Obstetrics, in succession to the late Professor Depaul.

NECROPSY OF M. MORIN.

The post-mortem examination of the body of M. Morin was performed yesterday by Professor Brouardel, the Medical Jurist, in the presence of the Procureur of the Republic and other judicial authorities. The examination confirmed the different points referred to in my letter of last week, with the exception that a fragment of the bullet which struck the skull was found lodged in the meninges. Meningo-cerebritis was the result, and this was stated to be the immediate cause of death. The bullet, which entered the throat and lodged above the left clavicle, was found lower down in the chest. It was of the calibre 7 mm. = bore ·297 of the English scale, and was handed to M. Gastyne-Renette, a gunsmith, who was summoned as an expert for the prosecution. Madame Clovis Hugues was exempted from being confronted with the corpse, as is usual in such cases, owing to the delicate state of her health.

Paris, Dec. 10th.

Obituary.

DANIEL J. DUIGAN, C.B.,

DEPUTY INSPECTOR-GENERAL OF HOSPITALS AND FLEETS.

DR. DUIGAN, who died on the 2nd inst., at the age of sixty-three, belonged to an old and much-respected family in Kilkenny. He was educated in Dublin, and took the F.R.C.S.I. in 1845, the M.D. of Aberdeen in 1857, and the M.R.C.P.L. in 1860. He entered the naval service in 1844, and was employed for a year at Haslar Hospital, after which he served for seven years in the Mediterranean in the *Hibernia* and *Queen*, flagships of Admiral Sir William Parker, G.C.B. In December, 1853, he was appointed to the *Royal George*, whence he was transferred, in April, 1854, to the *Duke of Wellington*, and was engaged in the Baltic, in the operations at Bomarsund, during the Russian war, being in all the most important boat operations by night and day, as well as in the assaults on batteries, in which his conduct gained the approval of Sir H. Jones, the commanding engineer. On returning to England he was ordered to join the Naval Brigade before Sebastopol, and to take passage in the *Prince*. He escaped the dreadful fate of his fellow-passengers by his alacrity in proceeding ashore to his appointment immediately the *Prince* arrived at Balaclava, on the eve of the total wreck and disappearance of that ship. Through the terrible winter 1854-55 he served in the camp of the Royal Naval Brigade, as surgeon in charge of its second division hospital. On the return of spring, with the reopening of bombardments, he volunteered for service in the batteries and trenches, being the only officer of his rank on leaving England who was in that position; having from that time until the fall of Sebastopol, on the 8th of September, been present in the batteries on the opening day of every one of the three great bombardments. On the fatal 10th of June, being confined to his tent by a severe attack of camp fever, he rose from his bed and proceeded at dawn to his proper post in the Diamond battery under Sir William Peel's command, whose admiration he excited for his steady attention to the sufferers during that eventful day. His valour was equally conspicuous on the closing day of the siege; in fact, it may be said he was ever on the alert to be present at the

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point of danger, and was never behind time there. For these services he obtained the Sebastopol medal, the fifth class of the Order of the Medjidieh, and lastly the decoration of Companion of the Order of the Bath, and the Sardinian and Turkish medals, with clasp. He subsequently served in the *Vulture* in the Mediterranean from 1858 to 1860; in the *Mersey* on the North American and West Indian station from 1860 to 1862, and at the Jamaica Naval Hospital for five years (1862 to 1867). He was employed with the Royal Marines at Deal from May, 1867, to July, 1870, and in the *Agincourt* from August, 1872, to February, 1874, when he was appointed to Devonport dockyard, which appointment he held until he was placed on the retired list, with the honorary rank of Deputy Inspector-General, in April, 1876.

Always exemplary for his kind, gentle, and courteous demeanour to all around him, for his unswerving zeal and attention to his duties, and for his oft-repeated acts of self-denial, he was esteemed by his nearest friends and companions in arms as a gentleman and officer in a truly classical sense—"Factus ad unguem." He has left a widow, two sons and a daughter, with family and friends to lament their loss.

LLEWELYN THOMAS, M.D.

LLEWELYN MORGAN THOMAS, who died on the 26th ult. at the early age of thirty-six, was educated at Dulwich School, whence he proceeded to St. Thomas's Hospital. He gained the Cheselden medal and scholarship, and on qualifying filled the office of house-surgeon and resident accoucheur. Having taken a voyage to China with the Submarine Cable Company's expedition, he became resident medical officer at the Guest Hospital, Dudley, for two years, on leaving which he was presented with a testimonial of regard. Having graduated as M.D. of Brussels, with honours in operative surgery, he settled in London about ten years ago as a specialist in throat and ear diseases, and quickly attained reputation and a good practice, as is evident by the fact that he was physician to three large institutions connected with education of the vocal and musical arts—namely, the Royal Academy of Music, Trinity College, and the Guildhall School of Music. He was also honorary aurist to the Jews' Deaf and Dumb School, and surgeon from its foundation to the Central London Throat and Ear Hospital. Although Dr. Thomas had not written much, his short essays on Diseases of the Throat and Ear, published by Churchill, were full of practical suggestions, and his opinion was valued by his colleagues as one full of sound judgment. His great devotion to his art and his extreme amiability endeared him to his patients, his colleagues, and all with whom he came in contact. The cause of his death was acute nephritis, the symptoms of which only manifested themselves three days before the fatal termination. It was characteristic of him that, although he was aware that for many months, probably years, he was the subject of Bright's disease, he had kept it to himself rather than give anxiety regarding his health to his family.

CHARLES WADSWORTH, L.R.C.P., L.R.C.S. ED.

IT is with extreme regret that we announce the death of Mr. Charles Wadsworth, which took place at his residence in Belfast on the 3rd instant. While in the discharge of his duties he contracted typhus fever (a malady to which so many Irish physicians have succumbed), and after a very severe attack he died on the twelfth day, at the early age of thirty-four. After having studied at the Belfast Medical School, Mr. Wadsworth obtained the qualification of Licentiate of the Royal Colleges of Physicians and Surgeons of Edinburgh in 1873, and commenced practice in Belfast, where he was appointed one of the district dispensary doctors. As a student Mr. Wadsworth was well known at the principal Irish athletic clubs as a most enthusiastic and very popular athlete, he having few equals at throwing the hammer and putting the weight. As a medical man Mr. Wadsworth was much respected by a wide circle of patients and friends, and at the last election of officers of the Ulster Medical Society he was chosen one of the vice-presidents. His funeral took place on Friday, 5th inst., when almost all the medical men in town were present. At a meeting of the Dispensary Committee, held on Monday, Dec. 8th, it was agreed to transfer Dr. Clements from his own dispensary district to that held by the late Mr. Wadsworth, while Dr. Torrens was also transferred to the district held by the late Dr. Martin. The election to fill the vacancies caused by these transfers will take place in a fortnight.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council held on Thursday last Mr. Hulke was re-elected a Member of the Court of Examiners; and Messrs. Langton and Pick were elected Members of the Court, *vice* Messrs. Cooper Forster and Savory resigned.

The Nomination Committee presented its report on the candidates for the several examinerships to be appointed by the College of Surgeons under the combined scheme of the two Colleges. The following elections were made:—

Elementary Anatomy: Messrs. J. N. C. Davies-Colley, A. P. Gould, C. W. M. Moullin, J. Black, and R. W. Reid.

Elementary Physiology: Mr. C. H. Golding-Bird.

Anatomy: Messrs. H. G. Howse, E. B. Owen, R. J. Godlee, and W. H. Bennett.

Physiology: Messrs. H. Power, W. M. Baker, and G. F. Yeo.

Midwifery: Drs. Galabin and Champneys, and Messrs. G. E. Herman and W. A. Duncan.

On the recommendation of the Nomination Committee, the following Fellows were elected members of the Board of Examiners in Anatomy and Physiology for the Fellowship of the College for the ensuing year:—

Anatomy: Messrs. Howse, Anderson, Owen, Godlee, and Morris.

Physiology: Messrs. Power, Baker, Golding-Bird, and Yeo.

Mr. Marshall's motion to reduce from twenty guineas to fifteen guineas the fee for the Diploma of Member of the College, when granted under the combined examinations of the two Royal Colleges, was postponed.

Sir James Paget, Mr. Erichsen, Sir Spencer Wells, Mr. Marshall, together with the President and two Vice-Presidents, were appointed delegates of the College to confer with an equal number of delegates of the Royal College of Physicians, respecting the arrangements whereby the two Colleges may become joint tenants of a site in Long-acre whereon to build rooms for examinations and other purposes.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members, having passed the Final Examination for the Fellowship on Nov. 27th, 28th, 29th, and Dec. 1st, were, at a meeting of the Council held on the 11th inst., admitted Fellows of the College:—

Bishop, Edward Stanmore, L.R.C.P. Ed., Albany Chambers, Manchester; Diploma of Membership dated July 26th, 1871.
Anderson, Alexander R., L.S.A., General Hospital, Nottingham; January 24th, 1877.
Morse, Thomas H., L.R.C.P. Ed., Prince of Wales-road, Norwich; November 20th, 1879.
Jessop, W. Hamilton Hyison, M.B. Camb., Harley-st., July 27th, 1880.
Johnson, Geo. Lindsay, M.B. Camb., Fernlea, Highfield-hill, Upper Norwood; January 24th, 1881.
White, Edwin Francis, L.S.A., Dealtry-road, Putney; April 21st, 1881.
Tait, Henry Brewer, L.R.C.P.L., Highbury-park, July 21st, 1881.
Pounds, Thomas Henderson, L.S.A., Snodland, near Rochester; July 22nd, 1881.
Cahill, John, L.R.C.P.I., Albert Gate; July 27th, 1881.
Colville, Ernest George, College-road, Eastbourne; Nov. 18th, 1881.
Dendy, Walter Chester, L.R.C.P.L., Chaplin Villa, Forest-hill; November 19th, 1881.
Hewer, J. L., M.B. Lond., Highbury New Park; Jan. 19th, 1882.
Watson, Archibald, M.D. Paris, Queensland; Jan. 23rd, 1882.
Bull, W. Charles, Bromborough, Cheshire; April 19th, 1882.
Howard, Robert Jared Bliss, L.R.C.P.I., Montreal, Canada; July 31st, 1882.
Wilson, James, M.D. Q.U.I., Money More, Derry; May 14th, 1883.

Two other candidates passed the examination, but not having attained the legal age (twenty-five) will receive their diplomas at a future meeting of the Council. Twelve candidates failed to reach the required standard, and were referred to their professional studies for one year.

The following gentlemen, having previously passed the required examination in Surgery and having obtained the

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necessary Medical qualification, were admitted Members of the College on the 1st inst. :—

Dickinson, Joseph Jewitt, L.S.A., Bow-road.
Gray, Thomas Underwood, L.R.C.P.L., Essex-road.
Mullis, George William, L.S.A., Derngate, Northampton.

CAMBRIDGE UNIVERSITY.—At a congregation held on the 4th inst., the following degrees were conferred :—

DOCTOR OF MEDICINE.—John Mackern, Gonville and Caius.
BACHELOR OF MEDICINE,—Harold Bailey Shaw, Sidney Sussex.

UNIVERSITY OF DURHAM.—At the recent examinations for degrees in Medicine and Surgery, the following candidates satisfied the Examiners :—

DOCTOR IN MEDICINE FOR PRACTITIONERS OF FIFTEEN YEARS' STANDING.

Coombs, Rowland Hill, L.R.C.P., M.R.C.S., L.S.A.
Martin, William Young, F.R.C.S.

DOCTOR IN MEDICINE (THESIS).

Robinson, William, M.B., M.S., M.R.C.S.
Sheppard, William John, M.B.
Squance, Thomas Coke, M.B., M.S.

BACHELOR IN MEDICINE.

Blackwood, Fredk. Martindale, M.R.C.S., College of Medicine, Newcastle-upon-Tyne.
Davidson, Charles Robert, Westminster Hospital.
Erulkar, Solomon Abraham, Grant Medical College, Bombay, and College of Medicine, Newcastle-upon-Tyne.
Harper, Alexander, M.R.C.S., St. Bartholomew's Hospital.
Malden, Frank James, St. Bartholomew's and College of Medicine, Newcastle-upon-Tyne.
Mears, Frederick Charles, M.R.C.S., L.S.A., London Hospital.
Newbolt, George Palmerston, St. Bartholomew's Hospital.
Pollard, Reginald, St. Bartholomew's Hospital.
Richards, George William, London Hospital.
Slater, William, College of Medicine, Newcastle-upon-Tyne.
Tanner, Charles Edward, M.R.C.S., St. Bartholomew's Hospital.
Wakefield, Mark J., College of Medicine, Newcastle-upon-Tyne.
Watson, James Russell, M.R.C.S., Charing-cross Hospital.
Wigham, William H., College of Medicine, Newcastle-upon-Tyne.

MASTER IN SURGERY.

Irvine, Robert J., M.B.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Dec. 4th :—

Barrett, William Amherst Henry, St. Thomas's Hospital.
Cory, Isaac Rising, St. Thomas's Hospital.
Gray, John Alfred, St. Bartholomew's Hospital.
Martin, Francis George Clifton, London Hospital.
Oldham, Montague Williams, Guy's Hospital.
Relton, Bernard, St. Thomas's Hospital.
Sydenham, George Francis, St. Bartholomew's Hospital.
Wade, Charles Henry, London Hospital.
Yeoman, Charles, St. Thomas's Hospital.

The following gentlemen also on the same day passed the Primary Professional Examination :—

Samuel Constable, Dublin and St. George's Hospital; Edward Soy King's College.

AN anonymous donor has given £1000 to the Swansea Hospital.

ON the 6th inst., Mrs. Gladstone opened a Maternity Home in Shadwell.

THE Library of the Royal College of Surgeons of England will be closed on Friday and Saturday the 26th and 27th inst.

A STRANGE FREAK.—A man was recently admitted into the City of Dublin Hospital who had swallowed seventeen half-sovereigns.

THE Fancy Fair in Glasgow, held with the object of raising sufficient funds to build a sick children's hospital, closed on the 29th ult., the sum obtained being £20,011.

VACCINATION GRANT.—Dr. Horace Lowther, of Ventnor, has been awarded the Government grant for efficient vaccination in his district.

THE Corporation of Reading has approved the erection of a one-storey building for use in the isolation of cases of scarlet fever, and of a public mortuary for the town, at a total cost of about £700.

ON the 17th ult., on the occasion of the newly elected Mayor of Stockport attending divine service in state, the collection on behalf of the local infirmary amounted to £130.

SUPERANNUATION.—Mr. George Bland, L.R.C.P., L.R.C.S.Ed., late medical officer for the Eastchurch district and the workhouse of the Sheppey Union, has been awarded a superannuation allowance of £50 a year.

AT a tea party at Oldham last week some twenty of the guests were attacked with serious illness. All the sufferers were said to have partaken of cured tongue which had been enclosed in a tin vessel.

THE Leicester Board of Guardians have, we understand, decided to proceed with the prosecution of defaulters under the Vaccination Acts. This will be no light task, as the malcontents are said to number about 4000.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The third meeting of the twenty-ninth session, 1884-85, was held at the Royal Kent Dispensary, Greenwich-road, on Friday evening, the 5th inst., when Dr. Horrocks, of Guy's Hospital, read a paper on "Inflammation of the Cervix Uteri."

A MUNIFICENT BEQUEST TO SYDNEY UNIVERSITY.—The Sydney University has just become entitled to a bequest of £180,000, in accordance with the terms of the will of Mr. Challis, a wealthy colonist, who has adopted this mode of perpetuating his memory.

AN inquest was held recently at Hatfield on the body of Mr. Charles Wade, surgeon, who died suddenly on the 28th ult., whilst present at an entertainment. The jury, having heard medical evidence to the effect that death was due to fatty degeneration of the heart, returned a verdict accordingly.

HOSPITAL SATURDAY FUND.—At a meeting on Wednesday last of the delegates of this fund, regret was expressed that the majority of participating institutions still refuse to open their doors to applicants for relief during the evening, when working people could attend without loss of valuable time.

THE ROYAL HOSPITAL FOR INCURABLES.—The annual meeting of the governors and subscribers of this charity was held on the 28th ult. The secretary stated that financially the past year had been a prosperous one, the total income as compared with the previous year showing an increase of £6731. In November of last year the number of beneficiaries of the hospital was 654, and 50 have been since elected.

GLASGOW WESTERN INFIRMARY.—The tenth annual general meeting of the supporters of this institution was held on the 27th ult. The number of out-patients treated during the year was 22,039, as compared with 18,905 in the previous twelve months; and of in-door patients 3777, as against 3927. The ordinary income for the year amounted to £13,359, while the expenditure was £18,589. The extraordinary income consisted of £14,433 derived from legacies.

THE death has recently occurred of Dr. Augustus Voelcker, F.R.S. Educated at Göttingen the deceased came over in early life to England, and successively held the posts of assistant to the late Professor Johnston at Edinburgh, Professor of Chemistry in the Royal Agricultural College at Cirencester, and Professor of Chemistry to the Royal Agricultural Society of England. He was well known as the author of several works on theoretical and agricultural chemistry, such as the "Chemistry of Food" and the "Chemistry of Manures."

THE INVENTOR OF THE TELEGRAPH.—On August 27th a deputation from the Royal Society of Victoria waited upon the Premier of the Colony with the view of urging the claims of Dr. Davy as an inventor of the electric telegraph on the attention of the Government. It was finally decided that, pending the endeavour of the Premier to obtain the insertion by the Home Government of Dr. Davy's name in the civil list, a motion should be made in the legislative assembly for £100 to be placed on the estimates this year for Dr. Davy, the Government undertaking to support the motion.

CLINICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.—The sixtieth annual general meeting of this Society was held on the 28th ult., when a very satisfactory report was presented. The three completed years of the current quinquennium show, when compared with those of the previous period, that while the new business has been substantially greater, the revenue has increased in an augmented ratio, and the additions to the assurance fund have been larger, the death claims relatively to the sum assured, and the working expenditure proportionately to the income, have been less.

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HEALTH CONFERENCE IN MANCHESTER.—A meeting was held in Manchester on the 5th inst., for the purpose of making arrangements for holding a conference in that city next Easter, on subjects connected with health and education. Among the subjects proposed for discussion are overpressure, cheap meals for school children, the protection of the sight, the spread of disease in schools, and the means of isolation.

THE PARKES MUSEUM OF HYGIENE.—The ordinary general meeting of the members of the Parkes Museum was held on the 4th inst. The report set forth the work done in connexion with the Museum during the past year, which had included lectures by the Council of the Sanitary Assurance Association, in addition to those arranged by the Council of the Museum. The accounts showed that there was urgent need for increased subscriptions if the Museum was to be continued, for the small invested capital had had to be made use of this year to meet the current expenses. On Wednesday the second of the series of three popular lectures on "Precautions against Cholera" was given by Mr. Shirley Murphy, medical officer of health for St. Pancras, particular attention being drawn to this lecture to the subject of local precautions.

THE HOSPITALS ASSOCIATION.—The session of 1884–85 was opened with a soirée at the rooms of the Medical Society of London, on Saturday evening last, when there were present the lady superintendents and secretaries of most of the principal hospitals in the metropolis, besides other distinguished guests, and a very enjoyable evening was spent. The attractions included music and recitations, and a short address by Major Ross, M.P., the chairman of the Council. The first general meeting of the Association will be held on the 17th inst., Dr. Buchanan, F.R.S., presiding, when Professor Marshall, F.R.S., will deliver a lecture on "Hospital Circular Wards," and Mr. Keith Young will read a paper entitled "A short Description of the Miller Memorial Hospital," which hospital will be opened the same day at Greenwich.

PRESENTATIONS.—Dr. R. D. Williams was recently presented with an illuminated address and a salad bowl by the employés of the Landove Tin Scale works on the occasion of his marriage.—Dr. Daxon, of Ennis Lunatic Asylum, has, on his retirement, been presented with an address and a valuable clock by the officers and attendants.—Dr. Peregrine has been presented, on the occasion of his departure from Silchester, with an ebony inkstand, as a mark of the esteem in which he and his family are held.—Dr. Dodds, who has been appointed Deputy Superintendent of the Montrose Asylum, was presented on the 28th ult. with a handsome timepiece by the officers and staff of the Birmingham Borough Asylum. The presentation was made by the superintendent on behalf of the subscribers, who spoke in the highest terms of Dr. Dodds. The timepiece was of black marble in the shape of a temple, striking the hours and half-hours on a gong.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BLACKMORE, ALFRED, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the First District of the Manchester Township.

CLARKE, JAMES ADAMS, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Busney District of the Watford Union, vice Hicks.

COSGRAVE, E. MACDOWEL, M.D., Ch.M., L.K.Q.C.P.I., L.R.C.S.I., has been appointed to the Chair of Botany and Zoology in the Carmichael College, Dublin.

DE'ATH, ROBERT, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Borough and Union of Buckingham.

DODDS, W. J., M.D., D.Sc, has been appointed Assistant Medical Superintendent to the Montrose Royal Lunatic Asylum.

FOX, W. PIERCY, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Resident Medical Officer to the Rochdale Infirmary, vice Herbert M. Gay, M.B., resigned.

GOULD, A. PEARCE, M.S.Lond., F.R.C.S.Eng., has been appointed Surgeon to the Hospital for Epilepsy and Paralysis, Regent's-park, vice Prof. Godlee, resigned.

GUBB, ALFRED S., M.R.C.S., late Resident Obstetric Assistant at Westminster Hospital, has been appointed Resident Medical Officer to the French Hospital, Leicester-square.

HALL, ALFRED, M.R.C.S., has been appointed Medical Officer for the Calton District of the Ashbourne Union, vice J. B. Hall.

LAMB, WILLIAM, M.D., C.M.Ed., has been appointed Medical Officer for the Arnold District of the Basford Union.

LANGFORD, HENRY EDWARD, M.D.Ed., M.R.C.S., has been appointed Medical Officer for the Kidderminster No. 2 District of the Kidderminster Union, vice Roden.

MOORE, ADAM JAMES, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer for the Parish of St. Lawrence, Reading Union.

PRAGER, ISIDORE FRED., L.D.S., L.R.C.S.I., late Assistant House-Surgeon, has been appointed House-Surgeon to the National Dental Hospital.

RUNDLE, EDMUND, L.K.Q.C.P.I., L.R.C.S.I., L.M., of Porthleven, has been appointed Medical Officer and Public Vaccinator for the newly-formed District of Lithney, in the Helston Union, Cornwall.

SCOTT, CHARLES CASELY, M.B., C.M.Ed., has been appointed Medical Officer for the Isleworth District of the Brentford Union, vice Hunter, deceased.

STRUGNELL, WALTER T., M.R.C.S., L.S.A.Lond., has been appointed House Surgeon to the Great Northern Central Hospital, Caledonian-road, N., vice F. A. Stokes, M.R.C.S., resigned.

SUFFERN, A. C., M.D., M.Ch., has been appointed Assistant Medical Officer to the Borough Asylum, Winson-green, Birmingham, vice Dr. Dodds, resigned.

SYMONS, J. GEO. RENNY, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Third District of the Holsworthy Union, vice Pearce.

WILLIAMS, P. WATSON, L.R.C.P., has been appointed Clinical Assistant to the Birmingham Borough Asylum, vice J. D. Bush, resigned.

Births, Marriages, and Deaths.

BIRTHS.

CUFFE.—On the 8th inst., at Dundalk, the wife of Surgeon-Major C. McDonogh Cuffe, C.B., Medical Staff, of a son.

HOWLETT.—On the 7th inst., at 4, Wright-street, Hull, the wife of E. H. Howlett, F.R.C.S., of a son.

MASON.—On the 6th inst., at Bear Tree House, South Ockendon, the wife of A. Haynes Mason, L.R.C.P., of a daughter.

MOORE.—On the 2nd inst., at Bareilly, India, the wife of Surgeon-Major J. H. Moore, Medical Staff, of a son.

REYNOLDS.—On the 7th inst., at Stamford-hill, N., the wife of W. Percy Reynolds, L.R.C.P.Lond., M.R.C.S., of a daughter.

SKEEN.—On the 28th ult., at Patiála, Punjab, the wife of Surgeon-Major A. Skeen, M.B., I.M.D., of a daughter.

WHITING.—On the 2nd inst., at Ebury-street, Eaton-square, S.W., the wife of James D. C. Whiting, M.R.C.S., of a son.

MARRIAGES.

ROW—DEMPSTER.—On the 26th ult., at Stoke Dameral Church, Devonport, Frederick Everard Row, M.R.C.S., L.R.C.P.E., son of Fredk. Row, M.D., J.P., to Eleanor Elizabeth Carroll (Nella), eldest daughter of the late James Carroll Dempster, M.D., Deputy Surgeon-General, A.M.D.

SPOONER—ARCHER.—On the 2nd inst., at St. John's Church, Hackney, Fred. H. Spooner, M.D., of Howard House, Clapton, to Jane Levesque, eldest daughter of Thos. Archer, Esq., F.R.H.S., of Kenninghall-road, Clapton.

WILDE—MARTIN.—On the 6th inst., at St. John's, Crawley, Sussex, by the Rev. J. Barrett Lennard, M.A., Frederick Wilde, M.R.C.S., to Margaret Helen, second daughter of T. H. Martin, M.R.C.S., of Crawley.

WILSON—WILSON.—On the 4th inst., at St. Michael's Church, Headingly, Samuel Wilson, M.R.C.S., L.S.A.Lond., of Mare-street, Hackney, to Hannah, youngest daughter of the late Joseph Wilson, Esq., of Melville House, Batley, Yorks.

DEATHS.

BANISTER.—On the 6th inst., at Eastbourne, George Banister, late Surgeon-General, Indian Army, aged 64.

DUIGAN.—On the 2nd inst., at his residence, Edith-road, West Kensington, Daniel John Duigan, C.B., M.D., Deputy Inspector-Gen. of Hospitals and Fleets, R.N., in his 63rd year.

GIBSON.—On the 5th inst., at his residence, 9, River-street, Myddelton-square, E.C., John Billerwell Gibson, M.R.C.S., aged 73.

LAY.—On the 4th inst., at Peasenhall, Suffolk, Joseph John Lay, M.D., M.R.C.S., L.S.A.Lond., aged 70.

MUSCROFT.—On the 5th inst., at Pontefract, Henry Muscroft, M.D., in his 55th year.

ROBERTSON.—On the 2nd inst., at Bath, James Robertson, M.D., M.R.C.S., F.L.S., &c., formerly of the City of Rochester, aged 45.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, December 11th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia. in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Dec. 5	29·78	W.	41	39	..	54	39	..	Bright
,, 6	29·71	W.	54	52	..	55	40	·43	Raining
,, 7	29·87	S.W.	50	47	..	56	46	·02	Cloudy
,, 8	29·81	W.	50	49	..	51	49	·35	Overcast
,, 9	29·95	S.W.	42	41	..	43	41	·05	Raining
,, 10	30·15	W.	43	41	..	52	35	·12	Bright
,, 11	29·65	W.	49	46	..	51	41	·11	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

ASPIRATOR FOR REMOVING EXUDATIONS FROM THE TRACHEA AFTER TRACHEOTOMY, &c.

To the Editor of THE LANCET.

SIR,—A very simple and inexpensive form of aspirator has occurred to me for the removal of diphtheritic and croupy exudations from the trachea after tracheotomy, and indeed, I think it might be used in many other cases in which aspiration is required. I claim for its merits, first, that it is easily procured, in fact, it may be extemporised on the spot; secondly, that it is efficacious; and thirdly, that it may be constructed by any instrument maker and supplied by him at a very small cost, as no air-pump, syringe, or other costly mechanism is required. The apparatus consists of an exhausted bottle, and I think my method of obtaining the desired vacuum is unique. We have in the usual quart aerated water bottle with syphon tap, as supplied by most chemists and aerated water dealers, all the apparatus that is required, with the exception of a foot or two of rubber tubing, and two or three metal unions made to fit the different sized tracheotomy tubes. The rubber tube is slipped over the tap and one of the unions is affixed to its other end. To produce the vacuum, the bottle is immersed in a large tin saucepan or other suitable vessel, containing sufficient warm water to cover the bottle up to its neck. The water, with the bottle thus immersed, is then brought to the boiling-point, by placing the vessel over the fire, the syphon tap being kept open to allow of the escape of the expanded air. The bottle is retained in the boiling water until air ceases to escape from the tap; this may be ascertained by occasionally closing and re-opening the tap; when air ceases to escape, the bottle is removed from the boiling water, and placed aside to cool, with the tap closed. When it has cooled a vacuum will have formed possessing great suction power. This may be tested by immersing the open end of the rubber tube in water and then opening the tap, when the water will rush into the bottle with great force and will about three parts fill it. Here then we have a ready and simple method of clearing the trachea by aspiration. The apparatus can be made by anyone in a case of emergency, with an ordinary bottle having a closely fitting perforated cork through which passes a piece of glass tube; perhaps even a Maw's feeding bottle might answer the purpose.—I am, Sir, yours truly,

R. W. SUTTON BARRACLOUGH, M.D.

Dulwich-road, Herne-hill, S.E.; Dec. 1st, 1884.

Mrs. Hoare.—The letter was received and referred to in an annotation in our issue of Nov. 29th.

CHARBON.

To the Editor of THE LANCET.

SIR,—The publication in your last issue of two cases of charbon with a reference to the practice of excision induces me to ask the attention of your readers to the excellent account of this disorder, and its successful treatment by excision, given at page 371 in Travers' work on Irritation. The date of the cases there mentioned is 1796.

I am, Sir, yours faithfully,

Old Burlington-street, W., Dec. 5th, 1884. J. W. HULKE.

INSPECTOR-GENERAL CORBIN.

WE have been asked to publish the following:—

"M.G.O." "Asst.-Adj.-Gens. Office, R.G.M., 20th Nov., 1884.

"The Lieutenant Governor regrets to find himself under the obligation of accepting Inspector-General M. A. B. Corbin's application to be relieved from active duties with the militia force. Commencing as an assistant surgeon in the Artillery Brigade, he terminates his services as the head of his department, embracing altogether a period of more than half a century, during which he has always ably and punctually carried out the duties of the medical department. His Excellency feels convinced that the militia force will join with him in thanking Inspector-General Corbin for his long service, and in wishing him health and happiness in his retirement. Inspector-General Corbin's name will be placed on the unattached list of officers. "By order,

"JAMES MCCREA, Lt.-Col., Assist. Adjt. Genl. R.G.M.

"Inspector-General Corbin, Medical Department, R.G.M."

L.R.C.S.—For "port wine stains" do nothing. For nævus on the back, if capillary, apply primarily nitric acid; if venous, either tie, or excise and unite the edges of the wound.

Quis Separabit.—The letter is too long to admit of insertion.

MATERNAL IMPRESSIONS.

To the Editor of THE LANCET.

SIR,—The following case of unconscious maternal impression, or perhaps of mere coincidence, may be worthy of mention.

On the 4th inst. I attended Mrs. S—— in her fifth confinement, and delivered her of a mature male child, who had a harelip, with unequal sides, on the left side, and a double cleft palate. None of her previous children had this deformity, nor was there any history of it in the family. It appears that at the latter end of February or the beginning of March she saw a brother, a soldier home from India on furlough, who had recently been bitten in the upper lip by a dog, and who then had a scar on the left side of the upper lip. At the time of hearing of the accident she was rather upset, though she did not see her brother till after the wound had healed. She had, of course, no idea of its affecting her child, as she could only have been in her first month of pregnancy at the time, and she says she had no thought of the kind subsequently. In most cases of maternal impression which I have referred to I find that the mother was conscious of the impression, and fearful of the result. I have ascertained that there is no doubt about the facts of this case. I am, Sir, yours obediently,

T. GODFREY PARROTT, M.R.C.S.

Cottage Hospital, Bournemouth, Nov. 19th, 1884.

Mr. Senior.—1. The subscription to the New Sydenham Society is one guinea per annum.—2. Apply to a medical bookseller.

MEDICAL HEROES.

To the Editor of THE LANCET.

SIR,—On Feb. 3rd, 1882, died John Topham Gadsby of this place, a M.D., and a Medalist of the London University. His death was caused in precisely the same manner as that of Dr. Rabbeth, and was all the more mournful on account of his leaving a young widow, to whom he had been married only a few months. After performing tracheotomy on a child in the Workhouse Infirmary who was suffering from diphtheria, the tube became blocked, and he at once cleared it with his mouth, contracted the disease, and died. All this duly appeared in the obituary column of THE LANCET at the time; but I am unaware that the slightest notice was taken of the sad event by the members of his University, the profession, or the public.

Now, what I wish to elicit is, the reason why the untimely death of one of these gentlemen should be most justly and generously met by marks of universal condolence and sympathy, while the memory of the other has been treated with cold and heartless neglect. Is it too late to do something, or anything?—Your obedient servant,

Bath House, Mansfield, Nov. 27th, 1884. G. WHITEFIELD SPARKE.

THE TITLE OF BACHELORS OF MEDICINE.

G.—The card looks very well as it is. If others like to accord the higher title to the holders of this goodly degree, well and good; there is no compulsion. But the Bachelor himself shows good taste in using the ordinary title of a gentleman.

"LANCING THE GUMS."

To the Editor of THE LANCET.

SIR,—What would the shade of Marshall Hall say if he could hear the discussion on gum lancing which has lately been recorded in THE LANCET? His dictum was (and I believe still a sound one), it was better to lance a child's gums 199 times unnecessarily than to omit it once if necessary; and I am sure many older practitioners who have followed his teaching can testify that, whether *post* or *propter*, a child almost immediately after its gums are lanced often passes from a distressing state of convulsions, screaming, or feverishness to calm, refreshing sleep, and comparative health and comfort. From the good I have seen apparently follow from lancing the gums I certainly should feel I had not done my duty to a child in convulsions during dentition if I neglected to examine its mouth, and relieve tension by scarifying the gums, cutting off, as Marshall Hall says, the first link in the chain of reflex irritation. I am, Sir, yours faithfully,

Dec. 2nd, 1884. M R.C.S. OF 1845.

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TANNERS AND THE CHOLERA.

THE Vienna *Tanners' Gazette* states that an Italian contemporary devoted to the leather trade calls attention to the fact that the tanners in Italy have been spared from the ravages of the cholera epidemic recently rampant in that country, and that in all towns where tanneries existed the plague was of a less virulent character. It has been noticed that streets in which there are tanneries have been altogether spared, whilst other parts of the same town were terribly visited by the cholera.

THE UNITED KINGDOM BENEVOLENT ASSOCIATION.

To the Editor of THE LANCET.

SIR,—At this season of the year all the leading journals liberally open their columns to the appeals of our public charities; and as I feel sure that THE LANCET, the leading journal of the medical profession, will not close its columns to a Christmas appeal on behalf of the widows and daughters of its less fortunate members, I bring under its notice the claims of a society which hitherto has made no special appeal to the medical profession, although it has for many years past been extending to them substantial help. By the report which accompanies this you will observe that the United Kingdom Benevolent Association grants annuities of £20 and £25 to persons of the upper and middle classes in reduced circumstances who are above forty years of age, and who are unable from bodily infirmities to earn their own livelihood, and affords temporary help to candidates in urgent distress. I need hardly say that the applicants for the help of the Society are quite as numerous from the medical profession as from any other class. It has granted annuities of £20 and £25 each to nearly forty widows and daughters of medical men, of whom twenty-nine are now living, and are supported by its bounty at a cost to the Society of nearly £600 a year. There are twenty-three medical candidates awaiting election, among whom are many ladies who are in extreme distress, one of them, the widow of an army surgeon, being paralysed and in great want. Since 1877 the Secretary of the Temporary Relief Fund has made an annual appeal to its subscribers for a Christmas gift for these poor ladies, which each year has been most kindly and liberally responded to.

It has been my privilege to have been associated with this Society from its foundation; and I think the medical profession owes it a debt of gratitude, which I believe they would be glad to have the opportunity of discharging, and which it cannot better repay than by responding liberally to this appeal for a Christmas gift for our distressed candidates.

Particulars of the twenty-three medical cases may be ascertained at the Offices of the Society, 4, Berners-street, Oxford-street, W., by any person who may be willing to assist them in their election or otherwise. Last year our Christmas appeal brought us nearly £800.

I am, Sir, yours truly,

Dec. 9th, 1884. M.D., A MEMBER OF THE COMMITTEE.

Mr. D. S. Donovan, B.A.—We fear there is no chance of our correspondent getting a qualification from any European medical authority. But does he for such work really much require it? People living "hundreds of miles" beyond qualified medical assistance soon discover the aptitudes of missionaries, and will not be slow to recognise any medical faculties they possess, without inquiring closely as to authorisation. Our correspondent might put himself in communication with the Edinburgh Medical Missionary Society.

UNSOUND MEAT.

To the Editor of THE LANCET.

SIR,—I observe in your issue of the 28th ult. an article on the subject of "Unsound Flesh," in which you refer to a recent case where a medical man and a veterinary surgeon gave contradictory evidence. This, Sir, is not the first case of the kind which has occurred, and it is always a matter of grief to me when I see the details of such cases made public, as I am strongly of opinion that the two professions should work shoulder to shoulder in this matter and urge upon the Legislature the necessity of putting it on a proper footing. At the first meeting of the British National Veterinary Medical Association, held last year, in London, I read a paper on this subject, and at the meeting of the same Association, held in July last, in Manchester, I had the pleasure of opening the discussion on the paper written by Professor McCall, and at the close of the discussion I succeeded in getting the unanimous consent of the meeting to a series of propositions on the subject which I was privileged to bring forward. Moreover, in my work on "The Four Bovine Scourges," published in 1879, I dealt fully with the matter of meat inspection, as I have also done on a number of public occasions. The matter as it at present stands is in a very unsatisfactory, and I may say dangerous position, as no definite or authoritative rules are laid down for the guidance of inspectors of meat, and I hope the time is not far distant when a joint commission of medical men and veterinary surgeons will be appointed to consider the subject with a view to the inauguration of legislative action by the Government. I, for one, shall be happy to assist in bringing about such a desirable consummation, and I trust your powerful aid will not be wanting.

I am, Sir, your obedient servant,

THOMAS WALLEY, Principal.

Royal Veterinary College, Edinburgh, President of the R.C.V.S.
Dec. 9th, 1884.

COCA PASTILS.

WE have received from Mr. Martindale, New Cavendish-street, a sample of pastils prepared from erythroxylon coca. They are intended for the temporary relief of hunger, thirst, fatigue, exhaustion, distaste for food, or nervous depression and weak digestion. One or two of the lozenges are to be allowed to dissolve slowly in the mouth every two or three hours.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

To the Editor of THE LANCET.

SIR,—The time is approaching when it will be necessary to consider how to utilise fully the opportunities afforded by our new building for the study and treatment of nervous disorders upon a scale not hitherto attempted in this or any other country. The Board of Management are naturally anxious that the new hospital shall not prove an additica to those institutions whose ward space is in excess of their means to make use of it, and they desire that with as little delay as may be a large proportion of the beds—all, if possible—shall be put at the service of the staff. The institution has always been "National" in something more than its name. Even with the limited accommodation of the old buildings it has dealt with patients from nearly a thousand cities, towns, and villages of the kingdom. Many of these places, although rich and important, have contributed nothing towards the outlay incurred; and experience shows that when it is a question of obtaining funds not for a special and conspicuous purpose, but year by year to be expended upon maintenance, a national institution is prejudiced by its want of locality. We now seek to minimise this disadvantage, and, if possible, to overcome it. A hospital whose wards contain at one time patients from a dozen different counties and fifty different towns is really a group of little local hospitals collected under one roof, and it appears eminently reasonable to invite those districts which send patients to assist towards their cost. A proposal which has received the sanction of the Board of Management is calculated to bring about some such co-operation, and greatly to increase the value of the new hospital. It contemplates the allotment of beds to certain districts, either for a specified number of years upon a contribution to the capital funds, or year by year upon an annual subscription. The contributions suggested are £500 for the allotment of a bed for fourteen years, or an annual donation of fifty guineas. It is needless to say that these figures represent a much less sum than the actual cost of the bed, while, as the only object in view is to increase the hospital's power of usefulness, the accommodation for patients from contributing districts will not be limited to the reserved beds, but applicants will possess the same chance of admission as heretofore to any bed which may be vacant. In these days of hospital penury the idea may be commended to any metropolitan institution in similar case, though none other stands so isolated as this, and to local philanthropists desirous to do their poor neighbours a service in which all the world may share. Of course, a patient will be admitted only in conformity with rules. He must be suitable for gratuitous treatment, and his fitness medically considered will be judged of by the physicians of the hospital, either upon personal examination, or upon information supplied in regular form by a local practitioner. If the beds were in some way affiliated to the provincial institution, possibly local interest, both philanthropic and professional, would be stimulated, and valuable means might be obtained for the diffusion of knowledge in regard to diseases of the nervous system. Finally, were the idea generally adopted, we need no longer fear that for lack of means our new wards will fail to be fully utilised, to the detriment of the sick poor and the no less certain loss to science and humanity at large.—I am, Sir, your faithful servant,

B. BURFORD RAWLINGS, Secretary.

National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-sq., Bloomsbury, Nov. 24th, 1884.

"THE SEVERE, OR SO-CALLED 'UNCONTROLLABLE,' VOMITING IN PREGNANCY."

To the Editor of THE LANCET.

SIR,—The paper of Dr. Grally Hewitt on the above subject, read before the Obstetrical Society and published in your last issue, suggests to the mind of a once busy practitioner a remedial means of which the late Dr. Marion Sims was, I believe, the author. This consists in applying to the cervix uteri once a day a solution of the nitrate of silver, of the strength of from twenty to sixty grains to the ounce, lengthening the intervals as relief is obtained. Cases will have occurred to many wherein no deviation from health could be diagnosed, and where the newly active organ might only affect the stomach through its "reflexes." In this class, as well as in those wherein a more tangible cause was obvious, the course mentioned has many times quickly and completely relieved my patients when artificial abortion appeared imminently necessary, and, stranger still, the relief was generally permanent, the operations rarely requiring repetition. Certainly, many anxious practitioners will find room for such a simple means before resorting to the severer operation. My own chosen method was to employ a solution of silver in equal parts of pure sweet spirits of nitre (fresh) and distilled water, painting the whole visible cervix through a speculum, and leaving as a dressing a pledget of absorbent cotton soaked (and then squeezed) in glycerine. I have rarely been obliged to make a fourth application. I am, Sir, yours faithfully,

London, Nov. 22nd, 1884. M.D. (U.S.A.)

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IRREGULAR PRACTICE IN CAPE COLONY.

A VERY sensible article appears in *Port Elizabeth Telegraph and Eastern Province Standard* on the harm done by allowing irregular practitioners to carry on practice in remote districts, and advocating the publication of simple instructions by Government for use as first aid in districts where medical men are few. In thinly populated communities doctors are sometimes ten or twenty, or more, miles away from the inhabitants, and a sound set of instructions would be infinitely preferable to a travelling pretender to the art of physic.

ANÆSTHETICS.

To the Editor of THE LANCET.

SIR,—On reading the discussion which has recently taken place at the Medical Society of London on the above subject I was somewhat surprised to find that no mention was made of the hypodermic injection of ether in the case of the circulation or respiration failing; for I have always found this to prove a most speedy and effectual measure in resuscitating the patient when all other methods have failed. The sensation caused by the injection of ether has frequently been described to me by patients as being of a peculiar tingling sensation over the whole body, from the tips of the fingers to the extremities of the toes, thus showing its speedy stimulating action. Perhaps the great drawback to the hypodermic injection is that a suitable syringe is not always at hand the moment it is required. As a *dernier ressort*, however, I am strongly in favour of applying almost scalding water, by means of a flannel, to the forehead. May I mention, by way of conclusion, that I have invariably found the "hot water" application to be invaluable in various cases of syncope, and above all for the most speedy restoration or establishment of the circulation of newly born infants.

I am, Sir, yours truly,

Baron's Court, S.W., Nov. 26th, 1884. R. FITZROY BENHAM.

CYCLING: "THE SWING FRAME."

To the Editor of THE LANCET.

SIR,—From the correspondence I have noticed regarding the liability of cycling to injure the rider owing to the pressure of the saddle, I quite agree with the reply of Mr. Battams as to the very remote chance there is of injury. I think the tricyclist is more subject to this liability than the bicyclist; for it is a well-known fact that the rider is very apt to sit forward on the peak of the saddle when riding a hill. Being a cyclist myself, and finding it of great assistance, I wish to mention an invention which entirely prevents any possibility of injury, and in this hilly locality it is especially useful. I refer to the "swing frame," which by its action depresses the peak of the saddle on a hill, and brings the rider forward over his work. As I can thoroughly recommend its action, and feel sure it prevents what at times may be an injury, I bring it to the notice of your readers. The inventor, Mr. Warner Jones, of 14, Bury-place, Bloomsbury, London, will, I am sure, be happy to explain its action to anyone who writes for information.

I am, Sir, yours faithfully,

Exeter, Nov. 18th, 1884. EDWARD A. BRASK, L.R.C.P.Lond.

"PARTIAL INQUESTS."

To the Editor of THE LANCET.

SIR,—Referring to your article under the above heading in your issue of Nov. 29th, I should like to bring before your notice, and that of your readers, the following case.

On Nov. 27th Charles Henry D——, aged seventy, was found suspended by a rope round the neck. When found the body was warm. No medical man was sent for. A coroner's inquest was held without medical evidence, when a verdict was returned that deceased committed suicide whilst in an unsound state of mind. The body being warm, is it not possible that under proper treatment death might not have ensued? Again, is there any proof that death was not the result of poisoning, and that the deceased was subsequently suspended? I could mention other cases in point; but the above case is in itself sufficiently striking, and shows that "our coroners fail to carry out the provisions of the law."—I am, Sir, yours truly,

WILFRED HOWARD, M.R.C.S.Eng., L.R.C.P.Ed.

Littleport, Isle of Ely, Nov. 30th, 1884.

"STRANGE MIGRATION OF A NEEDLE."

To the Editor of THE LANCET.

SIR,—Dr. Campbell Black's case is replete with interest. It is unusual at the first to feel the needle-*point*, but having done so, and after vain attempts at extraction, he seems to have been well advised in cautioning the patient against following his example lest still "greater injury" might result. After eleven months' journeying through the tissues at the rate of about six inches and a half per mensem, the needle issues at last with out help from the faculty, and lo, the point is quite clear! The point that must be clear to everyone but Dr. Black and his lady patient is this, that having entered the *right* thumb, the needle leisurely travelled up one digit and doubled down the next, and that Dr. Black and the lady were left pursuing in unconscious companionship a headlong chase in the direction in which the doctor had felt the needle-point.

I think David Hume would thus have explained away this latest of miracles. I am, Sir, yours obediently,

London, Nov. 10th, 1884. W. MCLAURIN.

PARIS LUNATIC ASYLUMS.

THE Prefect of Paris Police states in his annual report that the total number of lunatics in the asylums belonging to the French capital was 8907 at the beginning of the year, but that it is now over 9500, this large increase being attributed more to the anxiety of relatives to avail themselves of the better accommodation now provided in French asylums than to an actual development of insanity. There is, however, a certain increase of insanity as well, and this is doubtless due to the spread of drunkenness among men, who now form 55 per cent. of the insane, whereas a quarter of a century ago they were only 45 per cent. There are four special asylums for the insane within and outside the walls of Paris. The total estimated expenditure for the current year is £232,000, or £28,000 more than last year. This expenditure is borne in part by the municipality, and in part by the parishes of which the patients are natives, while the Government pays for all insane soldiers, sailors, and prisoners.

ALLEGED DEATH FROM VACCINATION.

To the Editor of THE LANCET.

SIR,—A short time ago you alluded to an inquest in which I was concerned, where the jury returned a verdict of "Death from convulsions arising from vaccination," though the death was undoubtedly due to suffocation.

There are a few lessons to be deduced from the case which, with your permission, I will lay before my professional brethren, for their guidance, should they be placed in the same circumstances as I was.

1. It may be taken as a fact that in future in any case of sudden death in an infant who has been recently vaccinated, an attempt will be made to "hook on" the death to vaccination, if the circumstances can possibly be made to fit in with such a theory. If therefore any medical man be called to such a case, I would strongly advise him to ascertain all the facts as to lymph supply, and the state of the child's health when vaccinated and shortly before its death; and, moreover, to get at these facts directly after the death; for if any sympathising anti-vaccination agent interviews the mother, the facts (?) will be told in a very different manner to what they are, at the time the case first comes under notice, and before any leading questions have been put or suggestions made.

2. If the question be brought up at an inquest, and an adverse verdict proposed, the medical man must refuse to accept it, without a post-mortem be made, and must ask the coroner to adjourn the inquest for that purpose. In my case the jury wished to bring in a verdict of "Death from blood-poisoning, arising from vaccination," though not one particle of evidence had been adduced to prove it, and the subsequent post-mortem disproved it.

3. Let the coroner appoint the gentleman who is to make the post-mortem, and not allow the jury to do so; at the same time the medical man must insist on being present, and have with him, if he wish, some independent skilled witness—some pathologist of known repute for example.

4. The medical man must be on his guard about another matter—viz., that if the case be one of convulsions, an attempt will be made to show that these were due to the irritation of the arm. In my case there was no evidence to show that convulsions existed, and four of us gave a positive opinion to that effect.

I am, Sir, your obedient servant,

The Oaklands, Upper Clapton, Nov. 29th, 1884. CHAS. T. AVELING.

THE DUCT OF GARTNER.

To the Editor of THE LANCET.

SIR,—I have recently observed that in many English works the name of the anatomist who first described the more or less persistent traces of the efferent duct of the Wolffian body, as seen in adult female mammals, is constantly spelt "Gaertner." That anatomist was not a German, but a Dane, and in Danish the word, whether a proper name or signifying "gardener," is spelt "gartner." The work which he wrote on the above subject is entitled, "Anatomisk Beskrivelse over et ved nogle Dyr-Arters Uterus undersögt glandulost Organ." It was published in Copenhagen in 1822. I am, Sir, yours truly,

Seymour-street, W., Nov., 1884. ALBAN DOMAN.

VICTORIA DENTAL HOSPITAL, MANCHESTER.

THE dental specialists are still given to advertise very much. A handbill has reached us advertising the above hospital, with all the surgeon's names on the back. This is not a commendable or professional procedure.

TO AMUSE THE CHILDREN.

To the Editor of THE LANCET.

SIR,—Would any of your readers kindly lend a magic lantern for one evening to amuse some country school children. It would be to them much like the visit to Drury-lane is to the London arabs. I would, of course, pay all expense of carriage, &c., and be responsible for any injury that might happen to the lantern. It would have to burn oil.

I am, Sir, yours obediently,

South Hayling, Hants. PERCY POPE, M.R.C.S.

ERRATUM.—The age of the boy referred to in Mr. Douglas's letter on "Supposed Cancer of the Rectum," published in our issue of Nov. 29th, p. 983, was fourteen years, not nineteen.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Lady John Manners; Sir Spencer Wells, London; Dr. Clifford Allbutt, Leeds; Mr. Hulke, London; Messrs. Birn Brothers, London; Dr. Dyson, Sheffield; Mr. R. J. Shepherd, London; Mr. R. Senior; Dr. Eshelby, Frocester; Messrs. Boake and Co., Stratford; Mr. L. Humphry, Cambridge; Dr. Tucker Wise, Maloja; Mr. P. Buchanan, Coleford; Mr. G. R. Jesse, Henbury; Mr. R. F. Benham, London; Mr. Lane, Birkdale (W.C.); Mr. Spencer Watson, London; Mr. Hodgkinson, Manchester; Dr. Caddy, London; Dr. Maunsell, Bath; Dr. Prosser James, London; Mrs. Hoare; Mr. J. W. Beck, London; Mr. W. A. Thomson, Ampthill; Surgeon-Major Gribbon; Dr. Macnaughton Jones, London; Dr. Bell Taylor, Nottingham; Dr. Campbell Munro, Nottingham; Mr. Dutch; Mr. Clouting, Norwich; Dr. Fenwick, London; Mr. T. Blair, Leeds; Mr. Samuels-Donovan; Dr. MacAlister, Cambridge; Mr. Startin, London; Mr. P. Pope, South Hayling; Mr. S. Snell, Sheffield; Dr. C. Pope, London; Mr. Stenson Hooker, London; Mr. Radcliffe, Blackpool; Mr. Gamgee, Birmingham; Mr. Townsend, Liverpool; Dr. Fry, Swindham; Messrs. Kegan Paul and Co., London; Dr. Adam, West Malling; Mr. Alden, Shirley; Mr. Jones; Mr. Price; Mr. Powne; Messrs. Ellis and Co., London; Mr. Stanford, London; Dr. Bryden Hill; Dr. Butcher, Birkenhead; Mr. Douglas, London; Mr. Waterfield, Stonehouse; Mr. C. E. Steele, Liverpool; Prof. Walley, Edinburgh; Mr. Hamilton, Hawick; Dr. Burdon Sanderson, Oxford; Mr. Hemsted; Mr. Bush, Bristol; Mr. Cluckie, Greenock; Dr. Isambard Owen, London; Mr. Clifford Smith, London; Mr. C. W. Harvey; Mr. Hulme, Birmingham; Mr. Yeoman, Sheffield; Mr. Ransom, East Dereham; Messrs. Oppenheimer and Co.; Mr. Birchall, Liverpool; Mr. Langdale, London; Mr. Frampton, Weston-super-Mare; Dr. Juler, London; Mr. Elliott, Carlisle; Mrs. Pratt, Cardiff; Mr. Livy, Clifton; Mr. Marmaduke Shield, London; Mr. Atkin, Sheffield; Passed in Surgery; Medicus, Mottram; Quis Separabit; Traveller; Enquirer; An Old Assistant; J. R.; An Irish Bull; One who hopes for Reform; A Provincial Surgeon; Physician; J. S. C.; H.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Trimmer; Dr. M. Mackenzie, London; Mr. Hutton, Ormskirk; Mrs. Clark, Tunbridge Wells; Miss Sidney, Brighton; Dr. Grose; Miss Harris, Leeds; Messrs. Smith and Son, Birmingham; Mr. Webb, Bury; Dr. Walter, Midhurst; Mrs. Rogers, Truro; Mr. Armstrong, Manchester; Mr. White, Bayswater; Dr. Williams, Talgarth; Mr. Turner, London; Mr. Mackay, Edinburgh; Mr. D'Orsey; Mr. Walker, Accrington; Dr. Husband, Edinburgh; Dr. McEnery; Miss Johnston, Southampton; Mr. Sergeant; Mr. Harding, Rotherham; Mr. Husbands, Notts; Mr. Coste, St. John's-wood; Dr. Hill, Oldham; Mr. Parrott, Hayes; Miss De Luttichau, Holloway; Mr. Warburton, Treherbert; Mr. Oglesby, Bury; Mr. Jones, Romford; Mr. Pollock, Wallingford; Mr. Davies, Brighton; Mr. Richardson; Miss Pyne, London; Dr. Heming, Pontypool; Sphenoid, Kensal-green; Middleton, Scarboro'; Specialty; F. S. A., Wye; W., Halifax; F R C P., St. Servan; Beta, London; W. T. C.; Polin, Cardiff; M.R.C.S., York; Medicus, Minchinhampton; One of Them; Matron, Liverpool; Yorkshire; Consilium; H. H, Brighton; Physician, Darlington; Lady Superintendent, Cambridge; M. M. L.; Medicus, Glasgow; G. H.; B. B. B.; M.R.C.S.

Dean Forest Guardian, Liverpool Evening Express, Alnwick and County Gazette, Christian World, Annual World, Temperance Record, Islington Gazette, &c., have been received.

Medical Diary for the ensuing Week.

Monday, December 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—Sir Andrew Clark, Bart.: A Case of Relapsing Pneumonia in an Aged Man, with Some Observations on the Nature of the Disease.

Tuesday, December 16.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M., and on Fridays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—Dr. Wilks: Intestinal Obstruction produced by Gall-stones.—Dr. Carrington: Thyroid from a case of Exophthalmic Goitre.—Mr. Rose and Dr. Sainsbury: Gunshot Injury of the Brain.—Dr. Hale White: The Sympathetic System, from Four Cases of Diabetes; Patent Ductus Arteriosus (card): Abnormality of Lung.—Mr. Godlee: Fracture of Skull in an Infant followed by the Effusion of Serous Fluid.—Mr. Lane: Fracture of First Rib.—Dr. Norman Moore: Hæmorrhage into Substance of Liver.—Mr. Pepper: A Case of Malignant Disease of the Spermatic Cord.—Mr. D'Arcy Power (for Dr. Mackinder): A Pouched or Duplicate Bladder (card).—Mr. G. R. Turner: A Drawing of Congenital Deformity of the Perineum (card).

Wednesday, December 17.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, December 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, December 19.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7.30 P.M. Mr. Henry P. Armstrong: The Status of the Medical Officer of Health as a Criterion of Sanitary Progress.

Saturday, December 20.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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Remarks ON THE GENERAL PERFORMANCE AND TREATMENT OF AMPUTATIONS.

By JAS. WHITSON, M.D., F.F.P.S.G., F.R.M.S.,
ASSISTANT-SURGEON, GLASGOW ROYAL INFIRMARY.

AMPUTATIONS have always been of frequent occurrence in large industrial centres, though since the introduction of the antiseptic system the necessity for their performance has considerably diminished. The loss of a limb, whether partial or amounting to complete dismemberment, is a serious privation for any individual to encounter; and under these circumstances it is the duty of the surgeon, in effecting its removal, to adopt measures which will yield the greatest prospect of recovery and secure as much future comfort as possible. The practices which were in vogue fifteen or twenty years years ago were unsatisfactory on many grounds, and, as a natural consequence, the death-rate was high, convalescence among those who survived was only reached after long and tedious intervals, while the trouble and anxiety falling upon all in charge were incalculable. Suppuration was the ordinary concomitant of wounded surfaces, and its effects upon the patient were depressing in the extreme. Neither need this be wondered at when we remember that pus is a product of inflammation derived mainly from the white corpuscles of the blood, and is, on account of their withdrawal from the circulation, not only a disturber of nutrition, but a heavy drain upon the recuperative powers of the patient. Nor was this all, for when decomposition set in, the receptivity possessed by the tissues led to the absorption of poisonous material, and was a fertile source of the numerous epidemics of pyæmia and hospital gangrene which were so disastrous in their effects when they extended through the wards of a large hospital. Happily, in the midst of these complications, the antiseptic system came to our aid. Its chief end was the prevention of decomposition, and the results subsequently attained through its instrumentality have clearly proved the truth of the theory first propounded by Lemaire, that wound products become altered under the influence of contaminated air, and give birth to a series of phenomena due to one and the same cause—fermentation. The views held by this distinguished Frenchman, and afterwards successfully worked out by Lister, were almost universally received with doubt and distrust, while many eminent members of the profession openly ridiculed and condemned them, without even waiting to test their stability or verify by actual observation the correctness of the data which had been advanced regarding them. The antiseptic system has, however, stood the test of time—the most trying of all tests,—and the verdict which must now be given is that its adoption has proved an incomparable boon to surgery, not only on account of the improved forms of treatment and subsequent immunity from bad effects it has given rise to, but for the many departures from the beaten path now practised with safety, and which adherence to its principles warrants.

Performance of Amputations.

Amputation, though essentially a radical measure, is at the same time a conservative act, and its performance may be required either in consequence of injury or for the removal of disease. Certain axioms have long since been laid down as necessary for the successful conduct of this class of operations, and many of the dicta of the older writers are, with certain modifications, still upheld and acted upon by the leading surgeons of the present day. Thus, while recognising the propriety of taking away an affected part in its entirety, we make it a rule not to go nearer the trunk than is necessary, and it is a fundamental maxim that skin must cover muscle just as muscle ought to envelop bone. Before proceeding to operate it is our duty to see that the parts which are about to be subjected to surgical interference are thoroughly clean, because impurities which are allowed to remain may vitiate the result; and in such cases failure is not unlikely to be ascribed to some element entirely foreign to the true cause or a mere accident in its production. If these precautions require to be taken on behalf of the patient, similar vigilance is equally necessary on the part of the surgeon and his assistants. Their hands must be freed of all matter capable of becoming a focus for the spread of decomposition, while every instrument ought to be in faultless order. Nothing more plainly bespeaks slovenly arrangements on the part of, or is so derogatory to the reputation of, the surgeon as badly kept or dirty instruments; and few things are more likely to react prejudicially than the apathy which permits such a state of matters to exist.

It is well to bear in mind the fact that an amputation should never be attempted without efficient help, and the adoption of the divisional system greatly contributes to its more perfect performance; each man being assigned a post, and if possible being practised in, and therefore conversant with, the particular part allotted to him. If, for example, we are called upon to remove a leg, one assistant should be entrusted with the holding of the thigh, a second ought to grasp the foot, and a third can attend to the retraction of the flaps. The instruments are best placed under the care of one person, and the sponges[1] under that of another; while nurses ought clearly to understand the position they are to occupy, and the nature of the service expected from them. In this way work is more expeditiously performed, there is a total absence of confusion, and time as well as labour are utilised to the utmost advantage.

In all amputations it is of paramount importance to reduce the loss of blood to a minimum. The old mode of controlling the circulation in a limb used to be for an assistant to grasp the parts above the seat of operation and compress the main artery at its most convenient point; but though the chief vessel may be commanded by this means, its branches are unlikely to be so, and the parts below are not rendered exsanguineous. A further drawback to such a mode of procedure is that the hands of the person who is entrusted with this duty are apt to become cramped from the continuous strain placed upon them, and if the fingers are relaxed a considerable quantity of blood escapes, which adds to the difficulty of ligaturing the blood-vessels, and at the same time weakens the patient. The tourniquet of Petit was an advance upon this; but as the compression exercised by the screw and strap is confined to a limited area, its employment cannot be well borne for any length of time. The elastic rod with the catch of Foulis is even worse than the means just mentioned, and if stretched tightly round a limb may give rise to sloughing of the tissues in its neighbourhood.[2] With both these agents, unless special precautions are taken to the contrary, a large quantity of blood is imprisoned below the seat of amputation, and is thus wasted.[3] Both are also liable to produce a temporary paralysis of the vaso-motor nerves in the locality, and until the atony consequent upon this procedure passes off, the capillaries and smaller arterial twigs remain dilated. Their power of contractility is not regained for some time, and so long as such a state of matters exists oozing will continue to go on. Fortunately, however, we have in the elastic bandage a means of attaining our end which is in great measure free from the drawbacks just alluded to. The amount of pressure exercised by it gives rise to no uneasiness,[4] and its action, while cumulative in principle, is twofold in character—emptying the parts of blood and controlling the circulation. Its application should be commenced at the distal extremity of the limb which is to be operated on,[5] and carried as far upwards as may be deemed advisable. The webbing is then unrolled from its lowest end, and when uncoiled to a sufficient extent is finally wound round its uppermost folds and made fast by a safety pin; or, if more convenient, a second bandage can be affixed above the first one, the latter being removed as soon as the former is secured. When we have to

[1] Sponges ought to be perfectly clean and freed from every particle of sand or septic material. During an operation sponges after being used had better be thoroughly washed, in order to rid them of blood, and they should be wrung out of the carbolised solution before being handed to the surgeon.

[2] An instance of this is referred to in the Glasgow Medical Journal for January, 1883, page 9, and a short experience of the rod on one's own person will soon convince the most sceptical in regard to the truth of the statement. Such a complication is more likely to occur in the arm than in the thigh, the former not being so well clothed with soft parts as the latter.

[3] All who have witnessed the performance of amputations when these modes were prevalent must recollect the gush of venous blood imprisoned below the seat of operation which succeeded the cutting of the vessels.

[4] This is accounted for by the webbing being spread over a large surface.

[5] Prior to the application of the bandage the limb should be elevated.

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deal with a limb which is the seat of malignant disease,[6] or with one which contains a large collection of purulent fluid, it is inadvisable to adopt this method of rendering the parts exsanguineous because of the forcing of diseased material into the tissues.[7] In such cases the difficulty may be overcome by raising the limb to a vertical position for four or five minutes, and then putting on the bandage above the site selected for operation. Elevation[8] under such circumstances no doubt contributes towards the emptying of the bloodvessels, but the chief factor in producing ischæmia is a nervous one, the stimulus which is given to the vaso-motor system by the diminution of pressure, caused by the action of gravity on the contained blood, acting on the arteries and inducing a reflex contraction of their parietes.

The Cutting of the Flaps.

The shaping of the flaps now claims our consideration, and amongst the different styles of fashioning these we may first mention the circular, which has no lack of advocates, and is much practised in America. The method recommended by Teale is one which is frequently followed, and in many ways it is an excellent mode of operating. The flaps when accurately measured come nicely together, there is a natural drainage, and the cicatrix lies out of harm's way; but as the anterior flap requires to be one-half the circumference of the limb, a needless sacrifice is entailed, and we thus go nearer the trunk than is really necessary. Lister[9] in some degree meets this difficulty by making the anterior flap equal to two-thirds of the diameter of the limb, and the posterior flap half the length of the anterior. At the present time many surgeons seem to be in favour of flaps of nearly equal length, though circumstances frequently alter cases and render adherence to any fixed rule a matter of impossibility. It often happens, for example, in cases of injury that the tissues on the front of a limb are severely crushed, while those on the posterior aspect remain comparatively sound. Under these circumstances we are compelled to select a long posterior flap with a short anterior one, because the latter, from its bruised condition, will, if retained, almost certainly slough. In whatever way we proceed we ought always to secure abundant covering for the end of the bone in order to ensure freedom from tension; and if the drainage be good and other conditions favourable, any special formation of flaps is a matter of minor importance.

We will now suppose the various preliminaries have been attended to, the parts at the seat of election cleaned[10] and shaved, the limb emptied of blood and firmly held, and that the operator is ready to proceed in the execution of his task. The shape and length of the flaps having been decided on, the first incisions ought to be made with a free sawing motion of the knife, the point of the blade being made to penetrate through the entire thickness of the skin.[11] A skilful hand should retract the flaps as these are gradually dissected back, care being taken by the surgeon to include the whole of the cellular tissue in order that the vascularity of the tela adiposa may not be encroached upon, and keep them out of harm's way when the operator is cutting the muscles and sawing through the bones. During the latter process the distal portion of the limb ought not to be depressed or elevated beyond a certain extent. Should we fall into the first of these errors, the edges of the bone are apt to be splintered; and if the second be not avoided, the instrument is liable to become locked between the osseous surfaces. Any little projections which happen to remain can be filed down with the rasp.[12]

Ligaturing of the Bloodvessels.

When the separation of the limb from the trunk has been accomplished, our next duty is to see to the occlusion of the bloodvessels, and it is of the first importance to close as many of their divided ends as we possibly can. Should this precaution not be attended to a greater or lesser amount of oozing will ensue, and if the material which has exuded does not obtain a ready exit tension speedily follows. The securing of the arteries will be greatly facilitated by having a number of pairs of catch forceps ready to affix to their various mouths. After these are applied the different points can then be ligatured, and the process repeated as often as is necessary until the whole area of the stump is gone over.[13] One great advantage of the elastic bandage is that from the artificial ischæmia which it produces the empty channels of the larger arteries can be seen and tied with ease and deliberation, and without loss of blood to the patient. Silk was at one time almost universally employed in the ligation of arteries, and surgeons were in the habit of leaving the ends long in order that the whole thread might be pulled away after the lapse of a certain time. To some extent strands of this material also acted as drains, but the porosity of their fibres and consequent liability to be infiltrated with inflammatory products proved sources of disturbance. Chromicised catgut is to be preferred for this purpose, because while equally efficient its presence in a wound gives rise to no irritation, and being cut short is in the majority of cases ultimately absorbed. In ligaturing bloodvessels care should be taken to isolate their parietes, in order that adjoining structures may not be included. Nerve trunks are best cut short, as their presence in a wound is undesirable, and may give rise to future complications.

(To be concluded.)

[6] More especially those of the soft type.

[7] The mode just alluded to would also have been undesirable in a large diffuse aneurysm of the femoral artery which I happened to see not long since, and where an immense quantity of clotted blood was turned out previous to tying both ends of the vessel.

[8] See Holmes' Surgery (third edition), vol. iii., page 708. See also an Address on the Influence of Position upon Local Circulation, by Joseph Lister, F.R.S., Brit. Med. Jour., June 21st, 1879, page 923.

[9] Holmes' Surgery (third edition) vol. iii., page 706.

[10] It sometimes happens that a limb is besmeared with grease, and in such cases a little spirit of turpentine will be found one of the best agents for removing it. Under ordinary circumstances soap and water are sufficient for cleansing the parts. There are many surgeons who use ether for this purpose.

[11] An excess of covering should always be preferred to a deficiency, because any redundancy soon contracts to its normal limits.

[12] It leaves a smoother surface than the bone forceps, which are usually employed for this purpose. An excellent style of rasp is made by Thamm, of Berlin.

[13] This will be found to be a better plan than the one which used to prevail of seizing any vessel indiscriminately, ligaturing it, and proceeding towards it in the same fashion.

ABSTRACT OF REMARKS ON A CASE OF

RELAPSING OR INTERMITTENT PNEUMONIA OCCURRING IN AN AGED MAN.

BY SIR ANDREW CLARK, BART., M.D.,
PHYSICIAN TO THE LONDON HOSPITAL.

ON the 25th March, 1884, the patient was first seen, and had for five days suffered from disordered digestion and malaise, with aching pains and feverishness. He was a gentleman aged eighty-two, of vivacious appearance, light and spare frame, and of active habits. In 1877 he had had an attack of pneumonia. There was a history of his having caught cold, and when first seen the countenance was pinched; the eyes were dull; the face yellowish, the tongue loaded, the appetite gone; there was thirst; the abdomen was full; the urine high coloured, free from albumen, but loaded with urates. The breath sounds were feeble at the posterior base of the right lung. The pulse beat 86 times per minute; the smaller arteries were exceptionally soft, and otherwise sound; the skin was hot; there was a dull headache with languor. A fluid diet was ordered, with a saline draught, and a colocynth and blue pill was given at 10 P.M. On the 26th a rigor set in; the temperature rose to 103°; the pulse was 94 per minute. The breath sounds were very feeble at the right base. Poultices were ordered; salines and the pill were repeated, and an enema was prescribed. On the 27th another severe rigor came on; the general condition remained unaltered. Now there was feeble bronchial breathing with increased vocal resonance. On the 28th another rigor set in; the mouth and tongue became dry; the thirst was increased. The bowels had been relieved. The temperature registered 104°. There was dulness over the posterior base of the right lung; the respiration numbered 24 per minute. There had been no cough. Half an ounce of brandy twice or thrice a day was prescribed with small doses of quinine. On the morning of the 29th the report showed a restless night, but no fresh rigor had occurred. The temperature was 100°, the pulse 80, the respiration 28. The patient felt much better, and had taken food well. Dulness with increased vocal fremitus, and tubular breathing with bronchophony, were made out at the right posterior base. There was no pain and no distress of breathing. On the 30th there was general improvement. On the 31st a fresh

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rigor was observed, and the patient got rapidly ill again; the temperature was 103°, the pulse 110, the respiration 32. The tongue was loaded and dry, and there were signs of fresh consolidation in the middle of the right back. The lower part of the right lung remained much the same as before. An alkaline saline was ordered every four hours, with brandy, quinine, and poultices. On April 2nd the patient said he was well, and the skin was moist. There were moist crepitations over the right lower back. Within four hours of the time at which these notes were made the pulse and temperature had risen rapidly, and there were signs of renewed illness. Cough set in for the first time; the face became bluish. The signs of a third strip of consolidation were detected higher up in the right back. The brandy was increased in quantity, and ammonia was added to the medicine; hot bottles were applied to the extremities. Again, on April 3rd, the patient was better; the temperature had fallen to 96°; the pulse was 80, but very weak and small. In the evening the temperature was 103°, and the consolidation had extended upwards. The notes of April 5th speak of improvement, but towards the evening the patient suddenly chilled, and all the symptoms grew bad again. The next morning the temperature was 97°, but at noon a sudden severe and prolonged rigor occurred. Strong soup and other stimulants were persevered with. There was now dulness on percussion at the base of the left lung; the skin was cold at the extremities, though everywhere dry. Another rigor occurred on April 7th, and afterwards on each day at half-past twelve there was a rigor till the 11th and 12th, when none occurred. At midday on the 13th another rigor supervened, and the patient was much exhausted; there were large crepitations to be heard at the base of the left lung. On the 14th he passed a fair night, and the temperature was 96°; there was an occasional cough and a slight amount of viscid, unstained mucoid expectoration. At midday the worst state of the patient was reached; the skin became dusky, dry, and hard, with a severe rigor; the pulse was small, weak, and irregular, and he had the aspect of one suffering from cholera. He remained in this state about four hours, and then began to recover at about five P.M. The urine contained a little albumen; there was no cough and no expectoration. The pulse was 116, compressible and irregular. There were the signs of consolidation of the upper part of the left lung. On the 15th he improved till the evening, and on the 16th he was greatly better. Later on the physical signs were clearing up, and the temperature was 98° in the evenings. The diet was changed to semi-fluid articles, and claret was allowed. On the 6th May the patient was fully convalescent, and complete recovery soon followed. The patient had passed through as many as nine or ten severe rigors with six pneumonic consolidations and seven weeks' illness.

In his remarks on the case Sir Andrew Clark spoke of the remarkable character, assemblage, and progression of the symptoms, and of the age of the patient, making the case one of great rarity in the annals of medicine. The nature of pneumonia, whether it were a local disease or a fever with a local manifestation, was touched upon. If pneumonia be really an inflammation or not was a question which had concerned him for many years. In his work on pneumonia Dr. Sturges considered that the phenomena of inflammation were conspicuously exhibited in pneumonia, and that the anatomical and histological phenomena were fully satisfied. Further, he not only considered pneumonia to be inflammatory, but regarded it as the pattern and model of all inflammations. Sir Andrew had contested these views at the Royal College of Physicians as long ago as 1866. In a consolidated pneumonic lung we might histologically investigate the solid exudation in the alveoli, the relations of the exudation to the alveolar wall and the condition of the alveolar wall itself. In investigating these three conditions he failed everywhere to find any signs of cell proliferation, and there were nothing but the signs of regressive change. The number of red discs extravasated in acute pneumonia equals or exceeds the number of leucocytes; the blood-discs were undergoing changes in the fibroid network just as in blood-clots. In the alveolar septa there was no evidence of any change with the exception of occlusion of some of the bloodvessels. Dr. Johnson had shown that in acute nephritis the vessels were not occluded but much enlarged. The absence of signs of active cell proliferation made one ask whether the alveolar tissues might not be incapable of any other manifestation of the inflammatory process. But the facts observed after traumatic influences, in connexion with tubercles and as a result of inhaled irritant particles, or from the spread of inflammatory processes from the pericardium or pleura, negatived such a notion. These considerations made him believe that the consolidation of pneumonia, though it might be an abortive inflammation, was much more like an active congestion in which capillary extravasation took place before the inflammation could be continued to its classical completion.

With regard to the principles which guided him in treatment there were possibly none, and medicine might be said to be the most unprincipled of arts, and that every case was a law unto itself. He had given, first, attention to the man, and next to the malady. The food was given in relays, not too liberally nor too frequently. He endeavoured to maintain the vigour of the circulation, and by other measures, such as warm sponging, the maintenance of gentle evacuations, the absence of noise or fussiness, with light and fresh air to keep the organism in the best possible state for recovery.

THE TRUE VALUE OF PICRIC ACID AS A TEST FOR ALBUMEN AND SUGAR IN THE URINE.

BY GEORGE JOHNSON, M.D., F.R.S.,
PROFESSOR OF CLINICAL MEDICINE, SENIOR PHYSICIAN TO KING'S COLLEGE HOSPITAL.

RATHER more than two years ago the discussion on the use of picric acid as a test was commenced in the pages of THE LANCET. The object of the present communication is to summarise the result of that discussion. And first, I beg sincerely to thank those who frankly stated what they believed to be objections to the test, for the result has been that its true value has been more speedily and firmly established than it could have been if it had been left unnoticed and uncriticised. The objections to its use as an albumen test have been the following:—

1. It was said that it gives with peptones a precipitate not distinguishable from albumen. It is a fact that it gives with peptones a precipitate at first sight like albumen, but I was the first to show that the peptonous precipitate, unlike the albuminous, is completely redissolved by heat much below the boiling-point of water. Now, this power of precipitating peptones when mixed, even in very minute quantities, with urine constitutes one of the chief uses of picric acid as a test. I have always insisted on the importance of applying a boiling temperature to every urine in which picric acid throws down a precipitate. Such a precipitate, if composed of albumen, is always made more dense and voluminous by heat; while, on the contrary, a peptonous precipitate entirely disappears, and one of mixed peptones and albumen is lessened by heat. The result of this extremely simple and accurate mode of testing for peptones has been that I have found them in only two out of several hundred specimens of urine. The often repeated statement that peptonuria is of frequent occurrence is, I believe, a result of trusting to Fehling's solution as a test for peptones. That agent gives with other substances, certainly with albumen, a red colour which is not distinguishable from that which results from a peptonous mixture. Nothing can be easier than to separate peptones from albumen if they should be combined in the same urine. This may be done in two ways:—1st. The albumen having been coagulated by heat, the peptones, which are not affected by heat, may be separated by filtration. 2nd. The mixed peptones and albumen having been precipitated by picric acid, the peptones are redissolved by boiling, and then separated by pouring the boiling liquid on a previously heated filter. The coagulated albumen will be left on the filter, while the picrate of peptones in the filtrate will be re-precipitated on cooling. I claim, then, for picric acid that it is at once the most delicate and trustworthy known test for peptones in the urine.

2. It has been truly stated that picric acid gives with the *vegetable alkaloids*, such as those of cinchona, a precipitate like albumen—like it, that is, at first sight, but unlike it in being completely redissolved below the boiling-point of water, and therefore not to be mistaken for albumen by those who follow the rule of applying heat to every precipitate or opalescence caused by picric acid. It is only when

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large doses of the vegetable alkaloids are introduced into the stomach, such as a five-grain dose of quinine, that enough escapes through the kidneys to give a precipitate with picric acid. Cases may occur, such as those of poisoning by opium or its alkaloid, in which picric acid as a urinary test for morphia might be of practical value.

3. It is a fact that picric acid, like nitric or any other acid, when added to urine, sometimes, though rarely, causes a turbidity from precipitated urates; this precipitate, however, unlike albumen, is at once and completely redissolved by heat.

4. It has been repeatedly and confidently asserted that picric acid precipitates *mucin*, but this statement can easily be proved to be erroneous. In fact, picric acid is the only common test for albumen, except heat, which has no apparent effect on mucin. All normal urines contain, partly in solution, and therefore not separable by filtration, and partly suspended, a substance which it is the custom to call mucin, and which is known to be coagulable by acetic and citric and by the dilute mineral acids. A few drops of acetic or solution of citric acid added to most, if not all, normal urines render them, in the course of a minute or two, slightly but decidedly hazy or opalescent when viewed against a dark background, which is essential in all cases of delicate testing. This haziness forms slowly, and is in no degree increased or diminished by boiling. So with nitric acid, as Dr. Wm. Roberts correctly and clearly states in the recently published *Medical Chronicle*, p. 2, "when a urine, containing both albumen and *mucin* is tested by the *contact method* with nitric acid, the albumen is thrown down just above the line of junction of the two fluids, while the mucin is brought into view towards the upper part of the column of urine, where it gradually forms a diffused haze, quite distinct from the opalescent zone at the line of junction." This haze is due to the action of the nitric acid, diluted by diffusion through the urine, upon the mucin. Now, when a saturated solution of picric acid is added in about an equal volume to a normal urine, the mixture remains quite transparent, except in the rare case of turbidity resulting from precipitated urates, which heat would at once remove. But the addition of acetic or citric acid to the mixture of picric acid and urine will gradually cause a considerable haziness, as will the addition of picric acid solution to urine with which acetic acid has been previously mixed. In this experiment the picric acid renders more apparent the haziness which results, not from the picric, but from the action of the acetic or citric acid. In short, picric acid alone has no visible effect upon mucin, while picric acid with acetic or citric acid causes a mucin haziness in most, if not all, normal urines. One of the most conclusive proofs that picric acid does not coagulate mucin is afforded by the following experiment:—Add to an albuminous urine of normal acidity an equal volume of picric acid solution, then boil so as to ensure the complete coagulation of the albumen, and filter. Add a few drops of acetic or citric acid solution to the clear filtrate, and the result will be, in a minute or two, the appearance of a slight, but perceptible, haze of mucin which the combined influence of picric acid and heat had left in the solution, and so passable through the filter. It is obvious from the foregoing statement of indisputable facts that any test for albumen which requires for its action the combination or the addition of acetic or citric acid is liable to the fallacy that it will give with the mucin present in normal urine an opalescence or haziness which is not distinguishable from that caused by a minute trace of albumen. This remark applies to the tungstate of soda, the ferro-cyanide of potassium, and the potassio-mercuric iodide, but especially to the last-mentioned test. The potassio-mercuric iodide, which, without the addition of acetic or citric acid, gives no reaction with albumen, with that addition causes in most, if not all, normal urines a decided mucin opalescence. I say in *most* normal urines, because although I have found this result in all the normal urines which I have examined, it is possible that there may be some exceptions. It is manifest therefore that picric acid, which requires the addition of no other acid, has a decided advantage over those tests which do require such an addition. It is true that picric acid will not coagulate albumen in an alkaline urine, but an excess of the test is sufficient to acidify most alkaline urines. If, however, a specimen be highly alkaline and ammoniacal, the safest method of procedure is to acidify with acetic or citric acid, then to filter, and add picric acid to the filtrate. The mucin coagulated by the acetic or citric acid will remain on the filter, while the albumen, if present, will pass through. Here, be it observed, the mucin of normal urine must not be confounded with the morbid *mucus* from an inflamed or catarrhal mucous membrane. The mucus which is secreted by an inflamed bladder or urethra or vagina is allied both chemically and microscopically to pus, and, like pus, contains albumen. The presence of morbid mucus in the urine renders the secretion visibly turbid, and the turbidity must be removed by filtration before the tests for albumen can be conveniently applied. Obviously in practice it is of primary importance to distinguish uterine or vaginal, vesical or urethral sources of muco-purulent albuminuria from that which is of renal origin, but it is no part of my present purpose to indicate the means by which this diagnosis is to be made. The result then of the various experiments with picric acid has been to show that *albumen is the only material found in the urine which gives with picric acid an opalescence or a precipitate which is insoluble by heat.* The most delicate test for a minute trace of albumen is to allow the picric acid solution to *mix*, and not merely to come in contact, with about two inches of the upper part of a long column of urine in a test tube, and then to boil the top of the liquid. The more or less turbid upper layer contrasts with the clear urine below. The slight haziness caused by a mere trace of albumen is always increased by heat, while the turbidity caused by urates, &c., is completely removed by heat. If the urine before testing is rendered turbid by urates these must be removed by heat before the picric acid is added, and if by mucus or other floating particles the fluid must be cleared by filtration. When the albumen is very copious the coagulum formed by a few drops of picric acid solution is redissolved, and an excess of the test is required to produce a permanent precipitate. It is manifest, therefore, that the mere *contact* of a column of picric acid solution, without mixture with such a specimen, might give no indication of the presence of albumen. A similar source of error exists in using the so-called "contact method" with nitric acid. I once saw a clinical clerk so carefully pour a column of urine on nitric acid, previously placed in a test-tube, that the two liquids came into contact without mixing. The result was a slight opacity at the junction of the two liquids, and the inference that a mere trace of albumen was present; but as the history of the case had led me to expect an abundance of albumen, I gave the test-tube a shake, when the mixed liquids became nearly solid with albumen. It is a well-known fact that while an excess of nitric acid redissolves coagulated albumen, especially when the mixture is heated, an excess of picric acid has no such misleading effect.

5. It can scarcely be urged as an objection to picric acid as a test for albumen, that to avoid some sources of fallacy the simultaneous or subsequent application of heat is necessary. There is no known single test which, by itself, can be relied upon. This remark is especially applicable to the nitric acid and the boiling tests, each of which employed alone has been, and must continue to be, a source of error.

Picric acid as a qualitative and quantitative test for sugar.—Although my proposal to employ picric acid with potash as a qualitative and quantitative test for sugar in the urine gave rise to a prolonged and somewhat acrimonious controversy, the result of the discussion may be very briefly summarised. It was admitted that when a solution of grape sugar is boiled with picric acid and potash, the yellow picric acid is partially deoxidised and converted into the red coloured picramin acid. This reaction had been observed by Braun, a German chemist, about twenty years ago, but it had never been practically utilised until, "by a happy accident," I rediscovered it.[1] It was also known to chemists that the alkaline sulphides have the same reducing effect as glucose on picric acid, and it was therefore contended that the unoxidised sulphur compounds in urine, and especially in albuminous urine, would form an alkaline sulphide when boiled with caustic potash, and so prove a source of fallacy. I soon found that the practical results were not in accordance with the theoretical objections; for in analysing by the picric acid process a highly albuminous urine, which was also saccharine, one specimen before and another after the removal of the albumen by heat, the results were so nearly identical that for clinical purposes it was not worth while to remove the albumen. And when, before analysing the urine, it was filtered through animal charcoal, so as to remove some colouring matter which appears to be associated with the

[1] See THE LANCET, Nov. 18th, 1882.

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albumen, the results of the analysis of the albuminous and the dealbuminised urine by the picric acid process were found to be perfectly identical. Ultimately my son succeeded in proving to demonstration that the formation of an alkaline sulphide by boiling unoxidised sulphur compounds with potash depends upon the strength of the alkaline solution. When albuminous liquids or other sulphur compounds are boiled with a strong solution of caustic potash an alkaline sulphide is formed. On the contrary, when unoxidised sulphur compounds are boiled with such weak solutions as are employed in testing and analysing saccharine urine no alkaline sulphides are formed, and the picric acid process of quantitative sugar analysis is liable to no such fallacy as theoretical considerations had suggested.[2]

The ready method of qualitative albumen and sugar testing consists in adding to about a drachm of urine in a test tube an equal volume of picric acid solution. This, when boiled in accordance with the rules before given, affords a certain indication of the presence or absence of albumen; then, whether albumen be present or not, add about half a drachm of liquor potassæ (P.B.), and boil for about half a minute. Any coagulated albumen that may be present is redissolved by the alkali, and the resulting colour in a non-saccharine urine is claret red. A good practical rule is that if any red colour is visible through the boiled column of liquid in the test tube, there is less than two grains of sugar per ounce. A solution of glucose in the proportion of two grains to the ounce, after boiling for a few seconds with picric acid and potash, appears quite black until it is diluted with water. Then, having ascertained the presence of sugar, we proceed to make a quantitative analysis by means of the "picro-saccharometer."[3] I have good reason for my belief that practitioners not much accustomed to testing for sugar will find the picric acid method much easier than the copper process. A very common source of error is this, that the slightly coloured phosphatic sediment thrown down by the alkali in the copper solution is mistaken for suboxide of copper, and sugar is erroneously supposed to be present when the urine is perfectly normal.

The materials for bedside albumen and sugar testing may be conveniently and safely carried in a solid form in a pocket test-case, the picric acid in powder and the potash in grain lumps. These, with a small spirit lamp, are all packed into a waistcoat-pocket case by Mr. Hawksley, 357, Oxford-street; or they may be carried in Jahncke's larger, but very pretty, cheap, and convenient case, which was favourably noticed in THE LANCET of September 20th, 1884.

One of the main objects of this communication has been to promote and facilitate the practice of testing the urine in every case of disease, however trivial it may appear. When this practice becomes general, as it ought to be, there will be fewer cases of disease of the kidney passing on to the stage of hopeless and incurable degeneration before they are discovered.

Savile-row, W.

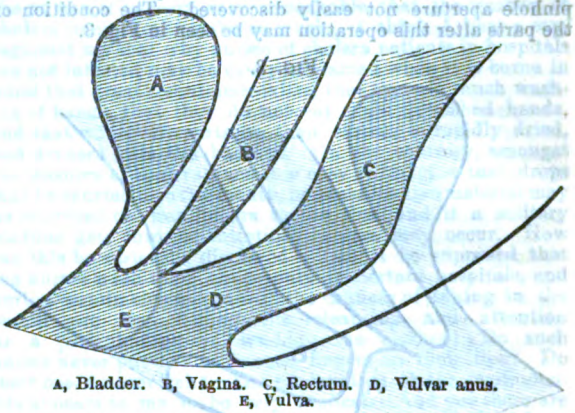
A CASE OF

CONGENITAL VULVAR ANUS CURED BY OPERATION.

By JAMES H. AVELING, M.D.,
SENIOR PHYSICIAN TO THE CHELSEA HOSPITAL FOR WOMEN.

THE subject of this rare malformation was born in 1866, and it was not until she was five weeks old that the unusual situation of the anal orifice was discovered. She was then taken to Sir Prescott Hewett, who made an opening into the rectum in the normal position of the anus. This was kept open by passing bougies more or less frequently for two years. Caustic was applied to the vulvar anus with the intention of causing it to close, but without effect. Up to the age of fifteen the patient was little troubled by the involuntary escape of fæces, constipation being habitual with her, and no motion passing without the use of aperients. At this time a change of residence caused constant relaxation of the bowels, and great inconvenience was experienced. Retention of fluid fæcal matter could only be effected by sitting with the legs tightly crossed. In 1882 she was sent to school at Brighton. While there the relaxation ceased, and although fæces and flatus passed through both openings she experienced little inconvenience. In 1883 the patient began to suffer violent abdominal pains, which induced her mother to relate the whole case to a medical friend, who advised that Mr. Jonathan Hutchinson should be consulted. He saw her, and gave a rather unfavourable prognosis, but recommended the mother to let me see the case, and obtain my opinion as to whether any operation would be feasible and likely to succeed. In February, 1884, the patient was brought to me. She was seventeen years of age and in good health. The catamenia had appeared when twelve years old. A lodgment of hard fæcal matter in the colon had been discovered recently, and to a great extent removed by suitable treatment. On examination I found the malformation, previous to any operation, to have been as depicted in Fig. 1.

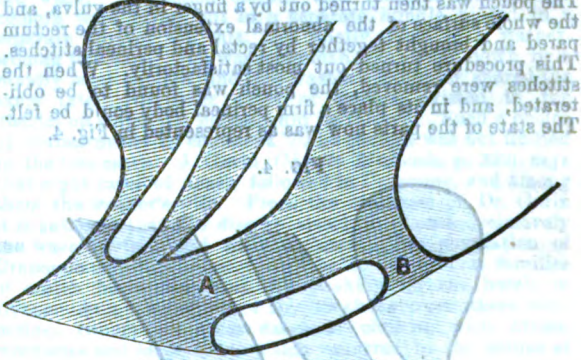
FIG. 1.



A, Bladder. B, Vagina. C, Rectum. D, Vulvar anus. E, Vulva.

It is well known that in early fœtal life the anal orifice is to be found terminating in the uro-genital sinus, and that this condition of parts continues until the perineum descends and divides the rectum from the vagina. If this developmental action be arrested, what has been called atresia ani vaginalis results. This appellation, at no time very correct, is quite unsuitable in the present case, for the anal orifice was not found terminating in the vagina, but in the vulva, where the fossa navicularis is usually situated. The condition of parts as I discovered them is represented in Fig. 2.

FIG. 2.



A, Vulvar anus. B, Artificial anus.

The vulvar anus readily admitted the tip of the index-finger. Had coitus taken place while this condition of parts existed, the penis would most probably have penetrated the rectum instead of the vagina. The artificial anus was rigid and unyielding all round its margin, and could not be dilated so as to permit of any operative measures being performed through it. Fæces and flatus passed through both openings. Beyond this the patient had no inconvenience, except a feeling of want of support in the perineal region, "tumbling to pieces" when standing or walking. Strange to say, up to within a few months of seeing me she had been ignorant of her malformation, and thought her uncomfortable state was shared by all her sex. In February I endeavoured to close the

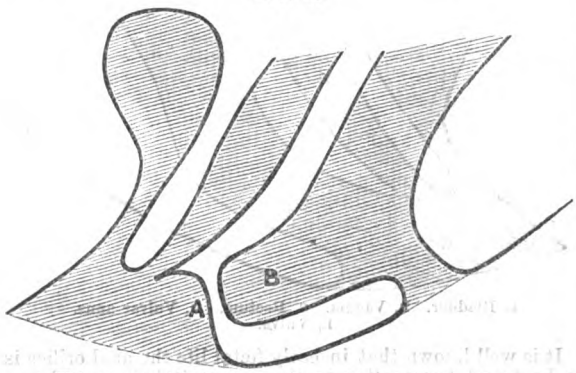
[2] The paper in which my son, G. Stillingfleet Johnson, described his observations On the Action of Potash on Albumen was published in the Chemical News, Feb. 23rd, 1883.

[3] For the details of this easy, rapid, and accurate process I must refer the reader to my pamphlet on Albumen and Sugar Testing, published by Messrs. Smith, Elder, & Co., as may be seen in the advertising columns of THE LANCET.

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vulvar anus by paring its edges and bringing them together with silver-wire sutures, secured by my shot coils. After the operation the bowels were ordered to be kept free by a small dose of castor oil every morning. The result of this was to bring down a large mass of hardened fæces, which forced its way along the abnormal rectal passage, and tore open the vulvar orifice, entirely defeating the object of the operation. In March, having assured myself that all scybalous masses had been removed, I operated again in the same way as before. The motions were kept fluid, and came away readily by the artificial anus. The flatus, however, forced its way between the stitches on the fourth day after the operation, and caused partial failure. The opening, being reduced to the size of a goosequill, still permitted the passage of fæces into the vulva. In June I repeated the operation, this time passing a small cylindrical speculum through the artificial anus and keeping it in the rectum, so that the flatus might pass through the tube and not reach the recently closed orifice. This plan answered well, and resulted in the vulvar anus being closed, with the exception of a minute pinhole aperture not easily discovered. The condition of the parts after this operation may be seen in Fig. 3.

FIG. 3.

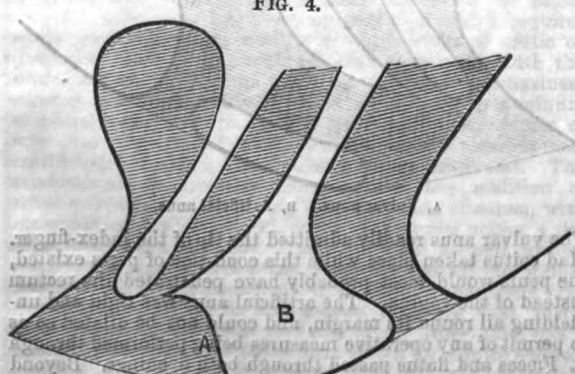


A, Vulvar anus closed. B, Pouch resulting from the operation.

Now another trouble presented itself. The fæces after the oil was stopped became hard, and passed along the rectum to the closed vulvar orifice. There they became impacted, the patient having no power to expel them from this newly formed pouch (Fig. 3, B).

In October I operated for the removal of this condition in the following manner:—The perineal portion of the pouch was divided through the mucous membrane and skin longitudinally up to, but not through, the united vulvar orifice. The pouch was then turned out by a finger in the vulva, and the whole surface of the abnormal extension of the rectum pared and brought together by rectal and perineal stitches. This procedure turned out most satisfactorily. When the stitches were removed, the pouch was found to be obliterated, and in its place a firm perineal body could be felt. The state of the parts now was as represented in Fig. 4.

FIG. 4.



A, Newly formed fossa navicularis. B, Newly formed perineal body.

The result of the operation on the patient was most gratifying. She expressed herself delighted with the change in her local feelings; for besides being relieved from the annoyance of fæces and flatus passing from the vulva, she felt she had lost a sense of weakness and insufficient support in the perineal region. She could hold herself more erect and take longer strides in walking. In the event of her marrying and having a child, she stands a better chance now of escaping serious laceration.

Remarks.—Many women suffering from this malformation have passed through life without any attempt having been made to remedy the distressing infirmity; one even married and had children, and managed to conceal from her husband the abnormal condition from which she suffered. Operative procedures have, however, been adopted in many cases. In some, as in the case I have related, an opening has been made through the perineum into the rectum and an artificial anus formed in the natural situation. The chief difficulty met with in this mode of operating is the persistent effort of nature to contract and heal up the newly made opening. Some cases have failed in receiving relief from this cause, but when the operation proves successful the vulvar opening still remains to be dealt with. A case is related in which this closed spontaneously, but this happy event cannot be expected to happen often. Even the application of caustics has failed to bring about this desirable result. After the formation of an artificial anus Mr. Curling advises that the edges of the vulvar orifice should be pared and brought together by sutures, but I am not aware that this suggestion has been carried out except in the case I have now recorded.

Vicq d'Azyr proposed the following method of dealing with this malformation. He introduced a director through the vulvar opening and divided the skin and rectum as far back as the natural site of the anus. He thus prevented the escape of fæces into the vulva, but left no perineum. His operation cannot therefore be looked upon as satisfactory. Dieffenbach divided the perineum in like manner, but improved the method of Vicq d'Azyr by dissecting the rectum from the surrounding parts and stitching it to the coccygeal angle of his incision. Subsequently he operated for the formation of a perineum. Rizzoli improved Dieffenbach's operation by laying open the perineum without dividing the rectum. This he carefully dissected from its surroundings and transplanted backwards, stitching the vulvar orifice to the skin in the normal anal site. This is undoubtedly the best operation yet proposed, for it preserves sphincteric action, which is lost by all other methods.

My case shows that the closure of the vulvar anus, as proposed by Mr. Curling, is not sufficient. The portion of the rectum between this and the artifical anus must be obliterated. Should I chance to meet with another similar case, I should, by one operation, slit up the perineum and rectum, as in Vicq d'Azyr's method, and having pared the mucous surfaces of the abnormal rectal extension bring them together by vulvar, perineal, and rectal sutures.

Upper Wimpole-street, W.

CHOLERA.

BY MAX VON PETTENKOFER, M.D.,
OF MUNICH.

(*Concluded from page 1043.*)

THE last sheet-anchor of the contagionists is always the linen of cholera patients. But this view rests on such debatable ground that in the end it may prove to be fallacious. If cholera is really spread through human intercourse, then it is clear that the unknown specific something must accompany other vehicles, which may be man himself; and if this something can cause illness in man, then it must reside in the system of the patient, and ought to be found there. There can be no doubt of this; and I am prepared to admit as much. Thirty years ago I began my investigations on cholera in the belief that the germs of cholera were contained in the stools; but afterwards, having made sure that cholera was dependent on locality as well as human intercourse, I endeavoured to see how this relationship obtained by asking myself what was brought to the soil by man in his journeyings. The reply was, urine and stools—his excrements and nothing else. This view ripened into the belief that disinfection of the excreta and their receptacles ought to be a prophylactic measure against the spread of cholera, and excreta which had not been disinfected constituted a source of danger. These thoughts soon

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plied me up to April, 1866, when I published with my lamented friends, Griesinger and Wunderlich, some regulations on cholera; and I first relinquished these views when further study showed the uselessness of measures of disinfection as well as the harmlessness of the undisinfected excreta of cholera patients. If the poison of cholera be contained in the excreta, then, individual predisposition aside, those who mostly come in contact with the excreta ought to be most frequently affected. And these should be the various physicians and nurses in hospitals devoted to the care of cholera patients. But experience has clearly shown that the medical attendants in cases of cholera are not more prone to take the disease than others. The like holds good of nurses. Let us first of all consider how the facts stand in the home of cholera, in India. During 1867, in which the epidemic at Hurdwar prevailed, James Cuningham investigated the relationship of cholera to nurses in forty garrison towns containing sixty-seven hospitals; of the sixty-seven hospitals only eight gave instances of cholera in the nurses; the largest number of cases occurred at Dharmsala, where there were eleven, Kasauli had three, Muttra and Moradabad each two, Fazabad, Lakhnau, Mirat, and two others one each. An epidemic amongst the nurses can therefore only be spoken of in the hospital of the 1st Ghorka Regiment stationed at Dharmsala, where eight nurses, two porters, and one other officer were taken ill of the disease. These statements show how exceptional such occurrences are. Why should not a hospital as well as a garrison now and again be a centre of infection? Closer investigation proves, however, that the *personnel* of the hospital at Dharmsala was not affected in a greater degree than the population outside the hospitals. It may be shown that the percentage of cases of cholera amongst the outside population was 8·01; in other words, that eighty-six cases occurred out of 1073, whilst of the hospital staff of 127 eleven fell ill, or a percentage of 8·66. Cuningham also inquired whether the immunity enjoyed by nurses could be explained by disinfection. He found from ancient sources that this striking immunity of nurses was by no means a new thing, and had certainly obtained before the days of disinfection. He draws attention amongst other writings to an experience of Dr. Bruce, who wrote: "In 1848 cholera broke out amongst the infantry at Cawnpur from May to September. During the whole time the hospital was never free from single cases of cholera, and at times it was overfilled with them. The whole institution may be said to have lived in the rooms of the sick; the coolies did not leave the beds of the sick for an hour together, the physicians had much to do with the treatment of the patients; and yet not a man, whether European, half-caste, or native, showed a single symptom of cholera. I took the greatest pains to collect and sift these circumstances, but in this year not a single instance occurred." In India a practical use is made of this knowledge under the exceptional circumstances of the nurses being attacked. Nothing is said of isolation and disinfection; but the site on which the hospital stands is looked upon as unfavourable, and a change is made. This change of place is called by the English a movement, and as a prophylactic measure comes within the first ranks. If the site to which a movement has been made prove to be more unfavourable than that which was quitted —from the frying-pan into the fire,—the movement has not availed anything. No good comes of the movement if the *personnel* has been already infected as much as possible. The 66th Ghorka Regiment in its march through Tarai was not spared when it reached the Naini valley; but, probably, if it had stayed a day longer in Tarai, the percentage of illness, instead of being 10, would have been 20. It is the same as regards nurses and hospitals in Europe. I shall refer to Munich intentionally, not because it had so frequently been the seat of cholera (Munich had cholera once to Berlin's twelve times), but because I am better acquainted with the particulars. During the epidemic of 1873–74 we had three hospitals—the hospital on the left bank of the Isar, in Lindwurmstrasse, and that on the right bank of the river in Müllerstrasse, and the military hospital in Oberwiesenfeld. Cholera behaved in each hospital just as it behaved in the houses in their immediate neighbourhood. Cases of cholera appeared in all three hospitals. In that on the left bank of the Isar there was rejoicing on account of the supposed success of isolation and disinfection until August 15th, when the summer epidemic reached its height; then an epidemic suddenly broke out. This was at the time that the epidemic developed in Lindwurmstrasse, in which the hospital was situate, and the epidemic in the hospital subsided as the epidemic in the street gave way. In the hospital on the right bank of the Isar the rejoicings lasted longer. The Ismaningerstrasse took no part in the summer epidemic, and neither did the residents of the hospital. But in the winter epidemic the same course of affairs took place as had occurred on the left bank of the river. The military hospital escaped all along. Of the seven barracks in Munich any cases or suspected cases of cholera were immediately sent to the military hospital. Now and again a surgical patient or a patient suffering from other illness than cholera was put amongst other patients, and later on suffered from cholera. Such cases were of course removed to the cholera division as soon as the stools betrayed the case. At times the cholera division was very full, and many nurses were employed therein; but none of these fell ill or gave the least indication of cholera, though many of them must have come in very close relation with the cholera stools. In the military hospital in Müllerstrasse the same facts were observed as were met with in the case of the other hospitals. Seeing how little contagious cholera is amongst the nurses, it appears very remarkable that the washers of cholera linen should suffer so much. I think I hear a contagionist say that why nurses of cholera patients in hospitals are not infected may be easily explained when it is borne in mind that great cleanliness exists, that there is much washing of hands, that they do not eat with unwashed hands, and that whatever spurts on their clothes is rapidly dried, and dryness kills the bacillus. On the contrary, amongst the washers of cholera linen it is easy to imagine that drops may be spurted into the mouth, or that infective material may be conveyed on wet fingers to the lips, and if a solitary bacillus gets into the intestines cholera may occur. How can this be seriously discussed? Can it be supposed that the nurses wash their hands only in certain hospitals, and during certain times, and that the chances of taking in the bacilli are less during the cleansing and attention to a patient than in washing the clothes? Do such nurses never put the moistened fingers to their lips? Do their noses never itch? The explanation of the contagionists appears to me to be very comical. And yet there are cases in which the infection must have been derived from the linen soiled by cholera stools. A very interesting case came under my observation at Lyons in the washing villages of Craponne. In the *Gazette Médicale de Lyon* for 1854, page 252, we read from a letter by Dr. Gensoul: "In the month of July, 1854, two fugitives, a man and his wife, from cholera, alighted from Marseilles at the Milanese court. They had hardly arrived before they were attacked by cholera, the germs of which they had brought with them, and both died on July 17th. Some days later the washers of the Gasthof Bouchard in Craponne, a village about twelve kilometres from Lyons, came to fetch the linen for the wash. The soiled clothes and linen of the cases of cholera were given out in a separate bundle, placed in a separate part of the cart, and finally given to a washerwoman to clean. The washerwoman was struck down by a rapidly fatal cholera, and the washer's daughter shared the same fate. No other cases of cholera existed in the district on which the blame could be thrown. Such a choice of victims needs no comment." The cholera was not limited to the two cases. J. Garin (*Gazette Médicale*, p. 399) says that eight cases of death followed in Craponne, and among them the washer's wife. From the statistics of Dr. Garin it is gathered that the disease attacked almost exclusively the washing folk and their children. The population of Craponne numbers about 1600 inhabitants, several families of which have charge of the washing for the hotels of Lyons. As a later report of Dr. Bouchet showed, there were besides twenty-five other cases of cholera, with fifteen recoveries and ten deaths, which occurred in the course of two months. The year 1854 was that in which the lower lying parts of Lyons were invaded by an epidemic. It remains a striking fact that in the fair-sized village of Craponne cholera attacked almost exclusively the laundry workers. With the exception of the washers, Craponne might be regarded as a place free from cholera. In 1855 severe epidemics prevailed in villages near Lyons—e.g., St. Bonnet and St. Laurent de Mure,—though the outlying districts always enjoyed immunity from cholera. The same held good of other exempt districts. A very instructive example of this kind is furnished by Stuttgart in 1854, which is usually exempt from cholera. At the time when the severe epidemic prevailed at Munich an inhabitant of Stuttgart left Munich

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whilst he was suffering from diarrhœa, and arrived at Stuttgart, where he became worse and died of cholera. A few days later a case occurred in the person of a woman who had never left Stuttgart. She was the nurse of the case which had come from Munich. This case might be quoted as one of direct contagion. Again, after some days, a third case appeared, and this time it was the washerwoman who had cleaned the clothes of the first case. Finally, the washerwoman's husband suffered from cholerine. But no further cases appeared. Such cases are always wrongly interpreted by the contagionists as examples of direct infection, and such, at first sight, appears to be the case. If the case from Munich had infected the three at Stuttgart, how was it that none of the three infected other individuals? For it must be remembered that the cases at Stuttgart and at Craponne must have been tended and their linen washed. How was it that no further cases occurred, and that an epidemic was not started? The linen of the case from Munich was poisonous, but not that from the cases at Stuttgart! Must we not also suppose that another factor is necessary to explain the further spread of cases introduced from without? And this local factor was wanting at Craponne and Stuttgart. If a case from Munich caused three at Stuttgart, then the latter ought to produce nine. In places which enjoy immunity from epidemics it is conceivable that sporadic cases may occur, but the conditions which are necessary for the production of an epidemic being wanting no further development can take place. The soiled linen appears to me to be infective not because it comes from cases of cholera, but on account of its arrival from a locality where cholera prevails. Perhaps linen is a good vehicle for transmitting the infective material produced in a locality under the necessary circumstances of time and place. Man is the only creature that wears linen, and perhaps he alone spreads cholera, and it is possible that whether he were clothed or naked he would spread it just as much and no more. But if we accept this doubtful solution of the Gordian knot, still the views of the contagionists on the dejecta of cholera and the soiled linen would not stand on a firmer basis, since we see not only individual cases but actual epidemics arising without the introduction of soiled linen. The infective material which produces cholera may be transmitted at all events in other ways along the paths of human intercourse. The germs of cholera may be brought from a locality to a place where the necessary relations of time and place are not favourable for the epidemic development of cholera, and they may there slumber for a month before they develop. There is every chance for the propagation of cholera in India, and yet cholera only shows itself fitfully in districts lying outside the endemic area. If the intercourse with India be reduced to the least possible, as it was in the last century, yet cholera might still at times visit us.

Finally, I shall ask myself what can be done to ward off cholera? The measures to be adopted will be very different according to the theory adopted. According to the contagionists the spread of epidemic cholera depends on personal and material intercourse, as well as on conditions of time and space when the germs arrive at certain localities. Moreover, the severity of the epidemic is supposed to depend on the individual susceptibility. If one of these three factors be wanting, an epidemic of cholera cannot develop. Preventive measures against cholera may be devised in one of three directions:—(1) Intercourse; (2) disposition in time and place; (3) individual predisposition. Measures to prevent the spread of cholera by interfering with human intercourse are, for many reasons, impracticable. If we ask ourselves what good has resulted from sanitary cordons, inspection, and quarantine, we are bound to answer, None. All these measures have failed because they simply treat the individual, the possible case of cholera. But the germs of cholera may be transmitted in the absence of the disease as manifested by illness. Even perfect sanitary cordons and quarantine would be also valueless, for the reason that they are commenced too late. It is true that quarantine and cordons may prevent a certain quantity of the germs of cholera from entering a country, so that it will serve as much purpose as a good customs house against smuggling. But there is a great difference between articles of commerce and germs of cholera. The germs of disease are capable of multiplication, and so the smuggling through in a few days, under suitable circumstances, be the means of the development of millions and billions. The epidemics of [illegible] afford excellent illustrations of my argument. Paris has not yet been attacked, whilst all the regulations have failed to prevent the appearance of cholera at Naples. No doubt inspection of ships is a good regulation as tending to discover unhygienic conditions, but it is useless as preventing the transmission of cholera. Inspection of places where cholera prevails, the disinfection of articles coming from localities where cholera is, as well also as the places where the dead are laid, are important matters, but too much is not to be expected from these measures. The prevalence of contagious diseases like small-pox cannot be much diminished by attempts to limit intercommunication. Protection from small-pox by vaccination, which leaves human intercourse free, has been followed by success. But we have not at our command a simple and sovereign remedy by means of which the individual predisposition to cholera may be done away with, and yet we can do something in this direction. Everything which tends to lower the general health and cause depression, but especially those conditions which induce diarrhœa, predisposes to cholera. To these matters everyone must look for himself, and his own efforts may be aided by the advice of doctors. The organs of public health may also effect much. Medical treatment should be obtained for the earliest cases of cholera and of diarrhœa. Care must be taken by the authorities and by the community to take measures for the treatment of the sick. But the difficult point in the prevention of cholera is the predisposition in time and place. It is no use urging, as the contagionists do, that we cannot change the nature of the soil. One of the established facts concerning epidemics of cholera is the tendency of the disease to rage in those quarters where the greatest filth prevails. All towns which have been provided with good drainage and water-supply have lost their susceptibility to cholera. England affords the best example of this fact. In 1849 there were recorded 53,237 deaths from cholera, in 1854 the numbers were 20,097, and in 1866 only 14,378, whilst from 1872 to 1874, when several epidemics prevailed on the Continent, cholera did not reach England. I do not imagine that this immunity was due to the want of predisposition to cholera as regards conditions of time. The case of Fort William in Calcutta may be again referred to, as there, I believe, the immunity from cholera now enjoyed was due not merely to the introduction of a better supply of water, but largely also to the improvement in other matters of hygiene.

Seestaupt, August, 1884.

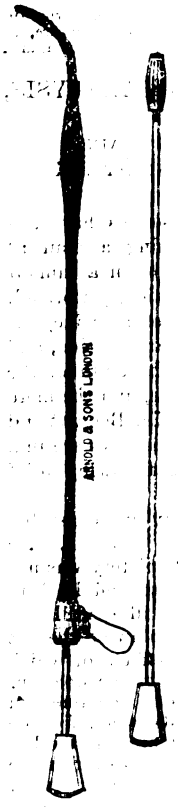
A NEW FORM OF DILATOR FOR STRICTURE OF THE URETHRA.

By W. J. WALSHAM, F.R.C.S.,
ASSISTANT SURGEON TO, AND DEMONSTRATOR OF ORTHOPÆDIC AND PRACTICAL SURGERY AT, ST. BARTHOLOMEW'S HOSPITAL.

THIS instrument, which is made by Messrs. Arnold and Son, of West Smithfield, may for the purpose of better describing it be said to consist of four parts: 1. A central solid steel staff or director, the size of a No. 1 catheter (English gauge). 2. An arrangement around this of a dozen or so of thin steel ribs, welded together at their distal ends, so as to form with the end of the central staff the curved extremity of the instrument; and inserted at their proximal ends at a distance of one-sixteenth of an inch apart into a metal ring, the size of a No. 14 catheter (English gauge). This ring is provided with a short flattened handle, to indicate the direction of the point of the instrument. 3. A series of bulbous-ended hollow rods of graduated sizes for sliding over the central staff. The bulbous extremities are grooved longitudinally, the number of grooves corresponding to the number of wires surrounding the central staff. When one of the hollow rods is slipped over the central staff, the grooves in the bulbous end slide along under the wires, separating them from one another, and expanding the instrument to the size of the bulb as the hollow rod is pushed home. 4. A long conical indiarubber sheath, which fits closely over the wire ribs, keeping them in contact with one another and with the central staff, and so rendering the instrument (when not expanded) to all intents and purposes a solid bougie. On passing one of the dilating rods the wires are separated by the bulb; but the instrument, unlike some others, is expanded, not

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through its whole extent, but only at the situation at which the bulb may happen to be as it travels along the central stem. The indiarubber covering ensures expansion of the wires in all directions equally, and prevents the mucous membrane of the urethra from being caught between them when the dilating rods or the whole instrument is withdrawn. After use the sheath can be readily removed from the wires and cleansed by immersion in some antiseptic fluid, or, as it costs but a mere trifle, a fresh one can be used on each occasion if thought more desirable. In using the instrument the rod with the smallest bulb should first be passed, and then successively one with a larger and larger bulb till the tissues composing the strictures have been thoroughly stretched, and the urethra in its proximity has been dilated a size or two beyond its normal diameter. Each rod should be passed very slowly (not thrust violently home, as in using a Holt's dilator), so as to stretch rather than to tear the tissues forming the stricture. If this is done, no deep laceration of the urethra need be produced, and very little, if any, bleeding will follow the withdrawal of the instrument.



The advantages of this dilator are (1) that as the bulb is pushed home the wires are expanded immediately in front of it in the form of a conical wedge, so that the stricture is gradually stretched, and not suddenly ruptured, as happens in the use of some so-called dilators; (2) that the expansion of the instrument takes place equally in the whole of its circumference; (3) that the indiarubber sheath renders it exceedingly soft and non-irritating, and prevents the mucous membrane of the urethra from being caught on withdrawing the instrument; (4) that as the steel parts of the dilator are entirely covered by the indiarubber sheath, they are preserved clean and dry, thus dispensing with the tedious cleaning otherwise required; and as a new sheath can be used on each occasion, all danger of septic infection is avoided.

I am not advocating the treatment of stricture of the urethra by means of dilating instruments, such as the above, in ordinary cases, as against the well-known methods in daily use; there are, however, exceptional cases in which treatment by means of dilators is indicated, and for such I believe the present instrument will be found to answer the purpose better than any other with which I am acquainted.

Weymouth-street, W.

A CASE OF
ACUTE ASCENDING PARALYSIS (LANDRY'S).

By H. MARTYN CLARK, M.B., C.M. EDIN.,
IN CHARGE, UMBRISUR MEDICAL MISSION HOSPITAL.

On account of the great rarity of this disease the following case of Landry's paralysis seems to me to be worthy of record.

F. D——, a Mahommedan lad, aged sixteen years, was admitted into the Mission Hospital. He was suffering from paralysis of the lower extremities; he complained of pain, and tingling and pricking sensations in the affected parts. The following history was obtained. The lad had enjoyed excellant health up to the time of the seizure. There was no history of syphilis, gout, or rheumatism; the family history was good. Five days previous to date of admission he on rising in the morning felt himself to be considerably "out of sorts." During the day he noticed that his legs seemed very heavy and weak; this caused him slight difficulty in walking. The next day the weakness and consequent difficulty had become greater; the limbs dragged; he was unable to continue at his work. On the third day there was complete paralysis; this became no better, but seemed steadily to increase. On the fifth day he was brought to hospital. Every now and then shooting pains occurred, but these were slight. At no time had he given much pain, but there had been a good deal of formication, pricking, and tingling in the limbs. An examination showed the lad was well nourished, and to all appearance healthy. There was complete loss of motor power in the lower limbs; this extended to the waist; above this the movements were unaffected; beyond the slight pain and abnormal sensations there were no sensory changes in the affected parts; thermal and muscular sense were normal; there were no vaso-motor or trophic changes; skin reflexes were normal in character but tendon reflex was markedly diminished. The organic reflexes were unaffected at the time of admission, as were the cerebral and mental functions; the other systems of the body were all normal. For want of proper apparatus the electrical condition of the paralysed parts could not be ascertained.

The day after admission the urine and faeces began to pass involuntarily and paresis of the muscles of the trunk and arms began to appear. This gradually deepened until on the third day after admission (the eighth day of the disease) there was complete motor paralysis of the trunk and arms. The intercostal and abdominal muscles were implicated and the respiration was carried on mainly by the diaphragm. The lad was thus paralysed from the feet to the arms. The sensory, vaso-motor, trophic, mental, and cerebral functions remained unaffected as before. At this point the patient was, much to my regret, removed by his friends, so that I am unable to state how the case terminated.

Remarks.—The sudden attack of weakness of the legs passing into profound motor paralysis, unattended by any sensory, vaso-motor, trophic, mental, or cerebral change, led us to diagnose Landry's paralysis, and the subsequent rapid extension of the disease upwards confirmed us in our diagnosis. This is a rare disease of the spinal cord, consisting in lesions which are as yet unknown; it usually ends in death by implicating respiration, or by extending to the medulla. Sometimes it becomes arrested and the patient recovers. No treatment has been found of any avail in this case; beyond general measures none was adopted.

A CASE OF
RETENTION OF URINE IN AN OLD MAN; PUNCTURE OF THE BLADDER ABOVE THE PUBES.

By FREDERICK W. STORRY, M.R.C.S.,
SURGEON TO THE STROUD HOSPITAL.

On Sept. 29th of this year I was called to an old man three miles in the country, about four o'clock in the afternoon, with a message that "he had not passed any water all day." I found him in bed suffering all the anguish of a distended bladder, unable to pass a drop of urine. He was ninety years of age. Fourteen hours previously he had micturated, and then for the first time in his long life he noticed some difficulty. I attempted to pass a No. 8 catheter, but failed. I then sent for more instruments, and tried a gum-elastic French coudée and silver catheters of all shapes and sizes, but signally failed to make one reach the bladder. Unfortunately, after an hour's struggle, I made a false passage, which relieved him of a couple of ounces or so of blood. I had examined him by the rectum when I first saw him, and found a large mass in the situation of the prostate, beyond which my finger could not reach; therefore puncturing the bladder per rectum was out of the question.

Having had ether administered to the patient, I cut down upon the linea alba just above the pubes, and tapped his bladder with the ordinary trocar and cannula for tapping through the rectum. I relieved him of a quantity of urine, but had no opportunity of measuring the exact amount. I left the cannula in the bladder for three days, then removed it, and replaced it by a gum elastic catheter cut to the proper length. Daily for a fortnight I removed this instrument, and washed out his bladder through this artificial opening. I have attempted frequently to pass an instrument into the bladder by the urethra since the operation, but have failed. The urine is now quite clear, and the old man is in comfort and great satisfaction at seeing his urine flow from him when he removes a

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spigot of wood at the end of a shortened catheter. He now removes the catheter, washes it, and puts it back again daily. He is up from his bed daily for a time, but is certainly losing flesh. Whether the mass felt through the rectum is due to simple hypertrophy of the prostate, or to a new growth in that organ, remains to be proved. Since the operation the mass certainly feels larger.

Stroud.

TOTAL SUPPRESSION OF URINE FOR NINE DAYS; RECOVERY.

BY D. S. SHROFF, L.R.C.P. & S. EDIN.

I SAW a Mahommedan on Sept. 4th; he was about fifty-four years old, in a fair condition of body. His complaint was that he had passed no urine since the previous morning, and that he felt heaviness in the head and suffered from vomiting. He attributed his illness to keeping late hours during the last two nights. Present condition: The abdomen was moderately distended, and there was neither fulness nor dulness above the pubes. All the abdominal viscera were normal, and so were the thoracic, except that the sounds of the heart were weak, the pulse being 70, soft and feeble. Pupils were slightly dilated, but there was no conjunctival redness. There were headache, vomiting, and drowsiness. On the 4th, being requested, I passed a No. 9 catheter, which went in very smoothly, but not a drop of urine passed out, except that when I took it out a few drops of reddish urine trickled down. This total suppression continued till the 12th. To sum up, the symptoms present during the space of nine days were as follows:—Drowsiness, drooping of the lids, pupils slightly dilated, headache, extreme weakness, slight pain in the lumbar regions, puffiness of the abdomen, and constipation. There was vomiting, which was severe at times, but not always. The patient retained about two doses and a half of medicine out of four, about half a cup of soup, a cup of milk, half a bottle of soda-water, and about half a cup of barley water in twenty-four hours. Thirst was absent, and there was neither delirium, coma, nor fever.

Treatment.—I had a great mind to inject pilocarpine, but the patient would not consent. My plan was as follows: Hot vapour bath in the morning, which produced copious perspiration, hot hip bath in the evening, and fomentation on the abdominal and lumbar regions twice a day. The trunk all round the abdomen was well covered with flannel, and the feet were kept warm, but the head cool. Internally I gave stimulating diuretics and an occasional saline purge. Every evening I gave an enema of castor oil with soap-and-water to relieve distension as well as constipation. On the tenth day, September 12th, the patient passed a few drops of bloody urine three times from morning till evening. On the 13th at 8 A.M. twenty-four ounces of urine were passed; it contained very little albumen and deposited some mucus. An enema at 9.30 A.M. was given, which was followed by a copious semi-solid stool. Only two doses of medicine were taken and retained. On the 14th at 2 A.M. thirty-five ounces of deep-red coloured urine were passed with one motion. On the 15th at 6 A.M. five ounces of straw-coloured urine were passed. Two doses of medicine were retained. On the 16th in the morning forty-five ounces of urine were passed, the first eight ounces were bloody. An enema was given at 7 P.M., which was followed by a copious semi-solid greenish-yellow stool. Only one dose of medicine was taken. On the 17th from evening till next morning some urine was passed every three-quarters of an hour, the total quantity measuring about fifty ounces. It was of pale-straw colour and deposited mucus; but there was no albumen in it. One dose of medicine was taken. On the 18th—i.e., on the sixteenth day from the total supression—the urine became normal in quantity and quality. After he began to pass water I stopped the baths but continued the fomentation. He had slight vomiting and slept longer, but complained of utter prostration.

Calcutta.

HOSPITAL SUNDAY AND SATURDAY.—The Hospital Sunday collections in Birmingham this year amounted to £4674, and the Hospital Saturday collection at Exeter realised £400.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.

EXCISION OF A TUMOUR FROM THE BRAIN.

(Under the care of Dr. HUGHES BENNETT and Mr. RICKMAN J. GODLEE.)

DURING the last few weeks several notices have appeared in various medical papers concerning a man at present in the above hospital, from whose brain a tumour has been successfully removed. This operation, performed, we believe, for the first time in the history of medicine, has naturally attracted much notice amongst the profession, and numerous inquiries have been made as to the truth of the reports. Pending the termination of the case, and the more complete and scientific account of it which Dr. Bennett and Mr. Godlee will doubtless subsequently publish, we are in a position to furnish our readers with the following brief narrative of facts.

Some weeks ago a young man, aged twenty-five, consulted Dr. Bennett, complaining of paralysis of the left arm. He stated that he was a farmer, that his family history was unimportant, that he had always led a temperate and healthy life, and that he had never suffered from any illness till four years ago. About this time he received a blow on the left side of his head from a piece of timber, the effects of which were temporary and did not interfere with his occupation. With the exception of occasional headaches he remained in his usual good health for a year afterwards, when for the first time he began to experience slight twitchings in the left side of his face and tongue. These gradually became more pronounced, and occurred paroxysmally at irregular intervals. Soon afterwards he was seized with a "fit," which began with a sensation in the left side of the face and tongue, running down the left side of the neck to the arm and leg, and culminating in general convulsions and loss of consciousness. For two and a half years, although maintaining his robust general health, he was subject to daily recurrences of these paroxymal twitchings in the left side of the face without loss of consciousness, and to the more severe general convulsive seizures with loss of consciousness which occurred on an average about once a month. Six months ago for the first time he was attacked with spasmodic twitchings of the left hand and arm, and these continued daily to alternate with the twitchings of the face, the two rarely occurring at the same time. These continued till the patient came under observation. Since the affection of the arm began there has been no recurrence of the general convulsive seizures with loss of consciousness. Shortly after, weakness of the left hand was observed, and this paresis of the upper extremity has continued slowly to increase up to the present time. The patient was, however, able to continue at work till three months ago, when the weakness of the arm prevented him using his tools. Since then twitchings of a similar nature have taken place in the left leg, and subsequently in the left eyelid, occurring in paroxysms several times a day. Quite recently the left lower extremity was found weak, and the patient walked lame.

On examination the patient was found in robust general health. His intelligence as well as all his organs and functions were normal, except those about to be described. He suffered from frequent and violent pains in the head diffused over the vertex. There was nothing abnormal to be seen on the scalp, but on firm deep-seated pressure there seemed to be tenderness in the upper parietal region a little to the right of the middle line. The movements of the eyeballs and pupils were normal. There was well-marked double optic neuritis, most marked in right; but vision was normal. There was slight comparative immobility of the left side of the

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face. The tongue when protruded pointed slightly to the left. Articulation seemed natural. Hearing normal, but somewhat less acute on the right side. There was complete paralysis of the left fingers and wrist, very limited movements of the elbow, and at the shoulder these were greatly impaired. The left lower extremity was weaker than the right, and although the patient could walk he did so with a limp, and swinging his left leg, as he could not clear the toes from the ground. The mechanical irritability of the muscles, the knee jerk, and the ankle clonus were most marked on the left side. The sensibility of the skin was everywhere normal, and there was nowhere any muscular wasting.

While under observation the patient suffered from violent paroxysms of lancinating pain in the head, which at times rendered him nearly delirious. He also was frequently seized with attacks of uncontrollable vomiting, which sometimes continued for days together and prevented his taking nourishment. The twitchings which occurred many times a day without loss of consciousness were also noted. These usually began in the fingers and thumb of the left hand, and consisted of rapid rhythmical movements lasting for a minute or two. These were sometimes confined to the arm alone, and sometimes to the face alone. Occasionally they began in the face, and from there extended to the arm, and down the leg of the same side. They were never observed in the leg alone.

These, briefly stated, are the chief symptoms which this patient presented. Combined with a general consideration of the facts of the case they led Dr. Bennett to arrive at the following conclusions. First, that there was a tumour in the brain; secondly, that this growth involved the cortical substance; thirdly, that it was probably of limited size, as it had destroyed the centres presiding over the hand, and only caused irritation without paralysis of the centres of the leg, face, and eyelids which surround it; and fourthly, that it was situated in the neighbourhood of the upper third of the fissure of Rolando.

This diagnosis having been made, Dr. Bennett suggested that the tumour be cut down upon and removed. He was all the more encourged to propose such an operation as the sufferings of the patient had become intolerable. All the risks were fairly explained to the man, who cheerfully consented to any procedure which offered any prospects of relief. Accordingly, on Nov. 25th Mr. Godlee trephined the skull, and removed a triangular piece of bone over the region corresponding with the upper part of the fissure of Rolando. The surgical details need not here be entered upon, as these, with the other more precise facts of the case, will be subsequently brought before the profession. It is at present sufficient to say that even after the bone was removed, the dura mater slit up, and the cortex of the brain exposed, no tumour was visible. The ascending frontal convolution, however, seemed to be somewhat distended. An incision about an inch long was made into the grey matter in the direction of the bloodvessels, and a quarter of an inch below the surface a morbid growth was found. This was carefully removed, and proved to be a hard glioma about the size of a walnut. The superficial part of this was distinct from the brain matter and was easily enucleated. The hæmorrhage was arrested by means of the galvano-cautery and the wound brought together by sutures.

Since the operation up to the present time (Dec. 15th) it may be said in general terms that the condition of the patient has been satisfactory. At no time has the temperature been above 100°, or the pulse over 90 beats per minute. The patient has throughout been perfectly intelligent, and now is cheerful, and expresses much gratitude at the result of the operation. He has totally lost the lancinating pains in his head, the vomiting, and the convulsions of his limbs; his appetite is excellent, and all his functions are naturally performed. The state of the wound has given rise to some anxiety, as a hernia formed, consisting for the most part of clot and granular matter, which was shaved off. This caused the flaps in the scalp to gape open, and these have not yet healed. This, however, does not seem to cause the patient any inconvenience. Since the appearance of the hernia cerebri the paresis of the left leg has increased, but how much this may improve it is at present impossible to conjecture.

We need scarcely observe that the further progress of this man will be watched with the greatest interest by all those who appreciate the important physiological and clinical principles involved in the case.

BRADFORD INFIRMARY.

TWO CASES OF DOUBLE OÖPHORECTOMY.

(Under the care of Dr. RABAGLIATI.)

FOR the following notes we are indebted to Mr. W. J. Spence, house-surgeon.

CASE 1.—Sarah S——, aged twenty-six, married, a slight-built, delicate looking woman, was admitted during December, 1882, complaining of a constant pain, which at times became most excruciating, affecting the left iliac region. Prior to admission she had been under the care of several practitioners, and had been in hospital three times. The remedies had been many and varied; a variety of instruments had been worn, all of which increased rather than diminished the pain. Posterior hysterotomy and dilatation of the os had been tried, blisters, baths, and innumerable medicines, but all to no purpose; the patient gradually got worse, until lately life had become, to use her own expression, unbearable. The pain, which increased on deep pressure, commenced six years ago (six months after marriage) with what she says was an inflammation of the bowels. It was at first intermittent, being sometimes free for days together, but of late it had become constant. Menstruation began when she was seventeen years of age, and has continued at irregular intervals ever since. She has never had any children. The sound passed two inches within the cavity of the uterus, causing great pain; there was slight retroflexion.

After a consultation with Mr. Miall, Dr. Rabagliati decided upon removing the ovaries as a last resource. The serious nature of the operation, with its results, was plainly put before the patient, but she urgently pressed for the operation, preferring it with all its risks to the suffering she was undergoing. The operation was performed on Aug. 10th with strict antiseptic precautions. The ovaries, together with their appendages, were removed through an abdominal incision from three to four inches in length; silkworm gut was used to secure the pedicles. Both ovaries were found to be enlarged, cystic, and adherent to the surrounding parts. On section they appeared injected, but there was no sign of suppuration. The Fallopian tubes were greatly dilated.

The wound healed by first intention and the patient made a good recovery. She has been seen at frequent intervals since the operation and expresses herself as quite a new woman, the old pain having entirely disappeared.

CASE 2.—Elizabeth L——, housewife, aged twenty-eight, was admitted on March 29th, 1884, complaining of severe pain in the right iliac region. The patient stated that menstruation commenced when she was sixteen years of age, and had continued at regular intervals ever since. The menstrual discharge was normal in quantity and appearance. She was married three years ago and delivered of a female child eleven months later. The child was brought up by hand and is alive and healthy. The labour was tedious, lasting twenty-three hours after rupture of membranes. She made a good recovery, being up and attending to her household duties at the end of a fortnight. The catamenia appeared two months afterwards. She has since been regular. About three or four months after the child was born she began to be troubled with pain in the region of the right ovary, it was, at first, intermittent and slight in character, but gradually increased in severity; it became constant and extended to the back and down the thigh of the affected side. Of late it had become almost unbearable. Her medical attendant, Mr. Miall, tried all the usual remedies, but without any relief.

After a consultation with Dr. Rabagliati, and at the patient's urgent request, it was decided to remove the ovaries, and for this purpose she was removed to the infirmary. Upon admission the pain was found to be located in the right iliac region and was increased upon deep pressure. The uterus was normal in position and appearance and the sound entered nearly two inches. The operation was performed under chloroform administered on a towel at 9 A.M. on April 9th. Strict antiseptic precautions were observed. The ovaries and their appendages were removed through a median abdominal incision three to four inches in length. Silkworm gut was used for the pedicle, as in the last case. The wound was closed by deep chromic catgut sutures, which included the peritoneum as well as the remainder of the structures forming the abdominal wall. Before the chromic sutures were tied the cut edges of the peritoneum were brought together by fine catgut sutures. Some superficial

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ones were also used to bring the skin into more accurate apposition. The right ovary was found to be cystic and the corresponding Fallopian tube somewhat constricted. The left ovary was also cystic, but the Fallopian tube appeared normal. During removal of the left ovary a large superficial cyst was ruptured.

There was slight sickness during and immediately after the operation, but none afterwards. For the first twenty-four hours the patient was allowed nothing but ice. On the second day a little milk diluted with water was given. On the fourth day there was slight appearance of catamenia, which lasted three days. The case ran a most favourable course; the temperature was never higher than 100·8°, the wound healed by first intention, and was quite sound on the ninth day. The patient was discharged cured at the end of the month. The patient has been seen at frequent intervals, and expresses herself as quite relieved. The old pain has entirely disappeared.

SOOREE CHARITABLE DISPENSARY.

CASE OF LIVER ABSCESS TREATED WITH FREE INCISION AND DRAINAGE; RECOVERY.

(Under the care of Dr. G. C. ROY.)

W. W——, aged about thirty years, a Mahommedan constable, presented himself for treatment on June 4th, 1882. He was very emaciated, and so weak that he had to be lifted from his bed. He was subject to malarious fever off and on. About three months before admission he had fever of low remittent type, followed three days after by pain over the liver, which had continued ever since. He was habitually addicted to spirituous liquor.

On admission his pulse was very weak and quick; tongue clean; bowels confined; appetite poor. The liver dulness extended to one inch below the costal cartilages, but at the side there was a uniform bulging with fluctuation and pain on pressure. No jaundice.

An incision about an inch in length was made on the seventh intercostal space in the axillary line under carbolic spray, and the cavity of the abscess was reached. About sixteen ounces of pus mixed with blood were evacuated; a drainage-tube eight inches in length was introduced and covered with a padding of cotton saturated with corrosive sublimate lotion and tied, and the whole secured by a body bandage.

The discharge continued free, being of the same colour and consistence. There was no accumulation of matter even when the cavity was sucked out by the aspirator. Weak carbolic lotion was injected for two days, but it produced strangury and symptoms of carbolic poison. The discharge gradually got less, and as the cavity contracted the drainage-tube was shortened, till on the 25th it came out altogether. On that date there was hardly any discharge, still he was kept under observation for four days, and discharged on the 30th with the liver reduced to its normal size; appetite was good, and the patient was then going about the hospital.

A CASE OF IMPERFORATE ANUS AND PREPUCE.

(Under the care of Dr. G. C. ROY.)

A child was brought three days after birth with absence of anal aperture. It was said that it had not passed water or any stool. The abdomen was swollen, the breathing was laboured, and its general condition was low.

In front of the coccyx and in the median line there was a slight depression, over which an incision was made and dissected down to the extent of one inch, but no dilated cloaca was found. A coil of intestine was felt, and as the child strained it was hooked down by a bent probe and opened, when meconium flowed out freely. There was closure of the prepuce producing phimosis, which was also circumcised. As after operation the child's condition seemed critical, no further manipulation was attempted, but it was put to the breast, and the mother was asked to come the next day. Nothing more was heard of it for ten days or a fortnight, when the mother returned with the child well developed for further relief, as the artificial opening was contracting and a fæcal sinus had formed in the scrotum. On probing the latter it was found to pass under the skin and communicate with the former. The sinus was laid open in two operations throughout its entire length, and at the lower part the bowels were found to be superficial and adherent to the skin. This opening was situated in front of the previous one, and was continuous with it. It had formed for itself a sort of mucous lining. The bowels continued to be discharging through this without any impediment, and the mother was asked to reappear after a month if there was any tendency to closure. The child was brought afterwards for observation, looking healthy and with no tendency to contraction of the artificial anus.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Intestinal Obstruction produced by Gall-stones.—Gunshot Injury of Brain.—Sympathetic System in Diabetes.

AN ordinary meeting of this Society was held on Tuesday last, Mr. J. Whitaker Hulke, F.R.S., President, in the chair.

Dr. PAYNE read the report of the Morbid Growths Committee on Drs. Lanchester and Hobson's case of Caseous Pneumonia. In some parts of the lesion, tubercle, with well-marked giant cells, were to be seen; and the lymphatic vessels contained much granular matter. The remarkable uniformity of the changes throughout the lungs was evidence of the age of the various parts being the same. The fibrous exudation in the alveoli, which had undergone fatty and granular change, as well as the fibrinous nature of the morbid products, pointed to the conclusion that the case was one of acute lobar fibrinous pneumonia, which had ended in caseous degeneration, and had been accompanied by acute tuberculosis. Usually caseous changes were the result of lobular catarrhal processes, and so this case was very rare. Possibly Addison had described the disease, but Cornil certainly had, under the term "pneumonie caséeuse lobaire," and as a secondary accompaniment of tuberculosis. Whether the pneumonia or tuberculosis were primary it would be difficult to decide.

Dr. S. WILKS showed, for Mr. Wilks of Salisbury, some specimens of Gall-stones which had caused intestinal obstruction. The patient was a single woman, aged forty-two, who suffered for seventeen days from obstruction of the bowels. She was first seen on Nov. 5th, 1884, when constipation had lasted two days; there was not a great distension of the abdomen, but some sickness was followed later by stercoraceous vomiting, and the symptoms lasted until Nov. 21st. Then an enema was given and brought away a large stone which was floating in the bed-pan; on the 22nd a second stone came away embedded in fæcal matter. Reference was made to a drawing in Frerich's work which bore on the case. The bigger stone had a concave facet and weighed 250 grains; it measured 1½ in. by ½ in., and was 3½ in. in circumference. The other stone weighed 130 grains, and measured ¾ in. in length. In the Pathological Transactions similar cases had been reported by Dr. H. Fagge, and Dr. Murchison believed that the stones formed in the gall-bladder and then made their way directly into the intestine. In this case there was no previous history of gall-stone or jaundice. It was generally believed that the cause of obstruction was outside the intestine, and so the present case was very exceptional.—Mr. HULKE asked at what part of the intestines it was supposed that the stone had lodged.—Mr. JOHN WOOD referred to a case on which he operated some months ago. There was a painful tumour about the gall-bladder, and adhesions existed between the gall-bladder and the wall of the abdomen. Careful dissection was made, and then thickened tissue connected with an abscess containing two gall-stones of the size of a small nutmeg was detected in contact with and adherent to the hepatic flexure of the colon. He had, in fact, intercepted the passage of the gall-stones from the gall-bladder to the colon.—Mr. HULKE referred to a case in which a large round knob was felt in the rectum, and had acted like the ball of an ordinary valve causing obstruction, which was easily relieved.—Mr. CLEMENT LUCAS said that the stone could not have obstructed the colon.—Mr. F. TREVES thought every possible evidence was in favour of the view of Dr. Wilks, that gall-stones ulcerated directly into the intestine. He had collected forty-eight cases of obstruction, due to gall-stones. Of these thirty-two were to be found in a paper by Leichtenstern. In the majority of cases direct evidence of ulceration between the gall-bladder and duodenum was to be obtained. Stones which measured three inches in cir-

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cumference could hardly have passed down the common bile-duct which, however, might be dilated to the size of the thumb. The gall-bladder was entirely disorganised in a case in which the gall-stone was supposed to have traversed the bile-duct. Sometimes ulceration took place between the gall-bladder and the hepatic flexion of the colon. The obstruction was situate in the lower part of the ileum in 50 per cent. of the cases. The upper part of the jejunum was the next most frequent site of obstruction. Foreign bodies were liable to set up inflammation of the bowel, and this might go on to gangrene of the intestinal wall, and so it could be understood how aperients were more likely to do harm than good. The largest stone which has been successfully passed was 3½ in. in circumference.—Mr. A. E. BARKER referred to a case which was published in the twenty-ninth volume of the Pathological Transactions. It was that of a lady, aged fifty, who died from exhaustion after stercoraceous vomiting. The stone was 4½ in. in its greatest circumference, and had plugged the upper part of the ileum. Ulceration and dilatation of the common bile-duct might allow of the passage of large-sized stones.—Dr. WILKS was of opinion that in this case the stone had probably stuck in the rectum.—Dr. GEORGE HARLEY said that ulceration of the gall-bladder frequently took place into the intestine, and that was the route by which gall-stones of some size had passed, and this explained the absence of jaundice or clay-coloured stools.—Dr. GOODHART spoke of a case in which the stone had ulcerated into the duodenum and set up hæmorrhage by attacking the portal vein. The lower part of the ileum contained a stone which was closely hugged by the muscular coat of the bowel. Such stones were not big enough *per se* to block either the intestine or the colon.—Dr. CARRINGTON also mentioned the case of an elderly lady who suffered from attacks of gall-stones from time to time, and in whom intestinal obstruction set in. The stone was not large enough to obstruct the ileum though it was firmly impacted a little above the cæcum in the ileum. Death had resulted from acute peritonitis due to rupture of adhesions about the duodenum.

Mr. W. ROSE read the clinical notes of the case of Gunshot Injury of the Brain. The patient was a solicitor, aged forty-five, who had been drinking heavily for a week. The revolver was fired, in an attempt at suicide, into the mouth, the bullet penetrating the hard palate and passing upwards through the anterior part of the brain. On admission the ragged aperture of entry was seen immediately behind the incisor teeth; the aperture of exit was not to be detected at that time. There were great tumefaction and tension of the tissues of the scalp, and the features had become unrecognisable. There was extravasation of blood into the eyelids, but no subconjunctival hæmorrhage could be detected until two days later. There was no motor or sensory paralysis, and no pain. The intelligence of the patient seemed fully preserved. On the fourth day the swelling had subsided, and an antiseptic operation was undertaken with a view of removing the bullet, which together with a fracture were detected in the right frontal region. Much clotted blood and brain matter were taken out, as well as several pieces of bone, and the bullet in two portions. The patient died fourteen hours later from exhaustion.

Dr. H. SAINSBURY read notes of a case of Gunshot Wound of the Brain. The bullet had traversed the ethmoid plate and pierced the right frontal bone close to the mid-line one inch in front of the coronal suture. The damage to the brain included extensive subdural and subarachnoid hæmorrhage. There was superficial laceration of the left orbital convolutions, corresponding to the situation of the ethmoid bone, and deep laceration of the corresponding parts of the right orbital convolutions. The further course of the bullet was limited to the right hemisphere; in front of a vertical line at the anterior border of the bend of the convolution of the corpus callosum there was complete destruction of the marginal convolution; this involved partial destruction of the first frontal convolution in front of the same line. The immediate symptoms in this case were negative; there were no sensory or motor effects of any kind, and, further, the patient was rational. The case is of interest from the position of the lesion and the complete accordance of the results of the lesion with the doctrine of "cortical localisation." The special value of the case lies in the damage done to the marginal convolution, the results again considered in relation to this being in agreement with the recent experiments of Horsley and Schäfer. The absence of any disturbing element in the shape of effects from altered intracranial pressure was owing to the very free drainage which obtained through the base of the skull. Finally, the importance of immediate symptoms in the consideration of lesions of the nerve centres was insisted upon. Immediate symptoms were those occurring after the disappearance of shock. The universal intercommunication of nerve centres, both in the spinal cord and cerebral cortex would necessarily imply the possibility of the opening up of side paths in the event of blocking of the main channels; and hence there was a possibility of a lower centre cut off from its higher centre still receiving stimuli from the opposite cerebral hemisphere. Hence in process of time there would occur the removal of the primary effect even though the original blockage should have persisted. The doctrine of the association of centres would be an exemplification of this doctrine of the general intercommunication of nerve centres. This anastomotic or supplemental action would probably account for many experimental and pathological discrepancies. The latency of symptoms in slowly growing tumours of the brain might receive an explanation from these considerations.—Mr. CLEMENT LUCAS said it was quite clear that the subarachnoid space had been opened above and below the hemisphere, and asked whether the evidences of this lesion were present.—Dr. RICHARDS referred to the case of a boy who received a sort of bullet wound in the right parietal region of the skull, and in whom for forty-eight hours there were no symptoms. The boy died suddenly, and then two ounces of lead were found close to the central ganglia of the brain. It was supposed that the lead had gravitated to the basal ganglia.—Mr. VICTOR HORSLEY said that in man there was about the superior frontal convolution a secondary sulcus which was regarded as a landmark in the marginal convolution. In monkeys the same sulcus existed, and he had found experimentally that behind that sulcus the motor centres for the muscles of the trunk were situate. The absence of paralysis was perfectly accounted for in that the wound of the brain in Dr. Sainsbury's case was completely anterior to this motor region. With regard to the recovery of motor power in hemiplegia he dissented from the theory of Dr. Broadbent, and believed that the recovery of power was due to the removal of pressure by absorption of the blood-clot. He believed that there was double representation of parts of the body in one hemisphere, but the arm was probably represented singly in each hemisphere, and hence the difficulty with which the arm recovered in cases of hemiplegia. In these views he was not in accord with Hughlings Jackson.—Mr. HERBERT PAGE spoke of a case of injury to the brain in which the bullet lodged in the prefrontal region; there were no symptoms until the fifth day, when aphasia set in; death occurred on the ninth day, and the inflammation had by that time extended widely.—Mr. HULKE mentioned a case which had been reported by Mr. Lawson and in which a gunpowder accident had damaged the frontal region of the skull and brain without producing symptoms; the patient made a complete recovery.—Mr. ROSE, in reply, said he had detected no cerebro-spinal fluid in his case. He referred also to the celebrated "crowbar" case.

Dr. HALE WHITE read a paper on the Microscopic Examination of the Sympathetic System in Diabetes Mellitus. In all the cases some change was found, usually of a chronic inflammatory nature. Thus the note of one specimen of the thoracic sympathetic cord was that there was much increase of small cells, hiding almost completely the nerve fibres. There was great engorgement of the vessels, and also new growth of fibrous tissue. In this case the splanchnics showed the same change, whilst the semilunar ganglion presented great increase of interstitial fibrous tissue, abundance of new small cells in many places developing into fibrous tissue. The semilunar ganglion from the second case was almost the exact counterpart of this, whilst in the third case the changes although present were less marked. In the fourth case dark brown degenerative patches were to be seen scattered about the section, the vessels were so much dilated that they looked not unlike a cavernous structure and the tissue around the vessels was degenerate, and they contained many white blood-corpuscles, some of which might be seen to have wandered into the tissues. Inasmuch as sections of the sympathetic vary so much among themselves Dr. Hale White had examined over a hundred and fifty slides to familiarise himself with the normal appearance, and came to the conclusion that all these four cases of diabetes presented abnormal sympathetics. It was suggested that these cases showed that sometimes at least diabetes is due to

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disease of the sympathetic, which belief was borne out by the numerous physiological experiments by which glycosuria was produced by acting on the vaso-motor sympathetic system. It could not be expected that lesion of the vaso-motor nerves should always produce glycosuria, for the area of vascular dilatation might be too extensive or the lesion might be irritative and not paralytic. In support of this view, as was pointed out, some of the other symptoms might be explained by supposing the disease to have affected the vaso-motor system—e.g., polyuria, thirst, red tongue, coma. In one or two cases contraction of the pupil and hyperidrosis unilateralis have been observed. Diabetes might be due to one of three causes:—First, affection of the vaso-motor nerves in some part of their course between the vaso-motor centre and the liver, as in the four cases here recorded. Secondly, affection of the vaso-motor centre itself, as seen in the cases in which glycosuria was due to cerebral lesion. Thirdly, affection of the vaso-motor centre reflexly, as in the cases of neuralgia, sciatica, &c., with glycosuria as recorded by Frerichs.—Mr. C. B. LOCKWOOD said that the anatomical relationships of the semilunar ganglia were different on the two sides of the body. Had both ganglia been examined? In injury of the frontal region of the brain glycosuria sometimes occurred.—Dr. HADDEN had examined portions of the brain, medulla, and semilunar ganglia as well as the sympathetic nerves going to the liver in some cases of diabetes. He found all these parts normal, and could not satisfy himself that the appearances were abnormal in Dr. White's specimens.—Dr. PYE SMITH thought no one could doubt that the specimens were abnormal.—Dr. HALE WHITE said that in one case both ganglia were examined and presented the same lesions. Frerichs gave two cases of disease of the trigeminus in which there was glycosuria.

The following card specimens were shown:—Mr. G. R. Turner: Congenital Tumour of the Perineum. Dr. Hale White: Congenital Malformation of Lung and a specimen of Patent Ductus Arteriosus. Mr. D'Arcy Power (for Dr. Mackinder): A Pouched or Duplicate Bladder. Mr. Rivington: A specimen of Osteitis of the Upper Part of the Tibia with Disease of Knee-joint.

CLINICAL SOCIETY OF LONDON.

Discussion on Charcot's Disease.

THE adjourned debate on this subject was resumed, but not concluded, at the meeting held on Dec. 12th, Sir Andrew Clark, President, in the chair. On the motion of the President, it was determined that an extra meeting should be held in order to finish the discussion, and the date fixed was Dec. 19th, which, however, as announced elsewhere, was subsequently changed to the 23rd.

Dr. DUCKWORTH read a *précis* of two letters which he had received from Professor Charcot. Two specimens sent by Charcot were specially referred to. One was from a cast of pied tabétique, and the other was the pelvis and the upper extremities of the femora of a case of locomotor ataxia. Charcot had not met with the joint disease apart from tabes dorsalis. He admitted that rheumatic arthritis may supervene in the course of tabes dorsalis, but that was another matter. Reference was made to the porosity and fragility of the bones. Dr. Duckworth repeated his conviction that in Charcot's disease we had a definite clinical condition determined by disease of the spinal cord or some part of the central nervous system.

Dr. MOXON proposed a vote of thanks to Professor Charcot; this was seconded by Mr. MORRANT BAKER, and carried by acclamation.

Dr. MOXON, in proposing the vote of thanks, professed much admiration for Charcot. Assuredly no connoisseur had ever brought so proud an imagination to his science, and no scientific imagination ever had a better power of observation subordinated to it. Without pretending to a Carlylese worship of a fact, yet he had great respect for facts. In reviewing the discussion he experienced an indefinite state of mind, which was uncomfortable to him. Referring to Sir James Paget's speech, he considered that he might beg, with Sir Andrew Clark, that Sir James would make more clear what it was that he meant. When he remembered the range of thought and accuracy of utterance which were at Sir James's disposal, he confessed to a certain degree of disappointment, and he was particularly sorry to find that herpes zoster had been dragged in. Herpes zoster was a narrow clinical puzzle, just as such substances as selenium, iridium, and rubidium were narrow chemical puzzles. He did not think that the turning on of herpes zoster could throw any possible light on Charcot's disease. He referred to a typical case of herpes zoster in which a medical man had told the patient that the disease at its beginning was a mixture of gout, neuralgia, and rheumatism. As far as he knew, Charcot's disease was extremely like rheumatic arthritis, and he fell in with the views of Mr. Hulke, and could see nothing peculiar in this so-called peculiar disease. He thought that the more vaguely he spoke the better it would suit the occasion. Charcot's disease seemed to him to be hopelessly indefinite, and whereas herpes zoster was definite, typical, and full of nerve from beginning to end, this so-called peculiar joint disease had no nervous phenomena at all. Sir James had failed to fit the case altogether. Looking at the line of indefiniteness which surrounded Charcot's disease and rheumatic arthritis, might it not be through our ignorance that they do coincide? So far he had dwelt on negative points, but he despised negativism, and would now advance a positive contribution. Locomotor ataxy has branches, and he did not think that Charcot's disease was a grafted branch. Eight years ago Westphal pointed out that in general paralysis of the insane the conditions of locomotor ataxy were present. This statement of Westphal's drove him to St. Luke's—as an observer,—and he also took with him a galvanic battery and several Guy's men. He found that a third of the general paralytics had the physical conditions of locomotor ataxy. Dr. Savage had found that the same holds good for Bethlem, and he had also Dr. Savage's permission to state that no case of Charcot's disease had occurred amongst the general paralytics. Might there not be some relation between this absence of disease of joint in cases which were paralysed and ataxic? He suggested that simple rheumatism might be changed into an exaggerated unrepresentative, irritative, severe, strange, and peculiar disease when occurring in cases of ataxia, and in illustration of his remarks he showed a specimen of the shoulder-joint of an ex-cabman who was thrown from his cab a year before his death. Here he thought that the constant jolting of the arms had led to the wearing away of the head of the humerus, and compared this jolting to a "locomotor ataxic action" on the shoulder-joint. He considered that this specimen was halfway to a Charcot's joint; there was no production of new bone about it. If half a Charcot's joint can be made by wobbling alone was it not possible that a whole one could arise as the result of wobbling when the nerves were in a diseased state. If careless and continued use could produce such changes, it was surely better to search for traceable causes. When he was demonstrator of anatomy he taught that the nerves going to a muscle also supplied the skin over that muscle on the side towards which motion was effected, and further that the joints were also supplied, generally on the side towards which motion takes place. There must be some meaning in that. It was a requisite of joint life that the moving agency should be duly checked. And if we took away this sensibility, this agency for checking movement, must we not measure that before we are told that there is a special disease? Common rheumatism after long experience of insensitive joint and spasmodic muscle might be turned into Charcot's disease. If the cabman had had an insensitive state of joint as well as the spasmodic action of muscles, he could not help thinking that the half Charcot's joint would have been a whole one. He confessed that the narration of the following case cost him pain. It was that of a case of perityphlitis in a man in whom there was a board-like hardness of the cæcal region, and it was desirable for the man's good that an examination should be made under chloroform in order that the hardness of muscular action might be got rid of. After returning to consciousness the man experienced the most intense agony, and died in nineteen hours from peritonitis, the result of rupture of the intestine. This case led him to consider the value of the protective agency of the motor parts of the body, and made him very recognitive of the degree in which ready sensitiveness helps a patient. These natural medicative powers being absent, he thought that an exaggerated irritative, severe, and strange disorder of joint might arise. The phenomenon of the discussion on Charcot's disease was not an isolated case. It was no new thing for a mysterious origin to be claimed for a local manifestation. Fifteen or twenty years ago the occurrence of auricular hæmatoma, or hæma-

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toma auris, was assigned to a mysterious disorder of the nervous system. But the divine madness of youth, such as has been confessed to in the height of a scrimmage at football, may be accompanied by the formation of a bleb of blood in the external ear of a hæmatoma auris. A literary gentleman had informed him that the evidences of shrunken hæmatoma] auris were to be seen in statuary representing Greek boxers, so that this affection could not be looked upon as a development or twig of modern civilisation. There was a tendency, in the absence of proved direct causes, to appeal to the nervous system, as if the disease were a kind of special product. There used to be moderation in these views until the trophic nervous system was invented. By this system was meant a kind of Providence that supplied daily food to the joints, a sort of Secretary of State of the Joint Department; not that the nervous system actually found the material, but it should be remembered that Providence always uses means. Why should such a frightful, tenacious, unsparing catastrophe afflict one joint when it was no greater sinner than the rest? No one had shown that the nerves going to the diseased joints were diseased. (Sir Andrew Clark here referred Dr. Moxon to some observations by Charcot's pupils.) Until it were proved that the neural changes were primary and obvious, both destructive and irritative, he for one would not be content to allow that the nerves caused the arthritic affection. He had examined cervical ganglia in large numbers, and never made much out; there might be a little pinkness, a yellowness, or what not. Again, the fragile state of the bones used to be attributed to the state of the nervous system in the inhabitants of those vast hotels of not very critical guests. And recently a case of fracture of the ribs and sternum had been reported in the LANCET, and he dared say that the bones were soft. This fragility of bone became startling only when the conditions were mystic. The tendency to bring in the vague and general and to avoid measuring the force of the direct and measurable causes must be deprecated. So it was with the unilateral bedsore of cases of hemiplegia. He was not ready to admit the influence of trophic nerves in this connexion. Here there was tendency of the body to roll upon the paralysed side by the continuous action of the still active limbs. In this connexion Dr. Moxon referred to the manner in which the perforating arteries of the thigh were protected as they run under a tunnel of fibrous tissue, which in the contraction of the muscle was kept open so that the arteries were not constricted. It was the duty of a muscle to hold open its own arterial channels. When a muscle is paralysed the vascular supply suffers, and as the vessels of the gluteus maximus pass through the muscle before supplying the skin what was the wonder that the skin sloughed? The play of genius of M. Charcot showed itself in the introduction of the marvellous to explain clinical phenomena. He was reminded of a time ten years ago when one of his colleagues now practising gynæcology—a word, by the way, which etymologically seemed to imply the most ambitious of all the sciences with the doubtful exception of theology—drew his attention to a case of what others diagnose as hysteria. There was profound anæsthesia of one side, and he found his ambitious colleague hard at work with sovereigns and shillings producing what he believed was called a transference of total insensibility. He was not quite sure what it was all about, but it was very obscure. However, potato parings cut into circles seemed to be endowed with the virtues of the noble metals. He concluded by saying that no one had ever brought so proud an imagination to his science, and no scientific imagination ever had a better power of observation subordinated to it than had M. Charcot.

Mr. HENRY MORRIS said that after the witty and brilliant speech of Dr. Moxon's it would be tame for the Society to come down to the level of a simple matter of fact. He narrated two cases of Charcot's disease. One was that of a man admitted in 1877 to Middlesex Hospital for disease of the knee, which seemed to require amputation. The joint had the appearance of aggravated chronic rheumatic arthritis, but it had all the special characters of Charcot's disease. There was in addition a malignant tumour of the face which had been five times removed, and was in fact a rodent ulcer. The limb was put up in a Thomas's splint. Six years before being seen the man had been working in water, and then felt pain of a rheumatic character, which lasted twelve months before swelling of the joint occurred. At the end of six years the leg hung like a flail upon the thigh. The internal ligament of the knee was ossified. Eight weeks before death there was difficulty in speaking, and blood was vomited a few days before death. The case was one of long-standing Charcot's disease without ataxic symptoms, and improved under the rest obtained by means of the splint, though the movement continued to be free in many directions. The disease was of a rheumatic character, and he agreed with Mr. Hutchinson that the insensitive state of the joint largely contributed to the causation of the disease. The other case was that of a man with elephantiasis of one limb, and intestinal obstruction due to an enormously thickened volvulus, in which the sac-like omentum was greatly thickened, and which must have existed a very long time; the man died from the obstruction after having experienced severe sudden pain in the abdomen lasting but a short time. In this case the ankle had lost all its normal characters; the man walked on the inner border of the foot, and there were perforating ulcers on the great toes of each foot. The right foot had become diseased twenty-one years before, bone having been lost and suppuration set up. Fifteen years before the left ankle became affected, and the elephantoid condition of the skin had lasted ten years. At the autopsy there was a saucer-like cavity about the ankle, with thickening of bone around the tibia and fibula, which were firmly united; irregular thickening of the shafts of the bones also existed; the posterior tibial nerves of both sides were swollen, and sections made by Mr. Hudson showed changes in the nerves like those described by Messrs. Savory and Butlin; there was enormous thickening of the epineurium, but little of the perineurium, and some thickening of the endoneurium. The sensory fibres were almost absent. The painlessness of the disease, the long continuance, the profuse perspiration without ataxic symptoms were noteworthy features.

Mr. HERBERT PAGE spoke of the case of a man who had had severe gastric crises, lightning pains, and in whom the tarsal bones of one foot were disorganised, the other foot following suit soon after. (Clinical Trans. 1883) The feet were put up in plaster-of Paris and ankylosis obtained. The feet were extremely misshapen. There was little or no ataxia in the case. In August, 1884, there was a recurrence of the attack in one foot, the ankle and tarsal bones being involved. If this were an exacerbation of rheumatism it was strange that it should not have attacked the other foot. It was the clinical features on which Charcot established the disease as a wholly distinct malady. The wearing away of the bone is rapid, and not like a rheumatoid change in which friction might play a part. Further, in the case above mentioned other symptoms clearly referable to the nervous system were present, as, for example, the attacks of hæmaturia. Why should we not admit that irritative lesions of nerve trunks produced changes in the parts supplied wholly different from those alterations which might result from mere removal of nervous influence, as in cases of simple section of nerves? Further, in cases of irritative nerve lesion, as when a contractile scar irritated a nerve trunk, the changes induced at a distance ceased when the nerve was freed from the irritating scar tissue. And if lesions of nerve trunks could set up changes, why should not lesions of the central parts of the nervous system have the same influence? He felt sure that the pathology of acute bedsores was of this nature. With regard to the whole question, he thought that we were in a condition of what he termed individual belief. In his belief Charcot's disease was a distinctive affection of joints.

In reply to Dr. MOXON, Mr. PAGE said that there was no ataxy of gait, and that the recurrence of joint disease affected only one foot.

Dr. MOXON then inquired whether rheumatism was less capable of acting on one side than locomotor ataxy; was not ataxy always of both sides?

Dr. PYE SMITH said that there was no evidence to show that any disease was new. Cholera and diphtheria were not new, and cerebro-spinal insular sclerosis had only recently been recognised. With regard to the relation of Charcot's disease to osteo-arthritis, he said there was no adequate evidence for separating them. In osteo-arthritis there was great excess of bony growths, whilst in Charcot's disease there was a great deal of wasting of cartilage and bone, yet if a sufficient number of specimens were examined, more or less attempts at the production of new bone would be found. The age and duration of the disease allowed of the distinguishing of varieties in the large group of cases. A contrast was drawn between the rheumatoid changes in a young woman and those in an old man. Acute rheumatism was an entirely different disease. And yet occasionally cases of acute rheumatism exhibited changes in the phalanges like

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those of osteo-arthritis. Brief mention was made of two such cases, both of which had valvular disease of the heart. Trophic nerves had now been allowed an existence by physiologists, though Schiff's early experiments and those of Donders were first interpreted otherwise. The evidence for the existence of trophic nerves was so strong that there could be no doubt on the matter. Mr. Hilton had observed how lesions of the hand waxed and waned with pressure on the ulnar nerve by an exostosis. Again, bedsores of rapid and violent production were best explained on the assumption of their existence. Zona followed the course of the nerves, yet nerve lesions could hardly have anything to do with Charcot's disease, seeing that the anterior roots were not involved in tabes dorsalis. The whole pathology of gout was so different from osteo-arthritis that confusion on this score ought to be impossible. Irish disease was almost a synonym for osteo-arthritis. Gout is almost unknown in Ireland and Vienna, so much so that when a specimen of gouty joint appeared it was long before the nature of the disease was recognised in Vienna. The fetlock of a horse sometimes showed an example of osteo-arthritis. Busk had discovered osteo-arthritic lesions in bones found at Gibraltar, which must have belonged to bears of the glacial period. And Flower had shown the cervical vertebræ of a porpoise with similar lesions. Syphilis certainly had nothing to do with these affections. Hutchinson had rescued the lesions of congenital syphilis from the group of scrofulous diseases. Dr. Pye Smith considered that tabes was not an absolutely fixed and definite entity. He differed from Dr. Wilks in believing that there was a real complex of symptoms which might justly be said to come under the wide category of tabes dorsalis. He concluded by referring to the dictum which said that investigation was to be preferred to speculative imagination.

MEDICAL SOCIETY OF LONDON.

Relapsing Pneumonia.

AN ordinary meeting of this Society was held on Monday last, Mr. Arthur Durham, President, in the chair.

Sir ANDREW CLARK read a paper on a case of Relapsing Pneumonia in an aged person, an abstract of which will be found on another page.

Dr. C. T. WILLIAMS said that he had always regarded acute croupous consolidation of the lungs, not as a local disease, and not exactly as an inflammation, but as a case of blood-poisoning. He put such cases in the class of fevers. He had seen somewhat similar cases, though the relapses were neither so frequent nor severe. Supporting treatment was all that was wanted.

Dr. SANSOM asked whether there was any history of the inhalation of vitiated air. He quoted a case in which there were rigors, with the accession of febrile symptoms and initial partial consolidation of the right upper lobe; delirium was very great indeed, and lasted a few days; the illness was an extremely rapid one. A few days later he found the patient with precisely the same symptoms, which ran almost exactly the same course. In both cases there were rusty sputa, but the patient had also severe hæmoptysis. Recovery took place by defervescence at the end of a week. He referred to another case of pharyngitis with febrile acumosis on alternate days for a week, in which a severe attack of consolidation of the lungs was passed through. The etiology of this case was as conclusive as anything could well be; there was a large crack in the soil pipe, from which sewer gas found its way into the bedroom of the patient; and, in fact, all the residents in the house suffered in some way or other.

Dr. DOUGLAS POWELL was a little disappointed that Sir Andrew had not given his explanation of the case. Had the patient been exposed to malarious influences? Recurrent thrombosis suggested itself as a method of explanation, but the clinical symptoms did not fit with this hypothesis. At the fag end of pneumonia, in some instances, the resolution seems to take place too fast, and an overdose of morbid material is taken into the circulation, and hectic phenomena produced. He described such phenomena many years ago.

Dr. ROGERS spoke of the case of a gentleman seventy years of age, who went through six relapses of pneumonia. Twelve years ago he had rheumatic fever with valvular affection. There was a history of gout in the family. He was attending the patient for rheumatic gout; a rigor set in, the temperature rose, and the signs of consolidation of the middle lobe of the left lung were made out. There was no cough and no expectoration. Delirium set in suddenly. There were frequent changes in the patient's state, very much as happened in Sir Andrew's case. He believed there was some poison at work in the system. Eczema broke out in the course of the case. There was something more than inflammation in pneumonia.

Dr. T. H. GREEN said he still felt somewhat in the dark as to the nature of the case under discussion. He considered that "pneumonia" was a general fever with a local manifestation in the lungs. He would separate Sir Andrew's case from those of acute pneumonia. It seemed to him that the case was more likely to be due to some septic influence.

Dr. SIMMS inquired into the family history of the case, especially as regards rheumatism and gout. The relapses at regular intervals suggested such an etiology. Cases had been recorded by Dr. Johnson, in which there was no expectoration, and in a case under his care there had been no expectoration whatever; these cases were probably of a gouty or rheumatic nature.

Dr. S. COUPLAND thought the case must be placed more in the category of septic pneumonia than anything else. With regard to the histological nature of pneumonia, he referred to the views of Hamilton of Aberdeen, who believed that pneumonia was not an inflammation, but was due to a profound circulatory disturbance. That view had not been accepted by the majority of histologists. The lung might be best compared to a serous membrane where there were fibrinous exudations in inflammation. An inflammatory change was almost solely a vascular change, and so where we had to do with congestion and rupture of vessels it was possible for the mind to perceive a distinction without a difference in the views which had been propounded respecting the histological nature of pneumonia. He himself preferred not to teach his pupils the view of Sir Andrew and Hamilton.

Sir ANDREW CLARK, in reply, said the expectoration was very minute in quantity. It was no rare thing for him to see cases without expectoration, and he ventured to say that one-third of the cases at the London Hospital had no expectoration. He thought that there was no evidence of cell proliferation or cell advancement, but as the whole aspect was one of regression, and, further, since there was a want of close organic union between the exudation and the alveolar wall, and no sign in the alveolus of any textural change, that he was justified in the views he held. The products of inflammation of the pleura were totally unlike those of pneumonia. Textural changes may be observed in pneumonia when the alveolar wall is excited to action by the presence of foreign material. He was quite familiar with the cases of relapsing pneumonia due to too rapid absorption from a resolving consolidation, as well as with those due to perityphlitis, pelvic cellulitis, or phlebitis. He believed that a malarial influence might have been at work in this case. Gout was also a possibility. He had seen at least a dozen such cases as the one recorded, and had made two post-mortem examinations which seemed conclusive of the presence of pneumonia. The intimate nature of disease could not be determined by anatomical alterations.

Mr. DURHAM showed the Cervical Cyst of a boy whom he had exhibited at the Society two weeks ago.

Dr. RADCLIFFE CROCKER showed a case of Gangrenous Ulceration of the Groin in a child; the disease began three weeks after the measles.

OPHTHALMOLOGICAL SOCIETY.

Unilateral Irido-Choroiditis.—Retinitis Albuminurica.—Vesicle of Cornea.—Hyphæmia.—Hysterical Deviation.—Cocaine.—Ophthalmic Models.

A MEETING of this Society was held on Dec. 11th, Mr. J. Hutchinson, F.R.S., President, in the chair.

Mr. MARCUS GUNN showed a child, aged eight years, the subject of Unilateral Choroiditis. Some years before this child's birth the mother had suffered from syphilis. Two years ago the child had a feverish attack, probably due to meningitis. Mr. Gunn found that there were numerous synechiæ in the right eye; the optic disc was occluded by a

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dense light grey mass, with well-defined edges, which protruded forward into the vitreous; vessels could be traced over it. Stretching inwards from this structure was a narrow detachment of the retina, and another detachment was seen in the region of the macula. There were numerous patches of choroidal atrophy. In reply to the President, Mr. Gunn said that he considered the lesions to be due to congenital syphilis, but that he had difficulty in accounting for the condition of the vitreous.

Mr. HENRY EALES showed a case of Retinitis Albuminurica in the Left Eye only. The patient was a man aged twenty-five years, single, by occupation a striker. He first came to the Birmingham Eye Hospital on August 25th last, complaining of loss of sight in his left eye of three weeks standing, when in Mr. Eales' absence he was seen by the house-surgeon, who made a note that his right eye was normal while his left eye presented all the typical appearances of retinitis albuminurica, that the urine contained albumen in a small quantity and that he was a heavy beer drinker of seven years' standing. On September 1st Mr. Eales saw him and confirmed the above. On inquiry it was ascertained that on Saturday, August 2nd, being very drunk, he had a fall on some steps in which he twisted his left side. This pained him for a fortnight after so severely that he was unable to stand upright. His urine remained normal in appearance as far as he could tell, but on the following morning he noticed his sight dim, there being "a cloud over the upper part of his sight." He has never had scarlet fever, syphilis, or, in fact, any illness till the present. Having been treated as an in-patient, by frequent purgatives (mostly of elaterium), hot baths, and with liq. ferri perchlor. and digitalis as the principal medicines, the albuminuria and retinitis rapidly subsided—indeed for a time it was thought the albuminuria had quite disappeared, but careful investigation still showed albumen in slight traces in the urine about two hours after breakfast No casts have been found, possibly on account of not being looked for in the more acute stage of the affection. The retinitis was typical, the retina being covered by large milky opaque effusions, with a few hæmorrhages, the yellow spot and disc being especially affected. The right eye has never shown a sign of retinitis, even of the slightest kind. The present state is as follows:—The right eye was normal; in the left eye the disc was white and atrophied, and its margin blurred; the retinal arteries were reduced to threads, and several glistening dots were present in the retina all round the macula like that seen after typical retinitis albuminurica. The urine showed a trace of albumen after breakfast, but at no other time.

Mr. MCHARDY showed a drawing of a case of Unilocular Retinitis in a patient suffering from Albuminuria. The patient had been under the care of Dr. G. Johnson, and the case was shown at the International Medical Congress in 1881. He referred to another reported case of unilocular albuminuric retinitis, in which also there was but one kidney.—Dr. STEPHEN MACKENZIE related a case which had been placed under the care of Dr. Hughlings Jackson on account of a disease believed to be albuminuric retinitis; the presence of albuminuria appeared to confirm the diagnosis, but the optic nerves were more swollen than is usually the case in albuminuric retinitis, and had rather the appearance seen in tumour. The patient ultimately had convulsions, followed by coma and death. The necropsy revealed tubercular meningitis. There was only one kidney, and this was not diseased. He believed it to be impossible, in certain cases, to decide from the ophthalmoscopic appearances whether the lesion was albuminuric retinitis or whether it was a condition which sometimes occurred in connexion with brain disease. Recently Mr. Morton had referred a case to him where the appearances resembled those of albuminuric retinitis. The necropsy showed a tumour of the corpus striatum and optic thalamus of one side. Having these facts in view, and looking at the whole history of the case, he was inclined to suggest the presence of some coarse intracranial lesion in Mr. Eales's case. It was known that in cerebral tumour the optic neuritis was not unfrequently unilateral in the early stages of the case at least.—Mr. NETTLESHIP considered that the patches in the choroid were not the result of retinitis; he doubted whether the patches were coincident in time with the papilloneuritis, and thought, on the contrary, that they were probably of longer standing. The condition of the papilla pointed to the occurrence of thrombosis as not improbably the cause of the lesions of the fundus oculi. He would suggest that there was arterial thrombosis in an eye which had previously had some choroidal disease leading to atrophy.—Mr. EALES, in reply, said that the distribution and mode of development of the disease appeared to him to be incompatible with the explanation offered by Mr. Nettleship.

Mr. ANDERSON CRITCHETT and Mr. JULER showed a case of large vesicle of the cornea; the disease had existed for about five months. The vesicle had been about four millimetres in diameter at its base, but had recently burst. The chief symptoms were photophobia, lacrymation, and pain. The eye had previously been quite sound.

Dr. W. A. BRAILEY showed a case of Hyphæmia secondary to some deeply seated intra-ocular change; the prominent signs were double irido-cyclitis, with hæmorrhage into the anterior chamber, and great variation in the tension. The case was of interest owing to the obscurity which surrounded its mode of origin. There was no history of gout.—The PRESIDENT observed that slowly progressive iritis, with hæmorrhages into the anterior chamber and into the vitreous, generally occurred only in persons with a gouty history.—Mr. NETTLESHIP suggested that the case would perhaps fall into the group to which the term idiopathic phthsis bulbi had been applied; there were rapid variations in tension in this disease.—Dr. BRAILEY pointed out that the case differed from idiopathic phthisis bulbi in every respect except the variation in tension.

A case of conjugate deviation of the eyes to the right in a hysterical woman aged twenty-five was shown.

Mr. NETTLESHIP read a short paper on Cocaine in Ophthalmic Practice, which had been communicated to him by Mr. Simeon Snell, and the gist of which will be found in a letter from that gentleman published in our last number. Mr. Nettleship then read an elaborate paper on this subject. He had operated on about seventy eyes under the influence of cocaine since Oct. 10th, on which day six eyes were so dealt with. The number of eyes so operated on were as follows:—Extraction of cataract, with iridectomy, 12; extraction of cataract after preliminary iridectomy, 4; extraction of soft cataract through small incision without iridectomy, 4; iridectomies for various purposes, 16; conical cornea (apex excised), 1; discission, 8; iridotomy, 2; scraping corneal ulcers, 2; tenotomy, 17. It was used in several other operations (chiefly tenotomies), and almost daily for several weeks in cases of foreign body on the cornea. The preparations used were a 2 per cent. watery solution, a 2·5 per cent. solution in vaseline and in castor oil, occasionally a 4 per cent. watery solution, and of late usually gelatine disc (made for the writer by Savory and Moore about the middle of October), each disc containing $\frac{1}{10}$ of a grain of cocaine hydrochlorate. These always caused complete anæsthesia of the cornea and conjuctiva of healthy (that is, non-inflamed) eyes; but the iris had never been completely anæsthetic in any of the operations involving iridectomy, even after frequently repeated applications; he doubted, indeed, whether the sensibility of the iris was lowered at all in any of the cases. In one preliminary iredectomy the patient became so unruly when the iris was grasped that the operation had to be completed under chloroform, and with the other patients some difficulty was experienced at the iridectomy stage, although the operations were satisfactorily finished without general anæsthesia. In tenotomy there was sometimes slight pain, when the parts were put on the stretch by the hook and scissors. But with the exception of the iridectomy mentioned above, the operations had almost invariably been completed without a hitch, with next to no discomfort to the patient, and with no bad after-effects. Had cocaine not been in use, ether or chloroform would have been given to about one-half of the patients referred to. Cocaine was used prior to the application of the actual cautery to granular lids on several occasions with partial success; in a case of cauliflower warts about the inner canthus, and in a case of lupus on the skin of the lower lid, with little or no success. Cocaine greatly relieved the photophobia in several cases of corneal ulcer. When the ciliary region was much congested, it remained sensitive to deep pressure, though the conjunctiva seemed anæsthetic to light pressure, and the cornea completely so. The mydriatic effect was often less marked in inflamed than in healthy eyes, and repeated applications to congested eyes had not produced any decided blanching. A single application to the healthy eye caused complete anæsthesia in two or three minutes; about four minutes later this began to diminish, and had entirely passed off about twenty minutes from the time of application. Retraction of the upper lid began in

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four or five minutes, and lasted about half an hour; during the same time well-marked blanching of the surface of the globe occurred. Mydriasis began in three to ten minutes, was at its maximum ten to fifteen minutes later, and lasted in all at least twelve hours. The reflex and associated actions of the pupil were present throughout. Accommodation, though scarcely affected by one application, was almost completely paralysed, but for a very short time, by repeated applications. A single drop of eserine solution acted as fully and quickly as if no cocaine had been used. Probably the retraction of the upper lid, whitening of the eyeball, and mydriasis were caused by spasm of muscular fibres innervated by the sympathetic. The very fleeting cycloplegia caused by the repeated use of the drug might be due to ischæmia of the ciliary muscle from spasm of its nutrient arteries.

Mr. ARTHUR BENSON of Dublin contributed a paper on the same subject. The author found that the specimen of cocaine with which his previous experiments had been conducted was contaminated, probably with eserine. Hence the subsequent contraction of the pupil, &c. This result did not occur when the pure drug was used, but the pupil remained dilated for several hours. The most minute trace of eserine counteracted the dilatation. He found in experimenting on himself that the anæsthesia produced reached its maximum in two or three minutes, and was extremely local; he could, by applying a small quantity, produce anæsthesia of one half of his cornea and conjunctiva, whilst the other half retained perfect sensation. The degree of anæsthesia depended, within limits, upon the amount of the drug employed; repeated applications of a 2 per cent. solution produced almost total anæsthesia of the cornea and conjunctiva, so that the removal of foreign bodies and other operations could be performed painlessly. The sensibility of the iris seemed to be only slightly, if at all, diminished. He had applied it on the tongue and lips without marked result, a slight dulness of sensation alone being produced. In cases of photophobia he had used it with marked benefit (keratitis and conjunctivitis), and considered it of great value in facilitating the examination of such cases, as well as from a therapeutic point of view. In normal eyes it usually produced an increase of tension amounting to +1 within from half to one hour, the tension falling before the dilatation ceased. He had not tested its effect upon the tension of diseased eyes. He had removed an aural polypus, having applied cocaine to the ear, with apparently good results. He was certain that the drug when used pure and in abundance would prove one of the most valuable ever discovered. Its action being so local, and the duration of the anæsthesia so limited, it should be used abundantly, and a very short time before the operation. Owing to the lateness of the hour there was no discussion on these papers.

The sitting was prolonged for a short time to allow Mr. PRIESTLEY SMITH to demonstrate models illustrating the following points:—1. Hypermetropia and myopia; a diagrammatic section in two parts, the one sliding upon the other. 2. The condition of the retinal picture in emmetropia, hypermetropia, and myopia, with and without accommodation, and with and without glasses; a spherical wooden model capable of elongation, and with a movable lens. 3. The same conditions by a different arrangement, and to demonstrate the fundus image-test. 4. Astigmatism; a "cornea" of indiarubber cut from the side of a large ball. 5. The mechanism of accommodation; a thin elastic steel band curved to the proper shape to represent the lens in section. The suspensory ligament was represented by spiral steel springs; the ciliary muscles by ribbons, which could be pulled upon when it was desired to illustrate the action of the ciliary muscles. 6. The causation of diplopia, and its correction by prisms; two cardboard cylinders mounted on a vertical axis, with a convex lens in front, and an aperture covered with thin paper behind. At the yellow spot region the paper was made more transparent by a drop of paraffin; at the fixation-point was a lighted candle. The relation between deviation of the cornea and the apparent deviations of the image in paralysis of the sixth nerve, and in other deviations of the eye, could be demonstrated, as well as the effect of prisms. Mr. Priestley Smith also exhibited a simple artificial eye, and an apparatus for demonstrating operations on pigs' eyes, which consisted of two short cylindrical pillars with cupped extremities, over which tubular caps slided, and held the eyes which lay in the cups tense.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Wednesday, Dec. 3rd, Henry Gervis, M.D., President, in the chair.

The following specimens were shown:—Dr. Walter (Manchester): Fibrous Tumour of Uterus removed by Operation. Dr. Horrocks: Two-headed Fœtus. Dr. Godson: Fibrous Polypus. Dr. Champneys: Ruptured Uterus.

Discussion on Dr. Graily Hewitt's paper on uncontrollable vomiting in pregnancy, adjourned from the November meeting. Drs. Champneys and Galabin spoke at the November meeting, but the whole discussion is given below.

Dr. CHAMPNEYS observed that many of Dr. Hewitt's anticipations of probable objections amounted to a declaration that, in spite of them all, he believed his own theory. Anteflexion or anteversion is found in 80 per cent. of all cases of early pregnancy. No attempt has been made to show the difference as regards vomiting between those whose uteri are "displaced" and the small minority in which they are not displaced. In the puerperal state anteversion and anteflexion are at least as common. Here is a large uterus, full of blood, anteflexed, but where is the vomiting? Again, it has been assumed that anteflexion is a position of constraint. Here are these women lying on their backs, and yet the uterus is persistently anteflexed. It has never been proved that flexion as flexion ever disturbs the circulation in the uterus. If, however, we look for a typical condition of flexion with pressure, we find it in the case of the retroverted gravid uterus. Here we may have acute flexion with incarceration, either of which, on Dr. Hewitt's theory, is sufficient to cause vomiting. But where is the vomiting? Flexions have been proved to be very common in women, whether well or ill, and association, without severe sifting, proves nothing. The sudden cessation of vomiting recorded in some of the cases is a well-known character of this vomiting, and is a precarious foundation for theories. The cases themselves require more details as to other possible causes of vomiting, such as albuminuria, jaundice, constipation, &c.

Dr. GALABIN said that anteflexion was so common in early pregnancy that it was one of its best diagnostic signs. If it were the cause of vomiting, a pessary should cure the vomiting. Not one of the cases related was cured by this means. In backward displacement relief followed reposition oftener in Dr. Hewitt's cases. Excessive vomiting was plainly only an extreme degree of the common vomiting of pregnancy. Tension must be an important element, witness the cessation of vomiting if the ovum dies, and the excessive vomiting associated with hydatid mole. When the nervous system is hyperæsthetic, some morbid condition of the uterus, such as inflammation, induration, and grave displacement, such as retroversion, especially with incarceration, might produce excessive vomiting. Dr. Hewitt's theory did not explain the relief which he had several times seen follow dilatation of the cervix. The *modus operandi* of this procedure was hard to explain, but it might be connected with overstretching the nerves or rupturing some of the fibres about the os internum, which is a special seat of reflex action in labour. Incarceration of an anteverted or anteflexed uterus in early pregnancy was to him inconceivable apart from adhesions.

Dr. BARNES said that excessive vomiting in pregnancy was an instance of a physiological process passing the healthy boundary. The physiological basis is vascular and nervous tension peculiar to pregnancy. Vomiting is a safety valve for nervous energy, and a safeguard against nervous seizures, such as eclampsia. Vomiting is a sort of physiological convulsion, and so is labour itself. After delivery the tension ceases, and the liability to vomiting also. The exciting cause of the vomiting of pregnancy is usually in the uterus itself. The fact of the vomiting occurring as soon as the patient gets up may be partly explained by increased flexion, partly also by Bretonneau's theory of rapid distension of the uterine fibres under increased hydraulic pressure of the blood from the erect position when the nervous centres are most excitable after rest, and the inhibitory force weakest from fasting. Since flexion remains for the rest of the day, however, flexion is not sufficient. Vomiting later in pregnancy, which is the severer form, is kept up by starvation when once started, degraded blood increases the nervous irritability, and a vicious circle is formed. Albuminuria is a further evidence of toxæmia, and hiccough is a form of convulsion. The vomiting seen in obstructive dysmenorrhœa

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is analogous. The solution is not to be sought in any one factor, but nervous and vascular tension underlie the whole question.

Dr. BRAXTON HICKS said the term "severe" was too vague, and he had never seen uncontrollable vomiting. The vomiting of pregnancy was so variable that severe vomiting could not be considered apart from the vomiting which might be called natural. When the pulse rose emaciation commenced, and when the tongue became red and the epigastrium tender, the case became urgent. He had never seen a case which had not yielded to remedies. With regard to the cause of vomiting, he agreed in many points with the previous speaker. Since Dr. Graily Hewitt's first paper he had examined all cases carefully, and he had never found any displacement or other local disturbance requiring mechanical treatment, nor had he ever failed to carry his patient safely to full time by the persistent use of remedies, especially opiates, given perseveringly until some portion was retained by the stomach, and the system was calmed. The nerves of the mucous membrane of the stomach became irritated, and after a time formed a centre of disturbance, after the manner seen in other parts. By the administration of opiates by the mouth these nerve ends were soothed, and consequent benefit secured.

Dr. MATTHEWS DUNCAN knew no controllable vomiting of pregnancy. Medicines might do some good, and perhaps in some cases stop it. This he did not deny, but everyone in practice knew that the vomiting was practically uncontrollable. He placed most reliance on atropia in the common variety of vomiting when excessive. The vomiting of pregnancy was of course stopped by emptying the uterus; that was not to control it nor really to stop it; that was to stop the pregnancy. He recognised, meantime, only two kinds of vomiting of pregnancy: the ordinary, natural, physiological; and the pernicious, uncontrollable — very dangerous. The former generally ceased about mid-pregnancy, but it might go on longer, be excessive, and induce emaciation. He was not quite certain that it ever ended fatally. The pernicious kind had been the subject of several recent memoirs, and was often fatal, rapidly fatal; it might begin at any period of pregnancy, and run its course slowly or more quickly; and till our new knowledge of this kind was used in the investigation of all cases, he would not admit that a fatal result came from the ordinary or physiological kind, even though very severe. The pernicious kind was no doubt induced by pregnancy, and in it we had degeneration of organs, granular, fatty, or inflammatory. Cases often presented all the characters of icterus gravis, but they varied much from the apparently simple cases of fatty degeneration of Hecker, Grainger Stewart, and others, to cases with symptoms more or less like those of Bright's disease or of yellow atrophy of the liver. They presented great prostration, often bleedings, often albuminuria, more or less considerable, also often bile in the urine. Sugar even had been observed. Such cases were not always fatal. He was disposed to regard this pernicious vomiting as certainly sometimes passing off after delivery, or perhaps even before it. It often led to the death of the fœtus. He knew of no remedy but emptying the uterus.

Dr. PLAYFAIR said that we are all apt to ride our hobbies too hard, but, in this respect, Dr. Hewitt carried off the palm with ease. Indeed, with perfect good faith, he fitted his facts to suit his theory. In many of Horwitz's cases there were conditions which might quite account for the vomiting, such as perimetric adhesion, tumour, parenchymatous metritis, and other inflammatory conditions. All these Dr. Hewitt calmly puts aside as beside the question, and points to a slight deviation as the cause of the vomiting. The plainest of all facts about the vomiting of pregnancy is that it is a neurosis of an intense degree, and only one of many neuroses accompanying pregnancy, and also associated with many forms of pelvic disease, such as inflammation and dysmenorrhœa. All these differ only in degree from the vomiting of pregnancy. It was observed long ago by Dr. Bedford of New York that when there was no vomiting in pregnancy some other and often more distressing form of neurosis, such as fainting and palpitation, was apt to be present. He therefore used actually to prescribe ipecacuanha as an emetic, and, Dr. Playfair thought, with much justice. In every case of intractable vomiting we should endeavour to find out the special form of irritation. There is much to be said about the risk of the indiscriminate use of pessaries and of cervical dilatation during pregnancy; but, above all things, it is necessary to take a broad scientific view of the whole question, and not to adhere to any exclusive theory, such as that advocated by Dr. Hewitt, to the overlooking of the concomitant conditions of which he makes so light.

Dr. CLEVELAND believed that the opinion of the Society was, on the whole, that the relation of the ascertainable condition of the uterus with, at all events, the less severe forms of vomiting could not be regarded in the light of cause and effect. Pregnancy disturbs the nervous equilibrium, and some women suffer from toothache, in others from a grave neurosis (may be) of the pneumogastric nerve (vomiting). His special object was to point out the danger to life from prolonged and excessive vomiting in pregnancy, and to inquire what is the probable mode of death Is it not failure of the heart's action, and if so, as one of the means of averting the tendency to death, ought we not to lay stress on the necessity of rest in the recumbent position? He related a case of violent vomiting in which death ensued on the patient's getting out of bed contrary to strict injunctions. Post mortem the heart was found somewhat dilated, the liver large and congested. The uterus was pregnant about ten weeks.

Dr. MURRAY was not inclined to believe that in pernicious vomiting other organs are implicated, for if so, why does the vomiting sometimes cease when the cervix is dilated? He had recently seen a case where this treatment stopped the vomiting for some days, but the patient died exhausted after expelling the uterine contents. There was no displacement of any kind. He thought that after a fair trial of remedies early interference with the pregnancy was best for the patient.

Dr. WYNN WILLIAMS did not find that flexion of the uterus, apart from adhesions, was associated with severe vomiting in pregnancy. Neurosis would account for great sickness. The only two deaths he had seen had been in alcoholic patients with liver disease. In a case of severe vomiting he had advised the passage of a sound just within and around the os uteri, and the vomiting had ceased.

Dr. BANTOCK had never met with a case of uncontrollable vomiting. He thought Dr. Hewitt's theory too one-sided. The apparent state of anteflexion in early pregnancy is not properly flexion at all, but a condition produced by change in the size of the organ as it grows and expands, the apparent flexion increasing as pregnancy advances. Therefore, the ordinary teaching that anteflexion is usual in early pregnancy is utterly wrong. He thought the cause of the vomiting was irritability of the uterine body, especially about the os internum. This is illustrated by the vomiting which accompanies artificial dilatation of the os internum (though not of the os externum), and also the normal dilatation of the os internum during labour. He could understand the possibility of increased tension of the fibres about the os internum in retroversion and retroflexion, but not in anteflexion, and still less in anteversion.

Dr. HEYWOOD SMITH said that the uterus of early pregnancy was best described as antecurved. He had a case in which vomiting had persisted to within seven days of confinement, but there was probably a small fibroid as well as ovaritis, and another case was probably due to cervicitis. He thought the fact that vomiting often began on waking and before getting up spoke against Dr. Barnes's explanation, and in favour of the waking up of the uterus and its renewed energy acting on an empty stomach.

Dr. GRAILY HEWITT said the paper stated that there were two factors in the vomiting: (1) altered position or incarceration; (2) induration of tissue near the os internum. Dr. Galabin said that the therapeutic test—viz., by the elevation of the uterus—spoke against the theory, but in five out of twenty-seven typical cases the sickness was cured by elevating and replacing the uterus, and in two others it was at once relieved for a time, the uterus not being maintained in position. Five other cases of severe sickness were cured by postural treatment, rest, and measures calculated to prevent impaction. Uterine sickness, apart from pregnancy, might even lead to vomiting of blood. He did not consider the frequent occurrence of degeneration of organs in pregnancy proved Dr. Playfair had made similar remarks to those made to-night, as to "riding a hobby," some few years ago, at a discussion of a former paper of Dr. Hewitt's, but a year or two later he stated that he had changed his mind since reading Dr. Hewitt's book. He hoped for a similar revulsion of feeling in the present instance. With regard to the criticisms on his cases, he had collected all the illustrative cases he could find, whatever their import. Vomiting after the

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middle of pregnancy was probably due to continued distension and growth of the uterus acting on the indurated tissues near the os internum.

HARVEIAN SOCIETY OF LONDON.

A MEETING of this Society was held on Nov. 6th, Mr. H. Power, M.B. Lond., F.R.C.S., Vice-President, in the chair.

CLINICAL EVENING.

Dr. SYDNEY PHILLIPS showed a boy aged nine the subject of Movable Kidney. He had a lobulated elastic mass, situated chiefly in the umbilical and left lumbar regions, the upper edge of the mass reaching halfway between the ensiform cartilage and umbilicus, the lower edge halfway between the latter and Poupart's ligament. The tumour could be pushed downwards as far as Poupart's ligament, and was movable to a less extent in other directions. There was a marked hollowness and concavity in its left lumbar aspect. The tumour had been noticed after an attack of whooping-cough, when the boy was seven months old; it had gradually increased from the size of a pigeon's egg to its present dimensions, but for the last two years had not altered. During a period of observation of eighteen months his urine had been normal, and there had never been hæmaturia. The boy's health had been fair, but he had suffered from paroxysmal attacks of pain about the tumour. Dr. Phillips believed the tumour to be a displaced kidney which had undergone some change, possibly cystic, accounting for its increased size. It was not a double kidney, as the right kidney could be felt in the normal position.—Dr. STEPHEN MACKENZIE briefly discussed the case, and pointed out that the tumour was not typically kidney-shaped, and that the abdominal walls were not abnormally lax. These were important reasons for doubting that the case was one of movable kidney.—Dr. CHAMPNEYS considered that diagnosis in a case such as this should be based upon a process of exclusion. Had the patient been a female the existence of a dermoid cyst rising from the pelvis might have been strongly suspected. Against the hypothesis that this was an instance of movable kidney the following facts might be urged:—(1) As pointed out by Landau, the subjects were generally adults; (2) they were most commonly women; (3) in a large majority of cases a movable kidney was situated on the right side. The supposition of malignant disease was set aside by the long history of the tumour, which was first observed at the age of seven months. The complication of strangulation was negatived by the observation that for a long period the size had remained constant. With regard to the mobility of the mass, Dr. Champneys had noticed that the centre of movement appeared to coincide with the summit of the iliac crest, or, in other words, with a point perceptibly below the axis of the normal kidney. The final inference remained that this was a solitary, and, therefore, a hypertrophic kidney, and that it was slightly displaced, although not an instance of the malposition known as horseshoe kidney, which was the result of a congenital blending of both organs.—Mr. GANT, in commenting upon the case, gave his reasons for believing that its nature was an open question of diagnosis.—Mr. JOHN MORGAN remarked that he had not long ago had a boy under his care who presented a very similar tumour in the abdomen.

Dr. STEPHEN MACKENZIE narrated two cases of Lichen Planus in which the eruption was distributed along the course of cutaneous nerves, and remarked on the influence of the nervous system in the disposition of cutaneous eruptions. The first case was that of a woman in whom lichen planus was arranged round one-half of the back and abdomen in beltform, like herpes zoster, for which the eruption had been mistaken. Later the eruption became generalised. There was intense itching of the skin, and white patches on the buccal mucous membrane. In the second case, also that of a woman, the eruption was confined to a tract down the inside of one arm corresponding with the internal cutaneous and ulnar nerves, with intense itching in the area of eruption. Dr. Mackenzie proceeded to point out that these cases were deviations from the ordinary type of lichen planus, which was characterised usually by marked symmetry. He next drew attention to other cutaneous diseases which were distributed along the course of nerves, as herpes zoster, morphœa, neuropathic, papillomata, purpura, &c. He next considered the anatomical evidence explaining such neurotic eruptions. He then dealt with the significance of such eruptions, indicating his belief that the local lesions of the nervous centres merely determined the localised eruption, and that there was some other factor which decided its nature.—Mr. MALCOLM MORRIS said that cases of localised lichen planus like zoster were very rare. He referred to a communication in the *New York Medical Record* by Dr. Robinson, in which lichen planus and lichen ruber were described as two diseases, the former being the most localised. Mr. Morris thought, on the whole, that lichen planus was probably neurotic, and not a blood disease, as it often developed in persons who were severely depressed.—Dr. COLCOTT FOX remarked that modern researches had accumulated a mass of evidence to show that the nervous system played a very prominent part in the evolution of skin diseases, either directly through trophic nerves or through the agency of the vaso-motor system. From anatomical considerations it was evident that if a morbid influence was exercised through the vaso-motor nerves, the areas occupied by the eruption would correspond with the areas of blood-supply. It was difficult to resist the conclusion that the corymbose patches of eruption seen in a great many affections of the skin were thus caused. It was still more impossible to resist the conclusion that the patches of shingles were developed on the trajectory of a nerve, and, indeed, this had been placed on sure ground. From the mass of evidence to hand he might point to the evidence of nævi, both blood-vascular and papillary, in relation to nerve distribution.—Dr. STEPHEN MACKENZIE replied.

Mr. JOHN H. MORGAN narrated cases of Painful Mamma in Young Girls. A well-made girl, aged eleven and a half, had suffered from severe pain in the left mamma for some time, which had become more acute lately. The gland was very little enlarged and showed no symptoms of inflammation, but was the seat of great pain and was very tender to the touch. The pain was continuous, with exacerbations. There was no history of injury. The catamenia had not appeared. Shortly afterwards the right mamma became affected in an exactly identical manner. Neither local nor general treatment afforded relief. After some weeks the pain began to intermit, and at length gradually disappeared. Notes were read of six other similar cases, in five of which the left and in one the right mamma was the seat of pain. Mr. H. POWER referred to an article by Erb, dealing with this subject, in a volume of Ziemssen's Cyclopædia, which he had translated.—Mr. GANT alluded to a chapter in his own work on Surgery. This painful affection presented four well-marked characters:—(1) Hyperæsthesia, (2) wide distribution, and (3) superficial nature of the pain, (4) paroxysmal exacerbation. It might be looked upon as a pseudo-mastitis. In many cases it was probably the outcome of depraved habits. — Dr. CLEVELAND, believing in the neuralgic character of the pain, suggested that the hypodermic use of morphia might be expected to yield the same relief as in other neuralgiæ.

A new Antiseptic Vaporiser and an improved Surgical Syringe were exhibited by Mr. R. F. BENHAM.

Dr. AMAND ROUTH read details of five cases of Retroversion of the Gravid Uterus, two of which when first seen were complicated with resulting retention of urine; the bladder in these cases exactly simulating the objective signs of unilocular ovarian cyst. Seventy ounces of urine in the one case and fifty ounces in the other were drawn off. Reduction was easily effected in all the cases without subsequent abortion occurring, and with immediate relief of the symptoms.—Dr. CHAMPNEYS remarked that whereas in general outline cases such as those described were made up of combined flexion and impaction, none of the symptoms special to flexion or to impaction were present. Sometimes considerable difficulty was experienced in replacing the uterus; in such cases the pressure of water or of air was a valuable means of treatment. Dr. Champneys referred to a case recently seen by him in which an indiarubber bag was introduced into the rectum and distended with water under a pressure of four feet, with excellent results.

THE HOUSING OF THE WORKING CLASSES.—The Royal Commission on this subject at the conclusion of their fifty-first meeting adjourned on the 12th inst. until February 20th. It is hoped that the report relating to England and Wales will be presented to Her Majesty before Easter, and there will then remain the inquiry into the position as regards house accommodation of the working classes in Scotland and Ireland.

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Reviews and Notices of Books.

La Gymnastique. By A. COLLINEAU, M.D. Pp. 824. Paris: J. B. Baillière et Fils. 1884.

THIS comprehensive treatise on gymnastics comes in good time to show that the education of muscle rests upon a scientific basis as sound as that of mental culture, and should occupy a place not less essential, if less pretentious, in every school curriculum, and in the daily duty of every life. The definition quoted from Dr. Hillairet, that "gymnastics is the science of movement, and has for its object the regular development of the whole body, the proportionate increase of all its forces," gives promise of a liberality and insight in the execution of the work which closer examination shows are not wanting. An interesting preamble on the history of such organised movement in past epochs and among rude as well as civilised peoples is followed by several chapters which describe with brevity, but with detailed exactness, the known facts of anatomy and physiology, for on these alone, as Dr. Collineau observes, any successful system of muscular exercise must be founded. Experimental proof is adduced in reference to the more important questions discussed, as for instance the results obtained by MM. Chassaignac and Dally and by M. François Frank, as to the effect of exertion on the respiratory and circulatory functions. If there is a fault in this direction it is that extracts from authorities are frequently interpolated when a mere *précis* might have sufficed for the ordinary student. Here, as throughout the book, diagrams are numerous, and are clearly and correctly executed. The general rules as to gymnastic exercise form a series of sensible preliminary observations, most of which are already recognised in practice. For children under eight years games are wisely preferred to any artificial method, and all are recommended to employ their powers with energy but not to exhaustion, and to proceed leisurely from lower to higher developments of force.

The author divides his subject into two sections: (1) the practice of exercises natural to the body, and (2) the use of artificial appliances. Before going into details, however, he has some pertinent suggestions on the effects of malpositions in school and on the causes which produce them. Spinal curvatures from faulty attitudes in reading and writing, and from the adoption of a constrained carriage in walking, are particularly noticed. The *rationale* of such curvatures consists in the irregular and unequal action of the muscles of the trunk combined with unequal distribution of the body-weight; and the remedies suggested are shorter writing time, the use of seats and desks at which a child can sit and work without twisting the trunk, and, lastly, the free and regular practice of simple gymnastics. A variety of these is described, forming collectively a kind of school-drill, and including many useful movements designed to educate and strengthen successively the muscles of the head, limbs, and body. Among many other practical hints it is noteworthy that a broad and low heel is insisted on as an essential for a good walking boot. Elaborate directions as to length of journey, pace, alternations of rest, and the like, are carefully detailed. Attention is drawn to the risk of inflammation of epiphyses and of heart-strain from over-walking in childhood. The bent legs and "pulled arm" which result from premature walking in infancy are mentioned, and a suitable caution enjoined. Running, jumping, dancing, and various balancing exercises receive due comment and illustration. The education of the muscles of phonation has a section devoted to itself. The passages relating to distinctness of speech and the pathology and treatment of stammering are worthy of perusal. There is probably no more important subject under treatment in this work than that of swimming. It is, on the whole, well treated. It seems to us, however, that rather too much is made of various contrivances for teaching the necessary movements on land. No cradle apparatus can possibly give a man any but a very theoretical idea of the way to swim. Such artificial aids have doubtless a certain value as means of muscular exercise, but for our own part we should have preferred to find a large part of the space which they occupy in this work devoted to the consideration of the cause, prevention, and treatment of cramp, a subject which hardly receives sufficient elucidation. Riding is well treated of. Its stimulant effect upon the skin, respiratory and circulatory organs, its fitness or unfitness in different morbid states, are stated at length.

The chapter on games cannot fail to interest an English reader, although his own familiar national pastimes are freely and at times not quite justly criticised, as when cricket itself is accused of sometimes stimulating "brutalité." Dr. Collineau maintains with much good sense that games are as necessary for elder as for younger pupils, and complains that this fact is often lost sight of when a youth is pushed blindly forward in some groove of mental culture without reference to his physical needs or the development of his originality. A number of suitable games and other amusements are passed in review, from cricket, hammer- and stone-throwing, to battledore and shuttlecock, which Dr. Collineau regards as specially adapted to the requirements of growing girls. Lawn-tennis he would reserve to the male sex. Here we think he shows excessive carefulness. His desire is to make not strong, but supple and graceful women. It is manifest that the combination of vigour with grace would form a yet higher type, and girls, we think, may fairly be allowed in most cases to follow their own fancy in the choice of their exercises, and should be limited not so much by conventional restraints as by the measure of their physical capacity. The chapters devoted to gymnastics proper, or those exercises which entail the use of special apparatus, are interesting and instructive.

The association of hydropathy with gymnastics is a noteworthy feature of this book. A bath or douche of water at 12°–16° C. is used by the pupil for from two to four minutes immediately after ceasing his exertions. After this again he rubs himself well with a dry towel, runs a short race, has a second dry rub, and dresses. Commonly this practice, it is said, acts in a beneficial manner as a tonic to the circulation. Lymphatic persons especially find it advantageous. Very neurotic or sanguine constitutions and children, again, are unduly depressed by it. The professional athlete will find here, moreover, much detailed instruction as to appliances in daily use in his calling, and likewise with regard to the systems of Schreber and the German school, the more accurately scientific Swedish system, which adapts itself to the counteraction of opposing muscular forces, the modification of the latter method devised by Pichery, and the procedure of military gymnasia. To medical men Part V., which deals with the therapeutic uses of induced or spontaneous muscular action, conveys useful information. This is especially true of the remarks on gymnastic treatment in cases of spinal curvature. Dr. Collineau advises for such cases a combination of various methods, passive and active, and lays particular and justifiable emphasis on the benefit obtained by exercises of suspension, such as rope ladders, by the manual or Swedish system, and by the regular practice of spontaneous movements calculated to strengthen the muscles on the weaker side of the body. The efficacy of similar measures is also well shown in the treatment of chorea, and paralytic nervous affections. The uric acid diathesis, the state of obesity, the sedentary habit with its attendant evils, have at all times found their truest remedy in regular and sufficient exercise. The statements which are here expressed upon this point are therefore in

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accord with the previous teachings of medical science. A final chapter on the international aspect of gymnastic training is interesting in its own way; and the book as a whole may be considered to treat in a fair and comprehensive manner of the means and reasons for physical training.

OUR LIBRARY TABLE.

The Spitalfields Genius. The Story of William Allen, F.R.S., F.L.S., F.R.H.S., &c., Hon. Member of the Imperial Academy, St. Petersburg, Lecturer for many years at Guy's Hospital and the Royal Institution, and Founder of "America." Retold by J. FAYLE, B.A. Lond. and Camb., late Scholar Trin. Hall, Camb. London: Hodder and Stoughton.—The author of this pleasant little volume, who is evidently a hero-worshipper, must have devoted to it much time and patient loving labour; and his hero is particularly well chosen, for William Allen was one who unquestionably did much good work in very varied fields; who, labouring incessantly on behalf of the oppressed, the unfortunate, and the poor, himself seems to have led as blameless and perfect a life as is given to human being to live. Mr. Fayle claims that "the name of Allen ought to be for ever connected with three great schemes which have done so much to alter the whole condition of the country. 1. His 'Colonies' and general efforts to improve the condition of the agricultural labourers. 2. The 'Lanark Concern,' which led to a social revolution amongst the manufacturing hands. 3. The 'British and Foreign School Society,' which undoubtedly led to the present impulse given for general and compulsory education." The first refers to "America" or the "Colonies at Home," which Allen founded at Lindfield in Sussex, where he also tried another great experiment—an industrial school—and where he died. An amusing story is told of a startling mistake made in the case of one who, like Allen, "played many parts," but, unlike him, seems to be no sort of hero to the author. The Rev. Alexander Bell, who wrote that he thought it "an object of considerable importance to be distinguished with the honourable title of 'D.D.,'" seems to have applied for and duly received the "title of 'Doctor'—but unfortunately, through some accident, it was 'M.D.!'—and he knew as much of medicine as he did of Chinese." We have heard a story, the converse of this, of much more recent date. Some one having sent up the necessary papers and fees to a foreign bogus-degree-granting university received in return, instead of the M.D., a D.D. diploma. On writing to complain, he was informed that a mistake had been made, but that having been made a D.D., a Doctor of Divinity he must remain to the end of his existence; he could, however, by remitting fresh papers and fees, have the degree of M.D. conferred upon him as well! The book contains three illustrations and a chronological table of the life and times of William Allen, and treats of him in his various capacities as "the business and scientific man," "the philanthropist," "the courier to the Duke of Wellington," "the Quaker," and "the domestic man."

A Descriptive Catalogue of the Pathological Museum of the Middlesex Hospital. By J. KINGSTON FOWLER, M.A., M.D., assisted by J. B. SUTTON, F.R.C.S. London: J. and A. Churchill. 1884.—This catalogue is a praiseworthy production, and must prove of great value to the members of the staff, as well as to the students of Middlesex Hospital. And not to these only, for it is the custom of workers on various subjects to go the round of the pathological museums, and to such students a printed catalogue is of great service. The work is so arranged as to be easy of reference, and the descriptions of the specimens, though for the most part brief, are no doubt adequate to the purpose a descriptive catalogue is meant to subserve. We sincerely hope that the publication of this catalogue may stimulate the study of pathological specimens, for we are convinced that the majority of medical students do not give sufficient time to this section of their work. We cannot too highly praise the industry of the gentlemen who have accomplished this task.

Guy's Hospital Reports. Vol. XLII. London: J. and A. Churchill. 1884.—Sir William Gull writes on a case of probable thrombosis of superior mesenteric vein and renal veins, with detachment of several valvulæ conniventes of the jejunum followed by recovery. Dr. Hale White has a lengthy article on the theory of a heat centre from a clinical point of view. Dr. Goodhart contributes a paper on the relationship between the structural changes and the clinical symptoms of chronic renal disease associated with dropsy, and also records two cases of general anasarca in children without albuminuria. Mr. Charters Symonds describes cases illustrating the various results of partial subcutaneous laceration of arteries. A case of enlarged cirrhotic liver, with observations on the concurrence of fever with cirrhosis, is related by Dr. Carrington.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. IV. London: J & A. Churchill. 1884.—It is unnecessary to praise the matter and illustrations of this fourth volume of the Ophthalmological Transactions. We may make special mention of a few of the papers therein contained. Dr. Brailey, Mr. Gunn, and Dr. James Anderson have contributed papers on Uniocular Diplopia. Dr. Gowers has written on Spasm of the Ocular Muscles. A Case of Homonymous Hemianopia has been recorded by Dr. Seymour Sharkey. Mr. J. Hutchinson's paper on Proptosis with Enlargement of Glands has more than an ophthalmological interest. Dr. Stephen Mackenzie has discussed Anæmia as a Cause of Retinal Hæmorrhage. Mr. Nettleship is the author of several valuable papers, perhaps the most wide-reaching of which are: Recovery from Amaurosis in Young Children, and Hemianopia with Cerebral Tumour. Dr. Sharkey's and Mr. Lawford's case of Acute Optic Neuritis, associated with Acute Myelitis, is of singular interest. Papers on Sympathetic Neuritis and Miner's Nystagmus are other important items.

Clinical Notes upon Two Years' Surgical Work in the Liverpool Royal Infirmary. By W. MITCHELL BANKS, F.R.C.S., Surgeon to the Liverpool Royal Infirmary, Professor of Anatomy in University College, Liverpool. Glasgow: Stephen Miller. 1884.—We have read these Clinical Notes with great pleasure. They are a very simple record of work done, accompanied by the plain practical comments of an earnest but unprejudiced surgeon. There is much sound common sense in many of the criticisms of prevailing notions. Nowhere do we feel as we read that [Mr. Banks is playing the part of the clever critic or sharp writer, but only that he is "talking" without reserve and giving us the outcome of his practical experience. We wish others who may be similarly qualified would make as good a use of the experience gained at our large provincial infirmaries and hospitals. Much good work is being done in them, and in not a few instances they afford the opportunities for gaining an experience impossible to those who live and practise in the metropolis. Those who wish to imitate Mr. Banks must, like him, avoid "making a book"—of that kind of work there is at least enough!

Mahomet and Islam. By Sir WILLIAM MUIR, K.C.S.I, LL.D., D.C.L. Religious Tract Society, 56, Paternoster-row, E.C.—This volume contains an account of the life of Mahomet from his birth until his death, and it details the various circumstances which led to his early ministry as a prophet, and to his ultimate success both in warfare and in establishing the religion of Islam. The writer does not enter into any subjects having medical aspects; thus, he merely states the facts as to the curious "trances" which

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Mahomet exhibited early in life, and at a date when any attempt at imposition hardly seems indicated; neither does he seek to explain the subject of "visions," although it is evident from his account of them that some were resorted to solely for the purposes of deluding the people and of enabling the prophet to cover his own errors, or to recede from positions he had formerly taken up. There is also no account of the special sanitary regulations which the religion of Islam enforces. But those who desire to learn the story of this remarkable man, as told by an expert who has fully studied the subject by the aid of considerable experience of Eastern languages and Eastern habits, will find in the small volume much that will interest and instruct them.

A Treatise on the Purification of Coal Gas and the Advantages of Cooper's Coal-liming Process. By R. P. SPICE, Mem. Inst. C.E. London: Spon. 1884.—The author of this little book is a warm, and we venture to think a somewhat injudicious, advocate of the coal-liming process of gas manufacture invented (in its present form) by Mr. Cooper and backed by Mr. Wanklyn. Whether this process will be found permanently advantageous is more than we can say, but the gas managers with whom we have talked on the subject have certainly not been sanguine on the point.

THIRTEENTH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD.

THE report of the Local Government Board for the year ending Lady-day, 1883, shows that, notwithstanding the increase of population, there has been a diminution in the mean number of paupers amounting to 0·7 per cent. as compared with the previous year, the reduction having been mainly due to a falling off in the number of vagrants and other out-door paupers. But whereas the rate of expenditure for 1882 had been the lowest on record, a slight rise of one farthing per head of the population has since occurred, the average charge per head now amounting to 6*s.* 4*d.* Considerable additions are in prospect in some of the metropolitan workhouses. At Greenwich new buildings have been approved of, at Hackney the erection of new blocks is in progress, the Holborn Guardians are about to provide a new workhouse at Mitcham, at St. Pancras new buildings are to be erected on some land compulsorily purchased by the guardians, the Wandsworth and Clapham guardians are erecting a new building, and somewhat similar works are in progress in Poplar and Shoreditch. So also the opening of the infirmary at Mile-end, and the approach to completion of the infirmaries at Paddington and Fulham, will nearly complete the provision for the sick poor authorised in 1867. Much improvement has in recent years been effected in this matter of dealing with the sick poor. Formerly, before the issue of THE LANCET Workhouse Commission, the medical charge at each of the several workhouses was as a rule entrusted to an unassisted general practitioner having his other work to perform, there was about one paid nurse to seventy-five patients, and there were only three paid night nurses for the workhouses of London. Now there are seventy-five workhouse medical attendants, and apart from matrons, ward-cleaners, &c., there are 610 paid nurses in the Poor-law infirmaries, 200 in imbecile asylums, and 174 in workhouses. A similar advance for the better has taken place in the structure of the buildings and in their general administration.

In view of the advent of cholera, the Board arranged with the managers of the Metropolitan Asylums Board to make hospital provision quite irrespective of Poor-law relief or of the metropolitan vestries, and the managers were informed that the Board intended, in case they put the Diseases Prevention Act, 1855, in force for the metropolis, to constitute them the "local authority" for the purpose. The vestries and district boards were, however, by no means to be exonerated from their duties, and they were told that they might be expected to make arrangements for the prevention and treatment of the disease, such arrangements to include the medical visitation of the poorer houses, the supply of medical attendance and nursing, and of medicines and disinfectants, together with the provision of places of refuge for the sick. As regards the arrangements of managers of the Asylum Board in connexion with small-pox, it is evident that the Central Board takes the responsibility as to what has recently been done, for they describe the various steps adopted and explain that their sanction was given to them in connexion with the consideration which they had given to the recommendations of the Royal Commission on Fever and Small-pox Hospitals.

Passing over many other subjects with which the report deals we come next to the subject of local government and public health. In this part of the report we learn that whereas the total loans for sanitary purposes, sanctioned under the Public Health Act, 1848, by the General Board of Health, up to Sept. 1st, 1858, was somewhat over £2,900,000, and whereas the sanctions granted by the Secretary of State under various Acts up to August 19th, 1871, were some £7,300,000 in amount, the sums granted since the formation of the Local Government Board in the latter year, amount to over £29,000,000; the loans having mainly been sanctioned for works of sewerage, water-supply, purchase of land, provision of hospitals, &c. At the present date 1116 authorities have appointed medical officers of health with a view to repayment of half their salaries out of the Parliamentary grant, and 1016 have so appointed inspectors of nuisances. In some cases the Board have altogether refused to sanction appointments of officers of healths, on account of the inadequate salaries proposed, and they have further pressed certain authorities to discontinue the practice of appointing as medical officers of health the Poor-law medical officers of the districts concerned. During the year fifty-six rural authorities have been vested with urban powers, and certain defaulting authorities have been dealt with under section 299 of the Public Heath Act, notably the Cheshunt Local Board in connexion with their persistent failure to provide means of sewerage. To several authorities has been granted the power to make bye-laws as to tenement houses.

In connexion with the Sale of Food and Drugs Act, 1875, it appears that 265 authorities have appointed analysts, and that the number of analyses made during the year has increased by 200. Of the articles thus examined 15·04 per cent. were found adulterated, spirits, milk, coffee, butter, and drugs ranking highest in point of adulteration; but it is pointed out that the adulterations are, in one sense, less serious than they were formerly. Water may, it is true, still be added to milk, and chicory to coffee, but we now no longer get such poisons as copper and sulphuric acid added to articles like pickles and spirits. Much more stringency is, however, still needed in this matter of adulteration, especially as to the amount of the fines imposed.

The system of compulsory notification of infectious disease is also adverted to in the report; and it appears that during 1883 Burnley, Hartlepool, Heywood, and Portsmouth were added to the list of places where that system is carried out. It is curious to note that whereas thirty-four towns, having a collective population of over two millions and a half, had adopted this system of notification by the close of 1883, half this population is distributed amongst sixteen towns in the single county of Lancaster. Since the end of 1883 Chester, Croydon, and Dewsbury have also adopted the same provisions. Some other matters relating essentially to the Medical Department of the Board are contained in the volume, but as these are always dealt with separately in a special blue-book, they are either subjects which we have already considered or which we shall have a better opportunity of doing at a later stage, when we deal with the Supplement containing the Report of the Medical Officer to the Board, which has just been issued.

SOUTH LONDON SCHOOL OF PHARMACY.—The following prizes were presented to the successful competitors at the School examinations held from the 3rd until the 6th of December, on Saturday the 13th Dec. 1884:—Senior Chemistry: Medal, R. Atkinson; Certificate, T. J. Clark. Junior Chemistry: Medal, F. W. Taylor; Certificate, F. B. Bennett. Senior Botany: Medal, T. J. Clark. Junior Botany: G. D. Cooper. Materia Medica: F. B. Bennett; Certificate, F. W. Taylor. Pharmacy and Practical Dispensing: F. W. Taylor; Certificate, F. E. Brown. Extra Certificates of Merit: Messrs. Gooch, Marshall, Brown, Davies and Daintree.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 20, 1884.

THE great dissatisfaction with the arrangements for university education in London which has been so freely expressed in teaching circles and in the press has now taken a definite shape. On November 3rd a circular letter was sent by Lord REAY to those who were known to be anxious for the establishment of a Teaching University, on the 10th a subcommittee was appointed to draw up a report for presentation to the general committee, and the members were so expeditious that a scheme was laid before the teachers of London and others at the Society of Arts on Monday last. Lord REAY presided over a very crowded and representative meeting, at which Sir GEORGE YOUNG and the chairman were the principal speakers. Although there was some divergence of opinion as to the best means of securing a true university education in London, there was a complete unanimity as to the misfortune of having a mere examining board in the position which in every other city is occupied by a true university. The objects aimed at by the committee had the sympathy of every speaker, and the report was received and taken as a basis for more matured action. Association of university examination with university teaching, and the conferring of a substantive voice in the government of the university upon those engaged in the work of university teaching and examination, are the essentials of the whole scheme. Affiliation with existing institutions in London and alliances between the new university and the professional corporations, although of great importance, must be secondary considerations. If the University of London, which now occupies the ground that a real university should have filled, be too tenderly considered, the scheme must of necessity become abortive; and this, we fear, is the rock ahead in its course. A fortnight ago we showed, from the composition and mode of election of the Senate, how little hope existed that the present University could ever be expected to move from its present course and come into cordial relations with the professoriate. Twenty-four Crown nominees and twelve Fellows chosen by Convocation from the different Faculties alternately, and all elected for life, and with scarcely an active teacher, at the present time in the whole body, can have but little real sympathy with the present movement, and are unlikely to be expected to vacate their seats for younger professors so that the real teachers may form a majority in the Senate. Nor is it to be anticipated that they will admit that their policy in the past has been a mistaken one, and apply for a new charter omitting the 36th clause in the charter of 1863: "Persons not educated in any of the said institutions shall be admitted as candidates for any of the degrees [illegible] to be conferred by the said University other than degrees in medicine and surgery." Unless this be done how can the two bodies be represented on the same council, or how can they work harmoniously side by side, when each is a standing protest against the ideas and procedure of the other? The University of London should give up its restrictions and regulations for degrees in medicine and surgery as it has done in all its other faculties. "Free trade in education," and an "examination test," are its characteristics, and they should be fearlessly and logically carried out. It would then become a great examining board for the British Empire, and perform a great work for which it is well fitted, and which it has successfully carried out in the non-medical faculties. There would then be room in London for a teaching university, which would confer degrees only on the students who had passed a definite curriculum under its own professors and teachers, and who would, with outside assessors, examine their own pupils, as is done in all other universities. Teaching and examining would go hand in hand. By such means different functions and a different work would be given to each university, and all clashing and jealousy might be averted. The endeavour to weld together discordant institutions and divergent systems must always end in failure. University and King's Colleges, the Schools of Medicine and Law at present in existence, form a nucleus which could be utilised as the bases of the new university, and which might perhaps enlarge and develop at a future time, and form alliances with the professional and other corporations. A modest scheme is always the best one with which to begin. The Victoria University in Manchester is the pattern on which the proposed university should be constructed, but this cannot be followed if any compromise *with closed doors* be arranged between the committee and the Senate of the University in Burlington Gardens.

THE Metropolitan Sewage Discharge Commission, appointed in 1882, has issued its second and final report. It will be remembered that in their first report the Commissioners proved the existence of the nuisance complained of by evidence that placed it above doubt, but reserved the far more difficult question of a remedy for further consideration. The new report is in several respects very satisfactory. The hot summer of 1884 has rendered the condition of the river so horrible that some very strong supplementary remarks on the evils of the present system have been added by the Commissioners. On one occasion, three out of five Commissioners, and also their clerk, suffered from severe diarrhœa after their day's inspection. The sewage was perceptible by sight as well as smell throughout a large area. At Greenwich pier "the water was very black, and the smell excessively strong." At Woolwich, "the river for its whole width was black, putrid sewage, looking as if unmixed and unalloyed. The stench was intolerable." At Erith the smell was strong, and in Erith Reach the sewage was clearly visible and the water dark," and so on at all the points visited down to Greenhithe. It is not wonderful that the unfortunate visitors should have summed up their experience in such trenchant words as the following: "We found a condition of things which we must characterise as a disgrace to the metropolis and to civilisation." The state of the river in the past summer was actually too much for the Metropolitan Board, who have gone so far as to have admitted the existence of the nuisance in the present year," an admission, however, hardly in accordance with their previous broad statement that they [illegible] conclusions arrived at by the Commissioners [illegible] their first report."

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Having thus confirmed and emphasised their previous conclusions, the Commissioners set to work to find the best remedy. Here, unfortunately, they have been far less successful. They received but little assistance from the authorities who had fought so keen a battle before them in the earlier stages of the investigation. The interest of the Corporation of London seems to have cooled as quickly as it became heated, for the Port Sanitary Committee refused to move further in the matter, thereby showing how ill calculated such a government is for the consistent defence of public interests. The Metropolitan Board of Works also refused to tender evidence, although they allowed their engineer, Sir JOSEPH BAZALGETTE, to assist the Commissioners with his advice. Thus left to their own resources, the Commissioners seem to have done all that was possible for them to do. They took the evidence of all the experts they could gather, collected and studied all the literature of the subject, and visited many towns where processes of sewage treatment were in use. It is rumoured that not infrequent differences of opinion occurred among them, as well they might, and at last they had to content themselves with recommendations which, though valuable enough as far as they go, are by no means so definite as we had hoped to obtain. The difficulties of the question are indeed enormous, and are well illustrated in the able historical sketch which occupies twenty-seven pages of the present report. For the last thirty years and more scheme after scheme has been tried for the disposal of town sewage, and some have met with partial success. But it cannot be said that any one of them has proved quite satisfactory. All, under the conditions prevalent in the Lower Thames, would be expensive; and as there is now no doubt that some scheme must immediately be adopted, it only remains to choose the one which with real efficiency promises to be least costly. Sir JOSEPH BAZALGETTE proposes the extension of the present sewer, united into one by a conduit under the river at Crossness, to Thames Haven, thirty-six miles below London-bridge by river, but, with characteristic persistency, he urges that the sewage should still go into the stream in a raw state. We are glad to find that he is quite alone in this last opinion. It is, moreover, anomalous that the engineer who has so long and so stoutly opposed this extension should now himself propose it.

On the whole there seems to be a consensus of opinion, heartily adopted by the Commissioners, that the sewage must be taken to Sea Reach. What to do with it there is less certain. Carry it still further and throw it into the sea, say some engineers; and it is very possible that this might be the cheapest course, but there are many objections to it; and were entirely in accord with the Commissioners in believing that the proper system to adopt is that which is generally known as precipitation supplemented by application to land. Let the sewage of the whole metropolis, including that of the Lower Thames Valley, be taken in a single conduit to Canvey Island, below Thames Haven; provide sufficient land for intermittent downward filtration; precipitate the solid matters by the cheapest available process; apply the solid matters as manure to the land, thereby fertilising it and raising its level; irrigate the land with the fluid portion, and throw only a decently clean effluent into the river. All this would doubtless be expensive, but it is necessary, and we believe that if a Parliamentary committee were appointed to fix the means it would be found to involve no greater expense than the metropolis could bear.

Meanwhile some temporary precipitation process should and must immediately be adopted at the two great outfalls. We cannot too often repeat that the fearful danger of cholera hangs over the land, and if no preparation is made for it before next summer a most serious responsibility will lie with our rulers. Let us conclude in the words of the report before us, embodying as it does the opinions of Drs. STEVENSON and DE CHAUMONT, the medical members of the Commission:—"The condition of the river is such as to be a danger to health; and in view of the probable arrival on it of vessels with cases of cholera on board, should the state of the river not improve very speedily, the gravest results may be apprehended."

THE adjourned discussion at the Clinical Society, whilst fertile in the presentation of various views, brings us no nearer the truth as regards the nature of CHARCOT'S disease. The remarks of Mr. BARWELL, who began the discussion, referred chiefly to the differences which mark the contrast between typical forms of the disease. When such a method of treatment of the subject is adopted we cannot expect much more than a mere statement of facts. The explanation of the disease by such a method is hardly an exposition of the nature of processes, but is rather a descriptive commentary on the matter in hand. Of etiology Mr. BARWELL said but little; he seemed to think that the nervous system played an important part in the production of both chronic rheumatic arthritis and tabetic arthropathy, though the kind of nervous influence was not regarded as of identical nature in both affections. Sir JAMES PAGET, who followed him, treated the matter in a more philosophical and argumentative fashion. In the present state of our knowledge, it is not possible to make dogmatic assertions on the nature of the disease in question, and Sir JAMES took care merely to lay down the lines on which we might expect to explain the pathological relationships of chronic rheumatic arthritis and the joint affection of locomotor ataxy. He regarded the malady as of the nature of a new disease—not actually a brand-new affection, but a disease compounded of various constituents, whilst the resultant of such components bore little resemblance to the parent roots from which it sprang. To explain more fully the kind of view he would take, he presented for consideration other instances of disease, with the object of showing how a mingling of causes might produce a variety of effects having but little resemblance to the antecedents which played their parts in the production of such compound results. Next, as new species of animal and vegetable life have become evolved by the interaction and intervention of a mixture of pre-existing influences, so have new species of disease been produced under the guidance of like laws of evolution. New combinations arise, and alterations are effected in the aspect of disease, just as happens in other spheres of nature. The marriage of rheumatism with syphilis, or gout, or tubercle gives rise to new compounds of disease in which it is difficult to separate the individual influence of each of the factors. The task of the pathologist should be to endeavour to unravel the threads which composed the skein; in other words, to decompose the patholo-

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gical compound, and seek to ascertain the number and arrangement of units of rheumatism, or syphilis, or the amount of nervous influence, or what not, which may have entered into the composition of the complex disease. Sir JAMES considered that CHARCOT'S disease might be a species of chronic rheumatic arthritis, modified by its occurrence in a patient the subject of locomotor ataxia, or altered from its pattern by the intervention of the nervous disease. He believed that an error of nerve force did determine a lesion of nutrition, whether in the skin or elsewhere, but he also believed that such error of nervous action was not the sole element in the etiology; that in the causation of herpes zoster, for example, a nervous disturbance was acting there could be no doubt, but the nature of the cutaneous eruption was influenced by other agencies. Why should an error of nerve force give rise to a vesicular eruption, instead of to a scaly or ulcerative one? The disorder of nervous influence might excite a morbid action, but other factors, such as rheumatism, gout, syphilis, or this or that diathesis, gave character and colour to the morbid process. It might be argued against this view that errors in nerve force need not all be of one kind, and that nervous disturbances may vary in quality and quantity.

Dr. MILLER ORD was the only physician who joined in the debate on its first adjournment. He was inclined to think that the distinctions between the joint affection of tabes dorsalis and chronic osteo-arthritis would not bear close investigation. Even in cases which were roughly grouped under the head of chronic osteo-arthritis great differences prevailed. The evidences of a neurotic influence of a direct or reflex nature in the case of many diseases of the joints were no doubt strong, yet it must be confessed that many other causes might give rise to similar changes in the joints. Professor HUMPHRY introduced a new consideration by instancing the case of intracapsular fracture of the neck of the femur of old people. He was struck with the exuberant growth of bone in the neighbourhood of senile fractures as contrasted with the general atrophy of the osseous system, and he drew a parallel between CHARCOT'S disease and the repair of fractures in old people. He did not concur in the opinion that the disorder of nervous influence in locomotor ataxia allowed of no reparative process in the bones, and he referred to specimens in illustration of his opinion. Mr. JONATHAN HUTCHINSON believed that in lesions of nutrition in which the nervous system took part the disease was due, not to the active interference of the nervous forces, but rather to their passive permission of disease. Perforating ulcer of the foot was a local lesion, possibly started by an injury and permitted to continue by the unobservant or anæsthetic attitude of the afferent nerves, whereby continued pressure on the part was allowed to go on, since the patient was not in a position to feel pain owing to the diseased state of the nerves going from the foot. He thought the fact that such ulcers tended to get better when all external causes of disturbance were removed supported his views. In locomotor ataxia he saw a malady which might be looked upon as "a sort of tumultuous old age, a premature senility of the nervous system." Mr. WHITAKER HULKE sided with the opinion that CHARCOT'S disease was chronic rheumatic arthritis modified by circumstances. After having shown how the contrast between typical cases of the two affections would not hold good when less well-marked specimens were studied, he proceeded to point out that even in the clinical course joint affections occurring in locomotor ataxia might assume all the characters of an acute synovitis.

At the second adjournment, the principal speech of the evening was that which occupied Dr. MOXON fifty minutes in delivering. It is needless to say that the speech was characterised by wittiness of word and thought, and exhibited considerable powers of originality of conception. We are unable to agree with the views implied by Dr. MOXON on the trophic nerves, which have, in our opinion at all events, a functional if not a structural existence. Dr. MOXON lost sight of the usually rapid onset of CHARCOT'S disease when he endeavoured to show that the joint of the cabman might have been a typical case of the disease if some of the nerve symptoms of locomotor ataxy had been present. The speaker also apparently forgot that though the dilatation of the arterioles in muscular action is a fact, yet the nerves by which such a dilatation is brought about are probably not the same as those by which the muscle is made to contract; it would therefore be necessary to prove that the *vessels* in and about the paralysed glutei were in such a state as to prevent proper nutrition of the tissues. Mr. MORRIS was inclined to accept the views of those who agree with Mr. HULKE, and in more or less agreement with these doctrines Dr. PYE-SMITH'S speech may be placed. Mr. HERBERT PAGE was an unhesitating supporter of CHARCOT'S disease as a distinct malady.

THE relations between physician and patient are in many instances necessarily of so confidential and intimate a nature, that it is not surprising if from time to time cases occur which disturb the public mind. It is doubtful whether the trusted solicitor or the trusted medical practitioner is taken the more unreservedly into confidence, but each in his way is necessarily admitted freely behind the scenes. It may at once be granted that a medical man enjoys opportunities, and is indeed forced to occupy positions, which were he not a medical man would have no explanation but a criminal one. Under these circumstances it becomes advisable to lay down some of the principles governing these relations; and in this connexion we may say at once that while the medical man who is base enough to misuse his opportunities is a villain, whose punishment is desirable not more for the sake of the public than on behalf of the noble profession which he has degraded, the medical man unjustly attacked is a person for whose protection every generous mind, whether lay or medical, will claim the severe punishment of his traducer. To lay a hand on a person without cause is an assault in the eye of the law; it is conceivable that to feel a person's pulse against his will might form the ground of an action, though to look at a tongue or to touch it could not, since the patient must first willingly protrude it, thus consenting to the action. If the mere feeling of a pulse may constitute an assault, to examine the chest of a female patient against her will might be interpreted as an indecent assault; but the question naturally reaches its climax in cases where a pelvic examination is indicated. Here it becomes necessary for the medical man to be cautious, for the consent of the patient is essential. Such examinations being sometimes painful,

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patient may be most anxious to submit, and yet present insuperable obstacles to such an examination. On the other hand, a patient may submit, and afterwards protest that she objected; such cases are not unknown. What certainty can the medical man possess? how can his footing be firm? It may be at once stated that a patient who comes to a doctor's house complaining of pelvic mischief presumably contemplates that it may be necessary to undergo a pelvic examination, while if she places herself in a suitable position at the doctor's request, the act of so placing herself definitely gives her consent. The doctor, however, will do well, in case of any hesitation on her part, to explain to her that he cannot treat her without knowing what is the matter, and that this can only be ascertained by the usual examination; moreover, that *he* will not consent to make such an examination unless requested by her. We are far from saying that a pelvic examination is necessary whenever pelvic symptoms are complained of; in the case of virgins nothing but urgency will induce the high-minded medical man to make such an examination, and in the case of any woman the indications for such an examination must be clear to make it justifiable. In any case, however, the doctor must be the judge of such necessity, and it is to be presumed that if an examination has been made, it was necessary.

A medical man is exposed to another risk in dealing with pelvic diseases—namely, to that of being accused of unnecessarily protracted visits. It may be safely asserted that to do justice to these cases takes a longer time than is required by cases in any, or almost any, other department. In hospital practice, even if the cases are previously selected, so that all but local conditions are mostly eliminated, each new case may take twenty to twenty-five minutes; while in private, where nothing is previously known of the patient, and the whole organism may require consideration before sufficient grounds are found to justify a pelvic examination, thirty to forty-five minutes may be consumed. In subsequent visits the time required is generally shorter.

The question has before now been raised, whether in all these cases a third person should not be present. To this we will say that, from the patient's side, she should never enter the house of a man who, in her opinion, requires such supervision. But to have a third person present is, as a matter of fact, usually declined by the patient, even if the person be her own relative who has accompanied her. Generally speaking, the presence of a third person is a matter of indifference, or even of satisfaction, to the doctor; but the patient may be compelled to relate matters which render the absence of a third person more in accordance with delicacy. But there are undoubtedly certain precautions which common sense and good feeling suggest. The first is the practice of taking notes of each case at the time. Hysterical and intemperate women are undoubtedly dangerous; note of these states should be made, and the medical man should avoid pelvic examinations as far as possible, and in this special case may reasonably ask for the presence of a friend. Anæsthetics should never be given by a solitary doctor to his patient; the state of intoxication produced not unfrequently takes an erotic turn. It is usually advisable to avoid mixing social with professional visits; a doctor visiting as a doctor should play the doctor, and not the visitor; he may visit as a visitor at another time. In cases of domestic unhappiness or separation he should be doubly cautious. Finally, in case of any apprehension of foul play, the medical man should take into his confidence some one, at least, of his professional brothers, and, on the first indication of a charge being made against him, should attack his accuser with all his force. More than one pure reputation and innocent life has been lost just for the want of a little courage. The assumption of the aggressive is not only the proper course in such a case, but it goes far to carry conviction to others of the innocence of the aggressor, on the principle that "the righteous is bold as a lion."

THE questions at the first examination which has taken place under the new regulations for the promotion of surgeons-major, and which will be found in another column, appear to us fully to justify the course followed by the military authorities in establishing such a test. It must not be forgotten that the principle laid down in accordance with the recommendation of the Royal Commission presided over by SIDNEY HERBERT was, that promotion to the administrative ranks should be not by seniority but by selection; that while promotion to the rank of surgeon-major was ensured to every officer entering the service, unless he was proved to be incompetent, the higher grades were to be filled up by selection of the men best fitted for the administrative duties required of them. But no special rules were laid down as to the manner in which this selection was to be made or the knowledge to be acquired of the qualifications possessed by the officers eligible for promotion. For some time after the Warrant of 1859 came into operation they were selected by the Director-General; but under the rule of Sir T. G. LOGAN the system degenerated into that of seniority, unless there was evidence of the incapacity of the officer. Under the present organisation of the medical department, with its increased powers and consequently increased responsibility, it would be impossible to carry on the service satisfactorily on such a system. The Director-General is entitled to ask some guarantee that the officers to be selected for promotion are acquainted with the nature of the duties which will devolve upon them in their new position, and the rules and regulations under which these are to be conducted. In what manner can he obtain the information necessary to enable him to judge on this point? It has been said that he has the means in the confidential reports of the general officers and of the administrative officers of his own department. But it must be evident to anyone acquainted with the service that a general officer has neither the knowledge nor the opportunity to enable him to form an opinion on this point, and although the Principal Medical Officer may be able to satisfy himself on the subject of a surgeon-major's efficiency as an executive medical officer, he has no means of ascertaining the amount of knowledge he possesses on the subject of administrative duties. The examination as now authorised appears to be the only method by which the Director-General can obtain the information necessary to enable him to form a correct estimate of the qualifications of the officers to be selected for promotion. It has also the advantage of affording an opportunity to an officer, who from the exigencies of the service may never previously have had one, of showing that he possesses

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those very qualities which peculiarly fit a man for administrative work, and which are of so much importance in promoting and maintaining the efficiency of a department. We cannot sympathise with those who object to such an examination as derogatory to a medical officer. We rather look upon it as an opportunity of proving his special fitness for advancement. If the Director-General is permitted to carry out the system honestly and fully, we have no doubt it will tend greatly to the efficiency of the medical service, and to the advantage alike of the soldier, the medical officer, and the profession.

Annotations.

"Ne quid nimis."

THE REMOVAL OF SMALL-POX PATIENTS.

MR. COLLIER, medical officer of health for the Fulham district, has addressed a report to his authority on the subject of the removal of cases of small-pox from that district to the Fulham Hospital; and it concludes with advice which, if followed, would involve action of a distinctly retrograde character. He maintains that his authority can more effectually remove such cases than the Asylums Board, and he adduces a number of reasons to prove this. Thus, he implies that the unwillingness of patients to submit to removal can be got over by the sanitary officials better than by the Asylums Board officials. This is quite true; but we fail to see why the sanitary officers, who have called in the Asylums Board ambulance and whose presence in the infected house is necessary to disinfection immediately on the removal of the patient, should fail to use their powers of persuasion when one ambulance is employed instead of another. Then, again, he refers to the legal powers to enforce removal which are possessed by the sanitary authority, but which the Asylums Board do not possess. Here, too, we fail to see what this has to do with the ownership of the ambulance. Throughout the country and in the metropolis sanitary authorities exercise their legal powers in this respect under the circumstances which Mr. Collier does not regard as applicable to Fulham, without any question arising as to the ownership of the ambulance. The fact is that the removal of the patients by a number of different bodies was carried out in so scandalous a manner that public opinion demanded a change, and the Asylums Board, in deference to this opinion, has established ambulance stations in various parts of the metropolis, including Fulham. That they can do the work efficiently is most certain; and it is far better that a single body should be responsible to the public in this matter than that it should be vested in a number of authorities, many of whom have hitherto only brought the question into disrepute. An efficient ambulance station and staff exist in Mr. Collier's district, and will be maintained there whatever the Fulham Board decide; and it seems to us that the local people had better make use of it instead of maintaining an opposition one at their own cost. On one point, Mr. Collier may perhaps have a reasonable grievance. He says that the Asylums Board do not always give notice of the removal to the sanitary authority. The fact that he singles out an individual case in order to prove this seems to imply that the case was quite an exceptional one, and in view of the general practice adopted by the Asylums Board we have but very little doubt that the omission was a mere accident. Under any circumstances any such default can easily be remedied, and it bears no comparison with the gross irregularities which local authorities were in the habit of perpetrating previous to the establishment of the Asylums Board ambulance stations—as, for example, the habit of permitting relatives of the sick to [illegible] patients, and then to diffuse the poison right [illegible] the hands of the Asylums Board such grave [illegible] is certain not to recur, and we hope they will [illegible] in taking over the whole work of the re[illegible] of fectious sick to their hospitals.

FOOD AND STUDY IN ELEMENTARY SC[illegible]

IN former articles we have reviewed the evi[illegible] educational over-pressure in elementary schools, [illegible] reference to its causes remote and near, and to [illegible] upon the children in their bodies, minds, and mor[illegible] modes of application of this pressure are various[illegible] results must not be gauged by the proof of lunacy [illegible] alone, but by considerations of the general healt[illegible] children exposed to it. Its removal consequently [illegible] wide and intelligent inspection and adjustment of t[illegible] working of infant school machinery, the state of the[illegible] and the influence of one of these factors on the [illegible] has always been clear to our minds that a chief p[illegible] kept in view in dealing with this question has [illegible] preparedness or not of a child in regard to nutriti[illegible] work imposed upon it. There is too great a te[illegible] take fitness in this respect for granted, yet we hav[illegible] think of the shiftless parentage of so many who co[illegible] School Board influence, of the hunger and inevi[illegible] which prevail, among even the deserving poor out[illegible] to know that here we touch the core of the subject. [illegible] the laborious boon of education on brains which are [illegible] and while rest is perhaps the only kind of bodily t[illegible] which can be borne, is to block with good intentio[illegible] the avenues of intelligence and of health. It is n[illegible] sary to do more than to recall in the briefest t[illegible] reasons for the all-important power of food in ch[illegible] Not only does it represent a certain latent energy [illegible] work to be done, but at this age more than any oth[illegible] go to that continual work of building young [illegible] mental tissue, apart from its sustenance while [illegible] which we recognise as growth. Eminent [illegible] tissues in its rapid development in size and powe[illegible] brain; nor is it unrivalled while bone and muscle, t[illegible] structures most subject to strain and pressure, exhi[illegible] usual strong vitality. The lymphatics again, th[illegible] most corruptible by hereditary taint and that whi[illegible] ters to every organ its supplies, must be liberally f[illegible] maintenance of body heat is likewise admitted [illegible] special need of childhood, and a preventative of its m[illegible] liar ailments. This no artifice can accomplish if [illegible] changes be restrained by want of food. Under [illegible] these facts we would not be too careful in meas[illegible] advocacy of the plans by which it is sought to [illegible] ficient nourishment for the needy learners in el[illegible] schools. We have more than once had occasion to [illegible] the institution of penny dinners, which owes its [illegible] the thoughtful enterprise of Sir H. Peek, an[illegible] experience has already shown to be a good out[illegible] portion to its cost. Cheap though the provision [illegible] ever, it does not meet the case of many whose [illegible] cannot be relied upon for even a daily penny wo[illegible] charity would be illusory indeed which would [illegible] sanction and help a penny fund established for [illegible] of proved *bonâ fide* cases of this kind. In a[illegible] where spontaneous giving has long since [illegible] regularity of law when once its object is realised, [illegible] not be hard to find the food without recourse to a [illegible] or imperial grant. Why should not the churches [illegible] poor district combine to organise and guide [illegible] system of relief as we have suggested? It [illegible]

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mess, with weekly payment in advance, aided in carefully selected cases by a charity fund, would conduce to regularity of attendance, as it certainly would also promote a wholesome mental culture.

THE PARKES MUSEUM AND CHOLERA PREVENTION.

A MOST successful series of lectures organised by the Parkes Museum on Precautions against Cholera has just terminated. The first lecture dealt with precautionary measures from a national point of view, and Mr. Ernest Hart, the lecturer, evidently had the complete assent of a skilled audience in his contention that the whole course of the epidemic in Southern Europe had gone to prove once more that quarantine, both by land and sea, was a useless, mischievous, and, if stringently carried out, a cruel expedient when applied to European and other populous countries. On the other hand, medical inspection and isolation at the ports were advocated; and, in view of the etiological similarity of cholera and enteric fever, it was maintained that the country should never cease in its endeavour to remove from amongst the people those conditions which favour the propagation of the latter disease if they would secure themselves against the spread of the former. Mr. Shirley Murphy discussed the next subject, and, having regard to the position which he holds amongst medical officers of health, the advice which he gave as to the duties of sanitary authorities and of householders, in face of the possibility of the importation of the disease, should carry considerable weight. Means for the earliest possible detection of any choleraic cases, and provision near at hand for the immediate isolation of the patients, should be everywhere available; and both sanitary authorities and householders should secure the utmost cleanliness as regards air, water, and food. Dr. Norman Chevers, in the third lecture, brought his extensive Indian experience to bear upon the subject of the precautions to be taken by individuals. He urged that no person should be content to live in a house which was pervaded by sewer and other unwholesome emanations; that during an epidemic period excessive fatigue and exhaustion, as also exposure to sudden variations of temperature, should be avoided; that flannel in the form of a cholera belt had an unquestionable value; that the greatest care should be taken as to drinks—ginger beer, bottled lemonade, and cask ale being eschewed; and that everyone should be prepared to check the earliest onset of diarrhœa. Where such precautions were taken, manly resolution needed to be combined with the necessary prudence and moderation, and thus panic, the most dangerous and degrading of all the conditions with which cholera prevalences have been associated, would be avoided, and many lives would be spared. The Parkes Museum would materially aid in furthering the work they have set themselves to do if they were to issue the set of lectures as a whole. Their influence upon legislators, sanitary authorities, and individuals could only be for good.

THE NEW HOSPITAL FOR NORTH LONDON.

IT is announced that at length a site has been bought for this institution—namely, Grove House, in the Holloway-road. Much delay has arisen since the important meeting in Highbury; but the Committee has not been altogether to blame. The situation might have been a little more central, yet it will lie in the centre of a very large population. It is intended in the first instance to have 120 beds. But if the generosity of the public rises to the height of the need this number should soon be doubled. It must be remembered that the new hospital is to include and absorb the Great Northern Hospital.

MURDER FOR FOOD.

IT is to be regretted that the farcical proceeding of pronouncing a sentence which is not to be carried out should have been deemed necessary to vindicate the claims of justice in the case of the survivors from the *Mignonette*, who in the agony of their starvation in an open boat at sea committed murder. There can be no question in common sense, and it is satisfactory to find that there is no question at law, that these men are guilty of murder. It matters nothing to the nature or importance of the deed that it was a murder not for theft or malice but for food. The dictum of Lord Hale is, happily for the honour of human nature and the dignity of English law, affirmed: a man "ought rather to die himself than to kill an innocent." There must be an actual attempt on the part of the person killed to murder the man who kills him, or the act of putting him to death will be murder. A threat to kill is not sufficient without the overt act of trying to kill. It is not the necessity of the man-slayer, but the guilt of his victim, that makes the act of homicide justifiable. It could not of course be contended that the poor boy Parker, the youngest, and therefore the most to be pitied and protected, of the survivors of the *Mignonette*, had any guilt to justify the assault of his not less unscrupulous than hungry murderers. For the credit of human nature, and more especially of the class of men "who go down to the sea in ships," we will not believe that it would be easy to find other men who, being placed in such a dire strait as these, would have fallen upon the youngest of their number, the one who of all others had the greatest claim on their forbearance, and deliberately murder him for food. The tragedy enacted in this open boat, look at it as we will, is so terrible and revolting that the brain reels and the heart faints with conflicting compassion and indignation as we think of it. With infinite relief the blood-stained and humiliating page may now be turned down for ever. With too tardy forms Justice has confirmed the judgment of reason and humanity. The miserable men who committed this great crime against their nature and the laws of every civilised State, preferring to kill the innocent boy specially confided to the care of the man who ultimately murdered him, have been convicted of this deed of blood and justly sentenced to be hanged. That sentence is not, of course, to be carried into effect, but it is, as it must and ought to be, to the clemency of their Sovereign the offenders owe their lives. The imprisonment for a short term, which has been substituted for the death penalty, is necessary to mark the view which Justice takes of the wrong done. Had these men been mentally incapacitated for the formation of a judgment of right and wrong by the deprivation of food, that might have been pleaded in their defence; but no such plea was permissible in face of the fact that they not only clearly recognised the nature of the wrong they did, but they set about it in the most methodical manner, and were so cool in their reasoning that they actually murdered a boy they believed, or profess to have believed, to be dying, instead of waiting for his death, in order that the blood in his body might not coagulate before they could drink it. Hideous foresight—false in facts, but horribly sane in its reasoning. As a matter of fact the blood of a creature dying of starvation would not have coagulated, but these men could not be expected to know that. However, the use they made of the smattering of knowledge they possessed entirely precluded the adoption of insanity as a defence. Let us hope no such extremity may ever again befall British seamen; but if it should, it is well that this miserable case has so ended as to demonstrate that in law, as in the conscience of humanity, a man should far rather die than kill the innocent, even though it be murder for food.

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REFORMS AT THE COLLEGE OF SURGEONS OF ENGLAND.

THIS afternoon (Friday) an extraordinary meeting of the Council of the Royal College of Surgeons will be held to receive the report of the Committee to whom were referred the recommendations and suggestions of the Association of Fellows. On Jan. 2nd the President and Vice-Presidents will receive a deputation from the Association of Members respecting certain changes to be suggested in the new Charter in the interests of Members of the College. The tenour of these suggestions may be gathered from the letter which appears in another column signed by the Honorary Secretary of the Association of Members.

THE GERMICIDE POWER OF DISINFECTANTS.

THE Proceedings of the Royal Society of Edinburgh, just published, contain the results of an important research by Mr. A. Wynter Blyth. In experimenting on the chief disinfectants of commerce, with a view of ascertaining their power of destroying the spores of the anthrax bacillus, the author's object was to determine whether any of the disinfectants in popular use had a "germicidal" action or not. Very few have distinguished between the action of a *germicide* and that of a *disinfectant*. Angus Smith, Crace Calvert, Bucholz, and other workers, have studied the inhibition of fungoid growth and of putrefaction, the destruction of odours, and the decomposition and fixing of noxious gases. But the action of chemical agencies on those minute particulate substances which are regarded as the *materies morbi*, or seeds of zymotic and parasitic diseases, have been but little investigated, with a few notable exceptions—Gerlach and Franck's experiments on the virus of glanders, Ledra on that of ovine variola, and Braidwood and Vacher on the lymph of vaccine. Closely following the method pursued by Dr. Koch in his monograph, "Ueber Desinfection," Mr. Wynter Blyth chose the anthrax bacillus as the organism best adapted to try the germicide power of disinfectants. It certainly possesses the advantage that its morphology and life history are well known; and, when its vitality is otherwise doubtful, it admits of being put to the almost unerring test of inoculation. Experimenting with a supply of anthrax bacilli in the spore state, placed at his disposal by Dr. Klein, and adopting the strictest precautions in sterilisation and cultivation, Mr. Blyth obtained a number of results, of which the principal may be thus briefly summarised. A 1 per cent. solution of Calvert's carbolic acid No. 1 in water, seemed to have no influence on anthrax spores, not even delaying their growth. Even after soaking for twenty-four hours in a 10 per cent. solution of carbolic acid, the anthrax spores inoculated into a guinea-pig killed it in two days, with typical anthrax poisoning. Spores soaked for twenty-four hours in undiluted carbolic acid did not afterwards develop, but they did so after six hours' soaking in a 25 per cent. solution in alcohol. Various carbolic powders were made into a paste with water; but though the anthrax spores were allowed to rest in the paste, even as long as twenty-four hours, no germicidal effect was noticeable. Undiluted liquor carbonis detergens, which is a solution of certain coal-tar products in spirit, arrested the growth of anthrax; and it was also distinctly retarded by soaking for four hours in a 10 per cent. watery solution of the same agent. Sanitas fluid, emulsion, and oil, only retarded the spore growth; but sanitas powder had no influence whatever on it. The sulphates of iron, copper, and zinc, which are reputed disinfectants, in no case exercised any destructive influence on the life of anthrax spores. Of chloride of zinc, Dr. Koch has given a very unfavourable opinion as a disinfectant; and as a germicide, Mr. Blyth [illegible] no more favourable of it. He found that anthrax spores [illegible] solution of chloride of zinc; and the addition of thymol in no way altered the result. Perchloride of iron was experimented with in watery solutions of various strengths, from 1 to 25 per cent.; but in no single case did a twenty-four hours' steeping of the spores destroy their vitality. With the stronger solution the vegetation was late; but ultimately luxuriant. With a 1 per cent. solution, the development was more rapid than usual, the growth being, as it were, stimulated. Guinea-pigs died with all the symptoms of typical anthrax when inoculated with spores treated with [illegible] or mercuric chloride. The virulence of anthrax has long been notorious, and Mr. Wynter Blyth's research confirms it, proving indeed that it resists successfully most chemical agencies. Granting that the germs of few diseases may have such intense vitality, the research under notice suggests serious doubts, as to the germicidal power of the [illegible] and disinfectants in ordinary use.

SUPPOSED MURDER AND MUTILATION.

ON December 8th Dr. Danford Thomas, Coroner for Central Middlesex, concluded an inquiry into the identification of some human remains recently discovered in various parts of the west-central district. From the medical evidence it would seem that the parts belonged to a body of a female, and the condition of the teeth pointed to the conclusion that the probable age of the deceased was between twenty-five and forty. The viscera were wanting, but there were portions of the skeleton. Mr. Lloyd, [illegible] surgeon of police, was of opinion that "there were signs of skill in the disarticulation of the joints, the removal of the internal organs, and the separation of the limbs from the body." This raised the presumption that the [illegible] might have been used for anatomical study, and [illegible] scattered by some one who had gained possession of [illegible] either out of sheer wantonness or for the purpose of [illegible] a scare. Mr. Winter Blyth, analyst for [illegible], deposed to finding chloride of lime adhering to the [illegible], a fact which to us seems to negative the supposition that the body had been used for dissection or operation. The coroner exercised a wise discretion in pointing [illegible] the jury that in all likelihood a murder had been committed. At the same time we fail to see the evidence to warrant that portion of the verdict which runs as follows:—"That positive an abortion had been, previous to death, either attempted or completed." To say the least, it is not on all fours with Lloyd's suggestion, that the internal organs had been removed either to attempt to hide the sex or to disguise the real cause of death. All that can be said with any approach to certainty relates to the age and sex of the deceased; little stress can be laid on the appearance of dismemberment in the face of the circumstance that the body had been preserved by bleaching powder. It is [illegible] known that this substance retards the decomposition of animal matter, and so tends to thwart the designs of the murderer, as witness the evidence afforded by the exhumation of the body of Harriet Lane, the victim of [illegible]. Quicklime, on the contrary, has a corrosive action when applied in quantity soon destroys the soft tissues. Advantage is taken of this property in the disposal of the corpses of those who have succumbed to judicial [illegible]. It was a curious coincidence that not long before the finding of the subject of the inquiry under consideration [illegible] limb and two feet were found in Moreland Street, in the latter case the parts had evidently been [illegible] so the coroner ordered them to be buried. By the Home Secretary, however, they were [illegible] comparison of the two sets showed that they belonged to the same body. We fear it is too much to expect that further investigation will furnish evidence [illegible] of the remains, much less to the detection [illegible]

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persons who compassed the death of the deceased—that is, supposing a murder was committed. The late inquiry has been the means of providing an opportunity for the careful study of a problem, which will, no doubt, not be lost sight of by those whose fortune it was to attempt its solution. We trust a careful record of the facts will be published.

UTILITARIAN JUSTIFICATION OF VIVISECTION.

IN another column we record the main outlines of a successful case of removal of a tumour from the brain. It may be well here to point out the chief steps in the process by which so desirable a result was enabled to be brought about. Certain symptoms running a definite course clearly pointed to disease of a particular portion of the cortex of one cerebral hemisphere. This is the main fact on which a discussion of the merits of vivisection on the the ground of utility must turn. Could we without the aid of experimental pathology have arrived at the precise regional diagnosis of the disease? The answer to that question must be given in the negative. No doubt clinical observation and careful post-mortem examination may effect a good deal; but hardly, however, in the direction of the initiation of accurate knowledge in the region of neural physiology and pathology. It is but seldom that nature acting in the guise of disease distinctly affects definite functions of the brain or spinal cord. Moreover, however much clinical and pathological work may have been able to effect, it yet remains as a patent fact that though hundreds of years have been spent in the acquisition of medical knowledge, it was not until Ferrier and Hitzig's experiments that anything like real knowledge was acquired on the subject of the localisation of functions in the cerebral cortex. It is not ten years since good physiologists refused to admit that different parts of the brain subserved different purposes. Experimental pathology may, in the region of the cerebral cortex, be said to have been a royal road to the acquisition of accurate knowledge.

ANOTHER DEATH FROM PATENT MEDICINES.

THE necessity for immediate legislative action in the matter of patent medicines is well illustrated by a sad and painful case of poisoning by chlorodyne which recently occurred at Weymouth. From the evidence given at the inquest it appears that the patient, a young lady of thirty-three or thereabouts, is well known to have been suffering for some years from religious monomania of an aggravated type. About six years ago she attempted to commit suicide by taking three ounces of chloral which she had obtained surreptitiously, and was only restored with the greatest difficulty after the application of remedies for over three hours. She was then certified as being of unsound mind, and was for a time confined in an asylum. For many months past her mental condition has been a source of constant anxiety to her friends and relatives, and it is known that she on various occasions threatened "to do something terrible," assigning as a reason that life was unendurable, and that she could no longer bear it. On Thursday, the 4th inst., she was missing from the house of a friend with whom she was staying, and two days later was discovered in a dying condition behind the bed in an empty room in her father's house. By her side was a glass which had evidently contained poison, and in a drawer near the bed, with her hat and gloves, were found three empty chlorodyne bottles, two large and one small. Treatment this time was unavailing, and in a short time she ceased to exist. A rigid inquiry was instituted, and at the inquest a chemist's assistant came forward and deposed that on November 13th he had sold her a 1*s.* 1½*d.* bottle of chlorodyne, and on the 19th a large 4*s.* 6*d.* bottle. Another chemist's assistant, with equal candour, affirmed that on the 20th of the same month he had supplied her with a 4*s.* 6*d.* bottle of the same drug; whilst a third chemist said he had done the same two days later. These gentlemen one and all admitted that they had sold these large quantities of chlorodyne over the counter without any inquiry; but one, on being asked if he would have supplied her with half-a-dozen bottles if she wanted them, demurred, and said it was a poisonous preparation. Another witness, however, had no such scruples, and admitted that he would have sold her a larger quantity if she had asked for it, "as it was a patent medicine." In the course of the inquiry it was stated that the composition of chlorodyne was well known, and that ten drachms, or about two tablespoonfuls, contained six drachms of chloroform, half a drachm of tincture of capsicum, three minims of oil of peppermint, eight grains of hydrochlorate of morphia, twelve minims of prussic acid (Scheele's, double strength), one drachm of tincture of Indian hemp, and one drachm of treacle. The maximum dose, according to the medical evidence, is about half a drachm, and it was calculated that a 4*s.* 6*d.* bottle contained enough to kill at least eight people. The jury, after a prolonged inquiry and careful deliberation, returned the following verdict:—"That this jury, having carefully considered the evidence generally, are of opinion that deceased died from the effects of chlorodyne which she administered personally during a fit of temporary insanity, and we desire strongly to urge that representation should be made to the proper quarter making it necessary that chlorodyne and other patent medicines of such a potent nature should be placed under Paragraph 2 of the Poisons Act." With this expression of opinion we most heartily concur.

MORTALITY AMONG METROPOLITAN IMBECILES.

THE mortality statistics of the Metropolitan Asylums for Imbeciles at Leavesden and Caterham are instructive from many points of view. Their most noticeable feature is, perhaps, their steady decline during the thirteen years since the institutions were brought into use. In 1871 the death-rate among the mean number of inmates in the two institutions (2844) was equal to 164·6 per 1000. No approach to so high a death-rate has occurred in any subsequent year, and the mean annual rate in the five years 1871–75 was 132·9 per 1000; in the next four years it fell to 85·6; and in the last four years, 1880–83, it further declined to 75·8. This marked decline in the mortality of these pauper imbeciles since they were transferred from the metropolitan workhouses to these special institutions suggests some unpleasant thoughts with regard to the condition of the 12,056 pauper lunatics and imbeciles who, according to the last report of the Lunacy Commissioners, are still retained in workhouses without any attempt being made to ensure trustworthy statistics of this helpless population. This remarkable reduction in the death-rate of the metropolitan imbeciles in recent years also throws much light upon the great apparent increase of lunacy in the metropolis, compared with the recorded increase in other parts of the country. To this part of the subject we shall recur. With regard to the mortality in the institutions at Leavesden and Caterham it may be noted that the mean annual rate in the thirteen years ending 1883 was 91·1 per 1000 at Leavesden and 110·6 at Caterham. The noticeable excess in the Caterham mortality was maintained until the end of 1881, but in both 1882 and 1883 the death-rate there fell to 66·3 and 64·2, considerably below the rates for those years at Leavesden, which had increased to 72·1 and 84·6. A word or two in conclusion upon the mortality statistics of the new asylum for adult imbeciles at Darenth, the institutions at Leavesden and Caterham having had a comparatively

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stationary population of 4000 since the beginning of 1877. The Darenth adult asylum was opened in May, 1880, and the mean number of residents was respectively 220 in 1881, 320 in 1882, and 659 in 1883. The annual death-rate among these inmates averaged 126·7 per 1000 during these three years, whereas the mean death-rate in Leavesden and Caterham in that period did not exceed 75·9. It is evident that, as was the case when the Leavesden and Caterham institutions were opened, the health condition of the patients admitted at Darenth was very inferior to that of the patients who had for some time been residents in these metropolitan asylums. Trustworthy mortality statistics of lunatics and imbeciles in workhouses and residing with relatives, are urgently needed in refutation of the natural inference to be drawn from the remarkable statistics of the Metropolitan Asylums for Imbeciles. We recommend this subject as calling for the urgent attention of the Local Government Board and of the Lunacy Commissioners.

DR. RICHARDSON ON THE PAINLESS EXTINCTION OF LIFE OF THE LOWER ANIMALS.

DR. RICHARDSON'S lecture on his process of painless killing of the lower animals scores for science a magnificent success. As its author said in the closing passages of his discourse, science has now given to the inferior creation a blessing which she dare not give to man himself—painless death. At the Dogs' Home over 6000 dogs have during the past seven months slept their final sleep, knowing as little of their deaths as of their births. The principal agent used for the narcotic action is carbonic oxide, passing, at summer heat, over a mixture of chloroform and carbon bisulphide into a lethal chamber, in which chamber as many as 100 dogs can at once receive euthanasia. This is on the large scale; but Dr. Richardson described also a small apparatus which, after long trials, he has completed, in which from one to six animals can be painlessly killed, and which is so portable that it can be wheeled from a central station to any house or street ready for immediate use. Thus every village and town may be provided at a small cost with a means that will give painless death to any domestic animal without offending the most sensitive individual. By an extension of the same design the author next intends to apply it to animals of the larger kind that are used for human food, its application to the slaughtering of sheep being already quite feasible and inexpensive. By such works of beneficence as these man exerts his wisest and best dominion over natural sufferings and difficulties, and medicine is never more distinctly in her true position than when she is lending to that dominion the willing and practical aid which her representatives are specially fitted to confer. It is no contemptible part of its history in this century for the profession to leave as a bequest to the future the means of taking the sting of death from all our lower friends whose fate is under our control.

BACILLI IN SYPHILIS.

WE lately mentioned that Dr. Lustgarten had discovered a bacillus in syphilitic formations. This announcement has been speedily followed by a statement by Dr. Koniger (*Deutsch. Med. Wochenschrift*, No. 50) to the effect that in examining the sputa of certain cases of lung disease, where the tubercle bacilli were absent, he detected groups of long and delicate rod-shaped organisms differing in their staining reactions from the tubercle bacillus, and about twice as long as the latter. Two of the six cases in which these micro-organisms occurred were undoubtedly syphilitic, and further inquiry in two other of the cases showed that they also had been exposed to syphilitic infection. The fifth case was that of a [illegible] the history of having had many abortions, but the sixth case did not afford even these grounds for suspecting syphilis. The writer says he would have deferred mention of these cases until he had obtained larger experience had it not been for Lustgarten's discovery; and he believes that the detection of these bacilli in the sputum of a case of pulmonary disease may prove to be a sure test of its syphilitic nature.

H.R.H. PRINCESS CHRISTIAN AT THE MIDDLESEX HOSPITAL.

THE practical interest taken by the members of the Royal Family in the welfare of our great public charities was again evinced on Tuesday last in the visit to the Middlesex Hospital of H.R.H. the Princess Christian to open the new wing, a detailed description of which will be found in another column. Her Royal Highness, accompanied by Prince Christian, was received in the board-room of the hospital by Major Ross, M.P., chairman of the governing board, the members of the weekly board, and the medical staff, as well as a large number of ladies and gentlemen interested in the work of the hospital, including the Lord Mayor and Lady Mayoress, Lord and Lady [illegible], Lord George Hamilton, M.P., Mr. Coope, [illegible] and others. A contingent of the Volunteer Hospital Staff Corps formed the guard of honour, and the students of the hospital were engaged in the reception of the visitors, who lined the corridors of the building. Her Royal Highness was first conducted through the new wing, and on returning to the board-room a suitable [illegible] service, conducted by Bishop Tozer and the Rev. [illegible] Brindley, chaplain to the hospital, was held. This was followed by the presentation of an address to the Princess, who then declared the new wing open, and expressed her pleasure at having been present. It was stated in the address that one of the wards would, with Her Royal Highness's sanction, be named Helena Ward, and that Princess Christian had consented to be placed on the list of vice-presidents of the hospital. Purses to the amount of £400 were presented by ladies and children, after which Her Royal Highness inspected Queen and Helena Wards, accompanied by members of the medical and surgical staff.

"REASON OR INSTINCT."

UNDER this heading a simple narrative of [illegible] discussed at great length in the public press. The story was simple enough. A dog having received a wound in the foot went to Charing-cross Hospital apparently to be [illegible] treated. After demonstration of joy and gratitude when driven away, it returned to have the injured limb dressed. We see nothing in the story which either tends to [illegible] throws new light on the subject of instinct or on the power in animals below man. Those who believe that science teaches, that the only difference between the mind of man and that of his inferiors in the series of development is one of degree, can have no difficulty in understanding that these stories may all be true as the [illegible] undoubtedly is. There is really no distinction between reason and instinct. The one shades off into, and is part of, the other. Just as a dog remains to the [illegible] for food day after day, and is led [illegible] or shelter from outward appearance [illegible] scent, so a dog may very well [illegible] connecting that person with injured [illegible] lar building in pain, and come [illegible] this simple association of ideas this dog [illegible] the hospital and obtained what he [illegible] gone there he would go again. A dog [illegible] wash as well as to drink. A horse [illegible] likely place for a gallop. There is [illegible]

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the lower animals possess mental powers which we call reasoning. It has been urged that the "doctors" at Charing-cross ought to have allowed the dog to remain as an "in-patient." The all-sufficient answer to this complaint is that the noise of the barking was disturbing to the patients.

OVER-PRESSURE IN SCHOOLS.

THERE is only one word more to say on this subject, and that had better be put into the form of a question. Is there to be an independent inquiry by an independent and skilled commission? So far as we can see, the policy of the Education Department is one of distraction and subterfuge. Beaten on the merits of the issue he had the enterprise to raise but not the moral courage to discuss impartially, Mr. Mundella is apparently resorting to the stale trick of riding away from the lists on a hobby arrayed in the trappings of a sentimental philanthropy. In the face of a demonstration that the children of the poor are being over-taught, the Vice-President has seized on the fact that part of the evil which results from over-pressure is due to the starved condition of the forced brains, and is now posing before the public as a benevolent supporter of penny dinners. Mr. Mundella may succeed in winning a little popularity by his patronage of the penny dinner movement, but, unless we are very much mistaken, he will not triumph in his main purpose, which is to divert public attention from the baneful effects of the system of competitive forcing in the culture of underbred, as well as underfed, brains. As physiologists we are persuaded that there is far too much haste in this educational movement as a whole. It must take several generations of evolutionary progress in the development of the average cerebral organism to produce brains which can be safely as well as successfully crammed as the empiricists of the Educational Department would have the brains of the million crammed to fulfil the requirement of "payment by results." Nothing short of an exhaustive inquiry can meet the needs of the case, and these must be met, and to the full.

THE ALTERABILITY OF CHLOROFORM.

IT is well known that the valuable agent chloroform is liable to undergo alterations if kept under ordinary conditions. M. Jules Regnauld has recently published the results of an investigation extending over a period of eighteen months. The effect of exposure to sunlight and air was to decompose chloroform, the decomposition occurring at the end of two days in July and of five in December. A similar result followed when the chloroform used had been previously saturated with water by agitation. The specimens of chloroform kept in the dark maintained their initial properties. If chloroform be in contact with oxygen and exposed to light decomposition takes place, but this is not the case if the atmosphere over the chloroform be pure nitrogen. These changes are independent of the presence of chloral. A very small proportion of ethylic alcohol in chloroform prevents the alterations which sunlight and air are able to effect. Toluene and allylic alcohol seem to have a similar preservative influence, which methylic alcohol, amylic alcohol, and benzene have not.

ZYMOTIC DISEASE IN MILE-END OLD TOWN.

THE chairman of the Sanitary Committee of Mile-end Old Town, in a letter to *The Times* on Wednesday last, gives an unqualified denial to the report of an outbreak of "fever" in that sanitary district of the metropolis. The statistics, however, by which this denial is supported are far from satisfactory. Comparison is made between the number of fever cases attended by the local medical officers during the three months ending 12th inst. and in the corresponding period of last year, but no reference is made to the cases of fever under treatment in the Metropolitan Asylum Hospitals. With reference to this omission, it may be noted that two fatal cases of enteric fever belonging to Mile-end Old Town were registered in those hospitals during the week ending 13th inst. If this fact were known to the local sanitary authority, why was all reference to it omitted from the chairman's letter? Then with regard to the claim for Mile-end Old Town "to hold its place of honour in the health reports of the metropolis," it appears from the letter in question to be mainly based upon the Medical Officer of Health's report for a single week ending November 29th (in which the deaths happen to have been fewer than in any recent week), and that without any correction for the deaths of Mile-end residents occurring in the Metropolitan Asylum Hospitals. During the week in question three fatal cases of small-pox and one of scarlet fever belonging to Mile-end Old Town were registered in these hospitals outside the district. Apart from the facts in dispute bearing upon the health of Mile-end Old Town, it is evident that the statistics put forward in *The Times* by the chairman of the local sanitary committee are worse than useless, being absolutely misleading.

WOOLWICH AND SANDHURST.

IN the reports of the Board of Visitors on the two great military schools for the year 1883–4, we are glad to observe a marked improvement in the information afforded regarding the health of the cadets, although we have still to regret that on that for Woolwich the average strength is omitted. If this were given, as it is for Sandhurst, and the number of days on which the cadets were in residence at both institutions were added, the returns of the medical officers would leave nothing to be desired. Assuming the numbers at Woolwich to have been 200, being the present limit of accommodation, and the period of residence as 264 days, the admissions into hospital have been in the *annual* ratio of 1227 per 1000 of the strength, and the number constantly sick 9·80 per 1000. At Sandhurst, where the average strength was 264, the number of days of residence being taken to be the same as at Woolwich, the admissions into hospital were in the ratio of 639, and the mean daily sick of 7·88 per 1000. The proportion of sickness at Woolwich therefore was nearly double that at Sandhurst, and the mean daily sick 1·92 per 1000 higher. The excess in the admissions into hospital at Woolwich has been due chiefly to three groups of cases—bronchitis and catarrh; dyspepsia, diarrhœa, and tonsillitis; and accidents and injuries. The disease in which this has been most marked is dyspepsia, of which only six cases were returned from Sandhurst, and 31 from Woolwich. This shows a remarkable change in the state of health at Woolwich compared with former years, for in 1880–81 there was not a single case of dyspepsia recorded, while at Sandhurst there were in that year no less than fifty-four cases (THE LANCET, Aug. 27th, 1881). The increase of hospital cases at Woolwich and the decrease at Sandhurst are deserving of inquiry as to their causes. The very high proportion of 1227 admissions per 1000 of the strength at Woolwich from a body of young men all of whom have been examined as to their physical fitness before admission into the Academy, appears to require some explanation. And this seems the more necessary as the Board of Visitors state that, "though not defective in physique, the countenances of the cadets generally looked pale and jaded," while at Sandhurst "the Board were much impressed with their muscular development and general healthy appearance." Is this difference to be accounted for by any marked difference in the sanitary condition of the two establishments or in their dietary, or may it be an effect of over-pressure of work in the one which does not exist in the other? The

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subject deserves careful inquiry on the part of the military authorities, involving, as it does, the health of those whom we are training for military service, and the quality of the work they are called upon to do at the Academy; for there can be no doubt that this must be seriously affected by anything which deteriorates the health of the cadets.

PEACE-MAKING BY MACHINERY.

WE have received a communication describing at length a state of cheerless monotony and unsociability which is assumed to characterise the home life of the middle and lower classes of this country, and advocating freer intellectual and social intercourse among neighbouring families. The intention of the scheme is ostensibly good, its proposed method is certainly original and ingenious, but it may be doubted whether it is either necessary or judicious. It aims at the formation of "home dwellings of associated homes," and of "London and Provincial Societies of Conciliation and Reconciliation." In other words, we are to have more system and machinery introduced into social life; and such domestic and personal matters as voluntary seclusion from, or selection of intimate relations, abstinence from amusement on account of scruples or the *res angusta domi*, broken family peace and the like, shall be the concern, albeit as kind and as private as possible, of sympathetic committees of neighbours. While we may admit that a too strict abstention from pleasure has marred the happiness of some homes, has rendered sons or daughters unhappy or reckless, and has even been considered, not without reason, to have injured body or mind, and to have loosened by distrust the ties of morality which it was intended to confirm, we do not consider that this cause or this effect is usual, or that the scheme in question supplies an appropriate remedy. In the "association" of homes there is a degree of pushed acquaintanceship which savours rather of gregarious than of refined and social life. The intercourse of families cannot be undertaken or contracted for, nor should it be needlessly thwarted, but allowed to arise, as it naturally and usually does, out of the recognition of common interests. Conciliation, and especially reconciliation, is even less open to the offices—shall we say the officiousness?—of outside well-wishers. Mankind has long since agreed that matters of this most confidential kind cannot be guided by any official agency, but are best left in the keeping of those concerned, and of any to whose trusted delicacy they may voluntarily commit them. We cannot, therefore, do more than recognise the abstract benevolence of the scheme.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES AT WIGAN.

AN improvement Bill is being promoted by the Corporation of Wigan, and it contains clauses compelling the householder and medical attendant to notify to the health officer the existence of infectious disease: a dual notification. The fee for medical attendant's certificate is fixed at 2*s.* 6*d.* At the ratepayers' meeting, however, opposition was raised to these clauses by Mr. W. M. Roocroft, and he was supported by Mr. Monks, J.P., the Chairman of the Sanitary Committee, both being members of the medical profession. The medical officer of health, Mr. Barnish, explained the reasons why he wished these powers, and he was supported by Mr. Councillor Berry. The meeting determined to retain the clauses, but a poll being demanded, the Sanitary Committee, on the recommendation of the Parliamentary Committee, have agreed to drop the clauses so that the town may be saved the expense of a poll. We would observe that unless more ample provision be made in Wigan for isolating infectious cases than at present exists, the compulsory powers would be deprived of much of their efficacy. The Sanitary Committee ought to see to this without delay, and put in force the powers they already possess under the Public Health Act.

COMMA BACILLI.

THE authorities of Genoa having placed a well-equipped laboratory at the disposal of Professor Antonio Ceci, he, with Professor Edwin Klebs, instituted a series of researches on the etiology of Asiatic cholera. *La Rivista Internazionale di Medicina e Chirurgia*, for last month, gives a preliminary report ("Communicazione Preventiva") of the joint research. Its results, so far as concerns the comma bacillus, do not accord with those of Professor Koch. The Genoa observers conclude, that comma bacilli are not invariably present in the fæces of cholera patients, or in the intestinal contents of the cadavers of those who have rapidly succumbed to the disease. They also failed to discover the comma bacillus in the air expired by patients in the algide stage of cholera; the blood of these subjects presented, under the microscope, no other morphological changes than increase in the number of white corpuscles, and deeper colouring of the red corpuscles due to cyanosis. The symptoms, death, and organic changes of individuals stricken with rapid cholera are not explicable by the slight lesions found in the intestine. In perfectly fresh cases, in which epithelium still existed *in situ*, no comma bacilli were found in the glands of Lieberkühn, although lymphatic cells abounded in the mucous membrane. So far as concerns their morphological characters, the comma bacilli and spirilli, of Asiatic cholera, proved identical with the comma bacilli and spirilli, obtained by Finkler and Prior of Bonn, from the culture of the fæces of cholera nostras patients. The same forms of spirilli were found by Klebs, in the diarrhœa of an individual suffering from pneumonia.

"PRESCRIBING SEPARATELY FOR EACH PATIENT."

IT seems that this mode of procedure is an offence to a certain order of minds which infests the board-rooms of unions and parishes. The guardians of St. Olave's are to be congratulated on having rejected the overture of members of their body to censure their medical officer, Dr. Smart, for adopting the method condemned. It is judged too costly to care for the needs of the poor individually even when the cause of need is disease. Being poor, they must be content to be physicked in classes, on the principle in force at Dotheboys Hall, where Mrs. Squeers administered brimstone-and-treacle to the scholars indiscriminately. Something like three or four mixtures (!) at most, and perhaps as many sorts of pills, would, in the estimation of certain officials, amply suffice for the "doctoring" of a whole population of paupers. Happily, not all are of this way of thinking, and some medical officers are independent enough to assert their professional right to practise the art of healing on rational principles.

THE LABOURERS ACT, IRELAND.

A QUESTION of great interest to dispensary medical officers in Ireland was decided last week in the Exchequer Division of the Court of Queen's Bench. It was the case of Dr. Rogers, of the Youghal Union, who brought an action against his Board of Guardians for services rendered—namely, for inspecting labourers' cottages, his bill including a sum of over £8 for car hire. The guardians refused the remuneration asked for on the ground that as medical officer of health he was bound to give those services gratuitously. The upshot of the trial, which, being a test case, was awaited with considerable interest, was that Dr. Rogers, having undertaken

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the performance of duties which he might have declined, was not entitled to receive anything beyond his expenses for car hire. Very probably the matter will not be permitted to rest thus, and will be brought before another tribunal.

CHRISTMAS CHARITIES.

WE receive numerous appeals on behalf of various forms of Christian charity, and only regret we cannot make special mention of them individually. It would be well if for a few days, at least, starvation could be forgotten and "the hungry filled with good things." It should be the aim of every man, woman, and child who has the means, to see that the naked are clothed, and the cold warmed, and the downcast cheered. The special Christmas charities are, perhaps, not medical in their character, but they do good like a medicine. They cheer, they relieve, they revive, and restore. We would like to say a word, too, at this moment, to benevolent men and women in favour of the hospitals of London, in which six or seven thousand poor, and sick, and lamed will be lovingly and tenderly ministered to on Christmas Day, and all the other dark days of the winter. These institutions are amongst the most deserving of our charities; all the more that they are unsensational and unobtrusive.

SMALL-POX IN LONDON.

THE mortality from small-pox has steadily increased in the metropolis since the colder weather set in, the fatal cases during the past three weeks having numbered 40, 61, and 69 respectively. Following on a brief recurrence of milder weather there has been some reduction in the admissions into the hospitals of the Asylums Board, but everything seems to show that with severe weather a considerable increase in the number of attacks may be expected.

FOOTBALL.

THE following notice has been posted up at Harvard College: "The Committee on Athletics, having become convinced that the game of football as at present played by college teams is brutal, demoralising to players and to spectators, and extremely dangerous, propose to request the Faculty to prohibit the game after the close of the present season." We wish that some of those who control the sports of British youth would take steps to render this game less dangerous and objectionable.

THE BROWN LECTURES.

MR. VICTOR HORSLEY will conclude his series of lectures at the Brown Institution in Wandsworth-road, on December 22nd, at 3 P.M., by a demonstration of various tissues from the cases of artificial myxœdema and a practical exposition of the work of the institution.

"MEDICAL CHARGES AND DEATH CERTIFICATES."

IN our annotation under this heading of the 13th inst., we stated that the name of Mr. Burnes does not appear in the Medical Register. This statement was made in error; Mr. Burnes is duly registered, and we hasten to express our regret that the mistake should have occurred.

THE DEBATE ON CHARCOT'S DISEASE.

THE special meeting of the Clinical Society to which the debate on Charcot's Joint Disease has been adojurned, will take place on Tuesday, the 23rd inst., at 8.30 P.M., and not on the 19th, as previously arranged.

THE Committee on Organisation of the Ninth International Medical Congress, to be held in Washington, D.C., in 1887, met on the 29th ult., for the election of officers of the committee, who will be nominated to fill the same offices in the Congress. The following were appointed:—President: Dr. Austin Flint, Sen., of New York. Vice-Presidents: Dr. Alfred Stillé, of Philadelphia; Dr. Henry I. Bowditch, of Boston; Dr. R. P. Howard, of Montreal, Canada. Secretary-General: Dr. J. S. Billings, U.S. Army. Treasurer: Dr. J. M. Browne, U.S. Navy. The Executive Committee: The President, the Secretary-General, and the Treasurer, *ex-officiis*; Dr. I. Minis Hays, of Philadelphia; Dr. A. Jacobi, of New York; Dr. Christopher Johnston, of Baltimore; Dr. S. C. Busey, of Washington.

A PATHETIC STORY, entitled "It Won't Come Right," by F. S. J. B., is published by Wells, Gardener, Dunston, and Co., London. It illustrates the evils of brain-forcing, and shows how a poor little girl, eleven years old, was taught to death. The interesting feature in connexion with this work is that it was not written to support or express the views of Dr. Crichton Browne, having been actually in the hands of the printer before that report, which has attracted general attention, was made known.

THE second annual report of the Metropolitan Public Garden, Boulevard, and Playground Association has been recently published. It appears that during the past twelve months 85 new members have been elected, the total number of those belonging to the Association being now 214. Twenty-eight different matters have been taken in hand, and of these thirty have been carried to a successful ending.

A PHYSICIAN in the department of Maine et Loire is said to have at length discovered a means of overcoming the phylloxera by an easy and inexpensive treatment, the basis of which is an arsenical solution mixed with cinders. The limited experiments made with this preparation seem to have been attended with good results.

FOR some time past, small-pox has been raging at Trieste, an average of twenty five cases a day having occurred. The fatal cases are reported to be about twenty per cent. Several schools and other establishments have been closed by order of the authorities, and one of the schools has been converted into a hospital.

A PLUMBER in New York has recently been fined 250 dollars for having in a building he was erecting put in dummy vent-pipes and wash-basin traps, and fixed a dummy terminal on the roof, in such a manner as to be calculated to deceive the inspectors of the Board of Health.

ON the 14th inst., a steamship from Sfax arrived at Liverpool, having seven of the crew suffering from small-pox. The vessel was at once thoroughly disinfected and the sufferers removed to the infectious hospital.

THE latest news from Cairo contains the information that Dr. Sandwith has resigned his post in the Sanitary Department in Egypt.

EDWARD BELLAMY, F.R.C.S. Eng., has been elected Examiner in Surgery in the Victoria University, Manchester.

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ASSOCIATION FOR PROMOTING A TEACHING UNIVERSITY FOR LONDON.

ON the 15th inst. a meeting was held at the house of the Society of Arts to discuss the report of the Subcommittee which was some time ago appointed to consider the best means for obtaining a teaching, instead of merely an examining, university for London. The committee, it was stated, embraced 163 names, and admitted of the following analysis:—Nine members of the Senate of the London University; the vice-president and eleven members of the Council of University College, and thirty professors; the principal and others representing King's College, and twenty professors; the Dean of Council (Professor Huxley, P.R.S.) and seven principal members of the teaching staff of the Science and Art Department, South Kensington; Lord Walsingham, trustee, the principal librarian, and four principal members of the staff of the British Museum; the principals of Manchester New College, the New College (South Hampstead), the Regent's-park College, the Queen's College for Women, the Finsbury Training College, and the Royal Academy of Music; the director of the City and Guilds of London Institute, the Dean of the College of Preceptors, the Head Masters of Westminster, University, and King's College Schools, and numerous representatives of the Council of Legal Education and their professors, of the General Council of Medical Education, of the Royal Colleges of Physicians and Surgeons, and of all the hospital schools, eleven in number.

After Lord Reay, who occupied the chair, had opened the proceedings, Lord Justice Fry moved the adoption, but afterwards the reception, of the report, which was taken as read, remarking that the great point was that there were bodies that were doing an amount of university teaching, and there were a number of scattered professors, but they had no connexion with the University of London, and the great object was to unite them with a university. No fault was found with the history or with the present condition of the University of London, which was admitted to have done a good work for education. The great question was whether they should endeavour to unite the scattered teaching, which if brought together would represent a creditable univereity, and it was this that was proposed by the approval of the report. Professor Frankland seconded the motion for the adoption of the report, and stated that the separate recommendations of the report might be subject to modification when they were discussed in detail, but he trusted that the scheme as a whole would substantially receive the sanction of all those interested in the education of the youth of the metropolis, and that there would thus be provided a veritable university training affording a real preparation for the performance of the duties of life and the true enjoyment of its pleasures.

Several speakers, including Dr. J. M. Duncan, the Rev. Dr. Wace, and Professor Ray Lankester, having questioned the prudence of at once passing a resolution to formally adopt a report, dealing with so many matters of delicacy and difficulty, in all its details, some of which required full consideration, Sir G. Young offered some explanations, in the course of which he said he did not suppose the meeting was in a position to pledge itself to every proposition in the report, and the adoption or reception of it would simply mean that it furnished a basis for subsequent deliberation and negotiation. All that would be affirmed substantially was the desirability of associating university teaching with university examination, and of conferring a voice in the government upon those who were engaged in teaching and in examinations. It was impossible to arrive at a teaching university without a close alliance with existing institutions. It was impossible to ignore the University of London until it had refused to co-operate with this movement. It was from the teachers in London that the support of this movement must come. The control of the teaching bodies was largely in the hands of amateurs or of educational statesmen, who could not be expected to advance with the times in matters of educational reform. London was formerly in the van; but now Oxford and Cambridge were distinctly ahead of it in many respects, and the colleges which ought to be the University of London were not able to appeal to the intelligence of the people of London, the colleges were stinted for the lack of funds, which might be forthcoming if they could appeal to the public in the form of a [illegible] Funds might be obtained shortly from sources no[t] available, and London might hope to have a te[ach]versity of which it would be proud.

Lord Justice Fry then said he proposed to alter t[he] of his motion, and to move that the report be recei[ved] the further consideration of it adjourned to a future [day]. After some remarks from Dr. W. Carpenter, [Canon] Church, Mr. J. Marshall, and others, the resolu[tion] altered by the mover, was agreed to unanimously.

Report of the Subcommittee appointed Monday, N[ov.] 1884, to draw up a Plan for the Teaching Univ[ersity] accordance with the objects of the Association, a[s] as follows:—

1. The organisation of university teaching in London, in the form of a teaching university, with [faculties] of arts, science, medicine, and laws.

2. The association of university examination with university teaching, and direction of both by the authorities.

3. The conferring of a substantive voice in the go[vernment] of the university upon those engaged in the work of university teaching and examination.

4. Existing institutions in London, of universi[ty rank] not to be abolished or ignored, but to be taken as [the basis] or component parts of the university, and either [federated] completely incorporated, with the minimum of change.

5. An alliance to be established between the u[niversity] and the professional corporations, the Council of Education as representing the Inns of Court, and the Colleges of Physicians and Surgeons of London.

The following is the plan proposed by the Subc[ommittee] which consisted of Lord Reay, chairman; Profe[ssor] Marshall, F.R.S., Ex-P.R.C.S.; Dr. W. M. Ord, F[.R.S.]; Mr. F. Pollock, barrister-at-law; Mr. R. S. Poo[le] Museum; Dr. P. H. Pye-Smith, F.R.C.P.; Profe[ssor] W. Warr, King's College; Professor A. W. W[ard] University College; and Sir George Young.

A. THE CONSTITUTION OF THE TEACHING UNI[VERSITY].

To be founded on—(1) The faculties or constituent [colleges]; (2) a board of studies for each faculty; (3) a govern[ing body] or council.

1. *The Council.*

To consist of members representative of—(*a*) The faculties. The proportion of representatives of the to the whole number of the council to be at least [illegible]. (*b*) The Senate of the University of London. (*c*) The of Legal Education. (*d*) The Royal Colleges of P[hysicians] and Surgeons. (*e*) It should be a point for con[si]sideration whether other public bodies should be [rep]resented on the council—e.g., the authorities of the Museum, of the Royal Academy and Royal Society, Incorporated Law Society, and of the Institution of Engineers. (*f*) Colleges and other educational [institutions] associated with the university. The amount of [representa]tion and the qualification for direct representation on council to be determined in each case, having regard to the nature and the amount of the education [given] formed, by the associated institution. (*g*) Endowments, e.g., the Crown, if the teaching university should State endowment; the corporation and companies of London, if they contribute to endow the [university].

Representatives of associated institutions and [other] bodies not to exceed one-third of the whole number on the council.

3. *The Boards of Studies.*

To be elected by each faculty. Some additional [members] might be appointed by the council. The boards [to] all matters relating to the faculty, and to exercise in such matters as are delegated to it by the [council]. Facilities to be provided for joint meetings of two or more boards of studies, when necessary. The [council] appoint some or all of the representatives of the [faculties] the council. If any are appointed by the faculties they should also be ex-officio members of the [council].

3. *The Faculties.*

To consist for electing purposes of [illegible] professors, lecturers, or persons of [illegible] the colleges or educational institutions [illegible]

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university. (*b*) Examiners for the time being in the teaching university and in the existing university. (*c*) Additional members, to be appointed by the council, on the recommendation of the board of studies. There might also be honorary members of faculties, including graduates in that faculty, of the teaching university; members of Convocation of the existing university according to their degrees; recipients of degrees *honoris causâ*, and so forth; such honorary members having the right to attend and vote only at a general meeting of the faculty, to be summoned on requisition when necessary.

B. RELATIONS OF THE TEACHING UNIVERSITY WITH OTHER BODIES.

1. *The Existing University.*

There might be one chancellor, with two vice-chancellors, the teaching university and existing university constituting one university in two departments. The degrees might, if necessary, be distinguished by their designation in some suitable manner. The senate of the existing university would remain unaltered, would be appointed as at present, and would control the present examinations and confer degrees, without interference. Convocation might accept the graduates of the teaching university as full members. The teaching university might, so far as is practicable, find a place of meeting at Burlington House, together with the existing university.

2. *The Professional Corporations.*

Degrees in law, medicine, and surgery to be recognised as qualifying *pro tanto* for call to the Bar or for licence to practise, the power of calling to the Bar or of conferring licences to practise being reserved to the existing authorities. The previous examinations of the teaching university to receive recognition by those authorities, such as is now given to the examinations of existing universities.

3. *Colleges, Educational Institutions, Special Schools, and Institutions for purposes of Research.*

Each associated institution to remain unaffected in any way, save in so far as it might be willing to adopt the recommendations of the University Council.

The School of Law of the four Inns of Court to be an associated institution, and its professors and examiners to be members of the Faculty of Law, but without further direct representation on the Council than that already given to the Council of Legal Education.

The recognised hospital schools of London to be associated institutions, and their professors and lecturers to be members of the Faculty of Medicine. The direct representation of the hospital schools on the Council being difficult, owing to their number, it might be provided that they should all have one representative, at least, on the Board of Studies of the Medical Faculty.

Schools of fine art and technical schools employing teachers, some of whom are not engaged in what can be called, strictly speaking, university work, if composing part of an associated institution, to be admissible as special schools of the university, and their principal teachers to be members of the appropriate faculties. Junior schools forming part of associated institutions to be admissible similarly as special normal schools for the purpose of training teachers. Institutions for purposes of research to be admissible as special schools, and their principals or principal members to be eligible as additional members of the appropriate faculty. Educational institutions, of which the work is either in kind or quantity insufficient to entitle them to rank as associated institutions, while at the same time partaking of a university character, to be similarly admissible as special schools.

C. WORK OF THE TEACHING UNIVERSITY.

The teaching university to obtain power to confer the usual degrees, either by way of supplemental charter to the University of London or otherwise, after such course of study and examination as may be determined on. As means and opportunity will allow, the teaching university to appoint professors in the more advanced studies, and for purposes of original research. The Council to negotiate with associated institutions for the increase of facilities for common attendance at lectures, laboratory work, and admission to libraries and museums, and for the concentration of teaching within one or more of such institutions, or within the university itself, in such studies as may appear desirable.

The extent to which it may be found possible to blend the examinations of the teaching university with those of the existing university, of the professional corporations, or of other examining bodies, to be determined hereafter, full liberty of action being reserved to the respective authorities.

Professors, lecturers, &c., who are members of the faculty, to have the title of " Professor, Lecturer, &c. (or on) " in the proposed university; the first blank denoting the college or institution with which they are connected, preceded by the title (if any) by which their chair or other office is known.

Students in associated institutions and special schools to be at liberty to become undergraduates in the teaching university, or to obtain degrees as at present from the existing university.

Signed on behalf of the Subcommittee,

6, Great Stanhope-street, Dec. 3rd, 1884. REAY, Chairman.

TREATMENT OF INTESTINAL OBSTRUCTION.

A DISCUSSION AT THE

LIVERPOOL MEDICAL INSTITUTION.

Dr. GEE, President, in the chair.

(*Concluded from p. 1065.*)

MR. PAUL said that one of the noticeable features of the debate was the comfortable manner in which physicians congratulated themselves upon their success in the treatment of intestinal obstruction. They warned us that one brilliant surgical success, or one post-mortem that showed how easily the obstruction might have been relieved, was likely to make an impression which would lead us to forget the number that recurred without surgical aid, or the number of post-mortems which showed that an operation could have been of no service. He presumed that five years was a fair average time to test the results of a particular medical practice. Well, for five years he had been pathologist at the Royal Infirmary, and during that time the records showed that twenty cases of intestinal obstruction had been admitted; of these, ten found their way into the post-mortem room, and a mortality of 50 per cent. could hardly be regarded as encouraging. Of the ten cases, three were slight bands in vigorous young subjects, one the same in an old man, one was a twist in a woman of fifty-one, two were concretions in the appendix cæci, one depended upon acute pelvic inflammation after confinement, one upon adhesions of the small intestine to a cancer of the rectum, and one upon fæcal accumulation, ulceration, and perforation in an old woman. Perhaps only the first three were really suitable for immediate operation; but he maintained that, notwithstanding what had been said as to the impossibility of making a diagnosis, most of the others might have been excluded by any surgeon who desired to select operation cases with particular care. The last three no one would have had any difficulty in deciding upon as unsuitable. Both of the two cases of ulceration of the appendix had symptoms of inflammatory trouble in the right iliac fossa, and though he would consider them quite suitable for an early operation, many surgeons would not. The case of twist in the woman of fifty-one and band in the old man would both have to be taken on general grounds—of age, constitution, &c.,—as both might have been relieved by operation if they could have borne it. What he wished to point out was that though the physician might not be able to say exactly what was the cause of obstruction in a case suitable for operation, he could very often discover grounds for not operating in unsuitable cases. Time only permitted a reference to one other point. In the course of his experience he had met with two or three cases of obstruction diagnosed to be due to cancer of the intestine, and in which the surgeon had refused to operate. A little consideration of the probable part attacked in this disease would almost invariably enable one to give relief by operation. He had notes of sixteen cases of cancer of the intestine, of which six were above the rectum. Of these, one was in the duodenum, one in the cæcum, one in the transverse colon, and three in the descending colon. Cancer in the duodenum came under the same clinical conditions as in the stomach; it was practically unknown in the rest of the small intestine. Fortunately, it

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was very rare in the cæcum, and became more common towards the rectum. The rule should be that when the age and circumstances of the case pointed to obstruction by cancerous growth in the bowel, a right colotomy should be done in all cases where the growth could not be felt in the rectum. This would give relief in all but a very few, and could be followed, at the discretion of the operator, by an attempt at extirpation of the growth when the bowel was empty.

Dr. ALEXANDER was surprised not only at the paucity of successful cases described by previous speakers, but at the few cases of intestinal obstruction met with by anyone. He thought the backward state of the treatment of this disease arose from its occupying the debatable ground between the physician's department and the surgeon's department, so that physicians often kept the cases so long under unavailing medical treatment that the patients were moribund when the surgeon took charge, and then operation too often hastened the fatal issue. The few cases met with by single surgeons also prevented that continuous and prolonged study necessary to perfect the treatment. The cases should be handed over entirely to the surgeon, as he could carry out the medical treatment quite as well as the physician, and could prepare, on its failure, for prompt surgical treatment. In many cases it was possible to tell early in the case whether the ultimate recovery was probable or not. From the beginning in some cases the pinched face, weak pulse, and great prostration show that death is probably inevitable, and such cases should be operated on early. In operating, the intestines should not be disturbed more than necessary. A hand passed into the abdomen should explore the region of the vermiform appendage first, then the sigmoid flexure, and then the region of the transverse colon. In these three regions adhesive bands are found most frequently. When the constriction or tumour is found, it alone should be exposed. Death would occur in many healthy persons who had no obstruction of their abdominal contents were they treated as the descriptions show they had been treated. Aspiration in one case of obstruction from peritonitis saved the life of the patient, and in another case a foreign body had been removed by him with success.

Dr. RICH said that he would merely refer briefly to two points, one pathological, the other clinical. One reason why the differential diagnosis of this condition was so difficult depended upon the fact that within the abdominal cavity there were so many conditions predisposing to obstruction. And with reference to only one of these, the appendix vermiformis, which, as everyone knew, played a very important part in the causation of many obstructions, he might remark that the varietes of size and position of this little structure were apparently much greater than is generally imagined. Of thirty-five cases examined by him, in only fourteen did he find the appendix cæci normal according to the description given by Quain and other authorities. Many cases were regarded as obstruction which were merely examples of aggravated constipation. As a rule the symptoms speedily yielded to ordinary measures. There was one small detail of treatment which had not attracted the attention it deserved—viz., puncture of the bowel in cases of great flatulent distension. In several instances he had practised this with great benefit to the patient both in cases like those he had referred to and also in severe flatulent colic.

Dr. RAWDON could not help thinking that in future operative treatment would be more frequently resorted to in cases of intestinal obstruction, especially in cases where the symptoms came on suddenly and approached in character those of strangulated hernia. The chief difficulty, however, would be in the diagnosis. To give an instance of this: two years ago he attended an old lady with strongly marked symptoms of intestinal obstruction, even to the extent of repeated attacks of stercoraceous vomiting. In the end his patient recovered, and in ten days' time passed a gall-stone the size of a large walnut. There was one class of these cases of which he had seen three examples occurring in young children. He referred to intussusception where the diagnosis was comparatively easy; not only was there straining with the passing of bloody mucus, but the mass of invaginated bowel might often be felt high up through the rectum. In one case the intussuscepted gut was extruded through the anus for seven or eight inches. In the cases he had seen the inverted cæcum had always been the presenting part, several inches of the ileum with its mesentery having been forced through the ascending, transverse, and part of the descending colon. In the treatment of these cases he protested against the forcible injection of enemata of water or distension of the lower gut by air or gas. If left alone they might possibly recover by one or other of nature's processes, but not after such treatment. He was also opposed to abdominal section, on account of the difficulty in disengaging the invaginated bowel; or it might be impossible to effect this at all, not on account of adhesions, but because of the tight embrace of the outer layers of the bowel.

Dr. JAMES WILSON, while recognising the able manner in which this subject had been brought forward by Dr. Greves, contended that it was impossible to influence the small bowel by remedial measures from below, such as injection of air or fluid, inasmuch as the ileo-cæcal valve in a sound state will not admit of regurgitation of air or fluid. The only way in which the small bowel could be influenced would be (and this would be equally for evil as for good) by outward means through distension of the colon. For the same reason stercoraceous vomiting indicated that the obstruction was above the valve. In cases of intussusception he did not agree with opium being given in large doses, and he much questioned its utility at all, inasmuch as the opium diminished the peristaltic acton of the bowel, the very effort of nature to rid itself of the trouble; for what was the mechanism of intussusception if it was not from want of coördination of the circular and longitudinal muscular fibres of the intestine? If, therefore, by opium we succeeded in paralysing one or both sets of fibres, how could we hope to effect a cure? With regard to the question of operation, there was no doubt much to be said for and against. If operative measures were to be undertaken, they should be undertaken before the products of inflammation had become organised. No doubt it was very difficult at all times to decide upon the question, but much valuable time was often lost by useless (perhaps a worse word might be applied) remedies, and an operation decided upon when the most fitting step would be to send for the undertaker. In his hands electricity, both the interrupted and continued currents, had been very successful in cases of intussusception, and in a large class of cases coming under the head of paralysis of the muscular coat of the bowel, so often met with in adults and aged persons. He mentioned a case that occurred at the Worcester Infirmary under his care in which the obstruction had been complete for ten days and incomplete for a month, the patient being discharged quite cured; readmitted again, cured by the same means, and remained so nearly two years, dying eventually from cancer of the sigmoid flexure.

Dr. CRAWFORD narrated a case of intestinal obstruction which had occurred in his practice, and in which, after trying a number of remedies, including aspiration of the bowel, he ultimately succeeded in giving relief by forcible inflation through the rectum. He spoke strongly in favour of using the aspirator when the abdominal distension was great. He thought that in suitable cases gastrotomy should be performed.

Dr. ARCHER had found great relief follow the use of an aspirator needle in suitable cases, and mentioned one of cancer of the rectum, which derived great benefit from this simple procedure. He thought that it should be practised before undertaking any serious operation for intestinal obstruction. He called attention to the occurrence of obstruction in very fat people from fatty degeneration of the walls of the intestine, causing paralysis of the gut. He had seen two or three cases of this kind, and considered that one referred to by Dr. Waters and another by Dr. Carter might be classed under this head.

Mr. G. HAMILTON referred to two cases he had seen operated upon in Edinburgh, one of which recovered and one died. He spoke in favour of early laparotomy in acute cases.

INSANITARY HOUSES IN ST. GEORGE'S.—On the 11th inst. at the Thames Police-court the Sanitary Inspector of St. George's-in-the-East applied for an order under the Nuisances Removal Act enforcing the closure of twenty houses known as Perseverance-place. The inspector stated that in these houses there was no back ventilation or light; for the whole twenty only four closets were provided, and no provision had been made for children to use the waterclosets. Recently eleven cases of small-pox had occurred in these houses, and altogether they were unfit for human habitation. The order asked for was granted.

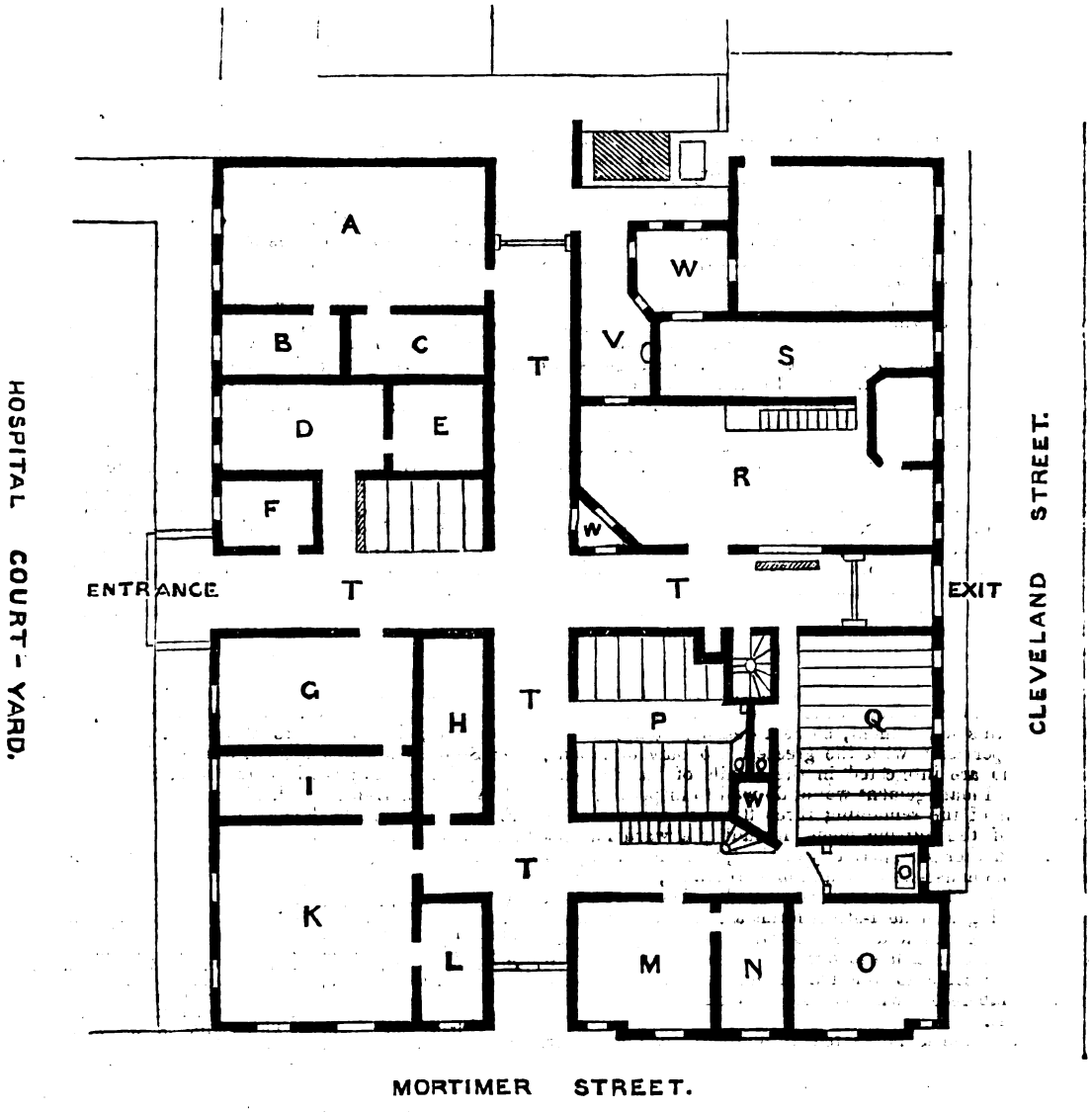
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THE MIDDLESEX HOSPITAL.

DURING the past twelve months considerable alterations have been made in the Middlesex Hospital, involving a complete reconstruction of the out-patient department, the addition of a new dispensary and store-room, and the provision of further accommodation for officers, nurses, and servants. The necessity for these new buildings has long been felt, and the acquisition of some property adjoining the east wing of the hospital afforded an opportunity of supplying this need. For many years the increasing number of out-patients far exceeded the accommodation provided for them. The rooms in which the physicians and surgeons had to see patients were daily overcrowded to an unhealthy extent, whilst the waiting-rooms and dressing rooms for male and female patients were wholly insufficient for their purpose.

The new buildings are situated at the east end of the hospital, at the junction of Mortimer and Cleveland-streets. Reference to the annexed plan (drawn to a scale of 40 ft. to the inch) shows the arrangement of the ground floor. The building has a frontage of about 90 ft. in Mortimer-street, and 100 ft. in Cleveland-street, where it adjoins the Nursing Home. The entrance in the courtyard in front of the hospital is formed by a porte-cochère, to which vehicles containing patients can be driven, and opens into a corridor (T) which completely bisects the building, affording an exit for out-patients in Cleveland-street, guarded by a turnstile. At right angles to that corridor is another which runs the whole length of the building, opening into the main corridor of the hospital at one end and terminating at the other in a large stained glass window. The physicians' and surgeons' rooms open into these corridors along the west and south sides. The walls of the corridors are constructed of porcelain glazed bricks, and the floor of mosaic pavement. They are lighted from above by raised skylights, and the entrances and exits are protected against draught by swing doors.

As one enters the block from the main building the first room (A) on the right hand is for the medical cases. The room measures 20 ft. by 18 ft., and has opening out of it two dressing-rooms (B, C), each about 12 ft. by 8 ft., the one nearest the corridor being also fitted up for laryngoscopical examinations. Next in order, and opening from the entrance lobby, is a room (D) about 17 ft. by 13 ft., for the reception of urgent cases of illness and medical casual patients. This room is also provided with a dressing-room (E) lighted from the corridor. Immediately within the entrance is a small room (F) for the nurses in charge of the department. On the other side of the lobby, facing the medical casual room, is the surgery (G), a room 22 ft. long by 14 ft. wide, leading into a dress-



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ing-room (I) eight feet wide. The surgery is intended for the reception of cases of accident and minor injuries, and the doors of both this room and of the medical casualty room are of sufficient size to admit of the passage of the ambulance in use at the hospital. Thus the ambulance can be taken into the porch, and the patient transferred immediately from the cab into either of the casualty rooms, and conveyed thence to any ward in the hospital, without further disturbance, by means of the hydraulic lift which was erected a few years ago. Passing through this dressing-room (I) we enter a large well-lighted room occupying the south-west angle of the wing, about 20 ft. square. This room (K) will be used by the assistant surgeons, and the assistant obstetric physician, for whose further requirements an examination room (L) has been fitted up. The room will also be used by the ophthalmic surgeon, in connexion with whose department there is in close proximity a dark chamber (H), 20 ft. long by 8 ft. wide, which is fitted with six lamps for ophthalmoscopic examinations. Room M on the south side will be furnished with a bed for the reception of any doubtful case of insensibility admitted in the night, and it is contemplated to fit up the adjacent room (N) as an electrical department. The room at the south-east corner is devoted to the medical and surgical registrars; it communicates by a special staircase with a muniment room in the basement. The rooms marked P and Q in the plan are fitted with benches as waiting-rooms for male and female patients respectively.

The dispensary occupies the rest of the space, and consists of the apartment R, about 40 ft. by 18 ft., arranged so as to allow of the dispensing for the in-patients to be carried on separately from that for the out-patients, the nurses having access to a window placed at the end of a lobby (V) leading from the main building. The delivery window for out-patients is close to the exit corridor. Contiguous to this is another room (S), 22 ft. by 10 ft., used as a store for lint, surgical dressings, &c., issued to the nurses through a window in the lobby above mentioned. Separating these two rooms is a small office for the senior dispenser, who is thus enabled to overlook both the departments. A staircase leads down from the dispensary into rooms of the same size underneath, which are fitted up as steam rooms for the preparation of decoctions, &c., with a tincture press and other apparatus, and also as a store for drugs. The area outside this part of the basement is furnished with a lift for heavy goods, and the cellars are utilised for the storage of spirits and other inflammable materials. There is also a hand-lift from the store to the dispensary. In the room S a still supplied with steam from the engine room enables a sufficient supply of distilled water to be conveyed direct to each of the three dispensing counters. We believe that great care has been taken in the arrangement of the various fittings in this department, so as to ensure complete and efficient supervision with the greatest economy of labour, and all who are interested in the details of hospital construction and management would do well to inspect it.

A portion of the remaining three floors is devoted to an extension of the nursing home, including a ward for sick nurses. Another part, perfectly distinct, is utilised as apartments for the house-steward and male servants, the topmost floor being fitted up as a private ward. The part of the building facing Mortimer-street forms a residence for two of the house-surgeons and the obstetric assistant, the new building replacing a house formerly used for this purpose which had become so dilapidated that it had to be taken down. A laboratory will be fitted up on the topmost floor of this house.

The whole block is heated throughout by hot water, and cisterns furnished with filters are reserved for the supply of drinking water which is conveyed to all parts of the building. Care has been taken that none of the water- or gas-pipes should be built into the walls, so as to be accessible in their whole extent, the various pipes being distinguished by being painted different colours. The waterclosets are of the pattern of Doulton's patent wash-out closet; those apportioned to the out-patients and male servants are worked by an automatic flushing apparatus. The soil pipes from these closets, and the pipes from the sinks, are conveyed immediately outside the buildings down the open courts (W W W), the method of ventilation adopted being that known as the open air interceptor system. The floors throughout are constructed of iron girders and concrete, thus rendering the building fireproof; and on the ground-floor and basement are kept fire-hose, buckets, &c. Teak has been used in the construction of the staircases, of the flooring of the two wards and the out-patient rooms. The rooms C E H are ventilated by Tobin's tubes. The architect is Mr. Matt. Wyatt, F.R.I.B.A., and the contractors, Messrs. Higgs and Hill.

MAHOMED MEMORIAL FUND.

DR. MAHOMED (Physician to the London Fever Hospital and Assistant-Physician to Guy's Hospital) succumbed to an attack of typhoid fever on November 22nd, at the early age of thirty-five. He was quite without private means, and having been thus cut off, almost at the outset of his professional career, his widow and five young children are left unprovided for. These facts, together with due consideration of the great services Dr. Mahomed rendered to the advancement of scientific medicine without regard to his own private pecuniary interest, induce his friends to make an appeal on behalf of those he has left behind.

It is earnestly hoped that this letter will meet with liberal and early response from the medical profession and from the friends of those institutions with which Dr. Mahomed was connected, and in his work for which he probably contracted his fatal illness. There must be many who would like thus to give substantial expression to their appreciation of his character and services.

At a meeting held at Guy's Hospital on December 10th, the following committee, with power to add to their number, was formed, in order to raise a memorial fund:—The Earl of Devon, President of the London Fever Hospital; Cardinal Manning; the President of the Royal College of Physicians; Sir William Gull; Sir James Paget; Sir Henry Acland; Dr. Paget, Regius Professor of Physic in the University of Cambridge; Sir Edwin Saunders; Dr. Habershon; Mr. Alderman Fowler, M.P., Treasurer London Fever Hospital; Professor Humphry; Dr. Wilson Fox; the President of Guy's Hospital; the Treasurer of Guy's Hospital; the Staff of Guy's Hospital and of its Medical School; the House-Surgeons and House-Physicians of Guy's Hospital; His Honour Judge Chalmers, Hon. Secretary to the London Fever Hospital; Thomas Hyde Hills, Esq.; John Hamer, Esq.; H. C. Burdett, Esq.; Dr. Hare; Dr. Chadwick; Dr. Husband; C. Macnamara, Esq.; Dr. W. E. Buck; Dr. Broadbent; Dr. Cayley; Dr. Grigg; G. P. Field, Esq.; Herbert Page, Esq.; Dr. Hughling-Jackson, F.R.S.; Dr. Andrew; Dr. Dyce Duckworth; Dr. Douglas Powell; Dr. Octavius Sturges; Dr. Withers Moore; Dr. Buzzard; Dr. Lauder Brunton, F.R.S.; Dr. Shepherd; Dr. Theodore Williams; Dr. Robert Barnes; Dr. Stephen Mackenzie; Dr. Sidney Coupland; Dr. Cleveland; Dr. Duffey; Dr. Donald Hood; Shirley Murphy, Esq.; C. A. Aikin, Esq.; Dr. J. M. Bright; Dr. Clifford Beale; F. Argles, Esq.; G. Eastes, Esq.; Dr. Markham Skerritt; and George Lawson, Esq.

The following further subscriptions have been received:—

	£	s.	d.
W. Adams, Esq., F.R.C.S.	5	5	0
C. A. Aikin, Esq.	10	10	0
Anonymous (per C. A. Aikin, Esq.)	1	1	0
E. Edmund Aikin, Esq. ...	3	3	0
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Anonymous	2	2	0
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Dr. Fancourt Barnes ...	1	1	0
H. C. Burdett, Esq., makes himself responsible for..	100	0	0
Dr. Burnet...	2	2	0
Dr. J. M. Bright	5	5	0
Wickham Barnes, Esq. ...	1	1	0
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Dr. Chadwick	50	0	0
Dr. Coupland	5	5	0
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Subscriptions will be received by the Treasurer, A. E. Durham, Esq., 82, Brook-street, Grosvenor-square, W.; or by the Secretaries, Dr. Goodhart, 25, Weymouth-street, Portland-place, W., and W. H. A. Jacobson, Esq., 41, Finsbury-square, E.C. The fund will remain open in case any contributors may wish to spread their subscription over a term of years.

WILLS OF MEDICAL MEN.

THE will of William Henry Sheehy, M.D., late of 39, Great Percy-street, Clerkenwell, who died on Oct. 24th last, was proved on the 19th ult. by Mr. William Henry Patmore Sheehy, the son, and Mrs. Sarah Sheehy, the widow, the executors, the value of the personal estate amounting to upwards of £10,000. The testator bequeaths £1000 to each of his children; and £200 to his brother Michael in America. The residue of his property is to be held upon trust for his wife for life or widowhood; and on her death or marriage again for his four children.

The Scotch Confirmation under seal of office of the Commissariot of Lanarkshire of the deed of settlement and codicils of James Patterson Cassells, M.D., late of 2, Newton-terrace, Glasgow, who died on April 13th last, granted to Mrs. Anne Bruce Murdoch or Cassells, the widow, has been sealed in London, the value of the personal estate in England and Scotland exceeding £7000.

The will of George Henry Marshall, M.D., F.R.C.S., formerly of 176, Broad-street, Birmingham, but late of 28, Tisbury-road, West Brighton, who died on July 31st last, was proved on the 1st ult. by Mr. John Mitchell Marshall and Mr. Henry F. Marshall, the sons, two of the executors, the value of the personal estate amounting to over £2900. The testator after making some specific bequests to his wife and to his said two sons, leaves the residue of his real and personal estate upon trust to pay the income to his wife for life, and then for his five sons in equal shares.

The will of Jeremiah Scott, M.R.C.S., late of Barnsley, Yorkshire, who died on August 25th last, has been proved at the Wakefield District Registry by Messrs. James Brown and Thomas James Newman, the executors, the value of the personal estate exceeding £1400. The testator gives £50 to his housekeeper, Hannah Gambles, £40 to Francis Scott, and the residue of his property to his mother, Mrs. A. Scott.

The will of Charles Marchant Jones, F.R.C.S., formerly of Amoy, China, but late of Plymouth, who died on May 16th last, has been proved at the Exeter District Registry by Mr. Allan Belfield Bone and Mr. John Stapleton Jeffreys, the executors, the value of the personal estate exceeding £2700. The testator leaves all his estate and effects upon trust for Matilda Isabella Wells.

The will of Cadwallader Brooke Wolseley, M.D., formerly of St. Helens, Dunfanaghy, Donegal, but late of Castleton, Northwich, Cheshire, who died on July 22nd last, has been proved at the Chester District Registry by Mrs. Katie Maria Wolseley, the widow and sole executrix, the value of the personal estate in the United Kingdom amounting to over £2700. The testator devises and bequeaths all his real and personal estate unto his wife absolutely.

The following legacies have recently been left to hospitals and other medical institutions:—Mr. Graham Moore Robertson, of 21, Cleveland-square, Hyde-park, £250 each to St. Mary's Hospital, Paddington, the London Hospital, Whitechapel, and the Hospital for Sick Children, Great Ormond-street.—Mrs. Eliza Hatton, of Ivy House, York-road, Leeds, £150 to the Ilkley Hospital, and the residue of her property to four charitable institutions, of which the Leeds General Infirmary and Cookridge Hospital are two, either equally or in such parts as her executors may determine.—Mrs. Mary Anne Matilda Willoby, formerly of Brighton, but late of 4, Priory Garden-villas, Hastings, £2000 to the Hospital for Consumption and Diseases of the Chest, Fulham-road, and £1000 each to the Cancer Hospital, Fulham-road, and the Sussex County Hospital, Eastern-road, Brighton.—Mr. Eustratios Ralli, of 93, Lancaster-gate, and of Scio House, Putney Heath, £500 each to St. Mary's Hospital, Paddington, and the Royal Hospital for Incurables, Putney; and £500 to the hospitals of his native island of Scio.—Mrs. Ann Bean, of 166, Lewisham-road, £200 each to the Royal Kent Dispensary, the City of London Truss Society, the Seamen's Hospital at Greenwich, and the British Asylum for Incurables.—Mr. William Charles Jones, of Manchester, and of The Elms, near Warrington, Cheshire, £500 to St. Mark's Hospital, founded by Mr. Salmon; and £100 each to the Manchester Infirmary, the National Hospital for the Paralysed and Epileptic, and the Royal Hospital for Incurables.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5946 births and 3798 deaths were registered during the week ending the 13th inst. The annual death-rate in these towns, which had been equal to 20·9, 23·8, and 24·4 per 1000, declined again last week to 22·6. During the first eleven weeks of the current quarter the death-rate in these towns averaged 21·5 per 1000, against 21·2 and 21·1 in the corresponding periods of 1882 and 1883. The lowest rates in these towns last week were 15·8 in Huddersfield, 16·6 in Birkenhead and Wolverhampton, and 16·9 in Portsmouth. The rates in the other towns ranged upwards to 30·2 in Bolton, 31·2 in Blackburn, 32·4 in Cardiff, and 34·1 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 396 and 392 in the previous two weeks, were 393 last week; these included 80 from measles, 75 from whooping-cough, 61 from scarlet fever, 60 from "fever" (principally enteric), 45 from small-pox, 37 from diphtheria, and 35 from diarrhœa. No death from any of these diseases was registered last week in Birkenhead; while they caused the highest death-rates in Cardiff, Bolton, and Preston. The greatest mortality from measles was recorded last week in Hull, Cardiff, Leicester, and Bolton; from scarlet fever in Brighton and Newcastle-upon-Tyne; from whooping-cough in Preston, and from "fever" in Halifax, Cardiff, and Derby. The 37 deaths from diphtheria in the twenty-eight towns included 27 in London and 4 in Salford. Small-pox caused 71 deaths in London and its outer ring of suburban districts, but not one in any of the twenty-seven large provincial towns. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had increased from 580 to 1027 in the preceding five weeks, were 1011 on Saturday last; the admissions, which had been 149, 228, and 263 in the previous three weeks, declined again to 190 last week. The Highgate Small-pox Hospital contained 92 patients on Saturday last, against numbers increasing from 18 to 80 in the previous five weeks; 22 cases were admitted last week, against 24 and 35 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 511 and 499 in the preceding two weeks, further declined to 457 last week, and were 97 below the corrected average. The causes of 106, or 2·8 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Derby, Blackburn, and in four other smaller towns. The largest proportions of uncertified deaths were registered last week in Oldham, Hull, and Sheffield.

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HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had rapidly increased from 22·3 to 31·8 per 1000 in the preceding four weeks, declined again to 28·3 in the week ending the 13th inst., but exceeded the mean rate during the same week in the twenty-eight large English towns by 5·7. The rates in the Scotch towns last week ranged from 17·9 and 19·5 in Greenock and Leith, to 32·6 in Glasgow and 36·6 in Paisley. The 684 deaths in the eight towns included 30 which were referred to whooping-cough, 27 to measles, 23 to diphtheria, 17 to diarrhœal diseases, 8 to "fever," and 4 to scarlet fever; in all, 109 deaths resulted from these principal zymotic diseases, against 101 and 140 in the preceding two weeks. These 109 deaths were equal to an annual rate of 4·5 per 1000, which was more than double the mean rate (2·2) from the same diseases last week in the twenty-eight English towns. The 30 deaths from whooping-cough included 11 in Glasgow and 4 in Greenock. Of the 27 fatal cases of measles 13 occurred in Glasgow and 10 in Dundee. The 23 deaths from diphtheria included 11 in Glasgow and 3 in Dundee. Five of the deaths from "fever," and all the 4 from scarlet fever, were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 181 and 231 in the two previous weeks, declined to 190 last week, but exceeded by 83 the number returned in the corresponding week of last year. The causes of 92, or more than 13 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 35·4 and 33·2 per 1000 in the preceding two weeks, further declined to 28·7 in the week ending the 13th inst. During the first eleven weeks of the current quarter the death-rate in the city averaged 29·3 per 1000; whereas the rate during the same period did not exceed 20·0 in London and 19·6 in Edinburgh. The 193 deaths in Dublin last week showed a further decline of 30 from the high numbers in recent weeks, and included 24 which were referred to the principal zymotic diseases, against 39, 23, and 25 in the preceding three weeks; 9 resulted from scarlet fever, 8 from whooping-cough, 3 from measles, 2 from "fever" (typus, enteric, or simple), 2 from diarrhœa, and not one either from small-pox or diphtheria. These 24 deaths were equal to an annual rate of 3·6 per 1000, the rate from the same diseases being but 2·2 in London and 1·5 in Edinburgh. The 9 deaths from scarlet fever corresponded with the number in the previous week, while the 8 from whooping-cough exceeded the number in any recent week. The fatal cases of measles, "fever," and diarrhœa showed a decline. No inquest case or death from violence was registered, while the 51 recorded in public institutions showed a further decline from recent weekly numbers. The deaths both of infants and of elderly persons also showed a decline. The causes of 26, or more than 13 per cent., of the deaths registered during the week were not certified.

MORTALITY IN THE PUNJAB.

Two recently received weekly returns, issued by the Sanitary Commissioner of the Punjab, afford most unsatisfactory evidence of the insanitary condition of that Indian province. It appears that during the fortnight ending Oct. 18th the annual death-rate in the province was equal to 73·7 per 1000. This terribly high death-rate was mainly due to mortality from "fever," to which no fewer than 39,755 of the 48,882 deaths from all causes were attributed. The deaths included 151 from small-pox, and but 3 from cholera. It is noteworthy that the death-rate in the forty-two large municipal towns of the province was 72·0 per 1000, and slightly below the rate for the entire province. It is evident, therefore, that the mortality in the rural parts of the province exceeds that in the largest towns. The "fever" fatality in some of the smaller towns is, however, sufficiently startling. In the week ending October 11th 175 deaths occurred in the town of Karnal, with a population of 23,133, giving an annual rate of 393 per 1000, 147 of the deaths being attributed to "fever"; the same number of deaths from "fever" occurred during the same week out of 185 deaths from all causes in the town of Umballa, with a population of 26,777 persons. Such death-rates from "fever" are almost beyond comprehension, and it would be well if we could believe them to be impossible.

Correspondence.

"Audi alteram partem."

THE REVIVAL OF OVARIOTOMY.

To the Editor of THE LANCET.

SIR,—The address on the revival of ovariotomy, which you did me the honour to insert, having been reprinted in pamphlet form, I have sent (and intend to send more) copies to some of my friends. In reply Mr. Nunn, Consulting-Surgeon to the Middlesex Hospital, has sent me a very interesting letter, with the suggestion that if I think it of sufficient importance I shall send it on to you for publication. I trust you will consider that it may be of such interest to your readers as to merit a place in your columns.

I am, Sir, yours truly,

T. SPENCER WELLS.

Upper Grosvenor-street, December 8th, 1884.

"DEAR SIR SPENCER WELLS,—I have to thank you for the copy of the 'address delivered at Birmingham.' It is of the greatest interest to all who have been engaged in ovariotomy as a history of your special work commenced at the Samaritan Hospital, and continued, one may say, over Europe; work which has resulted in giving a *rational and scientific basis* to the operation of ovariotomy. There was, however, a pre-Samaritan era of ovariotomy *in London*, of which I happen to have directly or indirectly some personal knowledge, and I write to you on this. The operation was then more or less an empirical proceeding, the propriety of which was warmly disputed. If you will refer to THE LANCET of 1847, vol. ii., p. 467, you will find a report of the meeting of the Westminster Medical Society, October 23rd. At that meeting Dr. F. Bird related a case of 'extirpation of both ovaries with recovery.' A discussion on ovariotomy followed. Mr. Francis Hird said that he '*doubted whether the operation was justified by the general result of cases of ovarian disease.*' Dr. Murphy, on the other hand, 'thought the fault was with the operator, and not with the operation.' Mr. Hancock made reference to the alleged suppression of the truth about fatal cases of ovariotomy. The following year I became the colleague of Dr. Frederick Bird at the Western Dispensary, Westminster, and I also made the acquaintance of Baker Brown, who at that time was with Samuel Lane, Alexander Ure, and others, working to establish St. Mary's Hospital, then in embryo. In THE LANCET of 1848, vol. i., p. 201, there is a report of a paper by Baker Brown (December 15th, 1847) giving the details of a case where, after much treatment by mercury and pressure, he came ultimately to suggest that Mr. Lane should perform ovariotomy.

"In a series of most able papers in THE LANCET, Dr. E. J. Tilt dealt with the question of ovarian disease. At page 420, vol. ii. (Oct. 14th, 1848), Dr. Tilt says:—'There are now 150 cases recorded, ... though insufficient for the final decision of the question of ovariotomy;' and at page 526 (Nov. 11th), he gives an analysis of the results of the operations of Lane, Bird, Walne, Jeaffreson, and Clay. It was just about this time that I joined the Westminster Medical Society, and became aware that the excitement of the somewhat acrimonious discussions on ovarian disease had not subsided. Baker Brown had vehemently assailed Dr. F. Bird, and advocated tapping and pressure. At the meeting of January 27th, 1847, Baker Brown exhibited bandages 'applicable in the treatment of ovarian dropsy'; one bandage 'applicable where pressure is required for a long time after tapping.' Now, Sir Charles Locock was a staunch friend of Baker Brown's, and sent to him cases of ovarian disease. Brown was kind enough to ask me to assist him in tapping such cases. I cannot tell you accurately the number of these, but at any rate they were sufficient to prove in many that tapping and pressure and mercury could be of no avail; that is to say, where sebaceous matter, hair, bone, and teeth (the, as it were, sweepings of a pathological dustbin) constituted the contents of the sac, to say nothing of a multilocular or semi-solid condition of the tumour. Thus it became obvious to Brown that his favourite plan had to be thrown overboard, and hence he began his career as an ovariotomist. I assisted him in his operations of ovariotomy, as I had done in his cases of tapping, until St. Mary's Hospital came into full blossom, when I almost lost sight of Brown, he obtaining assist-

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ance (as was quite natural) from his colleagues at St. Mary's, and thus the matter went on for a time. However, Brown's operations for ovarian disease at St. Mary's Hospital were attended by results so unfortunate (I use the word advisedly as proper to the *empirical* stage of ovariotomy) that his colleagues objected to the further practice by him of ovariotomy at the hospital. I was told that he was even threatened with a coroner's inquest if he again operated with a fatal result. This was in the year before the *annus mirabilis* of ovariotomy, 1858, to wit. At this juncture Baker-Brown again came to me, and appealing to my past experience of ovariotomy, and to my conviction that it was a justifiable operation, proposed that we should establish a small hospital where it could be carried out. The upshot of this interview was the opening of the *London Home* in 1858, and we commenced operations there, *but practically on the old lines.* Although certain improvements of detail had been introduced, we were still groping in the dark; it was bewildering to see that whilst the most unpromising cases frequently did well, those apparently favourable died. Nélaton paid a visit to the London Home, and he did not conceal his astonishment when he was shown three or four cases recently operated on satisfactorily convalescent. The great French surgeon took care to inspect the cicatrix of the abdominal incision in each case. You will most probably remember the date of Nélaton's visit to London to study ovariotomy. I believe your first communication to the Medico-Chirurgical Society was on five cases of ovariotomy (1859), your second on fifty cases (1863), and then on five hundred, and soon increasingly distancing your competitors. This vast labour and your example, as I have said, have afforded a *rational and scientific basis* for an operation which formerly was a dread proceeding, and only attempted by a surgeon at the risk of being stigmatised as rash or unscrupulous. I cannot refrain from telling you that three years after you commenced to operate and the London Home was established, I (on Oct. 25th, 1861) read a paper at the Medical Society of the Middlesex Hospital on the subject of ovariotomy. At that date you had then operated (as you informed me) twenty-nine times, and Baker Brown had operated in the London Home nine times. I said in that paper that 'having during the past ten or twelve years assisted at some thirty cases of ovariotomy, I do not hesitate to say that I believe ovariotomy will take rank with the most approved surgical operations. I am quite sure that much of the mortality has been due to causes now preventable, and that by an increase of experience many former errors will be avoided, not only in the operation itself, but in the after-treatment.'

"Now, I say that I feel grateful to you, that by your unrivalled experience and *rational and scientific study* of the operation my prophecy has been more than fulfilled.

"I am, Sir, yours faithfully,

"Dec. 6th, 1884." "T. W. NUNN.

COCAINE.

To the Editor of THE LANCET.

SIR,—I have much pleasure in supporting the opinions of your many correspondents regarding the great value of cocaine, and in expressing the results of my experience of this most important drug as a local anæsthetic in ophthalmic surgery. Such is the high opinion I have formed of the value of cocaine, that I believe ophthalmic surgeons are as deeply indebted to Dr. Carl Koller for his discovery as the surgical world is to the late Sir James Simpson. I consider it specially valuable in ophthalmic surgery for the following reasons: its ease of application, its rapidity of action, its local effect only, its duration, and, lastly, its leaving no bad results. My experience leads me, however, to differ somewhat from those writers who are of opinion that it causes complete anæsthesia of the deeper structures of the orbit, so as to allow of enucleation. I am very sceptical regarding cocaine being sufficiently powerful to allow of this operation being performed without pain, and I would certainly hesitate to enucleate an eye by its use alone. I have been using it freely during the past month, and beg leave to report some of the more painful operations in which I employed it.

A foreman engineer had his right eye severely burned from an explosion of boiling metal, which resulted in symblepharon and destruction of a portion of the ocular conjunctiva at the inner angle of his right eye, laying bare the sclerotic, and thinning that membrane to such an extent that by focal illumination the retina could be seen. Preparatory to operating upon this case, for transplantation of conjunctiva from the rabbit, in company with Dr. Philip of this town and Dr. Crawford of Port Glasgow, a 4 per cent. solution of the muriate of cocaine was dropped into the eye. Eight minutes after the cornea and conjunctiva were as completely anæsthetised as they would have been under the influence of chloroform. Knowing the operation would last at least thirty minutes, the solution was dropped into the eye four times, at intervals of five minutes. The patient made no complaint of pain during the introduction of the eye-speculum, or while seizing the ocular conjunctiva with forceps, or in stitching the foreign conjunctiva to the newly rawed surface. But while dissecting and separating the cicatricial conjunctival bands he complained of pain, and asked for more drops to be put into his eye. After a further instillation of the solution the operation was finished, but not without some slight suffering. It was necessary during the operation to exercise care while applying the solution to avoid injuring the newly transplanted conjunctiva.

The next operation was on a young man aged twenty-six, who had a congenital malformation of both eyelids. There was in each eye a double eyelid with eyelashes. The inner eyelid of each eye was partly adhering to the cornea at its lower border. In the right eye there was a convergent strabismus. As in the former case, a 4 per cent. solution of cocaine was freely instilled into the cul-de-sac, and after an interval of thirty minutes the operation for strabismus was completed, without any complaint of pain. The solution was again applied, and we proceeded to remove the eyelid. During dissection there was no complaint of pain until the deeper tissues were reached, when the patient seemed to feel as much pain as if no anæsthetic had been used.

I may further mention that I have used it in the removal of cataract, and in such cases it is specially valuable during the removal of the lens, the cornea and conjunctiva being insensible to pain; spasm of the ocular muscles is prevented, and there is thus less risk of escape of vitreous.

In operations for iridectomy the iris does not become so completely anæsthetised as the cornea and conjunctiva. In strabismus operations pain is experienced during the hooking up and snipping through the tendon. Its value as a sedative in all painful eye affections is very great.

I remain, Sir, yours very truly,

N. GORDON CLUCKIE,

Greenock, Dec. 8th, 1884. Surgeon to the Eye Infirmary, Greenock.

To the Editor of THE LANCET.

SIR,—Perhaps during the present discussion on the merits of cocaine as an anæsthetic a brief series of experiments with a 10 per cent. and 20 per cent. solution of the hydrochlorate of cocaine may not be uninteresting, even to others than those engaged in my specialty in surgery. With the 10 per cent. solution I met with but very limited success, its highest merit being as a very partial obtander of pain. In one instance it gave some temporary relief in a case of chronic periostitis, whilst in the extraction of a tooth for a near relative, in whose case I had the opportunity of exhibiting the drug to the best advantage, the effects in preventing pain from the operation were almost *nil*. Without troubling you with similar examples, it may be said that the 10 per cent. solution is of but little use in odontalgia or neuralgia. The 20 per cent. solution gives much more promising results. I have instantaneously destroyed an exposed pulp—one of the most painful operations in surgery—almost without pain, the carious cavity having been so sensitive previous to the use of the cocaine that it could not bear the slightest touch; whilst I have extracted two permanent teeth without anything like the usual amount of pain, though in a third and severer case the relief was not so manifest, though sufficiently appreciable. Its action in a case of earache which incidentally came under my notice to-day was most striking. The severe pain seemed entirely relieved in a few minutes. My limited experience leads me to hope that with a stronger preparation, say 30 per cent., success will be greater, whilst it is not too much to say that extraction in children may be relieved of many of its horrors, though too much must not be

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expected from its aid in the more difficult cases of extraction in adults. But the greatest achievement is the instantaneous destruction of an exposed pulp without pain, to the exclusion of the slow and painful method of destroying it by arsenious acid, &c. In three cases I have succeeded in almost completely reducing the acute sensibility of an exposed or partially exposed pulp, thus relieving dental surgery of one of its chief *opprobria*—the infliction of unavoidable suffering. With a stronger solution than that with which I have experimented it is fair to anticipate even more success, though of course the few examples I have brought before your notice must not be considered conclusive until more experience has been obtained. I had hoped to have worked upon more extended data, but the difficulty Messrs. Dinneford have experienced in obtaining the drug must be my excuse for any shortcomings in these few notes of my experience.—I am, Sir, yours faithfully,

HAMILTON CARTWRIGHT,
Professor of Dental Surgery, King's College.

London, Dec. 17th, 1884.

REFORM AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editor of THE LANCET.

SIR,—Perhaps it may be considered that the objects which the Association of Members of the Royal College of Surgeons has in view are of sufficient importance to warrant you in allotting a portion of your valuable space to a short letter on the subject.

This Association has only been in existence for a short time, yet it has received decided encouragement from those whose interests it has at heart; letters of approval and support have been received from all parts of the country; and the Ramsgate Medical Society has shown its interest in the undertaking by forwarding the following resolution:—"*That no alteration in the Charter of the Royal College of Surgeons would be deemed satisfactory by its Members unless it made provision for the Council being elected by the Members and Fellows unitedly.*"

The Association of Members of the Royal College of Surgeons in many respects approves of the recommendations and alterations proposed to be included in a new Charter of the College, which have been drawn up by a sub-committee of the Association of Fellows, passed at a general meeting of that Association, and submitted to the Council of the College.

It is hardly necessary to point out that the bulk of the revenue of the Royal College of Surgeons is derived from the fees paid by its *Members*. During the financial year ending in July, 1884, about £15,000 out of the total income of £20,000 was received in fees for the *Membership* examinations. The principle that taxation and representation should go hand-in-hand is so generally conceded that it is not unreasonable for Members of the Royal College of Surgeons to petition for a share in the management of the affairs of the College, to the maintenance of which they so largely contribute. The Association of Members therefore claims the right for Members of the Royal College of Surgeons to have representatives, elected by themselves out of their own ranks, upon the Council.

Until the Association of Members has had more time to ascertain the general opinion of Members of the Royal College of Surgeons as to the number of seats on the Council, which they may reasonably be entitled to claim, it can hardly be called upon to name any definite number. The Association desires, first of all, to establish the great principle that a large, educated and intelligent body of men should be permitted to have a voice in the management of an institution of which they may be said to constitute the backbone.

The objection has been raised that it would be impossible to ascertain by any system of voting the desires of the constituency that would thus be formed. It would, however, only be necessary that the system of election by voting papers should be adopted, which method is recommended by the Association of Fellows. The difference between taking the votes of 1000 and of 10,000 electors is only one of degree. The expenses of the election would not be great, and the Members of the College would probably be willing to defray them.

Knowing the ready manner in which you have always supported any movement which might be considered to be advantageous to the interests of the medical profession in general, we take the liberty of sending this short exposition of our views on the subject of medical reform.

We beg to subscribe ourselves, Sir, yours truly,

WARWICK STEEL,
J. NIELD COOK,
Hon. Secs. to the Association of Members of the Royal College of Surgeons.

3, New-inn, E.C., Dec. 16th, 1884.

AN ELECTRIC LARYNGOSCOPE: A WARNING.

To the Editor of THE LANCET.

SIR,—For several months past I have been engaged in conjunction with a young engineer, Mr. A. Vesey, and with a manufacturer of incandescent lamps and accumulators, Mr. C. H. F. Müller, of Hamburg, in Germany, in constructing a practically useful electric laryngoscope. As usual with inventions, the instrument constructed upon theoretical considerations has had to be subjected to several modifications, before being really useful. To-day, whilst we are still engaged in making these modifications, a commission agent called upon me, who had been advised to show me "a new electric laryngoscope." I was, of course, anxious to see it. What did it turn out to be? Nothing else than one of the later modifications of Mr. Müller's laryngoscopes, still in its original packings, the twin-sample of which was in my hall ready to be sent back to Germany as practically unsatisfactory. But whilst I had been charged for my specimen fifteen marks (fifteen shillings), the price demanded by the agent was no less than fifty shillings! Comment appears superfluous.

I am, Sir, yours obediently,

Welbeck-street, Dec. 1884. FELIX SEMON.

"MORBID RELIGIOUS AFFECTION."

To the Editor of THE LANCET.

SIR,—One of the most eminent of Scotch divines, the late Dr. Candlish, gives a strong confirmation to the view you have adopted and maintained in a recent notice on "Morbid Religious Affection." In his Exposition of the 1st Epistle of St. John, page 366, he writes:—

"Love, when its exclusive object is unseen, is sometimes apt to become ideal, shadowy, and merely sentimental. Even when God himself is, or is imagined to be, its object, it has not unfrequently taken that form and aspect. Meditative musing on the nature of God, the rapt gaze of solitary contemplation, the fixed eye of secluded devotion, filling itself with great thoughts of the divine majesty, excellency, and beauty, have had the effect of begetting in the soul a certain mingled emotion of solemn awe and melting tenderness, which is apt to pass for divine love. It is akin to the feeling which the hero or the victim of an affecting tale may call forth, though deeper far and more intense. In real life, in Church history, this kinship has been but too terribly exemplified. Love to God has been spiritualised and sublimated, as it were, into a passion; such a passion as may, and must, end in one of two ways: either in a sort of mystical and rapturous absorption of the human in the divine, or in a still more dangerous substitution of the human for the divine."

This testimony from a theologian of acknowledged ability and well acquainted with the workings of the human heart may afford a valuable contribution to your previous remarks.

Yours truly,

December, 1884. ARCHIPPUS.

"SHOOTINGS FOR LUNATIC ASYLUM PATIENTS."

To the Editor of THE LANCET.

SIR,—This novel method of treating insane patients, which appears to have been lately adopted at the Dumfries Lunatic Asylum, to which you call attention in THE LANCET of the 6th instant, demands more than a mere passing consideration; it will doubtless excite some interest, not unmingled with anxiety as to results, amongst members of the medical profession, the public, and the friends and relatives of the inmates, sane and insane.

The Scotch system is upon its trial at a critical period in

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the history of lunacy practice, and it is of the utmost importance that its merits and demerits should be known speedily, for its justification, or otherwise, it will, apparently, be ere long necessary to place the results arrived at under it fairly and fully before the profession. Accurate statistics are called for, showing the total number of accidents, major and minor, occurring during a given period for which it can fairly be held responsible; the number of escapes, attended by accident or otherwise; the number of deaths by suicide and homicide; the proportion of attendants required to carry it out efficiently; and, lastly, it should especially be shown in what proportion, if any, the recoveries exceed those in English or other asylums. You rightly criticise the action taken by the trustees and directors of the institution in this matter; it is fairly open to question whether they are justified in so largely drawing upon the funds of a charitable institution as the leasehold or rental of some two or three thousand acres of land must entail for an object which can hardly be for the general good of the insane inmates, and which under the most favourable circumstances can only be participated in by an exceedingly limited number of them.

Most people will agree with your remarks that trustees and directors of endowed asylums should clearly keep before them the beneficent aims of original founders, and should not in any way be themselves the means of bringing an inquiry on themselves, such as has been the case in some other endowed charities.

I am, Sir, your obedient servant,

Dec. 13th, 1884. PARTIALLY OPEN DOORS.

SUCCESSFUL OPERATION FOR HERNIA IN A PATIENT WITH BRIGHT'S DISEASE.

To the Editor of THE LANCET.

SIR,—The following case may be deemed of sufficient interest for a place in THE LANCET. I must confess that I anticipated a very different result in a patient the subject of long-standing Bright's disease.

On Sept. 3rd, 1884, Thomas C——, aged sixty-eight, was admitted here suffering from chronic bronchitis and general dropsy. I found that his urine contained just one-third of albumen. Under treatment his bronchial symptoms were greatly relieved and the dropsy left him, but he remained very weak and anæmic and his urine unaltered. On Nov. 23rd he became the subject of strangulated femoral hernia. The symptoms were never urgent, nor the vomiting stercoraceous; but the taxis was unavailing. He could pass no flatus, his face assumed the anxious expression typical of abdominal mischief, and the tumour had become tender to the touch. On the afternoon of the next day (Nov. 24th) my colleague, Mr. W. Steer, gave the patient chloroform, and, with the assistance of Dr. Richmond Johnstone, I proceeded, with many misgivings for the ultimate result, to operate. In doing so I had to open the sac, which contained a knuckle of intestine only. The stricture was at the neck, and yielded to the edge of the knife with an audible snick. The patient passed flatus the same afternoon. On the third day the wound was again dressed with carbolised oil on lint, cotton-wool, and a splint. The sutures were taken out on the fifth day. On the eighth day the bowels were relieved for the first time in response to an enema, and again freely on the tenth day, when the wound was perfectly healed and the patient seemingly none the worse for his experience. The temperature, which was taken night and morning, never rose. The urine, which was tested on the day of operation, contained one-third of albumen.—Yours obediently,

R. J. SHEPHERD.

Rotherhithe Infirmary, S.E., Dec. 4th, 1884.

THE SUPERINTENDENTSHIP OF THE ABERDEEN LUNATIC ASYLUM.—Dr. Jamieson, one of the joint superintendents of this asylum, having, after forty years' service, expressed a wish to be relieved of the responsibility attaching to the senior officer, it has been decided that Dr. Jamieson's coadjutor, Dr. Reid, be appointed superintendent with full charge of the institution, and that Dr. Jamieson be appointed to the position of consulting physician with a salary of £300 per annum, and liberty to reside in the dwelling-house at Elmhill, rent free, during the pleasure of the managers.

ROME AND ITS WATER-SUPPLY.

(*From our own Correspondent.*)

THAT Rome has a water-supply the finest for purity and abundance in Christendom is a fact long accepted by European authorities, repeated in the latest English treatise on the sanitary state of the city, and confirmed by the elaborate series of analyses made recently by Prof. Mauro of Naples, assisted by Drs. Piccini and Nasini of Rome, and superintended by Prof. Cannizzaro of the Roman University. An incidental allusion to the fact in my letter of Sept. 29th seems to have wounded the sanitary *chauvinisme* of Dr. Sizer of Brooklyn, who prefers the Abana and Pharpar of Long Island to all the rivers of the Eternal City. He is welcome to his opinion, advanced as it is with the "glorious certainty" of youth, but may I ask him to let me retain my own and to hazard a few reasons for its retention.

First, however, I must clear the discussion of a few misrepresentations imported into it by Dr. Sizer. He makes me say that the Roman water-supply has been "long known for purity as the finest in Christendom." What I really said was that it was "the finest for purity and abundance in Christendom," therein agreeing with Dr. L. Aitken, who ("Sanitary State of Rome," London, 1881, p. 13) says:—"The water-supply is so good and so abundant that no city in the world comes near it in that respect. From the aqueducts alone it amounts to nearly 300 gallons daily for each inhabitant, and the waters do not come from contaminated rivers or lakes." Again, Dr. Sizer quotes me as saying that the Roman water "contains *only* 50 grammes per 100 litres of residue," and italicises "only" as if he had expected me to exclaim, "How is that for pure!" What I did say was that, when evaporated, it left a residue of "not more than 50 grammes to the 100 litres," implying that its solid residue was within the "limit of tolerance" allowed in drinking-water by the first authorities in Europe. I might have added "well within that limit;" but how was I to know that Dr. Sizer's notions of "purity" were so much more "peculiar" than mine, or that the standard of tolerance which is good enough for Hygeiopolis is not good enough for Brooklyn.

Another point, Dr. Sizer says, "In benighted America we should call such water unfit for drinking, unless our object was the speediest possible creation of calculi." Would he be surprised to learn from Wanklyn that water may contain 40 grains of solid residue per gallon, and yet be quite fit for domestic use? or that (according to the same authority) the water supplied to the University of Bonn, though containing 45 grains of solid residue per gallon, is yet good enough for drinking, because "organically pure?" Dr. Sizer thinks that in America the imbibition of such water would "create" calculi—that, in fact, Americans have only to drink enough of it to produce any amount of stone, and make the graveyards of the present the quarries of the future. Perhaps he is right. I can only say that in Europe we are built on other lines; that calculi, whether "constitutional" or "local," are exceptionally rare here; and that if he fathers them on the drinking-water, the "stones of Rome will rise in mutiny."

But referring Dr. Sizer to Buzzard's masterly treatise on "Diseases of the Nervous System," Lecture XV., for another theory of calculo-genesis, let me quote to him what Professor Cannizzaro says on the question of drinking-water:—"The chemist and hygienist may consider the following rules as established by statistics. Water may be held to be good for drinking when it is limpid; when it is free from noteworthy quantities of organic matter, especially of animal origin, and from ammonia; when, after evaporation, it leaves a residue not exceeding 50 grammes per 100 litres; when this residue yields no other salts but those of the alkalies and alkaline earths, nor more than 30 grammes of earth carbonates, nor more than 4 grammes of magnesia, nor more than 6 grammes of sulphuric anhydride corresponding to the sulphates. Now, the results of the analyses of our four great drinking-waters, set forth at ample length in this report, completely satisfy these conditions, and therefore confirm the ancient renown of the Roman waters for excellence. The best are the Acqua Marcia and the Acqua Vergine, the former having the advantage of a lower temperature. The Acqua Felice, although, like the other two, free from organic matters, may be considered as

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inferior to them, since it contains a greater quantity of calcareous salts than the Vergine or the Marcia. The Acqua Paola, a mixture of the waters of the sources of Trajan and of that of the Lake Bracciano, although it yields less residue than the other three and has a smaller quantity of calcareous salts, and is therefore 'lighter,' must yet be regarded as inferior to the first two, because it contains a minute quantity of organic matter. This report puts on the same level of goodness the Marcia and the Vergine, notwithstanding that the composition of that minute quantity of solid matter they hold in solution is so different. They are, in fact, natural waters belonging to two different types, as their origins are different; in the Marcia the residue is almost all carbonate of lime proceeding from calcareous soils; in the Vergine the carbonate of lime is accompanied by quantities of silica and of alkaline salts, including those of potash, since this water is condensed and runs through separable volcanic soils.

While certain Italian and foreign physicians have by "trivial *a priori* reasoning" surmised that waters containing so much carbonate of lime as the Marcia favour the formation of vesical calculi, others assert that these waters promote the nutrition of the osseous tissues. On the other hand, some have suspected the potash salts in the Vergine to be injurious; some, again, think these salts and the other alkaline salts that accompany them to be beneficial. "Statistics," says Professor Canuizzaro, "justify neither the one set of opinions nor the other. The subject has been carefully examined by the River Pollution Commission, which, in its sixth report, has furnished proof that waters when they do not contain deleterious organic matters and leave no considerable residue are equally salubrious, whether the residue contains more or less carbonate of lime, or more or less alkaline salts."

Of the six tables in which Professor Mauro and his colleagues give the results of their analyses of the four drinking waters of Rome, I subjoin the fifth as indicating in grammes and referable to 100 litres of water, the weight of those components of which account should most be taken in judging waters, and for which therefore the value limits have been established by different authors and different commissions. Those adopted for this table are for the most part those of the Vienna Commission, which (says Professor Mauro) has shown itself the most exacting.

Per 100,000 parts of water.	Value: Limits.	Vergine.	Felice.	Paola.	Marcia.
Oxide of calcium, CaO	11—12	8·52	13·72	8·91	11·0
Oxide of magnesium, MgO	4·0	1·87	2·77	1·88	3·278
Anhydrous sulphuric acid, SO_3	2—6·3	1·702	2·036	2·09	0·264
Chlorine, Cl	0·2—0·8	1·283	1·001	3·728	0·89
Anhydrous nitric acid, N_2O_5	0·4	0·826	0·616	0·233	0·278
Anhydrous nitrous acid, N_2O_3	0—traces	Traces	Infinites. traces	0	0
Ammonia	0—traces	0	0.	Infinites. traces	0
Total residue dried at 180°	10—50	36·92	43·84	27·80	28·60
Total hardness expressed in French degrees	28—32	18·33	29·36	11·80	27·52
Quantity of oxygen consumed (Tidy's method). 3rd hour	0·05—0·25	0·0096	0·0064	0·0104	0·0082

As to the soil through which these waters descend from the Latian hills it would be difficult to find one better adapted for their oxidation. They filter down to the Roman Campagna through a mass of separable materials, constituting, hydrologically speaking, a kind of colossal sponge planted on the immense table of tufa and pozzolana. The engineer, Vescovali, has an eloquent passage on this subject, in which he has shown himself a master, but it is too long for quotation. Rather let me conclude with the tribute paid to the Roman water-supply by a great American man of letters who found residence in the Eternal City not the less attractive and beneficial from its water being "the finest for purity and abundance in Christendom." "The pleasant natural sound of falling water, not unlike that of a distant cascade in the forest, may be heard in many of the Roman streets and piazzas when the tumult of the city is hushed; for consuls, emperors, and popes, the great men of every age, have found no better way of immortalising their memories than by the shifting, indestructible, ever new, yet unchanging up-gush and downfall of water. They have written their names in that unstable element, and proved it a more durable record than brass or metal."

Rome, Dec. 6th.

PARIS.

(From our Paris Correspondent.)

THE NECROPSY OF M. MORIN.

WITH reference to the necropsy of M. Morin, reported in my letter of last week, I have further to communicate that in the removal of the larynx for more minute examination, Professor Brouardel discovered a most curious and unexpected phenomenon. It will be remembered that the bullet that struck Morin in the throat was found in the chest after having lodged for some time just above the left clavicle. The bullet in its passage wounded the left common carotid, and although the wound extended through all the coats of the latter, there was no sign of hæmorrhage either before or after death.

THE NEW ENTRIES.

At the last meeting of the Académie Council of Paris, Dr. Béclard, Dean of the Faculty of Medicine, read his report for the past year, from which it is shown that the number of medical students inscribed to October 15th, 1884, amounted to 3094, and that for the official year beginning at the above date there have been about 550 new inscriptions. The number of foreigners inscribed to December 1st, 1884, was 538, among whom there were 127 Americans, 96 Russians, 61 Roumanians, 52 Spaniards, 45 Turks, 30 Brazilians, 26 Swiss, 25 Greeks, 22 English. The number of lady students has considerably increased, for on Oct. 15th, 1884, the number amounted to 78, whereas on Oct. 15th, 1883, there were only 45. Twelve others have offered themselves as candidates, but have not yet been inscribed. Of the 78 already inscribed, there are only 13 French. The number of Russians amount to 47, English 11, and Americans 3. After the reading of the report, the question as to whether female students should be admitted to the "externat" and to the "internat" of hospitals was mooted, but no decision had been arrived at. The majority of the council, however, appeared inclined to admit them to the externat, but to exclude them from the internat.

THE CHOLERA EPIDEMIC.

This epidemic may now be considered at an end, as no fresh cases are reported to have occurred for more than a week, and it is to be hoped that we have heard the last of it.

December 17th.

THE SERVICES.

WAR OFFICE.—Grenadier Guards: Surgeon Horatio Robert Odo Cross, from the Medical Staff, to be Surgeon, vice A. L. Fernandes, retired.

YEOMANRY CAVALRY.—Leicestershire: Surgeon and Honorary Surgeon-Major Charles Morton Sidley resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the regiment on his retirement.

RIFLE VOLUNTEERS.—3rd Monmouthshire: Samuel Hopkins Steel, Gent., M.B., to be Acting Surgeon.—2nd Volunteer Battalion (the East Yorkshire Regiment): Lieutenant William Arthur Holmes resigns his commission; Acting Surgeon Arthur Henry Boissier resigns his appointment.

ADMIRALTY.—The following appointments have been made:—Staff Surgeon B. Renshaw, to the *Defiance;* Surgeon C. L. Vasey, to the *Boscawen.*

THE BRITISH ASSOCIATION.—At the close of the British Association meeting at Montreal it was decided, in commemoration of the meeting and as a recognition of the hospitality with which the members of the Association had been treated in Canada, to form a fund for the purpose of founding a gold medal at the M'Gill University at Montreal. The medal will be given annually in the Faculty of applied Science, and a sum exceeding £500 has been collected, the interest of which will be applied for the purpose.

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Obituary.

CHARLES OLIVES BAYLIS, M.D., M.R.C.S., L.S.A.

DR. BAYLIS, who only last year resigned the post of medical officer of health for West Kent, and who has since lived in retirement at Southport, died on Friday, Dec. 12th. On the following Tuesday his remains were brought to Birkenhead and interred in the parish church of St. Mary's. His funeral was largely attended, testifying to the estimation in which the deceased was held, and the flag at the Town Hall was hoisted half-mast high as a mark of respect for his memory.

Dr. Baylis was born in January, 1815, obtained a qualification in Edinburgh in 1837, and shortly afterwards commenced practice in Birkenhead. Here he received the appointment of surgeon to the Borough Hospital, and, after serving the institution for many years with acceptance, was made consulting surgeon. He was also elected an improvement commissioner, and in his position as chairman of the Health Committee laboured earnestly for the sanitary welfare of the town. About twenty years ago he retired from practice, and moved with his family to Douglas, Isle of Man; but in July, 1866, he returned to Birkenhead as medical officer of health, the post having become vacant by the appointment of Dr. Robinson to a similar position at Leeds. Dr. Baylis remained at Birkenhead, devoting his whole time to the duties of his office, till August, 1873, when he was made first medical officer of health for the now combined sanitary district of West Kent. During the spring of 1883 Dr. Baylis, owing to ill health, resigned his post, and, after a brief stay in the south of France, removed to Southport. The rest and sea air did not bring him relief. Disease of the prostate, from which he had long suffered, was followed by an apoplectic seizure, and this was followed by paralysis agitans. On the 6th he fell, going upstairs in his own house, and since then gradually sank. Dr. Baylis leaves a widow, two sons, and one daughter.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.D. Examination :—

Beverley, John Metcalfe, Manchester Royal Infirmary.
Roddy, Hugh Walter, Manchester Royal School of Medicine.
*Chesne, John Howard, Guy's Hospital.
Day, John Climenson, London Hospital.
*Haliburton, William Dobinson, B.Sc., University College.
Hipd, Wheelton, B.S., Guy's Hospital.
Hoole, Henry, Charing-cross Hospital.
Martin, Sidney Harris Cox, B.S., University College.
Murray, Hubert Montague, University College.
Pasteur, William, University College.
Pratt, Reginald, University College.
Rogerson, John Thomas, B.S., Manchester Royal Infirmary and University College.
Roughton, Edmund Williamson (gold medal), St. Barth's. Hosp.
Silk, John Frederick William, King's College.
Webb, Malcolm, Manchester Royal Infirmary.
Wilkinson, William Camac, B.A., Sydney, University College.

LOGIC AND PSYCHOLOGY ONLY.

Spicer, Robert Henry Scanes, B.Sc., St. Mary's Hospital.
Worthington, Sidney, Guy's Hospital.

*Obtained the number of marks qualifying for the Medal.

The following candidates have passed the recent M.B. Examination for Honours :—

MEDICINE.

FIRST CLASS.

Thorburn, William, B.Sc. (Scholarship and Gold Medal), Owens College and Manchester Royal Infirmary.
Turner, Alfred Jefferis (Gold Medal), University College.
Purslow, Charles Edwin, Birmingham School of Medicine.
Jones, J. Harvey, Owens College and Manchester Royal Infirmary.
Bushworth, Frank, St. Bartholomew's Hospital.
Prideaux, Frances Helen, London School of Medicine for Women and Royal Free Hospital.

SECOND CLASS.

Gostling, William Ayton, B.Sc., University College.
Powell, John Joseph, University College.
Eq. { Bennett, Frederick William, Owens College and Manchester Royal Infirmary.
Eq. { Cockey, Edmund Percival, St. Mary's Hospital.

THIRD CLASS.

Spencer, Herbert Ritchie, University College.
Glover, John Philip, St. Thomas's Hospital.

OBSTETRIC MEDICINE.

FIRST CLASS.

Lewers, A. H. Nicholson (Scholarship and Gold Medal), University College.
Thorburn, William (Gold Medal), Owens College and Manchester Royal Infirmary.
Prideaux, Frances Helen, London School of Medicine for Women and Royal Free Hospital.
Powell, John Joseph, University College.
Bushworth, Frank, St. Bartholomew's Hospital.

SECOND CLASS.

Gostling, William Ayton, University College.
Crookshank, Edgar March, King's College.
Anderson, George Elliott Caldwell, Guy's Hospital.
Dent, Harry Lord Richards, King's College.

THIRD CLASS.

Thomas, John Reglan, St. Bartholomew's Hospital.

FORENSIC MEDICINE.

FIRST CLASS.

Cockey, Edmund Percival (Scholarship and Gold Medal) St. Mary's Hospital.
Turner, Alfred Jefferis (Gold Medal), University College.

SECOND CLASS.

Reynolds, Ernest Septimus, Owens College and Manchester Royal Infirmary.
Eq. { Anderson, George Elliott Caldwell, Guy's Hospital.
Eq. { Prideaux, Frances Helen, London School of Medicine for Women and Royal Free Hospital.
Thorburn, W., Owens College and Manchester Royal Infirmary.

THIRD CLASS.

Lewers, Arthur Hamilton Nicholson, University College.
Day, John Roberson, University College.
Powell, John Joseph, University College.

The following have passed the recent B.S. Examination :—

FIRST DIVISION.

Bowes, William Henry, Guy's Hospital.
Collier, Joseph, Owens College and Manchester Royal Infirmary.
Elgood, Charles Reginald, University College.
Gostling, William Ayton, B Sc., University College.
Gross, Charles, Guy's Hospital.
Hewer, Joseph Langton, St. Bartholomew's Hospital.
Prideaux, Frances Helen, London School of Medicine and Royal Free Hospital.
Spencer, Herbert Ritchie, University College.
Thorburn, W, B.Sc., Owens Coll. and Manchester Roy. Infirm.

SECOND DIVISION.

Anderson, George Elliott Caldwell, Guy's Hospital.
Cooper, George Frederick, St. Thomas's Hospital.
Davies, William Thomas Frederick, Guy's Hospital.
Hartley, Robert Nightingale, Leeds School of Medicine.
Laurent, Eugène Arthur, University College.
Parry-Jones, Maurice, Guy's Hospital.

The following candidates have passed the recent B.S. Examination for Honours :—

SURGERY.

FIRST CLASS.

Collier, Joseph (Scholarship and Gold Medal), Owens College and Manchester Royal Infirmary.
Thorburn, William, B Sc. (Gold Medal), Owens College and Manchester Royal Infirmary.

SECOND CLASS.

Eq. { Gostling, William Ayton, B Sc., University College.
Eq. { Spencer, Herbert Ritchie, University College.

THIRD CLASS.

Prideaux, Frances Helen, London School of Medicine and Royal Free Hospital.
Hewer, Joseph Langton, St. Bartholomew's Hospital.

CAMBRIDGE UNIVERSITY.—At a congregation held on the 15th inst., the following degrees were conferred :—

BACHELOR OF MEDICINE.—Francis James Warwick, non-collegiate.
BACHELOR OF SURGERY.—Walter Dowson, Christ's.

COLLEGE OF PHYSICIANS IN IRELAND.—At the December Examinations the following obtained the licences in Medicine and Midwifery of the College :—

MEDICINE.—Patrick Duff, Martin Fennelly, C. Jackson, Cornelius Ignatius Kelly, Graham Egerton Kennedy, Charles Edmond Lister, John Joseph McDonnell, Thomas George Millerick, Andrew Murphy, Llewellyn Thomas Manly Nash, Jane Harriett Walker.

MIDWIFERY.—Martin Fennelly, Charles Jackson, Cornelius I. Kelly, Graham E. Kennedy, Charles Edmond Lister, J. Joseph McDonnell, Llewellyn Manly Nash, Francis Howard Sinclair, Jane H. Walker.

The undermentioned was admitted a Member :—

Joseph John Lamprey.

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APOTHECARIES' HALL.—The following gentlemen passed their examination in the Sciences and Practice of Medicine, and received certificates to practise, on Dec. 11th:—

Adams, Charles Edmund, St. Bartholomew's Hospital.
Baker, George Henry, Charing-cross Hospital.
Dipleck, Leonard Bramah, St. George's Hospital.
Hartley, George Thomas, Leeds School of Medicine.
Lewis, Percy George, King's College.
Spreat, John Henry, St. Bartholomew's Hospital.
Wrigley, Robert, St. Bartholomew's Hospital.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Charles Albert Adams, Charing-cross Hospital; James Young, St. Bartholomew's Hospital.

[In the pass-list of the Apothecaries' Hall published last week, Mr. W. A. H. Barrett is described as a student of St. Thomas's; it should have been "Westminster Hospital."]

THE Library of the Royal Medical and Chirurgical Society will be closed on Dec. 25th, 26th, and 27th.

THE MILLER MEMORIAL HOSPITAL at Greenwich was formally opened on the 17th inst. by the Lord Mayor.

DR. HART has been elected without opposition coroner for the Southern Division of the County Kerry.

NEW Hospitals are to be erected at Cairns and Maryborough, Queensland.

THE JACKSONIAN PRIZE.—Essays for this prize must be sent in to the Secretary of the College on or before Wednesday, the 31st inst., and not later than four o'clock.

BELFAST ROYAL HOSPITAL BAZAAR.—It is believed that a sum exceeding £3000 has been obtained by the recent bazaar and fancy fair held in aid of the funds of this Charity.

THE Leicester Branch of the St. John Ambulance Association has presented an ambulance waggon to the Corporation of that town.

THE Local Government Board have refused to sanction payments of money by the Canterbury Town Council to persons who had made claims for compensation for loss of work through discontinuing to take in tailoring and washing while infectious disease was present in their houses. The medical officer had directed these persons not to take in work while disease existed, so that infection should not spread, and it was thought that the Local Government Board would allow compensation.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At the monthly meeting of this Association on the 11th inst. Mr. J. S. Hodgson, Vice-President of the Manchester Architectural Association, read a paper on sewage farms, in which he stated that these farms were the only effective means of disposing of the sewage of large towns, and advocated the intermittent downward filtration system. The paper was followed by a discussion in which the Chairman (Mr. Vacher), Dr. Samelson, and others took part.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—On the 14th inst. an influentially attended meeting was held at Brighton, under the auspices of the board of management of this hospital, in reference to completing the Duke of Albany's memorial building and to consider a proposal to allot beds in the new hospital to the county of Sussex and Brighton. The proposal was warmly adopted, addresses in support of it being delivered by Dr. Crichton Browne, Dr. Tuke, and others.

THAMES VALLEY DRAINAGE.—The Local Government Board inquiry as to the proposed dissolution of the Lower Thames Valley Main Sewerage Board, or the separation from it of some of the constituent authorities, was continued at Kingston-on-Thames on the 13th inst. It was stated on behalf of the Richmond Rural Sanitary Authority that that body did not desire the dissolution of the joint Board or separation from it, and, further, that they were opposed to the proposed union of the urban and rural authorities in the matter of an independent scheme of sewage disposal for the five parishes comprised within the Richmond Poor-law Union. A number of witnesses were examined in opposition to the Richmond case, and the inquiry was again adjourned. The Works and Parliamentary Committee of the Main Sewerage Board have drawn up their report, which has been printed, and will be discussed at a special meeting of the Board to-day (Saturday).

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning at the latest.

ANDERSON, Jas. FISHER, L.R.C.P., L.R.C.S.Ed., has been appointed Government Medical Officer and Public Vaccinator for Uranda, New South Wales.

BAINSLEY, THOS. BOOTH, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Tattenhall District of the Tarvin Union, vice Proudlove, deceased.

CALDER, ROBERT, M.B., C.M.Aberd., has been appointed Government Medical Officer and Vaccinator for the District of Brisbane Water, New South Wales.

CRESSWELL, THOS. HOBBS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Grassington and Kettlewell Districts, Skipton Union, vice Anthony, resigned.

EMMERSON, WM. LINDSAY, M.D.Aberd., L.R.C.S.Ed., L.S.A.Lond., has been reappointed Public Analyst for the Borough of Stamford.

FITZMAURICE, RICHARD, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Third District of the Cuckfield Union, vice Porter, resigned.

GILDON, GEO. GORE, M.B., C.M.Glasg. has been appointed one of the Medical Officers to the Wellington Hospital, New Zealand.

GIVAN, JOSEPH, L.F.P.S.Glas., L.A.H.Dub., has been appointed Medical Officer to the Ballygawley Dispensary, Clogher Union.

HOLYOAKE, RALPH, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Hanbury District of the Droitwich Union, vice Roden, resigned.

JONES, T. W. CARMALT, M.A.Camb., F.R.C.S.Ed., has been appointed Surgeon to the Western Ophthalmic Hospital, vice Percy S. Jakins, resigned.

KEY, A. COOPER, M.R.C.P., L.M.Ed., L.S.A.Lond., has been appointed Physician to the Home of the Good Shepherd, Elsenham-street, Belgrave-square.

NICHOLSON, GERALD, M.R.C.S., L.R.C.P.Ed., has been appointed House-Surgeon to the Royal Cornwall Infirmary, vice E. Roberts, M.R.C.S., resigned.

PATERSON, WM. BROMFIELD, F.R.C.S.(cross), L.D.S., has been appointed Dental Surgeon to St. Bartholomew's Hospital.

ROBINSON, LOUIS, M.R.C.S., L.S.A.Lond., has been appointed Senior House-Surgeon to the Darlington Hospital, vice Dr. Hern, resigned.

STAPLE, JAMES D., L.S.A.Lond., has been appointed Assistant House-Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

STEWART, ANDREW, L.R.C.P. & L.M.Ed., L.R.C.S. & L.M.Ed., has been appointed Medical Officer to No. 4 District of the Birkenhead Union, vice R. S. Daniel, deceased.

TURNER, GEO. JOHN KERR, M.B., C.M.Aberd., has been elected Surgeon to the Wadebridge Branch of the Ancient Order of Foresters and Western Provident Association; and has been appointed Medical Officer and Public Vaccinator to the No. 1 District of the St. Columb Major Union, vice Enifford, deceased.

WELCH, ROBERT, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer to the Workhouse, Southampton Incorporation, vice Bencroft, deceased.

Births, Marriages, and Deaths.

BIRTHS.

BARCROFT.—On the 5th inst., at Constantinople, the wife of Pearson J. Barcroft, Surgeon, R.N., of a son.

CLARKE.—On the 15th inst., at Fordwych-road, West Hampstead, N.W., the wife of Fincastle G. B. Clarke, M.D., of a son.

GODSON.—On the 11th inst., at Grosvenor-street, W., the wife of Clement Godson, M.D., of a son.

GRAVELY.—On the 18th inst., at Holmlea, Newick, Sussex, the wife of Frank Gravely, M.R.C.S., of a son.

ORR.—On Dec. 14th, at Worlaston, Wellingborough, the wife of James W. Orr of a daughter.

MARRIAGES.

SMITH—WESTON.—On the 11th inst., at St. John's, West Chelsea, James Murray Smith, M.B., C.M.Aberd., of Romford, youngest son of the late Alex. Smith, M.D., Forfar, to Beatrice S. Weston, daughter of the late James Weston.

DEATHS.

BAYLIS.—On the 12th inst., at 62, Windsor-road, Southport, Lancashire, Charles Olives Baylis, M.D.Aberd., M.R.C.S., &c., late Medical Officer of Health for West Kent, and formerly of Birkenhead, much loved and deeply lamented, aged 69.

BROWN.—On the 6th ult., on board the s.s. *Cognac*, off Accra, West Africa, Percy Brown, M.B., youngest son of the late Thomas Brown, M.R.C.S., of Finsbury-circus.

HANSON.—At his residence, 12, South Parade, Huddersfield, after a short illness, John Edward Hanson, M.D., C.M. St. Andrews, L.R.C.P.Lond., aged 33.

HUTCHINSON.—At The Elms, Bishop Auckland, on the 16th inst., Valentine Hutchinson, M.D., M.R.C.S.Eng., L.S.A.Lond.

MUSCROFT.—On the 5th inst., at Pontefract, Henry Muscroft, M.D., in the 55th year of his age.

SNAPE.—On the 13th inst., at Rodney-street, Liverpool, George Henry Snape, M.R.C.S., aged 40.

WASHBOURN.—On the 11th inst., at his residence, Ashmeade House, Gloucester, Thomas Buchanan Washbourn, M.D.Lond., F.R.C.P., aged 55.

WILLS.—On the 8th inst., at Thorncombe, Dorset, John S. Wills, M.R.C.S., in his 59th year.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the Journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE GROWTH OF "THE LANCET."

THE LANCET of the present week consists of 104 pages. In 1874 the corresponding number contained 64 pages, thus showing an increase in size of 40 pages in ten years.

TARTAR ON THE TEETH.

A.W.S., M.B., C.M. Ed.—There can be no doubt that "tartar," or salivary calculus, is chiefly due to inefficient brushing of the teeth. People do not half brush their teeth. They take great care to polish the fronts of the upper and lower incisors, but they seldom attend to the inside of the lower incisors or the outside and grinding surfaces of the molars; and the majority of people use tooth-brushes which are too soft. On the other hand, it is not to be understood that even efficient brushing will remove all tartar; for in certain conditions the normal saline constituents of the saliva are much increased, and where an alkaline reaction exists there tartar is most deposited. This contraindicates the use of soda, whilst the use of any active acid would be injurious to the teeth. The rational treatment of tartar seems to be: (1) its complete removal by suitable instruments, leaving no nuclei for fresh deposits; (2) the use of twenty drops each of glycerine, carbolic acid, and tannin in the water when brushing the teeth, adding a few drops of eau-de-Cologne; (3) the systematic and careful brushing of the insides as well as the outsides of the teeth, and (4) the occasional use of a carbolic tooth-powder, being careful to use plenty of water afterwards, to prevent accumulation of the powder between and around the teeth.

"IRRITATION OF THE SKIN FOLLOWING THE APPLICATION OF VASELINE AS A SURGICAL DRESSING."

To the Editor of THE LANCET.

SIR,—Will you kindly allow me space to endeavour to remove an unpleasant impression which has spread rather widely in consequence of a letter which appeared in THE LANCET of the 22nd ult. from the Chesebrough Manufacturing Company respecting the vaseline supplied by them to the Leeds Infirmary.

Passing over the very strong language used by them, for which they have since expressed to me their regret, I have to say that when their representative called upon me for an order he submitted three sample tins of vaseline, the prices being, I think, 9*d.*, 6*d.*, and 4*d.* per lb. He recommended the quality at 6*d.*, saying that they were selling tons of it a week to the large hospitals in London and the provinces, at the same time naming several of the larger ones in London which were using it. But he did not then, nor at any time, say that it was "sold for use on animals only," and I never heard the word "veterinary" used in connexion with vaseline of any description until I saw it used by the Chesebrough Manufacturing Company in their letter referred to above. This representative assured me that the "red" was equally as pure as the higher priced vaseline, and to demonstrate the fact he ate some of it in my presence. Besides, the material has always been invoiced to us as "red" vaseline, and not "veterinary." Further, it is a fact that the firm received our orders and executed them without ever once informing me that we were being supplied with a material which they say is "only made to be used on beasts."

I have already communicated these facts to the Chesebrough Manufacturing Company, and now leave them with the numerous readers of your journal. I would only add that to me the experience gained by this transaction will be of the highest service. Thanking you in anticipation of your valuable assistance.

I am, Sir, your obedient servant,

Leeds Infirmary, Dec. 8th, 1884. THOS. BLAIR, General Manager.

THE CANINE PATIENT AT THE CHARING-CROSS HOSPITAL.

WE learn that nothing has been seen of the dog since the morning of Wednesday the 10th inst., when he attended at the hospital at an early hour, with his bandage still on, walked round the place, and then strolled out. As to whose property he is, or whom he resides, the hospital authorities appear to have no information whatever.

C. H. A. M.—The law does not attach a penalty to attendance, but to the assumption of a name or title implying legal qualification.

ADULTERATION OF DRUGS.

To the Editor of THE LANCET.

SIR,—As a constant reader of THE LANCET I am sensible of belonging to a class which through various reasons frequently affords you the opportunity of comment, implying both censure and mistrust; and seeing that in your last issue you have given prominence to matters which vitally affect the reputation of every practising chemist and druggist, and have expressed your opinion thereupon without qualification, I must appeal to your sense of justice to allow a voice to be raised on the other side.

In your annotation on the adulteration of drugs you have deduced certain arguments from a report issued by the Local Government Board, under exceptionally misleading conditions. According to the analysts' returns, the total number of samples (of all kinds) examined was 19,648; of these 252 only were submitted to the analysts by private purchasers, or about 1·5 per cent. of the whole. The analyses of "drugs" were 304; and as it is fair to presume that the proportion of private purchasers of drugs would not greatly exceed those in other departments, probably no more than six samples from this source were reported upon. From such incomplete testimony it can scarcely be a correct assumption that "once in four times, upon an average, a prescription made up at a chemist's shop is not compounded of pure drugs prepared in strict accordance with the directions of the British Pharmacopœia." Again, where is the evidence to prove that these samples of drugs, or even the majority of them, were purchased from registered chemists? It is well known that drugs and pharmaceutical preparations of all kinds are sold by grocers, drapers, oilmen, and general dealers. I myself have seen some of these which were certainly not prepared strictly in accordance with the British Pharmacopœia. Is it at all unlikely that some portion of the samples examined were derived from sources of this description?

To that portion of the article which imparts to every chemist a knowledge of the existence of a state of affairs which, if true, would entitle him to eminence in the ranks of assassins, I, as a chemist in actual business, most strongly protest; and, with your permission, I would earnestly appeal to your readers as to whether they have found the substitution of cheap for expensive drugs a matter of common occurrence. With the Pharmaceutical Society on the one hand, and the British Pharmaceutical Conference on the other, coupled with a host of minor institutions, all working more or less in conjunction for the elevation of pharmacy, and for the advancement of every interest connected with it, whose members consist principally of pharmacists practising in every part of the United Kingdom, it is scarcely possible that such disgraceful practices could occur without frequent exposure. Such cases have, happily, been most uncommon, and I cannot remember a single recent instance where substitution has been proved.

It is easy, perhaps, to say that such an article as the one in question is of a general character, and that individuals must not be too prone to reduce it to the unit of effect; but what is the position of the pharmacist when confronted with accusations in a medical publication which to those technically unacquainted with his business he has but feeble opportunities of proving untrue? Debarred from the devices which are common to ordinary traders, excluded from the consideration which falls to the share of strictly professional men, there are hundreds of pharmacists working with one common aim to the advancement of all things pharmaceutical, with instincts as purely professional, and acknowledgements as distinctly ethereal, as many of those whose privilege it is to work in wider and higher spheres. I could wish for no better judges than those who are your ordinary readers, and to these I fearlessly appeal. If they are prepared to endorse your testimony, the labour of many years has been a wasted effort, and medicine owes nothing to pharmacy or the pharmacist.

I am, Sir, most respectfully yours,

CHARLES B. ALLEN,
Kilburn, N.W., Dec. 15th, 1884. Pharmaceutical Chemist.

Idem.—Our correspondent's letter seems to have been mislaid. We should be glad if he would repeat his question.

AN APPEAL.

To the Editor of THE LANCET.

SIR,—I am anxious to get some books and old periodicals for my patients in an infectious diseases hospital, as during convalescence time hangs very heavy on their hands; also for the workmen in a large sugar factory here, where a library and reading-room has been formed in the works. My own resources being now exhausted, if any of your readers will kindly forward me any old surplus stock of a readable, instructive and amusing kind, for which they have no further use themselves, I shall be only too pleased to acknowledge their receipt, and distribute them to the two places I have mentioned.—Yours respectfully,

Hack-road, Victoria-docks, E., Dec. 15th, 1884. JOHN MOIR.

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EXAMINATION OF ARMY SURGEONS.

QUESTIONS FOR THE EXAMINATION OF SURGEONS-MAJOR.

First Day.

1. State, as briefly as you can, the principal objects aimed at by the present system of medical organisation and field hospital service.
2. Describe the lines of medical assistance in the field, traced from the front to the base of operations.
3. State the powers of an officer commanding a detachment of the Medical Staff Corps who deals summarily with a soldier's offence.
4. How are courts-martial on men of the Medical Staff Corps constituted, and by what authority are they convened?
5. What branches of the Service are responsible for the maintenance of buildings, and for the equipment and supply of hospitals in peace and war?
6. What are the principal points to be attended to in the medical examination of recruits?
7. What are the chief points to which attention should be paid in making a medical inspection of a ship taken up by the Admiralty for the conveyance of troops?
8. Briefly enumerate some of the more common and dangerous defects to be met with in an insanitary house.

Second Day.

9. How would you proceed to establish the insanity of a soldier, and fulfil the requirements of the law, previous to his admission to a lunatic asylum?
10. If called upon as a sanitary officer to advise as to the occupation of any given locality as a standing camp for a division of all arms of the service, what limit would you lay down as to density of population per acre?
11. State how long you think a camp, whether of huts or tents, may be continuously occupied; why its sanitary condition should gradually deteriorate, and in what way this deterioration might be expected to manifest itself as regards the camp population.
12. A force is going up the Nile in boats, ten to twelve men in a boat, and is required to carry provisions to last for 100 days, say; such provisions must be in the most compressed and portable form, and as varied as practicable; you cannot depend on any regular local supplies *en route*. State what articles of diet, &c. you would advise to be taken in each boat. You are not required to give the quantities.
13. What is your opinion of the utility of filters on active service in a tropical or semi-tropical climate? To what extent do you think a force could be supplied with filtered water under such circumstances? Are you in favour of having a filter as part of a soldier's water-bottle, or of giving a separate pocket filter to each soldier; and, if so, how would you propose to cleanse or renew the filtering medium?
14. You have a number of wounded men and amputation cases; the buildings available are, in your opinion, not at all adapted for the accommodation of such cases, and your tentage is deficient, but you have sufficient transport, partly wheeled, partly dhoolies, and bearers. What will you do with the wounded? How will you dress the wounds? What steps will you take to secure proper attention to them and to the other requirements of your patients? It is fine weather.
15. If called upon to report as to the water-supply of any given locality in which it is proposed to encamp a force of any given strength, how would you proceed to estimate approximately the quality and sufficiency of the available sources of supply?
16. You are sent to investigate into the causes of an outbreak of enteric fever in a small garrison or institution; briefly indicate the heads and steps of your inquiry.

THE ORAL EXAMINATIONS AT CAMBRIDGE.

To the Editor of THE LANCET.

SIR,—May I trespass on your space in order to mention a grievance to which examinees at Cambridge are subjected?

It is the custom here to allow anybody to hear the oral examinations, and it is this which I write to protest against. Of course, it does not matter in the least to men whose *robur et æs triplex* shield them from nervousness. But I have no doubt that many of your readers will be conscious of the state they were in when they had to undergo the ordeal of their oral examination; and to a man who is inclined to be nervous it is a terrible thing to see men he knows giggling and laughing about the nibblings he or others who went in before him may have made. I will venture to assert that this nervousness has been instrumental in plucking men, and that not infrequently. The only possible reason for this public examination is that it is intended to show future examinees what sort of thing they are to prepare for. Against this I submit (1) that the examination is for those who are examined at the time, not for those who are to be examined in the future; (2) that the majority of men, at all events of those who were present at the oral examinations this last [illegible] the examinations and therefore make them unduly [illegible] the people who ought to be the [illegible] and [illegible]

[illegible]

NERVOUS.

THE DISCUSSION ON INTESTINAL OBSTRUCTION IN LIVERPOOL.

To the Editor of THE LANCET.

SIR,—I was unable to take part in the above discussion at the Liverpool Medical Institution; but your faithful report of it has given me an opportunity of drawing attention to a point which I should not like allowed to pass unnoticed had I qualified myself to speak by sending notice.

Mr. Mitchell Banks, in adverting to the difficulties in connexion with the question of operation, mentioned as one the fact of spontaneous recovery under opium and starvation treatment, "which," he said, "had for many years been the recognised practice." I need hardly say that the latter remark took me greatly by surprise. Although I was a young member of the profession, I can recall the fact that in the [illegible] this form of treatment being recognised in my student days. We [illegible] professed to appreciate the value of opium neutralised by [illegible] giving milk, while others taught that calomel, enemata, [illegible] were the means and methods to which to look for escaping [illegible] words of Dr. Waters, who immediately preceded Mr. Banks in the discussion, could not have reminded him more forcibly that [illegible] to which he alluded had yet to be received by his fellow [illegible] Nor was his the only opinion in the same direction. The opium treatment was even condemned by some, enemata, &c. advocated, [illegible] and the number of those who adhered to the principles as laid down by the originator of this plan of treatment were very few. The explanation is evident. The opium and starvation treatment, [illegible] is not even known or understood by those who have not made themselves acquainted with its originator through his work on the subject. The treatment of intestinal obstruction by rest, opium, and starvation was undoubtedly originated by Mr. H. O. Thomas, and we require no further proof of its non-recognition generally, even at the present day, than the fact that it is not even alluded to by Mr. Treves in his new and exhaustive work. Nor do I think Mr. Banks can refer us to any writings that will justify his statement, although I am quite prepared to apologise and retract if he will.

I enter this protest against Mr. Banks's attitude with all [illegible] feeling sure that upon reflection he will agree with me that [illegible] able remarks were deprived of a finish which would have [illegible] them had he but rendered honour to whom honour was due.

I am, Sir, yours faithfully,

Liverpool, Dec. 8th, 1884. CHARLES [illegible]

To the Editor of THE LANCET.

SIR,—In your report of the recent discussion which [illegible] the Liverpool Medical Institution, on Intestinal Obstruction, I was very much astonished to read the following in Mr. [illegible]: "The second difficulty consisted in the fact of spontaneous recovery under the opium, rest, and starvation treatment, which had for many years been the recognised treatment." Is [illegible] and others of your readers if Mr. Banks would [illegible] authority for this assertion. I have read the Jacksonian [illegible] on this subject, and find no reference to the trinitarian [illegible] rest, and starvation, or, to speak more correctly, [illegible] tion, as the other two include rest to the bowel.

I am, Sir, yours, [illegible]

Dec. 8th, 1884.

To the Editor of THE LANCET.

SIR,—Last week's issue of your journal contained [illegible] of a meeting held at the Liverpool Medical Institution, and the subject under discussion was, "The Treatment of Intestinal Obstruction." During the discussion Mr. Banks is reported to have stated that the [illegible] treatment of this ailment for many years was opium, rest, and starvation. Being interested in this subject, I am desirous of knowing what authority Mr. Banks claims antiquity for this [illegible]

I am, Sir, yours obediently,

Birkenhead, Dec. 9th, 1884. ARTHUR [illegible]

CARLISLE MEDICAL SOCIETY.

THE name of Dr. Stewart Lockie, vice-president, [illegible] Society, was omitted from the list of officers given [illegible] this week.

MEDICAL ETHICS AND THE IRISH [illegible]

To the Editor of THE LANCET.

SIR,—Will you, kindly have inserted in your [illegible] questions:—1. A and B, both being [illegible] ists and equally qualified, may a coroner [illegible] in A's district? 2. Suppose a case of post-mortem [illegible] a coroner legally give B precedence [illegible] assistant, A having the advantage, moreover, [illegible] age? 3. Would there be a breach of [illegible] in accepting such precedence? 4. And could [illegible] to assist? 5. A dispensary doctor being [illegible] event held in his own district, can he [illegible]

Dec. 15th, 1884.

**** We must trust to [illegible] to give his answer to these [illegible]

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"TRACHEOTOMY IN CROUP."

To the Editor of THE LANCET.

SIR,—An annotation in your issue of Dec. 6th under the above heading brings to notice a paper read by Dr. George W. Gay at the annual meeting of the American Surgical Society in May last. One extract is as follows: "It is a physical impossibility to suck anything out of the trachea unless air has a free ingress to supply the vacuum;" and against this want Dr. Gay recommends the forcible inflation of the lungs by means of blowing air through a catheter which had been passed down the trachea. If blood has escaped during the operation of tracheotomy down the windpipe, Dr. Gay states that this inflation is followed by the expulsion of a large quantity of blood.

May I ask, has the paper by Dr. Gay any number of cases in which he has practised the method? It would be interesting and very useful to have the minutest facts before us, and, if possible, not only the experience of Dr. Gay, but also of other American surgeons, especially those of Boston, amongst whom this practice of inflation seems in vogue.

This plan of inflation has never occurred to me as a means of removing foreign bodies, and my experience would not lead me to expect a hopeful result in an extreme case of blood obstruction, where the smaller bronchi must be filled with blood. I can, however, readily understand that with a catheter passed beyond an obstruction forcible inflation is a valuable means of procuring relief.

Let me instance the worst case of blood obstruction I have met with. A strong, well-made man, about twenty-five years of age, was ill with that erysipelatous, brawny condition of the neck known as "cervical cellulitis of Ludovici," which later on was complicated with œdema of the larynx. The night after the œdema had set in the man was seized with a very violent attack of dyspnœa, and it appeared, the nurse having left the room for a short time, that he fell off the sofa he was lying on, and was found on the floor, with his face "black," and breathing convulsively, with long distances between the respirations. Two neighbouring practitioners were immediately called in, and very shortly afterwards I arrived. Expecting that the man would be in the condition I have described, I had on going into the room a knife and tracheotomy tube ready in my hands. I found one of the medical gentlemen about to perform tracheotomy; but on my entering he asked me to operate, and as there was no time to be lost I cut into the trachea with one incision, and as quickly inserted the tube. It seemed that there were volumes of dark blood running down the windpipe, as well as pouring out externally, with no effort on the part of the patient to cough the blood up, or even the slightest attempt at any respiratory movement. He appeared, as he did when I entered the room, dead, and it was only the feeling that it was our duty to do all that could be done that made us think of trying to save the patient's life. To shorten the account: for about an hour we had to persevere in our efforts, my colleagues performing Silvester's method of respiration, whilst I at each expiratory movement sucked the blood through the tube; and when I had removed a good quantity, finding that there was no effort at natural inspiration, I occasionally, with an inspiratory phase, blew through the tube. The patient recovered fully, and was able in six weeks' time to return to his employment.

By this case it is proved that it is not "a physical impossibility to suck anything out of the trachea, unless air has a free ingress to supply the vacuum," and that forcible inflation would probably not always answer, but in this instance would have driven a large quantity of the blood, which must have been choking up the medium-sized bronchi, further into the lungs, and prevented its removal even by suction with the mouth. Doubtless inflation by the catheter would have a splendid effect in many instances of obstruction in the air-passages, and would do away with the inclination for the dangerous practice of using one's mouth to remove a tracheal obstruction.

I am, Sir, yours obediently,

Dec. 15th, 1884. A GENERAL PRACTITIONER.

COMMERCIAL ENTERPRISE.

To the Editor of THE LANCET.

SIR,—I enclose circulars which have recently reached me. They explain themselves, and are good specimens of a great nuisance and evil—a terrible evil if my wife either did or was inclined to tipple!

I am, Sir, yours truly,

Dec. 9th, 1884. CHIRURGUS.

"59, Mark-lane, and 1, Seething-lane, London, E.C.

"Dear Madam,—On hearing just now of the birth of your son, we tender our best wishes for his health and for your speedy recovery. If you would kindly allow us, we should have much pleasure in forwarding to you free per parcels post a sample bottle of our champagne, which, strongly recommended by medical men for convalescents, and especially for ladies, would, we trust, be agreeable to you, and induce you to favour us with your esteemed orders.—Yours obediently,

"Nov. 25th, 1884." "F. PIOT, DE FOREST, AND CO.

"59, Mark-lane, and 1, Seething-lane, London, E.C.

"Dear Madam,—In writing to you last week on the occasion of the birth of your son, who we hope is progressing favourably, as also yourself, we took the opportunity of offering you our champagne. We beg to apologise for having omitted to enclose you our price list (this probably having prevented you from asking for a sample). Our price for this special 'ladies' wine' is 36s. per doz. quart bottles, delivered, or 40s. per twenty-four half bottles; and in order to enable you to judge of the quality, we shall be glad to send you a sample free on receipt of your demand.—Yours obediently,

"Dec. 6th, 1884." "F. PIOT, DE FOREST, AND CO.

Paterfamilias.—There is not, we fear, any law to prevent the diffusion of such trash.

Enquirer.—Forcible introduction of the hand is not necessary. Dilatation by means of a tent will suffice.

Inquest and *M.D. Aberd.* have not enclosed their cards.

"MATERNAL IMPRESSIONS."

To the Editor of THE LANCET.

SIR,—As the following case is somewhat similar to that in your last issue under the above heading, I think it will prove of interest to your correspondent, and I shall be much obliged if you will be kind enough to insert it.

On the 5th inst. I attended Mrs. P—— in her eighth confinement, and delivered her of a male child, using instruments, as the case was somewhat complicated. Growing from the child's neck on the left side was a large tumour. All her previous children were free from any deformity, and there was no history of it in the family. The following is the account in her own words:—"In my second month of pregnancy I was standing at the front door, and saw a man pass who had a very large tumour hanging from his neck. On seeing it I felt a shudder go through me, but had not the slightest idea that it would affect my child, and never gave it one thought afterwards."

I have found that the tumour in the man whom the patient saw is also on the left side, and that there is no doubt about the facts of the case. I am, Sir, yours truly,

W. WATERFIELD, L.K.Q.C.P.I., L.R.C.S.

Stonehouse, Devon, Dec. 15th, 1884.

Enquirer.—The late Canon Miller was the originator of the Birmingham Hospital Sunday.

X. Y. Z.—We prefer the style "D. Deronda, M.B."

"UNSOUND MEAT."

To the Editor of THE LANCET.

SIR,—In connexion with the discussion on this subject I submit that the proper authority on the fitness of flesh for the food of man is the medical officer of health, and not the veterinary surgeon. The diagnosis of disease made by the latter, as an expert on the diseases of quadrupeds, should be accepted by the former as the basis on which to arrive at a conclusion, but nothing more. That a veterinary surgeon is no judge of what is proper food for human beings will to most minds be evident from the curious, but by no means rare, offer of the one at Tiverton, who, in support of his views, proposed lately to eat the questionable flesh—a line of argument only paralleled in absurdity by the proverbial backing of an opinion by a wager. Whatever ideas may be held with regard to the wholesomeness of flesh meat affected with the disease from which the animal in the Tiverton case was ailing, a disease on the nature of which veterinary surgeons hold contradictory ideas, some calling it a "fever" and others an "apoplexy," it will be admitted that no one would willingly eat such for food.

I am, Sir, yours truly,

Newcastle-upon-Tyne, Dec. 15th, 1884. HENRY E. ARMSTRONG.

REMARKABLE COLOURATION OF THE SKIN.

To the Editor of THE LANCET.

SIR,—As I believe the following to be a rare case, I should be glad if you would kindly insert it in THE LANCET.

A boy aged twelve was brought to me by his father in July last, suffering from psoriasis guttata. The patient was perfectly healthy in other respects. My treatment consisted of warm baths, with a quarter of a pound of carbonate of soda in each, every other evening, vaseline to be used locally by day, and an ointment of oxide of zinc, with seven minims of carbolic acid to the ounce, by night. After six weeks of this treatment (with five minim doses of liq. arsen. and five grains of pot. chlor. in a tablespoonful of water twice a day) I was surprised to find the patient's skin, from the neck to the knees and elbows, of a deep copper colour, which has remained so, the above treatment being still persevered with.

I should be happy to show the patient to any member of the profession interested in such cases, or to receive any suggestion as to treatment. I am, Sir, yours truly,

Dec. 8th, 1884. PHYSICIAN.

THE CASSAN FUND.

To the Editor of THE LANCET.

SIR,—Will you kindly acknowledge the donation of £1 1s. to this fund from Dr. Mackender, Gainsborough.

I am, Sir, yours faithfully,

H. F. LANCASTER.

Lewisham High-road, St. John's, S.E., Dec. 17th, 1884.

Mr. T. Jones.—We do not prescribe.

Kentigern.—J. B. Lippincott and Co., Philadelphia.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Andrew Clark; Dr. Moxon, London; Mr. Butlin, London; Mr. A. Dodson, London; Mr. Clouting, Thetford; Mr. Dobbin, Banbridge; Mr. D. Moffat, Glasgow; Dr. Goodhart, London; Mr. Blomfield, Paris;

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Mr. C. B. Allen, London; Mr. C. E. Jennings, London; Dr. Heinrich Weiss, Vienna; Mr. Custance, London; Rev. R. C. Acland, Colchester; Dr. Madden-Medlicott, Eastbourne; Mr. Waterfield, Stonehouse; Mr. H. E. Armstrong, Newcastle-on-Tyne; Mr. C. F. Langdale, London; Mr. Pugin Thornton, London; Mr. Vacher, Birkenhead; Mr. Walsham, London; Messrs. Burroughs and Wellcome; Mr. A. E. Roberts, Yeovil; Dr. Tomkins, Monsall; Mr. Nield Cook; Mr. Storry, Stroud; Dr. C. S. Taylor, London; Mr. E. H. Saunders, Devonport; Mr. A. J. Harvey; Miss F. M. Gallaber; Mr. W. Peacey; Mr. A. Howie, London; Mr. Pollard; Mr. Carter, Leeds; Mr. Gordon Black, Harrogate; Mr. Robinson, Darlington; Dr. Jas. Murphy, Sunderland; Mr. S. Osborn, London; Mr. Bickerton, Liverpool; Mr. T. F. Gardner, Bournemouth; Mr. J. R. Whitley, London; Mr. Watson; Mr. J. F. Pink (W.C.); Mr. Poole, Dudley; Messrs. Pollard, Edinburgh; Mr. Moss, Frankfort; Mr. Harness; Mrs. Christy, Bournemouth; Mr. Walter, Midhurst; Dr. Robinson, Stanhope; Mr. Renton, Shotley-bridge; Mr. Alican, Paris; Mr Pyra; Mr. Curtice, London; Mrs. Norris, Weston-super-Mare; Messrs. Stevenson and Travis, Liverpool; Messrs. Lee and Nightingale; Mr. Richardson, Birkenhead; Mr. Gamgee, Birmingham; Mr. Dalmas, Leicester; Mr. Orr, Wellingboro'; Mr. Saunders, Camden-town; Dr. Macnaughton Jones, London; Mr. Hammett, Taunton; Messrs. F. J. May and Co., London; Messrs. Street and Co., London; Messrs. Down Bros., London; Mr. Grayson, Manchester; Mr. Webb, Bury; Dr. Rice, Derby; Dr. Woodman, Exeter; Mr. Diggens, Lancaster; Mr. Jesse, Hanbury; Mr. Hill Hill, London; Mrs. Pratt, Cardiff; Dr. Gall Guila; Dr. Jeeyarooswanayya, Dangalor; Dr. Hicks, Hendon; Mr. Keeting, Manchester; Dr. Goodhart; Mr. Unsworth, Liverpool; Mr. Elliott, Carlisle; Mr. McDonald, Hillside; Mr. Taylor, Buxton; Mr. Ker, Halesowen; Messrs. Blackwood and Co., London; Mr. McDonald, Inverness; Mr. De Coste, St. John's-wood; Mr. Marrack, Truro; Mr. Day, Lancashire; Mrs. Goff. Birkenhead; Mr. Lever, Stratford-on-Avon; Mr. Ashford, Halstead; Mr. Eberle, Thirsk; Mr. Orrock; Dr. Hunter; Dr. Lewin; A Neapolitan Surgeon; X. Y. Z.; Medicus, Bristol; M.D. Aberd.; M.B.; A. D., Brighton; Les Compliments du Saison; Partially Open Doors; Leeds; Paterfamilias; Archippus; T. M. L. C., New York; Idem; Nervous.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Hughes, Birmingham; Mr. Barrett, Huddersfield; Mr. Smith, Folkestone; Dr. Lagrade, Lyons; Dr. Allden, Southampton; Mr. Sott, Edinburgh; Mr. Sergeant, Camden-town; Mr. Rony, Hyères; Dr. Evans, Cardiff; Dr. McCallan; Dr. Whitla, Belfast; Messrs. Boake and Co., Stratford; Mr. Buttle, London; Mr. Abbs, Dewsbury; Dr. Bower, Bedford; Mr. Howlett, Hull; Mr. Moore, Dublin; Mr. White, Bayswater; Mr. Bayliss, Southport; Mrs. Moon, London; Mr. Southwell, Cardiff; Mr. Bird, Liverpool; Messrs. Lee and Martin, Birmingham; Messrs. Mackay, Edinburgh; Mr. Coomb, Castle Carey; Mr. Price, Crickhowell; Mr. Noorse; Mr. Wardell; Mr. D'Orsey; Mr. Steward, Sheffield; Mr. Brown, Pimlico; Mrs. Loy, Northampton; Mrs. Musthorp; Mr. Robinson, Sheffield; Mr. Galloway, Glasgow; Mr. Harwood, Manchester; Mr. Anderson, Kirkwall; Mrs. Christie, Bournemouth; Mr. Smailes, Honley; Mr. Robinson, Bedford; Mr. London, Myroe; Dr. Stanley; Mr. Mellons, Leicester; Ilex; M.B., Liverpool; K.; A. W., Liverpool; R. J., London; Surgeon L.R.C.P., Brierleyhill; Medicus, Dowlais; A. B., Bristol; Veritas; F. W.; H. P. A.; Omicron, Liverpool; Medicus, Wellington.

Bristol Mercury, Liverpool Courier, Christian Commonwealth, Times of India, Hull Daily News, Port Elizabeth Eastern Province News, The Peacemaker, The Journal of the Vigilance Association, Journal of the Society of Arts, The Health Journal, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, December 18th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Dec. 12	30·14	W.	46	43	..	53	43	·13	Overcast
,, 13	30·18	W.	53	50	..	56	43	..	Overcast
,, 14	30·03	S.W.	53	51	..	55	50	·05	Cloudy
,, 15	29·78	W.	49	47	..	50	41	·25	Overcast
,, 16	30·07	W.	35	34	..	45	33	..	Hazy
,, 17	29·60	W.	40	39	..	42	34	·13	Cloudy
,, 18	30·01	W.	36	32	..	42	30	..	Hazy

Medical Diary for the ensuing Week.

Monday, December 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—No meeting.

Tuesday, December 23.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M., and on Fridays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Adjourned Discussion on Charcot's Joint Disease.

Wednesday, December 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, December 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, December 26.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, December 27.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall: The Sources of Electricity.

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ABSTRACTS OF

The "Brown" Lectures.

BY VICTOR HORSLEY, M.B., B.S., F.R.C.S.,
PROFESSOR-SUPERINTENDENT OF THE BROWN INSTITUTION.

LECTURES I. AND II.

THE THYROID GLAND; ITS RELATION TO THE PATHOLOGY OF MYXŒDEMA AND CRETINISM.

THE previous ignorance of the importance of the thyroid gland in the economy was only swept away by the attention aroused by Kocher and the two Reverdins. Mr. Horsley arranged the matter under consideration into five divisions. The first division treated of the anatomy and position of the thyroid gland. The bilobed form of the gland was held together by a capsule of connective tissue, which sent its trabeculæ into the substance dividing and supporting the gland tissue; the septa of connective tissue were the paths for the bloodvessels and lymphatics. The lymphatics have been proved by Baber, Boéchat, and Frey to assume the shape of large lacunæ at the very margin of the alveoli. The thyroid body imitates in its development a racemose gland, and was probably of a glandular nature. Virchow and Boéchat believe that the acini of the gland intercommunicate. Théophile de Bordeu believed that minute ducts brought about a communication between the thyroid and the trachea, and Ricou postulated the same idea of a duct-like communication between it and the larynx. The structures and relations, together with the histological phenomena attending the development, also supported the view that the thyroid was a gland. The glairy fluid of the acini is said by Kühne and Eichwald to contain mucin, though Gorup-Besanez saw a difference in its solubility in acetic acid. Baber's theory, to the effect that the mucinoid contents of the acini were secreted by the epithelium and reabsorbed by the lymphatics, was supported by the foregoing considerations. Simon seems to have been the author of the view formulated by Liebermeister and Guyon, which regarded the thyroid body as a regulator of the cerebral circulation. The view has also been held by Simon that the thyroid gland secretes a something necessary for the nutrition of the brain, but the changes in the central nervous system, after thyroidectomy, may be of a secondary nature. Luschka believed that the thyroid might act in a mechanical fashion, staving off the pressure of the contracting cervical muscles from the carotid arteries. The possible influence of the thyroid in hæmapoiesis was also referred to. Most of the foregoing views do not completely harmonise with what is known of the powers of the thyroid.

The effects of thyroidectomy were next considered. What happened if the thyroid were completely removed? Kocher showed that man becomes a cretin. Schiff, Wagner, Sanguirico, and Canalis removed the thyroid of dogs, and found that the animals became idiotic and died comatose. Mr. Horsley's experiments on the monkey showed that a condition, called by Mr. Ord myxœdema, arose when the thyroid was extirpated. The method of operating was next detailed. The post-mortem examination proved the limitation of the lesion to the gland. No ligatures were used. Perfect antiseptic precautions were carried out. The theory which ascribes the origin of myxœdema to the sympathetic system is inadequate in the light of the evidence afforded by Mr. Horsley's operations. Schiff's first set of experiments cannot be quoted, as no pains were taken to prevent septic poisoning. The symptoms following thyroidectomy in the monkey were tremors, (which came on in five days), pallor, leucocytosis, followed by oligœmia, paresis, puffiness about the eyelids, with swelling of the abdomen and increasing mental dulness. The temperature tends to become subnormal towards the end, which is usually ushered in by coma from five to seven weeks after the operation. The symptoms were next examined in detail. The nerve symptoms were the first to attract attention. Fibrillar twitchings of the muscles may be observed in the dog as the first symptoms, and Wagner states that the tremors are succeeded by clonic spasm, tetanus, and finally rigidity. In the monkey a slight fibrillar movement may be seen on the fifth day, first in the hands, next in the feet, and then in the jaws. These tremors merge into a constant tremor, which has resemblance to the ankle clonus. Paroxysms of muscular tremor and even convulsive movements have been observed, and tracings made, but tetanus was never seen in monkeys. With regard to the origin of the muscular movements, Schiff had found that they continued after section of the motor nerves, and Mr. Horsley after removing the cortical centres for the upper arm observed that they still remained. Voluntary movements diminished the tremors, but the inhalation of ether increased their activity, whilst reflex irritation stopped them altogether. The conclusion is that the movements are energised from the medulla oblongata or spinal cord. The rate of the tremors per second was the same as that in dogs (Lovèn), and is believed by Mr. Horsley to correspond with the tremors of paralysis agitans and allied conditions in man. Paresis of gradual onset, varying in intensity directly with the force of the tremors, and rigidity, always coexist. There is never complete paralysis, but wrist drop and the "paralytic posture" may be seen. Hemiplegia occasionally appeared, and then the tremors on the paralysed side disappeared, except from the jaws. Sensation may be a little blunted, and touch may be delayed when the tremors are in an advanced stage. The superficial reflexes were diminished; the knee-jerk was present, but never the ankle clonus. The centres of the lumbar region and medulla appeared to be unaffected. Slow hebetude ending in varying degrees of imbecility with easy disturbance of temper were the disorders related to the cortex of the brain. There was a steady fall in blood pressure and in the number of red discs for about fourteen days. Leucocytosis accompanied and kept pace with the oligæmia. The "buffy coat" was better marked, owing to the lessened tendency of the blood to coagulate. Mucin is not a normal constituent of blood, but was present after thyroidectomy, in quantities varying with the duration of life. There was an increase in the serum globulin, though other proteids remained normal in amount. The serum albumin was found by Dr. Halliburton not to be separable into three forms. The sudden appearance and disappearance of dyspnœa were interpreted by Mr. Horsley to be of bulbar origin, owing to the absence of other physical signs. The recurrent larngeal nerves were always found to be healthy, and the larynx was normal in every way. The hypertrophy of the salivary glands was a novel feature, and due to extreme production of mucin, whilst, strange to say, the parotid comes to secrete mucin. The appetite fails immediately after the operation, but soon revives, only however to become ravenous prior to its final failure just before death. Credé, Zesas, and others have observed a connexion between the spleen and the thyroid, and Mr. Horsley has detected an increase in the splenic dulness during life, which was found after death to be due to general enlargement of the spleen. Distension of the intestines with hypertrophy of the omentum were the chief factors of the abdominal swelling. The small amount of peritoneal fluid contained mucin. The urine was normal in quality, and with the exception of occasional transient glycosuria and a normal quantity of mucin, nothing remains to be said on this score. The genitalia were normal. The marked pallor of the skin, which was apparently of normal humidity, the swelling of the face and eyelids, and the atrophy of the hair were dilated upon. It was curious to observe the atrophy and greyness of the hair about the buttocks, and one was reminded of the bedsores of man. The temperature curves show after operation a slight rise, followed by a fall to the normal. The morning fall and evening rise are exaggerated when the tremors set in. In monkeys Mr. Horsley does not find a high fever when the tremors are on, in this respect differing from what Schiff has described in the dog. The temperature slowly falls after the tremors have reached their height until a subnormal heat of body is registered prior to death, which is ushered in by cold surface and extremities, though shivering was never seen. The constant and small perversions of nutrition give rise to a clinical picture which has its counterpart in the myxœdema of man. At the post-mortem examination of the monkeys the subcutaneous tissues are found to be notably altered, being swollen, jelly-like, bright shining, and excessively sticky. The increase of the altered connective tissue is most marked in the triangles of the neck and over the hypochrondria. The same condition is observed in the tissues of the mediastinum and omentum, as well as along the coronary arteries and the auriculo-ventricular groove. Atrophic changes could be seen when the fatty tissue

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which remained was examined microscopically; these appearances were typically seen in the fat about the auriculo-ventricular grooves. No changes were seen in the bursa, but congestion of the synovial membranes was present without effusion. The bones and cartilages showed no positive alterations. An increase was observed in the connective tissue of the muscles. The connective tissue of the whole body may be said to be increased with a mucoid degeneration of the ground substance and atrophy of fat. The enlargement of the salivary glands has been noticed, and chemical analysis showed that the parotid of the monkeys in question contained as much as 1·21 per 1000 of mucin. The proportion of mucin in the submaxillary gland was increased from ·01 to 4·6 per 1000. There is swelling of the mucous membrane of the alimentary canal, and much slime in the motions. The brain and spinal cord were pale and somewhat wasted, and the meshes of the pia mater were distended with fluid. No sign of disease was detected in the musculo-spiral nerve or in the sympathetic system. The other nervous tissues have not yet been completely examined.

The various theories advanced as to the nature of cretinism and goitre were next passed in review. Myxœdema, cachexia strumipriva, and cretinism were outlined from the accounts given respectively by Ord, Kocher, and Hilton Fagge, and the conclusion that all these processes were of identical nature was arrived at. These morbid processes are most probably dependent upon profound changes set up by injury to or ablation (actual or virtual) of the thyroid body. Kocher's view that a chronic asphyxia led to the cachexia strumipriva as a result of the atrophy and softening of the trachea was not accepted by Mr. Horsley, on the ground that the trachea and gullet may remain healthy, and that chronic stenosis of the trachea is not followed by "myxœdema." Dr. Hadden's theory of capillary spasm does not hold good, because the sympathetics were found to be healthy, and because Schiff's experiments on irritation of the sympathetic nerves did not give rise to "myxœdema." The increase of connective-tissue must be regarded as an epiphenomenon of the changes found in myxœdema.

Mr. Horsley next draws up a tabular statement of certain facts which may be found a useful aid in further investigation:—

1. The thyroid gland appears to consist of two distinct portions: (*a*) glandular, having the function of excreting mucin (?); (*b*) highly vascular lymphoid nodules, having a (?) hæmatogenous function.

2. Excision of the gland is followed by an increase in the amount of mucin in the tissues, an increase in the activity of the muciparous glands, and the assumption of a muciparous function by glands which usually yield no mucin.

3. Excision of the glands is followed by the profound changes in the blood already indicated.

4. Excision of the gland is followed by nerve symptoms, indicating changes in the lowest motor centres, which cause tremors, with rigidity and paresis, as well as alterations in the higher cortical centres with the production of imbecility, and ultimately death in the comatose state.

Having thus summarised the changes, Mr. Horsley states his belief that myxœdema and its allies are due to the loss of the thyroid body—a virtual, if not an actual, loss. No doubt vaso-motor or trophic lesions may be the immediate cause of the changes, but even then the functional or actual want of a thyroid body would be the parent cause of the trophic or vaso-motor disorder. The view that the thyroid gland is an excretory organ received strong support from the experimental facts. The removal of one lobe of the thyroid causes enlargement of the other, and the subsequent removal of the second lobe is followed by myxœdema. May it not therefore be that the thyroid excretes a mucinoid material which is harmful to the organism, and that the loss of this excreting function entails death?

The surgical treatment of the thyroid gland was next discussed. The conditions calling for treatment are hypertrophy or adenoma, with or without some amount of cystic degeneration or fibroid overgrowth, cystic disease, malignant new growths. Removal was the only method for the last condition. The partial or total removal of the tumour is said to have cured one case of exophthalmic goitre, and partial excision is perhaps the only treatment which holds out a possibility of cure. Simple goitre may be treated by injection or removal. Injection may be simple or combined with laceration by a needle, as practised by Billroth. Sudden death has followed simple injection; and Billroth's method may be followed by serious inflammation. Before injecting it would be well to adopt Demme's plan of waiting to see whether a vein has been wounded or not. Mr. Horsley believes that the sudden death is due to thrombosis, the result of the entrance of iodine and not air into the circulation. The total removal of the thyroid is condemned, as good results may be obtained by removal of a portion. Mr. Sydney Jones's operation of excision of the isthmus between silk ligatures has been most successful.

LECTURE III.

TRAUMATIC FEVER.

The expression "traumatic fever" has universally been employed to denote the febrile state which usually follows an injury to the body with or without a lesion of the skin or mucous membranes. The term at present embraced fevers of widely different natures, as Lucas Championnière proved by describing puerperal fever, pyæmic fever that of septicæmia, and urethral fever under the same title. Erichsen separates septic, traumatic, and urethral fevers. Mr. Horsley limits the term traumatic fever to fever following a simple injury and uncomplicated by septic or other possible sources of pyrexia. A simple injury would imply one in which there was a solution of continuity of any tissue without exposure to the environment. A classification of fevers following injuries gave: (1) traumatic fever, (2) aseptic fever, (3) septic fever, (4) neurotic fever. The second fever is that which accompanies a wound treated perfectly antiseptically; Volkmann believes that a pyrogen is developed at the site of an injury, and then absorbed. But it must be remembered that a fracture and an amputation wound differ in this respect, that the latter has chemical substances brought directly in contact with it, and although carbolic acid is said to lower the temperature, yet it must be confessed that its presence adds a new element for consideration. Taking 168 cases of simple fracture, Mr. Horsley finds that about 92 per cent. were marked by febrile reaction. Volkmann and another, who only examined eleven cases, found the per centage to be 78·5, while Augerer gives the proportion as 70 per cent.; ten cases only were investigated. Stickler found that twelve out of thirteen had fever, which gives a percentage of 92. Chauffard believes that racial characteristics would explain the differences. Two groups of cases are separable in Mr. Horsley's cases; the first group being characterised by rapid rise of temperature and little or no swelling, the second group being attended with swelling and a slow rise of temperature.

In the first group attention to a composite chart constructed from sixty cases showed in one variety a rapid rise in an hour to a high point, and the rise attained gradually to a higher level during the next twenty hours, thence onwards there was a gradual fall to the normal in about 160 hours, or nearly a week. Another variety of the same kind of pyrexia was observed where the rise in temperature was slower by a few hours, and lasted only about three days and a half. The first or severer variety generally occurred in individuals below the age of thirty. In the second variety the large number of cases were above the age of thirty-five. In the differences between these two types of the first group we may see another instance of the diminished activity of the metabolism of the tissues in more advanced ages. In the type of the second group a rapid rise nearly to 100° is observed; then the curve steadily rises for two days, with slight remissions, to 101°. From this point it falls more rapidly until it reaches 99° at about the eightieth hour; and though this fall to the normal always occurs, yet it is soon followed by a second rise to above 100°, but seldom reaching 101°. This second rise is peculiar, constant, and almost invariably occurs at the 112th hour. From this second acme the temperature falls in two or three days to the normal. The total duration of this third type of fever averages seven days and a half, but very frequently it is prolonged to the tenth or twelfth day. The statistics showed that this type occurs most frequently in the young and old, whilst the middle aged escape; the majority occurred below the age of thirty-five. The presence of greater swelling in these cases indicates, *cæteris paribus*, a great amount of damage, and tissues are more likely to be damaged in those individuals whose age approaches either extreme of life. Was there any explanation for the absence of febrile reaction in the 9 per cent? The average age of those who had no fever

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was forty. In half the cases there was sufficient swelling to call for special attention. The femur and tibia were each fractured three times; the fibula once, and both bones of the leg five times. Of the twelve patients nearly all appeared to have enjoyed good health. In the group of cases which includes the first two types of fever the sharp ends of the fragments of the broken bones irritated the torn branches of nerve and ruptured muscle. And there is more or less extravasated blood, and the idea of more or less absorption of fat from the damaged marrow must be entertained. So that there are three possible exciting causes of a rise of temperature:—(1) Moderate stimulation of an afferent nerve; (2) absorption of extravasated blood; (3) so-called fat embolism. Severe stimulation of afferent nerves causes depression of temperature, whereas gentle stimulation causes a rise of temperature in the part supplied by the nerve. The possibility of heat centres in the spinal cord and elsewhere, which can be influenced in a reflex manner, was spoken of as affording an explanation.

Angerer has shown that the artificial production of a hæmatoma is followed by marked fever within four hours. Albert and Stricker have observed a rise of 1° C. in a dog as the result of the exposure of a vessel with a view of injecting into it. Absorption and nerve actions may have played parts in these cases. A rapid rise followed by a gradual fall is probably due to anything but the absorption of a pyrogenic substance. Mr. Horsley could adduce nothing to support the theory of fat embolism as a cause of the fever. In the surgical condition known as "tension" the possibility of a centripetal stimulation causing fever was great. Idiosyncrasy, too, received its best explanation on the neurotic view of the first two types of traumatic fever.

The peculiar type of fever of the second group of cases was ascribed to the development and progress of the œdema, or swelling. Angerer injected under the skin of the forearm of Fehleisen sufficient defibrinated ox blood to cause a tumour of the size of an apple; this gradually disappeared in a few hours, and was succeeded by a secondary swelling of the arm, together with severe constitutional symptoms of fever. The temperature chart of this case was identical with that of Mr. Horsley's third type, and the pathology of both was probably the same. Tension or absorption might be at work in the production of part of the febrile course. The occurrence of œdema is very comprehensible when the damage to the walls of the bloodvessels, with the thrombosis of some vessels and extravasation of blood from others, is borne in mind.

LECTURE IV.

ON URETHRAL FEVER.

In the fever known as urethral fever it would appear that we have a more probable example of the influence of the nervous system. In what Mr. Horsley calls the "fulminating" form of urethral fever the rise of temperature occurs immediately upon the operation, and the possibility of a septic influence is regarded as extremely small and improbable. Confirmatory evidence is afforded in the fact that the most rapid and severe form of urethral fever may follow the passage of a blunt instrument without any wounding of the mucous membrane. The fulminating form of urethral fever occurs in 63 per cent. of the cases by catheterism; the mild subacute form is caused by internal urethrotomy in 76 per cent. of the cases. The two forms of urethral fever already mentioned are absolutely distinct from uræmic fever or any kind of fever which may accompany renal disease. In the fulminating form the temperature shoots up to its highest point (above 104°), on the average in four hours and a half. In the next two hours it falls nearly half way back again, and then the normal is gained gradually by the end of twenty hours. The average age of the patient is forty-two. The symptoms of stricture are almost invariably of recent date, the average duration being eighteen months.

Sir Wm. Ferguson had observed that the greatest constitutional disturbance occurred in those cases which had not undergone previous treatment. Mr. Horsley states that 40 per cent. of the fulminating variety had not been treated at all; 40 per cent. had been unsuccessfully catheterised, and the remainder had been treated only a short time for urgent retention of urine. In the second variety the pyrexia rises at a rate at least five times as slow as the first form; the rise is frequently preceded by a fall due to shock. The temperature as indicated by the diagram is seen to fall 1° in three hours, and then to occupy nearly double that time in regaining the normal, from which point it rises slowly at first, but afterwards more rapidly towards the highest point, which is usually reached about the twenty-third hour. The small preliminary rise at about the eleventh hour is very constant, and is possibly the ordinary evening rise postponed by the influence of the shock due to the operation which was almost invariably performed about 2 P.M. Age would appear to have but little to say in the etiology of this variety; as a matter of fact the average age was lower than that of the first form—namely, thirty-eight compared with forty-two.

We should not expect to find that the difference between the two forms is in any way dependent upon age. The age of the stricture, however, probably has a great deal to do with the etiology of the subacute variety which usually follows operation on an old stricture, the average age of the stricture being eight years. The less degree of fever is probably dependent also upon the nature of the operation, which was internal urethrotomy in 76 per cent. of the cases. The characteristic rigor with which we are so familiar after operation on the urethra most commonly occurs just before the acme of the fever is reached, whether we consider the fulminating or subacute variety. The duration of the rigor has been observed to be proportionate with the intensity of the pyrexial disturbance. Sir Joseph Fayrer and others have remarked upon the influence of malaria in the causation of urethral fever. Cases in which no fever followed the operation appear to find their explanation in the long duration of the stricture (nine years and a half on the average), and in the nature of the operation, which was continuous dilatation and internal urethrotomy in about two-thirds of the cases. Cases of external urethrotomy and perineal section, being frequently complicated with other conditions, are best left out of consideration. To sum up, we may say that the most severe urethral pyrexia follows catheterism most commonly, and occurs in persons of middle age suffering from very recently developed strictures; while the less severe form occurs, as a rule, after internal urethrotomy in strictures of very long standing, and which have been freely treated. Finally, the apyretic state is commoner in still older strictures and after either internal urethrotomy or continuous dilatation with catheters.

Dealing next with the pathology, Mr. Horsley draws attention to the anatomical and physiological conditions involved in the question. The existence of centres all along the spinal cord which are concerned with the formation of heat has been rendered most probable from the experimental researches of Naunyn, Quincke, Wood, and Heidenhain, as well as by clinical observations, and the paper by Hale White is mentioned in this regard. Whether the spinal centres are of a thermo-genetic or thermo-inhibitory nature still remains doubtful, though the latter view is most probable. The spinal centres are governed by supreme centres situate in the cortex cerebri. These centres may be influenced by reflex irritation, and Mr. Horsley is of opinion that urethral fever owns a neurotic cause. Septic inoculation or absorption of blood are clearly incompetent to explain the severe fever which follows catheterisation with a blunt instrument where no blood is drawn. This belief is strengthened by the fact that the rise of temperature in the case of absorption does not take place till twenty-four to forty-eight hours have elapsed, whereas the curve of severe urethal fever reaches its height within four hours. Moreover, the fulminating form occurs in association with the first treatment of recent strictures, when the nerves about the stricture are, so to speak, in an abnormally excited state. Previous treatment, too, would tend to lessen the force of each succeeding interference, and so anything like a severe stimulation of the nerve fibres would be avoided. The safest and most fever-free operations are continuous and very gradual dilatations and internal urethrotomy. Roser has shown, in opposition to Sédillot's view of septic absorption, that in other simple operations, such as amputation of the penis and lithotomy, typical urethral fever is never seen. Surely this immunity is due to the freedom of the incision and consequent absence of traction upon the nerves in the mucous membrane. In internal urethrotomy we have a close parallel, complicated, however, by the wedge-like action which inflicts a stretching in addition to the incision. With regard to the influence of the administration of ether, and to the fact that Mr. Holt had performed this operation 670 times with but two deaths, the following considerations are urged. Dr. G. Johnson long ago showed that chloroform tended to suppress rigors, and it has been proved that ether,

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alcohol, morphia, quinine, and other alkaloids tend to prevent the development of pyrexia and its accompaniments. These facts favour the neurotic theory of fever, as does also the circumstance that no matter what the source of the fever the alkaloids mentioned still exert their controlling force. When Mr. Holt did not use an anæsthetic the occurrence of urethral fever was by no means uncommon. The large size of the stricture and the plan of preparing patients by the use of quinine and opium may account for the absence of fever and for the low mortality of his operations in Mr. Holt's hands. Malherbe gives it as his opinion that internal urethrotomy is as "pyrogenous" as divulsion or rupture of the stricture, but Mr. Horsley's statistics do not support this idea. Having referred to Mr. Marcus Beck's observations, Mr. Horsley passes on to give certain conclusions at which he arrived as the result of observations on the quantity and quality of the urine in five cases of internal urethrotomy. As a rule the amount of urine excreted is diminished for one week following the operation. In the one case which had no fever, the amount of urine was greatly increased for ten days after the operation. The less degree of hyperæmia may possibly explain this augmentation. The discharge of nitrogen is variable for the first few days after the operation, but it soon becomes normal, and then slightly increases. Urethral fever is a reflex symptom, just as much as renal congestion and altered excretion are.

In respect of treatment, the patient should be prepared by being kept in bed, put under the influence of quinine, previously catheterised gradually up to No. 4 E., given one-third of a grain of morphia an hour before the operation, and operated upon under the influence of ether, or, better, chloroform. The operation should be internal urethrotomy. No instrument should be left in, and none should be passed for four days. Diffusible stimulant and external heat should be aided by the employment of chloroform or morphia if a rigor set in.

Remarks
ON THE
GENERAL PERFORMANCE AND TREATMENT OF AMPUTATIONS.

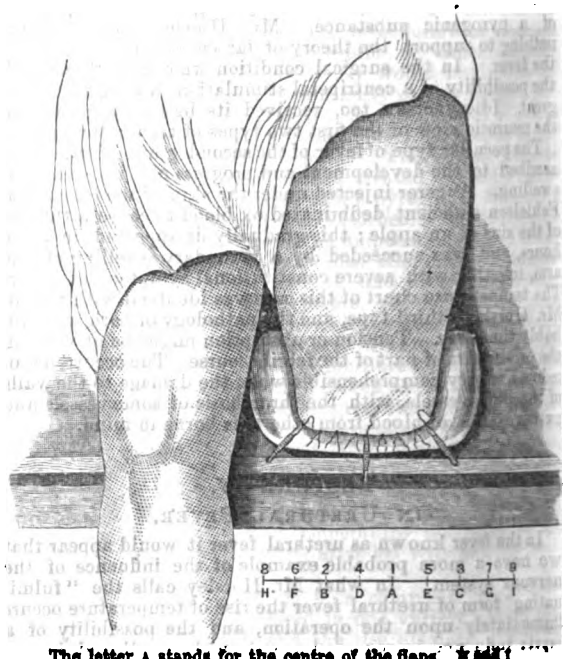
By JAS. WHITSON, M.D., F.F.P.S.G., F.R.M.S.,
ASSISTANT-SURGEON, GLASGOW ROYAL INFIRMARY.

(*Concluded from p. 1082.*)

Suturing of the Flaps.

IN all operative procedure it is desirable to leave a small scar, and with this end in view the suturing of the flaps ought to be carefully attended to. An accurate but easy apposition of their edges is necessary for successful union, and the first requisite for securing this is abundance of skin.[1] If too much pressure comes to be exercised on the stitches their division becomes imperative, even at the expense of additional cicatricial tissue, because the proximity of the margins under these circumstances is no longer desirable, and unless promptly freed will result in tension.[2] It is fortunate for the patient, however, that sutures when unfairly taxed have a tendency to cut their way outwards. Before passing the stitches a pair of stout artery forceps may be placed in the centre as well as at either angle of the flaps (Fig. 1). This manœuvre greatly facilitates the apposition of the margins, and sutures may then be inserted at the points A, B, and C. Two ought to follow at D and E, the spaces being regularly divided in this way till the whole line is completed. If cellular tissue be allowed to protrude an indelible cicatrix is the result, but this may be almost entirely avoided by stretching the edges one upon the other during the process. If, for example, we are about to insert stitch 2 (Fig. 1) an assistant will aid matters considerably by extending from the points A and H. If No. 7 requires to be dealt with, the points C and I may be selected for a similar purpose, and so on. By thus proceeding on a uniform system the sutures are unlikely to drag, and under proper after-treatment the wound heals with a very trifling cicatrix. When the sutures are passed continuously from one side to the other, a pouch almost invariably remains at the end, and mars the line of union. A needle-holder[3] is serviceable in the introduction of the sutures; and when the skin is tough, as in Syme's amputation at the ankle-joint, it is an invaluable auxiliary. Curved needles are the most convenient to work with, and to be preferred to the straight variety. Chromicised catgut when properly prepared[4] is the most convenient suture to work with. It is easy of manipulation, and the pliancy which it possesses permits of a nice degree of relationship being established between the edges of wounds. Under favourable circumstances its presence occasions no uneasiness, and we are never compelled, as in the case of wire, to take down the dressings in order to remove it, because that part of the thread which is in contact with the tissues becomes absorbed. In this way the upper portion is set free, and will at the end of a certain time be found lying loose on the surface of the skin. Stitches of silver wire are not secured with the same facility as those of gut,

FIG. 1.



The letter A stands for the centre of the flaps. H and I represent their outer and inner corners, while B and C indicate points respectively equidistant from H and A, and from I and A. The order followed in the insertion of the sutures is indicated by the numerals.

while the stiffness and general want of adaptability peculiar to metallic sutures render their ends liable to catch in the dressings and make the extraction painful to the patient. *Cæteris paribus*, sutures of a definite thickness maintain their hold best; but the stronger the thread of wire which is used the more intractable does it become, and the less capability does it press on the structures within its grasp; this latter cannot be attributed to catgut, inasmuch as its pliancy continues the same in all its sizes, and an equable compression is exercised by it throughout its entire circumference. Pus

[1] Should the element of covering happen to be deficient in a stump, button sutures will to some extent relieve the strain on the surrounding parts.

[2] Any tendency towards inflammation will be speedily revealed by the thermometer, and if the temperature is observed to rise much beyond the normal the stump had better be examined. If tension exists it should be relieved at once.

[3] The needle-holder manufactured by Lüer of Vienna is a excellent instrument, simple in its construction, and easily worked. Dieffenbach's needle-holder, as described by Billroth (Surgical Pathology, page 61), is also to be recommended.

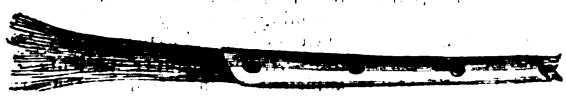
[4] A good deal of the material which is sold under the name of "chromicised catgut" is defective in one of two ways. If insufficiently chromicised, it yields to the action of the tissues in forty-eight or seventy-two hours; and on the other hand, if hardened overmuch it is wanting in pliancy. By Macewen's method of preparation catgut is allowed to steep from four to seven days in the chromic acid mixture, the length of time during which it is retained there being determined by the degree of resistance it is thought desirable to impart. When taken out of this solution the gut should be washed in water, and dried before being immersed in phenol and glycerine (1 to 40) in which to remain somewhat hard.

W. H. Pancoast of Philadelphia advocates an iron-dyed silk which he has been in the habit of using for some time.[5]

Drainage.

Drainage is now recognised as an important factor in the treatment of amputations, for if discharge does not obtain egress unpleasant consequences speedily manifest themselves and retard the progress of reparative action. A good deal of effusion succeeds the removal of a limb, and many surgeons obviate its accumulation by leaving the sides of the flaps partially open for the first forty-eight or seventy-two hours. This method certainly effects its purpose, but it should be borne in mind that the edges of wounds have begun to granulate by the end of that time, and it is therefore clear that their roughened surfaces cannot afterwards be approximated with the precision of freshly cut tissue, nor can the parts accommodate themselves so readily to each other after being kept apart for some days. The scar which follows such a mode of procedure is larger than it otherwise would be, and in addition to being unsightly may prove a source of future inconvenience. The first step towards improvement in this direction was the introduction by Chassaignac of indiarubber tubes of various sizes, which are perforated at regular intervals in order to increase their action. If favourably placed these agents make excellent drains, but owing to the pliability of caoutchouc their channel is liable to become deflected or compressed, and the conducting power which would otherwise be possessed by them may thus come to be interfered with. The decalcified chicken bone drainage tubes of Macewen (see Fig. 2) fulfil the design of their inventor admirably, and in fresh wounds are to be preferred to those previously mentioned. They are threaded with horsehair, which maintains their calibre, and at the same time prevents occlusion of their channels by blood-clot. If care be taken to leave the ends of sufficient length, a syphon action is induced, the result of which is that the discharge is led into the dressings and the stump kept dry and

FIG. 2.



Decalcified drainage-tube of Macewen.

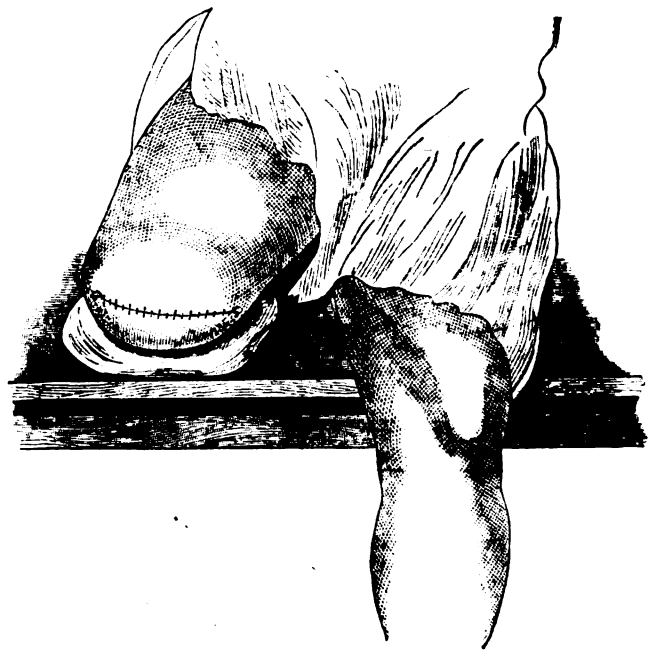
comfortable. It is usual to withdraw the hair at the expiration of forty-eight hours, because the sero-sanguineous exudation following an amputation has in the majority of aseptic cases then ceased. The tubes in question are easily prepared, and when placed in contact with tissues whose vitality has not been lowered are, as a rule, ultimately absorbed. Hair has, however, one disadvantage. It will not drain pus, and when suppuration is going on the indiarubber tubes of Chassaignac should be used.

Catgut[6] is inferior to hair as a conductor of fluid, owing to its lacking the straightness and hardness of capillary fibre. Its flexibility also renders it prone to displacement. Threads of gut have the additional drawback of being somewhat irregular in their cylinder, and do not on this account lie so well together as the rounded filaments of hair. Fewer can thus be inserted in a given space, and their united action must therefore be less, for numerical superiority—other things being on a par—increases power in a definite ratio as we ascend the scale.

We have now to consider the question of allocation, and decide whether it will be best to confine the drainage-tubes to any one position or distribute them regularly throughout the stump. In agriculture it has long been recognised as an axiom that if land is to be brought to the highest state of perfection it must be deprived of superfluous moisture. To effect this the skilful farmer does not construct one or two large drains in the central or lateral portions of his fields, but cuts instead a regular series of minor channels, taking care to utilise any slope in the ground and to see to the subsequent disposition of what has been abstracted from the soil.[7] The same principles hold good in surgery, and with a view to the better solution of this problem we may now ask ourselves the question, What is the area of discharge? The major proportion of the exudation immediately succeeding an amputation takes its origin in the muscular tissues enveloping a limb, because there are many small vessels divided here which are too minute to tie, and whose mouths in consequence will remain relaxed for some time. As blood, in common with other liquid bodies, obeys the ordinary laws of gravity by seeking its lowest level, we may thus safely proceed upon the assumption that several dependent exits will most favour its escape.

The practice of introducing indiarubber tubes at either corner of the flaps may aid matters provided the position occupied by them is favourable to drainage, but it should be remembered that if the posterior flap is of any length the bulk of the discharge will be compelled to travel some distance before it can pass out. Should the under flap remain unsupported and thus fall away from the upper, the proximal ends of the tubes are certain to be tilted downwards, owing to the fact that their distal extremities from being generally fastened by stitches are necessarily pointing upwards, and are almost useless for conducting purposes from the fact that fluid material cannot ascend. Hence it follows, if the edges of the flaps have been accurately sutured, that the bulk of the discharge is retained within, and the overflow alone is able to well away.[8] (See Fig. 3.) The same thing is also

FIG. 3.



liable to happen when a tube is passed from one side to the other. An excellent method of drainage, which effectually removes the difficulties referred to, is that of piercing the posterior flap[9] at different points, and inserting drainage-tubes into the openings so made. Discharge thus finds a ready exit, and its early liberation materially contributes towards the maintaining of the wounded surfaces in a condition favourable to the advance of repair. (See Fig. 4.)

Dressing of the Stump.

After arranging the drainage-tubes and fastening the sutures,[10] we require to dress the stump. Formerly strips of lint soaked in camphorated or other oil, and retained in position by means of calico bandages, were almost universally employed for this purpose. Lint when soaked with blood becomes hard, and a want of resiliency in a dressing soon proves irksome to the patient, while its frequent removal disturbs the process of healing, and is inconvenient

[5] For further particulars on this subject, see an article on Iron-Dyed Silk in the Philadelphia Medical Bulletin, August, 1883.

[6] Catgut, when used as a drain, should be chromicised; if not, it gives way too soon.

[7] The injurious influence which stagnant water exercises in its immediate neighbourhood is too well known to need further comment.

[8] We see the same thing happening in the case of a distended bladder.

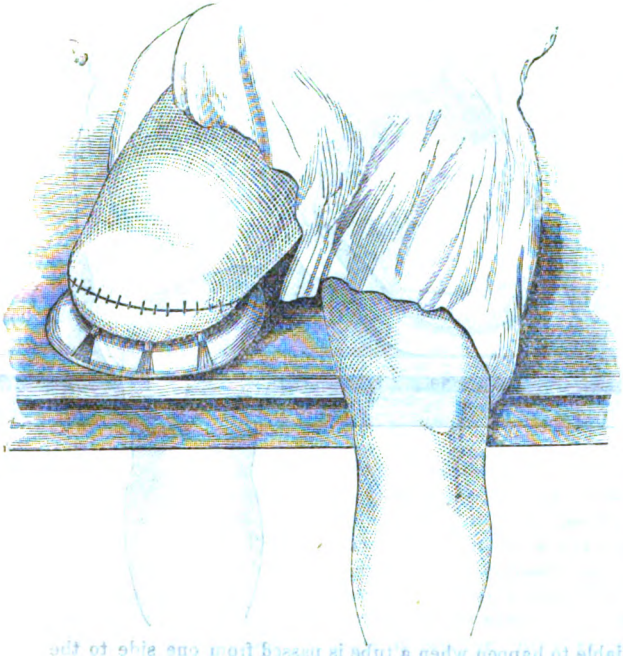
[9] A pair of dressing forceps answers very well for this purpose, and the exit can easily be enlarged by opening the handles of the instrument. When this method is carried out, the tubes are best inserted before the suturing of the flaps. In every case where I have seen decalcified drainage-tubes used, the blood began to drop from them at once, and continued doing so while they were under observation.

[10] Great care should be taken to see that the stitches do not drag.

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otherwise. Neither does it permit of sanguineous or purulent material passing readily through it, and its capacity in this direction will be still further lessened when impregnated with an oleaginous compound. Should the amount of discharge happen to be profuse, much of it on this account must be pent-up within the wound—a state of matters which ought to be carefully guarded against. After an extended trial of different materials Mr. Lister ultimately (1871) adopted gauze as the most suitable dressing for wounded surfaces, and the fact that this article continues to be so employed is the best evidence in favour of its superiority that could be adduced. Its numerous layers afford complete protection from external influences, porosity of fibre confers great absorbent power, and perfect asepticity permits of its being retained in position for some time—essential requisites for the progress of healthy action. Carbolised tow is a valuable adjunct to gauze.[11] After the first few strips of the latter have been applied several well-teased rolls of the former when investing the limb will be found to yield a firm as well as elastic support and assist in taking up discharge. It is usual, when following the antiseptic method of treatment, to dress an amputation forty-eight hours after its performance, provided there is no previous evidence of stain. If decalcified drainage-tubes have been called into requisition, the hair with which these agents have been

FIG. 4.



threaded may then be withdrawn. It occasionally happens that at the expiration of this period a quantity of clotted blood has accumulated within the stump. In such cases a stitch or two should be cut and the mass cleared away. If the cavity be washed out, it is advisable to do so gently,[12] and with a tepid solution of carbolic acid (1 to 40). Rough measures do harm, and fluid injected forcibly into a recent wound stimulates the tissues to increased secretion, and thus continues, rather than mitigates, the evil. If sufficient attention has been paid to details, the second dressing should not require removal for a week or even longer. In doing so an assistant should be instructed to pass both his hands under the limb and press the flaps forward, so that no strain may be placed upon them. A splint of Gooch padded with tow and with the corners rounded off may be advantageously applied to the limb; it renders the parts less susceptible to movement, and thus promotes the general weal. If the discharge happens to be profuse, stains speedily make themselves apparent at the lowest end of the dressings. Should it be inconvenient to remove this when these are first observed, a few folds of gauze may be secured round the parts till the whole can be replaced. Under favourable circumstances cicatrisation may be expected in the course of four or five weeks.

[11] Iodoform may be sprinkled over gauze with advantage, more particularly if it be intended to keep the dressing on for some time.

[12] A syphon is the best instrument for this purpose; the flow of water which it gives is uniform and steady, whereas in syringes it is apt to be jerky and uncertain.

LUNACY LAW REFORM.

BY ERNEST W. WHITE, M.B. LOND., M.R.C.P.

As reform in connexion with the heterogeneous legal enactments known as the lunacy laws is imminent, it behoves all who have had any experience in their operation to bring to notice the defects of the existing system, and to suggest remedies for these defects. With this end in view, I propose to discuss the subject from a medico-legal standpoint, and, for the sake of brevity, shall adopt the following headings:—I. Order of Admission. II. Medical Certificates. III. Care and Treatment. IV. Discharge on Recovery or otherwise.

I. *Order of Admission.—A.* For pauper patients an order of admission to the superintendent of the county or borough asylum (16 & 17 Vict., c. 97, s. 67 and Schedule F, No. 1) is necessary. This is usually made by a justice of the peace, but may on emergency (when the patient on account of health or other cause is unable to go before a magistrate) be signed by an officiating clergyman and relieving officer (or overseer). Protection is certainly needed against the abuse of this latter clause, orders being frequently signed by the chaplain of a union and the relieving officer to avoid the trouble of getting the signature of a justice of the peace. *B.* For private patients not found lunatic by inquisition the law is different; the so-called order, which is virtually a request to the proprietor or superintendent (16 & 17 Vict., c. 96, s. 4, and Schedule A, No. 1), is made by a relative or friend. This mode of procedure stands condemned by public opinion, and the most practicable remedy appears to be that the order or request of the relative or friend should be countersigned, before becoming valid, by a justice of the peace, on the recommendation of a local expert.

II. *Medical Certificates.—A.* For pauper patients one medical certificate is sufficient in addition to the order (16 & 17 Vict., c. 97, s. 67, and Schedule F, No. 3). This certificate is made by the medical officer of the union, who is, as a rule, conversant with the case. But there are patients who rank in the county and borough asylums as paupers whose friends pay to the union authorities the entire amount of their maintenance cost. These persons are sent to the public asylums because their relatives are unable to meet the extra expense attending treatment in a private institution. Now, the mode of certification in these cases is by no means satisfactory. The patient has probably been for some weeks under private medical treatment; the medical man in attendance and the relatives feel they cannot undertake the responsibility any longer. The patient is presumably insane. The relieving officer is applied to; he brings the case under the notice of a magistrate; an order is made to the district medical officer of the union to examine and certify. Now, it very frequently happens that this district medical officer has never previously attended the patient, and is quite unacquainted with the family history. Yet, I presume, it is one of the perquisites of his office to be called in to certify; so, in sublime ignorance of the previous history, he makes his examination and signs the certificate. Moreover, it not unfrequently happens that a patient of this class is taken to the union and remains there for several days to await examination, an unnecessary humiliation for the patient and the relatives. *B.* For private patients (16 & 17 Vict., c. 96, s. 4, and Schedule A, No. 2, and 25 & 26 Vict., c. 111, s. 47) two medical certificates are demanded in addition to the order, except on emergency, when one certificate remains valid for three days, at the expiration of which time two other certificates must be obtained. Now, while the law is very exact with regard to the "disqualifications" of medical men by reason of relationship, professional connexion, or interest in the asylum chosen for reception, and moreover requires that the medical examination in each case shall be separate and distinct, it makes no mention of the "qualifications" deemed necessary in the medical certifiers, beyond the fact that they must be "duly registered medical practitioners." The defects here are evident: 1. There is no com-

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pulsory education of medical students in mental diseases, and the class of psychological medicine is very scantily attended; I might even say it is virtually non-existent at many of the schools. 2. The qualifying examinations demand no knowledge of mental diseases. 3. Nine out of ten medical men have never seen a case of insanity until they are called upon in practice to examine a supposed lunatic and certify if necessary. What, then, I would ask, is the value of such a "skilled" certificate? And yet by virtue of an order signed by a relative or friend and two such certificates the subject can be deprived of his freedom! It being illegal for medical men to act in consultation on the case is certainly also a mistake, and opposed to the golden rule that "two heads are better than one." The origin of this separate examination clause was a desire to prevent collusion. In favour of the adequacy of the present system of certification, it has been stated that the medical officer of an asylum rarely returns a patient thus admitted as "not insane;" but, I would add, most medical officers are ready to admit that cases not unfrequently occur which have been unnecessarily sent to the asylum. The possible remedies for these defects are as follows:—1. The appointment of district experts as medical officers of insanity, occupying analogous posts with that of coroner or medical officer of health, with fixed salaries; these officers to be elected from their experience in the specialty, and to be allowed to practise as pure physicians. Their duties would be to examine all supposed lunatics in consultation with the medical man in attendance, to sign all necessary certificates, to visit all single patients and patients in private asylums in their districts, to report thereon from time to time to the Commissioners in Lunacy, and so act as district agents for the Commissioners or Deputy Commissioners. When the fact is taken into consideration that the work of the Lunacy Commission has more than doubled of recent years, its numerical strength remaining unchanged, it will be agreed that this aid will not be unwelcome. The salaries of these officers must be fixed to prevent any pecuniary interest in connexion with the certificates, for at present no fee is forthcoming in many instances unless the certificate be signed. The fees now paid for certification would go to meet the expenses of these new appointments. In cases requiring immediate treatment it should be in the power of the medical officer of any asylum to grant an "emergency certificate," under which a patient could be detained for three days, during which time the usual legal course might be pursued. 2. The theoretical and practical study of mental diseases to be made compulsory at the medical schools and by the examining bodies.

III. *Care and Treatment.*—*A.* Pauper patients are congregated in too large numbers in the county and borough asylums for the individual cases to receive the medical attention from day to day that should be allotted to them. It is generally acknowledged that mental diseases are most curable in the early stages, when they require careful treatment. Why then should not patients be received into "hospitals for the insane," of limited size (say, for from 100 to 200 patients), each having a highly qualified medical staff, with clinical assistants, and all the necessary means of treatment? Cases after a fixed time deemed incurable should be transferred to the "asylums," the "homes for incurables requiring no special medical treatment." Heretofore the lunacy laws have been framed on the score of humanity solely, with the result that the insane have steadily increased in numbers "by accumulation." Surely, it would be more economical, more humane, and more creditable to civilisation to endeavour to keep down this accumulation by offering increased facilities for cure. With this end in view, the ratio of medical officers to patients in the hospitals for the insane should be fixed by law, and the large mass of material for practical instruction in mental diseases contained in the county and borough asylums should be placed within the reach of the general body of the medical profession. *B.* Private patients are at the present time largely under the care of medical men who are asylum proprietors. This system, wrong, to say the least of it, from its possibilities of abuse, cannot be defended, and ought to be abolished at the earliest possible date. The asylums of the future for the upper and middle classes will be institutions similar to St. Andrew's Hospital for Mental Diseases, Northampton, and Wonford House Hospital, near Exeter, managed by Committees, and with efficient medical officers having no direct pecuniary interest in the patients.

IV. *Discharge on Recovery or otherwise.*—*A.* For pauper patients. The method of discharge by members of the Committee of Visitors, on the recommendation of the medical superintendent, appears in every way satisfactory. *B.* For private patients. The district medical officer of insanity should have power to order the discharge of any single patient, or any patient from any private asylum in his district, should he deem such a course desirable on account of recovery or otherwise. He should also be in a position to prevent the removal of any patient by his or her friends, when such removal is calculated to be fraught with danger to the patient or other persons.

While purposely abstaining from reference to the many good features of the existing lunacy laws, most of which owe their origin to the philanthropy of the legislators of the past, I would fain, in conclusion, remind the legislators of the present that insanity is but the outward expression of bodily defect or disease, and that if the acknowledged accumulation of the insane is to be arrested, it can be solely by offering legislative aid to medical science, with the hope that a largely increased percentage of cases of recovery will result therefrom.

Kent Asylum, Chartham.

CASE OF SIMPLE MENINGITIS; NECROPSY; REMARKS.

BY ERNEST F. NEVE, M.B. ED., M.R.C.S.,
RESIDENT PHYSICIAN TO THE COWGATE DISPENSARY, EDINBURGH.

I WAS called on Sept. 19th, 1884, to see Mrs. G——, aged thirty-six, multipara, seven children, two miscarriages, four of the children dead. Family history good on father's side. Mother died of consumption. A brother who had served in India suffered from sunstroke, had been intemperate, and died of "brain fever" after a short illness. The patient had delirium tremens two years ago, but since then had been temperate. She was six months pregnant.

On Sept. 17th she complained in the middle of the day of a headache. During the night she slept badly, seemed feverish, and complained of her head. On Sept. 18th she rose early, and worked hard at washing all day. She came home a little after 7 P.M. complaining of the pain in her head, which was worse. She was quite sensible, but had no appetite, did not sleep that night, complained of shivering, and wandered in her speech once or twice. On Sept. 19th she was sensible at 6 A.M. About 10 A.M. she became delirious, and very soon after sat up and began to grapple with the wall. She continued to struggle, but did not speak after 11.30 A.M.

When I saw her for the first time, at 12.30 P.M., she was flinging herself about wildly—one moment throwing herself forward then backwards, then over the edge of the bed, now against the wall, the next moment trying to rise up in bed. Three women of average strength were unable to hold her still. She was breathing very rapidly. The right pupil was found to be contracted, the left of normal size. Large doses of potassium bromide and chloral hydrate were attempted to be given every fifteen minutes. During the administration of this she vomited once, and the bowels were moved. At 2.30 P.M. she was in the same condition, so I placed her under the influence of chloroform. Her temperature was now found to be 101·3° F.; pulse 120 to 128 per minute, irregular but full; respiration 60 per minute. At 3 P.M. the pulse was 88, respiration 60. Ten ounces of urine were drawn off, high coloured, clear, no albumen. Cervix uteri soft; external os patent, internal closed. The hands were flexed and adducted at the wrists, and the thumbs tucked under the fingers. At 5 P.M. I cut off her hair, applied an icebag to the head, and allowed her to recover from the chloroform. The wild movements recommenced, but not so severely as before. Six minims of morphia (inj. hypod.) were now injected hypodermically. At 6 P.M. the temperature was 99·7°, pulse 95 to 100, full, strong, but irregular; respiration 28, and heavy. Pupils, left medium, right contracted, and both immovable to light. Lips rather dry; right knee flexed. At 8 P.M. the pulse was 96, respiration 36. At 10.30 P.M. the temperature was 100·2°, pulse 88, and respiration 28. Moves all her limbs occasionally; opened her eyes once on a bright light being thrown upon them, and rubbed the left eye upon my attempting an ophthalmoscopic observation. Fairly quiet during the night. On Sept. 20th, at 10 A.M., the temperature was 101·2°, pulse 118 to

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120, respiration 48; left pupil more contracted; movements on both sides of the body, more on left than right; face flushed and conjunctivæ somewhat injected. At 1 P.M. the temperature was 100·2°, pulse 100, respiration 50, coarse râles in throat; moved right arm; legs motionless and flaccid. She now gradually sank; the pupils became almost equal and contracted; by degrees all movements of the limbs subsided; the breathing became more shallow; extremities cold; radial pulse imperceptible; the heart very rapid. At 8 P.M. she expired and death was immediately followed by expulsion of the fœtus and placenta, the membranes being intact.

Necropsy, thirty-eight hours after death.—Dura mater only slightly adherent to skull cap. On removing the dura mater the vessels of the vertex were seen to be much injected. Beneath the arachnoid and over the entire surface of the brain, especially between the convolutions, there was sero-purulent and in some places purulent fluid; pia mater not thickened, but its vessels congested; injection especially marked over the junction of the left ascending frontal and parietal convolutions; at the base of the skull there was half an ounce of sero-sanguineous fluid; the venous sinuses of the base were full of dark semi-fluid blood; the vessels of the base of the brain were healthy; the membranes of the base appeared slightly thickened, especially in front of the pons Varolii and along the Sylvian fissures; in the latter there was a great amount of sero-purulent fluid. Careful macroscopic examination failed to reveal the presence of tubercles. On section the brain-substance appeared soft and its vessels were injected; the two lateral ventricles contained half an ounce of blood-stained fluid, with flocculi of softened brain-tissue.

Remarks.—The etiology of this case is obscure. There may have been some slight tubercular diathesis. The mortality amongst the patient's children was high, and her mother was consumptive; but Mrs. G—— had never manifested this tendency in the slightest degree. She was once intemperate, but not recently so. Intemperance is one of the only well-authenticated causes of simple meningitis.[1] It is possible that, for obvious reasons, the history was incorrectly stated in this respect. The symptoms are chiefly striking on account of their severity. The duration of the illness was very short. The violence of the motor excitement exceeds anything which I have seen or read of in connexion with meningitis. The unconsciousness and absolute silence of the patient in the midst of it all were very remarkable. Vomiting, which is looked upon as a frequent and important symptom,[2] was practically absent. This fact, which was also noticed by Dr. Lewis Smith in a certain proportion of twenty-one cases of meningitis analysed by him,[3] is probably due to its being in these cases a phenomenon of special reflex irritability needing some stimulant, such as food or medicine, to set it up. When this is not given, this symptom will often be absent. The temperature in meningitis, according to Rosenthal, Wunderlich, and Rosenstein,[4] maintains high figures. Tauner (loc. cit.) speaks of it as not very high, "seldom reaching 102° F." This case supports the views of the latter. The tendency to slowing of the previously rapid pulse noticed from the commencement was partly due, I believe, to cessation from violent movement whilst chloroform was being administered. Its final increase was possibly due to increasing pressure upon the brain.[5]

[1] Niemeyer: Practical Medicine, vol. ii., p. 236, edit. 1880. Huguenin: Ziemssen's Cyclopædia, vol. xii., p. 638.
[2] Tanner: Practice of Medicine, vol. i., p. 363, edit. 1875. Niemeyer: Practical Medicine, loc. cit.
[3] New York Journal of Medicine, March, 1855.
[4] Diseases of Nervous System. Rosenthal, 1879, vol. i., p. 16. Ziemssen's Cyclopædia, vol. xii., p. 650.
[5] Leyden: Virchow's Archiv., vol. lvii., p. 519.

SANITATION AT WOLVERTON.—On the 11th inst. the new sewage works for Wolverton were opened. They were commenced in April of the present year, and their estimated cost was £4467; but it is expected that they will be completed under that estimate. The purification of the sewage is attained by Lomax's quiescent precipitation system.

AT the meeting of the Wrexham Board of Guardians on the 18th inst. a hope was expressed that the advisability of the compulsory notification of infectious diseases in all parts of the United Kingdom would be fully discussed at the next Central Poor-law Conference, and a resolution passed.

AGORAPHOBIA.

BY R. PROSSER WHITE, M.B., M.R.C.S.

IN the wide field of scientific medicine, research and demonstration are gradually hemming in and contracting the circle of functional disorders, and the onus of causation is placed upon some unsubstantial coccus or some undefined catalytic action. Functional disorders, however, do exist, and are perhaps increasing, as is proved by the frequent usage of words expressing derangements without inflammation, or constant structural change, such as neurosis, neurasthenia, hysteria, hypochondriasis, &c., to which category this curious phase of nervous phenomenon, I think, belongs.

B. C——, aged about thirty, a professional gentleman, of active intellectual habits, whose previous health was good and whose family history shows no predisposition to nervous disorders, complains that for the last five or six years he has suffered from a nervous kind of light-headedness, gradually becoming more marked and troublesome. The attacks occur about twice a week, and are brought on by the ideas of space, vastness, height, depth, eternity, or such kindred subjects; and these ideas, however conveyed to the brain, such as the viewing of a large building, or vast area, or in conversation, the description of a voyage, even thoughts of the infinite power of God, or a feeling of loneliness—all and each are able to produce upon him an acute attack which shows itself by pallor of face, a peculiar oppression at the back of the head, palpitation, large drops of perspiration upon the forehead, and a feeling of great dread and exhaustion, and sometimes, as he describes it, a feeling of impending madness. The general condition shows slight tendency to stoutness, with anæmia; the lungs, heart, and kidneys are practically sound. He suffers very much occasionally from bilious attack, as he calls them, but otherwise is not troubled with headaches, tinnitus, deafness, or any stomach derangement. After an attack he feels sleepy and heavy, and sometimes passes a large quantity of urine; he says he feels nervous, and dreads the onset of another attack. He is occasionally troubled with spermatorrhœa, and reflexes of all kind are very sensitive.

These feelings and attacks may sometimes be avoided or lessened in severity by moral determination; deep concentration of thought will enable him to cross an open space or certain places which otherwise induce these attacks of dread; companionship relieves the feeling of loneliness and fear produced by the thought of taking a holiday in a part of the country new to him. The presence of a cart, even a stick or umbrella in the hand, persons, or trees, gives a sense of confidence when walking an unknown road. Cheerful and lively conversation, with a congenial companion, will always ward off the attacks.

This case is, I think, a typical example of that described in 1870 by Benedikt and in 1872 by Westphal, under the term "agoraphobia," and is, I venture to think, a not uncommon form of nervousness, though exceptional in its extreme forms; it is an essentially neurotic, as distinguished from an hysterical, affection.[1] It is rarely described in text-books. Quain's "Dictionary of Medicine" gives only a short article, written by Dr. Fred. Roberts, who does not think the complaint idiopathic, but says "it is sequential to some other condition." What that other condition is he does not say. Dr. Maschede is mentioned as describing a case of clithrophobia[2] in a young man who exhibited giddiness and oppression whenever he entered a small room or narrow space, and was obliged to camp out in the open fields and woods, and only in the depth of winter could he be prevailed upon to sleep in a large and airy apartment with all the windows open. Dr. Maschede also mentions two other similar cases. The author thinks that agoraphobia and clithrophobia ought to be classed under the same head, as in both cases the characteristic symptom is that the patient cannot by any means form an accurate conception of his surroundings.

Dr. Grainger Stewart, in a recent lecture upon "giddiness," thinks that these cases are closely allied to ordinary giddiness produced by what he calls and describes as "contradictoriness of sensory impressions." "Normal

[1] Gulstonian Lectures, by Clifford Allbutt, March 4th,
[2] British Medical Journal, May, 1879.

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equilibrium is the resultant of normal customary external impressions, and the symptoms of agoraphobia are produced by the absence or clashing of one or more of these impressions." This explanation seems to me hardly satisfactory, as my patient insists very strongly that there is a distinct difference between the giddiness associated with his bilious attacks and the giddiness which accompanies his agoraphobic attacks; again, companionship can hardly affect a man's appreciation of vertical lines, by which Dr. Stewart thinks the patients guide themselves, and also we find that the mental ideas of infinity, vastness, &c., are just as potent to produce the attacks as are external impressions.

To me the case seems essentially a form of mental depression in certain faculties unassociated with delusion and closely allied to what is called simple melancholia. There are disorders of perception; bright light, loud noises, likes and dislikes to persons and things are more pronounced and uncalled for, there is increased irritability to all external impressions, and these are accompanied with some form of deteriorated physical health; but I think the seat of this condition is certainly central, not peripheral. May it not be due to some functional irritation of the cerebral cortical sensory centres, which Ferrier calls the anatomical substrata of ideation?

The prognosis in this case is good, and he has always improved and recovered from his nervousness with the recovery of his usual good general health.

Treatment has been with the object of improving the general health by small doses of cod-liver oil, attention to diet, and the avoidance of such associations as aggravate the disorder. Great relief has been found from wearing a pair of dark-purple spectacles, especially upon bright days. The recumbent position, bathing the head with cold water, or a small dose of some stimulant, will often ward off an attack for some time. The peculiar pain in the back of the head is best relieved by pressure of the hands. A dose of bromide of potassium and strychnia will enable him to mount a hill or do some work which he could not have accomplished and would have shrunk from without it, and he finds he requires a quarter of an hour before the medicine acts. Other medicine he takes from which he is confident he receives benefit—namely, nux vomica, iron, and hydrobromic acid.

Wigan.

THE SURGICAL TREATMENT OF DEBILITY, ASIATIC CHOLERA, ETC.

BY J. R. UHLER, M.D.

A FEW years ago, having a patient with stricture of the œsophagus under my care, whom I was unsuccesafully trying to nourish by the rectum, I determined to take advantage of some of the little pores in the subcutaneous tissue to introduce more liquid into the system. For this purpose a nasal douche, with a two-way cock attached to soft rubber tubes, was employed, and at the end of each tube, where the nozzle is usually placed, the cylinder of a hypodermic syringe, deprived of its piston but retaining the needle, was substituted, making a reservoir apparatus somewhat like an aspirator, with two tubes and no valves. This receptacle was filled with whisky and water and other thin nutritive fluids, and the needles were thrust deeply into the areolar tissue of the extremities, while the reservoir was raised slightly above the level of the body to prevent the entrance of air. The fluid was prevented from escaping by pinchcocks close at the ends of the tubes, but at the moment of insertion a few drops were allowed to flow from the needles to show that it was right, and the pinchcocks were then removed. The reservoir was now raised high enough to permit the liquid to pass readily through the needles by natural flow, giving a constant, gradual supply to the tissues, care being taken not to elevate it too much, so as to avoid undue pressure or large collections of fluid under the skin, the object being only to supply the fluid a little faster than it can be absorbed, and to avoid abscesses. This device worked very well on the first day, affording much relief to the patient; but in the course of time the needles became loose, and larger-sized ones had to be substituted. Since then I have used it a few times as a temporary expedient in the vomiting of pregnancy, coma, phthisis, emaciation, after great loss of blood, and when food could not be swallowed, retained, digested, or absorbed. I have also thought (and find from the Journal of the American Medical Association of August 9th, 1884, that Dr. Todd has suggested the same treatment in a different way) that sterilised artificial serum, composed of the chlorides of sodium and potassium in small quantity, dissolved in distilled water, can thus be supplied to the depleted system in cholera from one or more reservoirs connected with three or four tubes and aspiration needles inserted into the extremities. A better plan, however, for cholera, and one which acts locally, and can be combined with this when necessary, is to fill the peritoneal sac, without distension, with sterilised artificial serum, injected at the temperature of the body by the aspirator or other appropriate instruments. The fluid is thus brought in contact with the other side of the diseased intestines, where it can be withdrawn as wanted, and will, like ascitic fluid, act by pressure, diminishing somewhat the size of the bloodvessels and lumen of the bowels; and, as it is exosmosed, washing away or diluting those low forms of life that are said to be the cause of the disease. The fluid when absorbed will also prevent that tarry condition of the blood which stops circulation, and will not interfere except by dilution with opium, acids, gases, or any other antiseptic remedies that may be thought proper to be applied to the interior of the stomach and bowels. For security, the peritoneum may be cut down upon with antiseptic precautions by an ordinary scalpel, and when it is reached a minute hole be made by pinching up the part and incising it so as to admit the dome-shaped aspirator needle or other purified tube. The mouth of the reservoir or aspirator bottle should be closed by sterilised cotton-wadding, and the wound be antiseptically dressed immediately after the operation. The proper time to fill the peritoneal sac is when the serum is rapidly draining off from the bowels, and before collapse occurs, but I would not hesitate to use it in that condition so long as there seemed to be any prospect of absorption.

Baltimore, Maryland, U.S.A.

EXCISION OF LOWER JAW FOR RECURRENT MYELOID EPULIS.

BY W. ALEX. MACKAY, M.B., C.M. EDIN.

EMILIA DE G——, aged twenty-six, born in Madrid, had the last lower molar tooth extracted in 1877. The extraction was followed by a good deal of bleeding and pain. Three months after she felt a hard painless swelling on the outer aspect of the bone corresponding to the situation of the extracted tooth. This slowly increased till in 1881 it had attained the size of an orange. The patient then consulted Senor Don Enrique Perez Andres, who removed the tumour. In three months the growth had returned in the same place, hard and painless as before, but growing now more rapidly, so that on December 20th, 1883, the left cheek was found tightly stretched over a tumour which entirely surrounded the left half of the lower jaw. The growth extended upward to the articulation, inward half way across the mouth, forward it reached the symphysis, and downwards it projected on the neck. The alveolar border of the upper jaw was carried inwards nearly to the middle line, the teeth of this jaw being received into a deep sulcus on the upper surface of the tumour. Examination of that part accessible from the mouth gave rise to pain, and this part also bled when touched, and was of a bright, fleshy, red colour. The cheek, which was adherent, was so tightly stretched that it had ulcerated at the most prominent point; but the ulcer had healed. Neighbouring glands were unaffected. The patient was of a nervous temperament, with a fast and weak pulse; very anæmic and emaciated, as she could not masticate her food, and had lived for some months entirely on fluids. There was slight congestion at the apex of the right lung. Heart and other organs were healthy. The urine was normal in quantity, and did not contain albumen. Her family history was good, and embraced no instance of tumour.

On Dec. 26th, 1883, the patient being under an anæsthetic, the following operation was performed. Entering the knife at the tempero-maxillary articulation, an incision was carried down along the posterior border of the ascending ramus, round the angle, and along the body of the jaw for

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about half its length. This was met by a second incision, running down and back through the lower lip, a little to the right of the middle line. Grasping the cheek with the left hand, it was reflected up from the tumour, which then came well into view. Clearing the anterior attachments of the tongue from the bone, the saw was applied at the level of the second incisor tooth of the right side, which had been previously extracted. The lateral attachments of the tongue being severed close to the bone, the temporal muscle was cut at its insertion into the coronoid process, and the jaw being drawn outwards and slightly downwards the disarticulation was easily effected and the mass removed. The facial artery, which was small, the inferior labials, and one or two muscular branches, were ligatured. The large cheek-flap fell well into position, and was retained by silver, silk, and catgut sutures. Placing a slip of lint in the deep incision, a light dressing of protective and boracic wool was applied, and the patient placed in bed on her right side. During the after-dressing the mouth was daily sponged out with a mixture containing equal parts of tepid water and tincture of eucalyptus globulus. A short cough proved troublesome for a few days, but was relieved by inhalations of the same tincture. The temperature did not rise above 102° F., nor the pulse above 120. The wound healed rapily throughout its entire extent, except where a small opening remained, about the middle of the incision, discharging saliva. The patient sat up in bed on the tenth day after the operation, dressed on the fourteenth, and at present continues in perfect health.

Remarks.—The microscope shows a dense fibrous structure containing nucleated spindle cells and groups of multinucleated myeloid or giant cells. The case illustrates the certainty with which these epuli return unless that part of bone from which they spring be removed with them; in the former operation the tumour had simply been cut off, and its site freely cauterised. It also shows well the increased rapidity of growth in tumours reproduced of the fibroid variety. Limitation by the symphysis and by the articulation was well marked, as the growth extended quite to the joint, and forward to the middle line. Although the cheek had ulcerated, the ulcer, not being malignant, had healed. The rapidity and completeness of recovery encourage removal of the largest growths in this region; although, from the size of the tumour, section of the portio dura and consequent deformity were unavoidable.

Huelva, Spain.

A REMARKABLE CASE OF UMBILICAL TUMOUR.

BY J. WYATT PRATT, M.R.C.S., L.R.C.P. EDIN.

CASES of umbilical tumour are not of frequent occurrence, and the following one presents some characters that are unique. Three years ago I attended the birth of a male child whose umbilical cord was of average length but of unusual thickness throughout, and which for the space of an inch and a half from the abdomen presented a dilatation of more than double the diameter of the remainder. The usual ligature was applied just beyond this enlargement. The resulting stump was exceedingly tense and hard. On the ninth day the coverings at the top had sloughed and showed a red granular projection, and in about a month all the outer coating had disappeared, and a firm, smooth, red tumour was left. This was an inch and half in length, pyriform in shape, and attached to the umbilicus by a short but thick pedicle. The outer expanded extremity presented a central orifice, from which more or less constantly a watery fluid exuded. There was no evidence of hernia. The growth did not appear to be painful to the touch, nor even to firm pressure; its surface bled when handled unless treated gently with oiled fingers, and, as usual in such cases, always became more full and vascular when the child cried. Towards the end of the third week feculent matter oozed from the terminal orifice, and this recurred, every three or four days only, for the following month. During the latter period, on three occasions, without any appreciable cause, bright-red blood trickled out from the same aperture, this at several days' interval, and upon the last occasion in considerable quantity. The infant in other respects was healthy, and at the breast thrived well. The tumour was dressed once daily with carbolic oil. When the little patient was seven weeks old, after the last somewhat severe attack of hæmorrhage, I tied a strong silken cord around the pedicle. This was followed by sharp bleeding from the seat of ligature, which was easily arrested by a fold of lint soaked in styptic colloid. A pad and a firm bandage were then applied to the abdomen. The bowels had been relaxed naturally before this treatment. Three days afterwards, upon the removal of the binder, the growth was found detached in a little well of pus upon the lint. The resulting raw umbilical surface was dressed with zinc ointment and a pad, and in a few days more nothing was noticeable except an induration around the umbilicus. Since then the child has continued well. The case is worthy of record on account of the fistulous communication with the bowel, and the tendency to spontaneous hæmorrhage.

Wiveliscombe.

FATAL CASE OF HYDROPHOBIA.

BY MAURICE KNOX,
SURGEON, ARMY MEDICAL DEPARTMENT.

PRIVATE H——, aged twenty-two years, a strong and healthy man, was badly bitten on the exposed surface of the left wrist and hand on May 25th, 1884, by a native dog. The dog was immediately killed by one of his comrades, and the man sent to hospital, where his wounds were washed, and freely touched with nitrate of silver; he remained in hospital twenty-three days. The patient presented himself on the morning of August 13th complaining of pain in his back and shoulders, the result, he said, of throwing a heavy shot. Shortly after admission the symptoms of hydrophobia commenced to develop themselves; he complained of discomfort about his throat, and when he was presented with fluid he started back with a look of horror on his face, became wildly excited, and the muscles of his throat and the muscles of respiration were acted on, producing severe spasms and short quick inspirations. The poor fellow when spoken to made every effort to swallow fluid, or take ice into his mouth, but without success, and his cry was "Take away the water; it will kill me." His skin was cool, and bathed in sweat; pulse 80. Given one-third of a grain of morphia hypodermically, and twenty grains of hydrate of chloral by enema; to remain in a dark room. 6 P.M.: Temperature 99·6°; pulse 80; has had some severe spasms within the last three hours. Given half a grain of morphia hypodermically, and twenty grains of hydrate of chloral by enema; also an enema of eggs and brandy. 11 P.M.: Patient much exhausted; any movement in the room or flash of light produces violent spasm of the muscles of the throat and muscles of respiration; he shrinks away in dread from being touched, is at times wildly excited, imagines there is a dog in the room, at other times talks quietly and sensibly to those about him. Given half a grain of morphia hypodermically, twenty grains of hydrate of chloral by the rectum, and an enema of eggs and brandy. Patient became quite exhausted before morning, and died at 3 A.M. on Aug. 14th. During this case no pain was complained of at the place where the bite had occurred, and there was very little secretion of viscid saliva.

Necropsy, five hours after death.—Rigor mortis well marked. Five scars on back of the left wrist, one on front. Nerves of the forearm apparently healthy. Brain: Weight 41 oz.; the surface vessels contained dark fluid blood; nothing abnormal apparent to the naked eye on section. The blood throughout the body was dark and fluid; nothing abnormal was observed about the mucous membrane of the mouth and throat. The pericardium and heart were normal. Old adhesions on both sides of the pleura and lungs; both lungs full of dark blood. On section the kidneys presented a dark colour, and the spleen was congested. On section the liver showed a dark colour, weight 3 lb. 8 oz. The stomach was quite empty, and the coat appeared to be much thickened.

Bareilly.

A GIFT of £100, from an anonymous donor, has been received by the Secretary of the Swansea Accident Hospital for the benefit of the institution.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

NORWOOD COTTAGE HOSPITAL.

CASE OF OVARIOTOMY, WITH HIGH ADHESIONS; RECOVERY.

(Under the care of Dr. JOHN H. GALTON.)

A. C——, aged fifty-eight. The maternal grandmother died of dropsy of the abdomen and legs at the age of sixty. In 1879 the patient first noticed a swelling of the abdomen; she did not observe whether it was one-sided. In May, 1882, she first came under observation, with uniform enlargement of the abdomen to forty-one inches and a half in circumference; no solid tumour to be felt anywhere, universally dull on percussion. The uterus was small, freely movable, and no swelling could be detected on the roof of the vagina. She had at intervals severe attacks of pain in the hypochondria.

On August 11th, 1884, there was great distress from the swelling; the abdomen measured forty-eight inches. To relieve this she was tapped, two pailfuls and a half of coffee-ground-coloured tenacious fluid being drawn off. After tapping, one small solid lump, four inches by two, could be felt in the epigastrium; the rest of the tumour, lobulated and solid to the feel, had shrunk into the lower iliac regions on both sides, and was freely movable.

On Oct. 14th she was admitted into the hospital, greatly emaciated, with an anxious ovarian look. Pulse 92, tongue clean; the abdomen universally distended and dull all over, measuring forty-five inches and a half.

16th.—At 1 P.M. operation was performed, with the assistance of Drs. Miller and Hetley, and Messrs. Sidney, Turner, and Plimmer. Chloroform was administered by Junker's inhaler by Dr. Brockwell, four drachms being used during the operation, which lasted an hour and ten minutes. The slight bleeding in the surface incision of five inches was arrested by torsion of two vessels. There were recent adhesions all round the upper segment of the cyst, very firm to the abdominal wall and intestine, in the right hypochondrium. In detaching these with the finger nail the cyst burst. It was already partially emptied by a Spencer Wells' trocar, but a quantity of shreddy lymph was discharged from the broken cyst, most escaping externally. One omental vessel was secured by torsion. The whole surface of the intestine, uterus, and cyst wall was deeply injected from recent peritonitis. The cysts were drawn forward, and the pedicle ligatured in two portions half an inch from the uterus. The pelvis was well sponged out, and the wound brought together by five thick silver sutures, including the peritoneum. Two superficial sutures were passed at the ends, green protective and eucalyptus gauze dressing, fastened with broad strips of plaster, and a four-tailed flannel bandage were applied. Twenty pints of fluid and three pounds seven ounces of solid were removed. Half a grain of morphia suppository was given. Pulse after operation 82. 7 P.M.: Pulse 106; temperature 103°; perspiring freely; tongue moist; slight twinges of pain in abdomen. Ordered twenty minims of tincture of opium every three hours; only ice to suck. 12 P.M.: Pulse 94; temperature 99°; no pain. Drew off four ounces of urine, much flatus passing per anum.

17th.—11 A.M.: Pulse 94; temperature 102°; respiration 19. Sleeping quietly. No pain or vomiting. To repeat opium every four hours, and to have an ounce of milk and lime water alternately with half an ounce of beef-tea every two hours. 8 P.M.: Pulse 84; temperature 101°; respiration 27.

18th.—Pulse 94; temperature 100·8°; respiration 11; voice strong; says she could take more food. To repeat opium every six hours. No distension or tenderness of abdomen. 5 P.M.: Temperature 98·2°. 8 P.M.: Pulse 84; temperature 99·4°. Has had twinges of pain in lower part of abdomen. Beef-tea slightly returns. To go on with milk and lime-water. Has feeling of faintness. To have half a teaspoonful of whisky every two hours.

19th.—Pulse 82; temperature 98·6°; no pain; slept well; hungry; had half a pint of beef-tea during last twelve hours; wound dressed, perfectly healthy; only slight oozing between two lower sutures; free from smell; abdominal walls flaccid with abdominal respiration and free peristalsis; had three tablespoonfuls of soft boiled rice with beef-tea. 9 P.M.: Pulse 88; temperature 100·6°.

20th.—Pulse 84; temperature 98·6°. 9 P.M.: Pulse 86; temperature 98·2°. To repeat opium at night only. Had rice with beef-tea; bread-and-butter and tea.

21st.—Pulse 84; temperature 98·2°. 6.30 A.M.: Passed urine naturally. 7.50 A.M.: Has slight shivering; temperature 101·2°; wound dressed, healthy; no discharge; surface union firm throughout; abdominal respiration; no tension of abdominal muscles anywhere; bowels acted naturally with solid motion at 7 P.M. 6 P.M.: Pulse 84; temperature 97·8°.

23rd.—Pulse 84; temperature 97·8°; wound dressed; entirely healed; removed all sutures; dressed with dry lint and strapping, and four-tailed bandage; bladder distended; drew off a pint and a half of urine; during the day thirty ounces of urine were, in all, passed. 8 P.M.: Pulse 84; temperature 99·4°. An enema of warm water brought away a quantity of solid motion.

25th.—Pulse 94; temperature 97·8°. Urine contains mucus and pus. Ordered four ounces of port wine.

26th.—Pulse 84; temperature 97·8°. Two natural motions. Two small bedsores formed from the pressure of the bandage folds. Ordinary diet.

29th.—Pulse and temperature normal. Urine still loaded with muco-pus. Ordered the following mixture, a drachm and a half of dilute nitro-hydrochloric acid, three drachms of glycerine, and eight ounces of the decoction of pareira; an ounce to be taken three times a day.

30th.—Applied abdominal belt, with pad, over wound.

Nov. 3rd.—Out walking. The urine improved; bedsores were healthily healing, and on Nov. 11th she was discharged cured.

Remarks.—The existence of the solid mass above, the history of frequent severe pains in the upper abdomen, and the great emaciation and weakness, constitute an apparently unfavourable case. The difficulty of separating the high adhesions on the right side, and the bursting of the cysts during the operation, made success unexpected; but the patient recovered without a bad symptom. Again, we notice the free discharge of fluid by perspiration and urine after the operation, as if when the cyst is removed, the drain of fluid to which the circulation is accustomed must be kept up by other channels.

PUBLIC HOSPITAL AND DISPENSARY, SHEFFIELD.

PNEUMONIA; CONVALESCENCE; GANGRENE OF BOTH FEET; PARALYSIS OF LEFT ARM AND LEG, AND OF RIGHT SIDE OF FACE; CHEYNE-STOKES' RESPIRATION; DEATH; NECROPSY; CLOTS IN RIGHT MIDDLE MENINGEAL, RIGHT POPLITEAL, AND LEFT ANTERIOR AND POSTERIOR TIBIAL ARTERIES; HÆMORRHAGIC INFARCT IN UPPER LOBE OF RIGHT LUNG.

(Under the care of Mr. PYE-SMITH and Dr. PORTER.)

FOR the following interesting notes we are indebted to Dr. Sinclair White, F.R.C.S. Eng., house-surgeon:—

William W——, a cooper, and addicted to drinking beer to excess, but fairly healthy and of robust appearance, was attacked with pneumonia about two months prior to his admission to the Sheffield Public Hospital. He convalesced from the attack, and went to the seaside to recruit his strength; while there he lost his cough, and was restored almost to his usual health. On August 18th, 1884, while walking across the room he suddenly felt pain and numbness in the legs and feet, and went at once to bed. In the course of a few hours the feet became cold and lost sensation; next day there was complete loss of motor power in the feet, and the tissues were œdematous. On Aug. 20th the œdema had extended half way up the legs, and the toes, which were previously white and bloodless, assumed a purplish hue.

He was admitted into the hospital on Aug. 22nd; his condition was then as follows. Both legs and feet were quite

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cold, destitute of feeling, and slightly swollen; the right foot, in its anterior half, was of a dark purplish colour, and the skin presented several bullæ; the toes of the left foot were of a similar colour. The femoral arteries could be felt pulsating in the groins, but no pulsation lower down could be made out. He complained of considerable pain in the legs. The lungs were everywhere resonant and the breath sounds natural; there was no cough and no dyspnœa. The action of the heart was tumultuous, the heart sounds normal, and the pulse 75 per minute and regular. The evening temperature was 101°, that of the morning 100°. The urine was somewhat scanty, but presented nothing abnormal. The tongue was clean and the appetite good. He denied having had syphilis. He was ordered a liberal diet, a moderate amount of stimulants, and half a grain of opium three times a day. The feet and legs were swathed in cotton-wool. The progress of the case is related in the following notes, which were taken from time to time.

August 26th.—Little alteration, the œdema of the legs has subsided slightly.

28th.—Sensation and warmth extend as low as the lower third of the legs. The gangrene is stationary. Sleeps badly at night.

September 1st.—Condition of legs unchanged. Was slightly delirious during the night.

3rd.—Was very delirious during the night and got out of bed. The pulse is irregular. There is dyspnœa. Numerous mucous râles are audible over both lungs.

4th.—Patient is much worse, the night delirium persists. There is complete paralysis of the left arm and leg and slight paralysis of the right side of the face. The pulse is irregular and intermittent. Cheyne-Stokes' respiration is present. Consciousness is impaired.

6th.—Has been semi-conscious for the last three days; the paralysis persists, so does the Cheyne-Stokes' respiration, the latter is very marked, the abnormal cycle occupies a space of 67 seconds, the ascent is made up of 33 respirations, which become deeper and quicker until the climax is attained, the time occupied by the ascent is 40 seconds; the descent is made up of 10 respirations and occupies a period of 15 seconds, the last few respirations being very shallow; the pause occupies a period of 12 seconds. The various phases of the cycle succeed one another with great regularity, almost always in the middle of the ascent the patient utters two or three groans. 8 P.M.: Pulse very weak, there is much dyspnœa. The respirations have ceased to be of the Cheyne-Stokes type. There is complete loss of consciousness. The sphincters have ceased to act.

Death occurred on the morning of September 7th.

A post-mortem examination made ten hours after death revealed the following condition. The brain was unusually soft, especially on the right side; there was a firm clot in the right middle cerebral artery. The mucous membrane of the bronchial tubes was much congested and covered with mucus; there was a large hæmorrhagic infarct in the upper lobe of the right lung. The heart weighed eighteen ounces; its lining membrane was smooth and glistening, nothing resembling ante-mortem clot or vegetation was anywhere visible; valves healthy; there were two yellowish elevations—commencing atheroma—on the lining membrane of the aorta near its commencement, the rest of the aorta and its primary branches were normal. Liver large and slightly fatty. Spleen normal. Kidneys intensely congested, evidence of commencing cirrhosis, shown by adherent capsule and puckered exterior. Femoral arteries healthy. On tracing their continuity downwards a firm clot was found in the right popliteal artery, and similar clots in the left anterior and posterior tibial arteries. The clots were of considerable length, they completely obstructed the arteries, and were adherent to the lining membrane. The arteries above the clots were empty, below the clots they were full of dark fluid blood. The veins down to the seats of obstruction were normal. No difference could be made out between the centre and the periphery of the clots.

THE man who, being an inmate of the County Asylum at Mickleover, stabbed Dr. Murray Lindsay, the medical superintendent, in three places, has been committed for trial. Dr. Lindsay was, we are glad to say, sufficiently recovered to be able to give evidence at the examination.

VACCINATION GRANT.—Mr. George Lowther has been awarded the Government grant for efficient vaccination in the east district, Kingston-upon-Hull (fourth award).

Medical Societies.

WEST LONDON MEDICAL AND CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Nov. 7th, Mr. F. Lawrence, President, in the chair.

Mr. BERNARD PITTS read a paper on Foreign Body in the Air-passage, followed by abscess in the lung, with recovery. A boy, aged nine years, was brought to St. Thomas's Hospital on Dec. 29th, 1880, in an insensible and asphyxiated condition. He had been seized with difficulty in breathing fifteen minutes before while eating chestnuts. Tracheotomy was performed in the casualty room the moment he was seen by Mr. Pitts. Hæmorrhage was free, and no relief was afforded until a catheter was passed down the trachea, a foreign body was then suddenly coughed beyond the tracheal opening into the larynx, and the bleeding at once ceased, and air began to enter the chest freely. The foreign body, consisting of a portion of a chestnut about the size of a dice, was easily extracted from the larynx by forceps introduced through the wound. The next day there were evident signs of the presence of a further piece of chestnut in one of the divisions of the right bronchus, and an attempt, under chloroform, was made to dislodge it by inversion of the patient, but failed. The edges of the trachea were fastened by sutures to the margin of the skin wound. In a few days there were signs of the consolidation of the upper part of the right lung, and a condition resembling acute phthisis became established — high temperature, sweating, emaciation, copious expectoration of a very offensive muco-purulent character—with the physical signs of a larger cavity opposite the second intercostal space. The boy, however, made a good recovery, and, after nearly three months' acute illness, left the hospital for a convalescent home. He was examined six months later, when the cavity was found to have contracted, and the boy to have regained his usual health, there being now no evidence of former mischief, except a slight flattening at the second and third intercostal spaces on the right side of the chest. Mr. Pitts referred to other cases to show how soon abscess of lung may follow the obstruction of a bronchial tube by foreign body; and, in conclusion, made some general remarks on opening the air-passage in cases of sudden emergency.—Dr. THUDICHUM referred to impaction of a tooth giving rise to consumption, ending in death, and Dr. CHAPMAN to a case where a shot was impacted, giving rise to phthisical symptoms.—Mr. PICK referred to some remarkable cases, one especially where a piece of tobacco-pipe became impacted in the bronchus, the child breathing through it.—Dr. BECKINGSALE and Mr. WEISS mentioned cases, and Dr. TRAVERS strongly recommended exploration of the upper part of the larynx by the finger before operating.—In reply to Mr. PICK, Mr. PITTS stated that no portion of the impacted piece of chestnut had been found in the sputum, but that it had probably slowly disintegrated.

Mr. M. THOMPSON read a case of Retention of Urine, with fever, followed by death. On Sept. 11th E. E——, aged twenty-two, came to the West London Hospital with twenty hours' retention. His doctor had tried to draw off his urine. The patient had had a stricture three years, several occurrences of retention, and practised self-catheterism. He was a healthy-looking man, seemed in great pain, bleeding from the urethra, and bladder distended. No. 15 French catheter was arrested 5 inches down the urethra, and felt rough, and discharge of blood followed. Patient was sent to bed, a hot bath (100° F.) was given; quinine, opium and hyoscyamus were ordered, after which three pints of urine (free from blood) were drawn off through a railroad catheter passed over a long piece of catgut. On the 12th he did well, excepting that he appeared exhausted, passed water fairly until the following evening (twenty-four hours from admission), when rigors set in, with temperature 105·6°. Ice was applied to the head and bladder region, sulphate of quinine, twenty grains, were given in three doses at intervals of an hour, and in three hours the temperature was 101°. At midnight, on account of feebleness of pulse and coldness of extremities, ice was discontinued, and two ounces of brandy were given in hot water every two hours. On the 13th vomiting set in, with increasing collapse and cessation of urinary secretion. Lumbar poultices and hot air baths with stimulant enemata were used; but on the 14th,

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after increasing collapse and cyanosis, the temperature rose to 107°, and death ensued. At the post-mortem examination general subcutaneous emphysema was observed, and endocarditis; a slough in the urethra at the seat of stricture; false passages and pus in prostate. Bladder contained one ounce of urine; kidneys healthy. Mr. Maitland Thomson remarked that the case illustrated the danger of introducing micro-organisms into false passages when self-catherisation was practised. The urine, too, acting in the false passages, might have caused an inflammatory focus, resulting in systemic infection.—In the discussion which ensued, Dr. ALDERSON related a case in which the ferret catheter (Teevan) was successful.—Mr. LLOYD would in most cases rather relieve by a small catheter than pass an overslíding one.—Dr. THUDICHUM, referring to the emphysema, judged the case was one of uræmia, an opinion which was confirmed by Mr. DUNN, who made the post-mortem, and remarked on the ammoniacal nature of the emphysematous gas.—Dr. PATMORE, when bleeding occurred, enjoined perfect rest, and five-grain doses of quinine to ward off fever.

Mr. NOBLE SMITH read a paper on the objects of the Medical Sickness Annuity and Life Assurance Society, and Mr. Radley, the secretary, attended to answer any questions put by members.

Dr. CHAS. GOOD read a case of Gastric Ulcer ending in perforation and sudden death. Miss L——, aged twenty, since having an attack of uterine inflammation, three years since, had been in fair health, with the exception of constipation and flatulence, with capricious appetite. When seen at 7 P.M. on Sept. 25th she was suffering from acute pain in the umbilical and hypogastric regions, slight mucous vomiting, rigidity of abdominal muscles, with tympanites, tongue clean and indented. Temperature 99°; pulse 84, small and hard. She had taken castor oil, and Dr. Good ordered hot fomentations and an opiate mixture. At 4 P.M. on the 28th she was taken suddenly worse, and died before Dr. Good's arrival. The abdomen was distended and tympanitic. Necropsy, thirty-six hours after death, revealed the following conditions: mesentery thickened, and intensely hyperæmic; two folds of intestine in contact with the mesentery, inflamed; a circular punched-out ulcer, one inch and a half from the pylorus on the anterior surface of the stomach. The ulcer had indurated edges and was as large as a threepenny piece. No extravasation of blood or adhesions. Gastric mucous membrane pale. Dr. Good remarked on the medico-legal aspect of the case. The clinical history did not point to gastric ulcer. From the sudden death the case might have been perforating duodenal ulcer, rupture from enteritis, or the sudden fatal termination observed in some cases of peritonitis. Sudden death from nerve shock without hæmorrhage was very rare.

Mr. H. PERCY DUNN showed a specimen of congenital contraction of a portion of the Colon, Sigmoid Flexure, and the Rectum, from a patient aged sixty-five.

ACADEMY OF MEDICINE IN IRELAND.

THE opening meeting of the Medical Section was held on Nov. 21st.

The PRESIDENT, having congratulated the Academy on its highly satisfactory position, entered upon the discussion of some of the relations existing between medicine and law, pointing out their frequently unsatisfactory nature. In passing, he touched upon the position of medical men as experts, as witnesses, and as defendants, and proceeded to discuss their relations with the Court of Chancery, both as regards their attendance on minors and lunatics and as claimants for settlement of accounts paid through the Court. He illustrated, by cases arising within his own experience, the difficulties met with first from the non-payment of these accounts through the fault of officers of the Court, and, secondly, by their arbitrary reduction of fees.

Dr. WALTER G. SMITH read a communication on the various forms of Lupus, which he illustrated by plates. On the motion of Dr. BANKS, seconded by Dr. GORDON, the discussion on Dr. Walter G. Smith's paper was postponed to next meeting, in order to give Dr. Bernard of Londonderry an opportunity of reading a communication.

Dr. WALTER BERNARD (Londonderry) related the clinical history and exhibited the morbid specimens of a case of prolonged Anuria occurring in a man aged seventy-five years. In December, 1883, micturition became more frequent. In February, 1884, epistaxis and hæmaturia occurred, accompanied by diarrhœa and febrile symptoms. In May the hæmaturia recurred, and between June 6th and 17th complete suppression of urine existed, curiously without any inconvenience to the patient. When the flow of urine was re-established the amount passed averaged 125 to 140 ounces. Suppression of urine set in again on July 4th and 5th, and on the third day he passed bloody urine. In August a tumour was detected behind the pubes. He rapidly wasted and died on Sept. 13th. The post-mortem examination was held eleven hours after death. The uro-genital organs were removed. Mr. Shattock reports having found soft carcinoma of the prostate, bladder, and liver; both ureters dilated. No carcinoma existed in the substance of the kidneys.—The PRESIDENT said this was the first time he had heard of total suppression of urine lasting eleven days without immediate fatal results. It was difficult to understand how it could have taken place for such a length of time without uræmic poisoning.—Dr. ABRAHAM observed that the microscopic specimens were the most beautiful he had seen for some time of morbid growths in the bladder and prostate. As regards the origin of the growths he would scarcely venture an opinion; there were several cells and nests of cells which were extremely similar to the cells of the epithelium of the bladder. He agreed with the remark as to the extreme rarity of carcinoma of the prostate; indeed, having seen a large number of tumours, he had only come across a single case which Mr. Martin had.—Dr. FINNY expressed his satisfaction with Dr. Bernard's remarkable paper. The pathological conditions to which he had alluded were of great rarity. The clinical aspect of the case was also unique—that suppression of urine could exist for so many days without remarkable symptoms. The explanation that it must have been from some nerve cause was likely to be the true one. Where complete suppression of urine took place head symptoms were extremely rare; but urinary fever and uræmic poisoning were not. In the absence of pathological change to account for the suppression of urine for so many days, they must look to a nerve origin.—Dr. H. KENNEDY, referring to the duration of the anuria, said he had in cases of cholera frequently seen patients recover after four days, and once after five days, and the recovery was apparently due to the vomiting. Even when the primary symptoms of cholera had subsided, the vomiting went on, and the patients recovered; so that vomiting seemed to be a vicarious effort on the part of the system to keep life going. He did not know that there was any connexion between the malignant disease and the anuria. Any cases he had seen were not connected with malignant disease, and the case under consideration was in that respect uncommonly remarkable.—Dr. BERNARD having briefly replied, the section adjourned.

CAMBRIDGE MEDICAL SOCIETY.

AT a meeting of this Society held on November 7th, Mr. J. H. HOUGH, describing a case of Puerperal Eclampsia, said he was called last May about 1 P.M. to see a woman who was in strong convulsions; she was about six months and a half pregnant. He sent up two draughts each containing twenty grains of bromide of potassium, and called as soon as possible; he found her lying across the bed nearly nude, pulse quick (120) and feeble. She was comatose, though aroused for a moment on being spoken loudly to and shaken; teeth clenched, eyes open and staring vacantly. Moving her into a better position, he proceeded to make a vaginal examination, but the instant he introduced his finger another violent spasm came on. He at once put her under the influence of chloroform, a cork being wedged between her teeth, and a vaginal examination made. The os uteri was fully dilated, the membranes had ruptured (no doubt during one of the convulsions), and a head presentation was made out very high up. A drachm of liquid extract of ergot was given; she was then quiet for half an hour, when, a convulsion coming on, chloroform was again administered; the fit at once ceased. After an hour's interval, as labour had advanced but a very little, he gave another dose of the ergot and the pains soon after this became regular. Chloroform was exhibited at each pain, which by keeping one hand on the abdomen was easily ascertained. After three hours a very violent spasm came on, and it seemed at first as if the chloroform had lost its effect, but persevering with it the spasm soon disappeared. Half an hour after the child was

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born alive, and there was no trouble with the placenta; and with the exception of one slight fit no other convulsion occurred. Mr. Hough had not the slightest doubt that the convulsions in this case were due to anæmia. The patient had been in actual want for some time during her pregnancy, and was pale and emaciated. There was but the slightest trace of albumen in the urine; the bowels were not loaded, and the pulse was always quick, rapid, and small. After the first dose of bromide, excepting the two doses of ergot, nothing was given by the mouth, so that there should be no source of irritation to produce the spasms, which yielded readily to the chloroform each time they appeared.

Dr. EASBY related a case of Puerperal Eclampsia seventeen days after labour. A delicate woman, aged twenty-four, was delivered by him on Nov. 27th, after an easy labour, of a female child. It was her second confinement, and she made a good recovery. On Dec. 13th he was asked to see her, and found her suffering from a severe cold and constant frontal headache. The next morning he was sent for hurriedly, as she had had several fits. He found her in a semi-comatose state, pulse 60, temp. 99°. The bowels had not acted, and she had not passed any urine. He prescribed twenty grains of chloral, and she had no further fit until noon. At 3 P.M. he found her about the same; a little urine had been passed, sp. gr. 1020, and containing one-fourth of albumen. At 4 P.M. and 6 P.M. two more slight attacks occurred; the dose of chloral was repeated after each, and a turpentine enema was given. At 8 P.M. she had a violent convulsive attack, with twitching of the right arm and leg, and in five minutes another and worse attack. A catheter was then passed and a pint of urine drawn off, and a third of a grain of tartrate of morphia given hypodermically. She slept well, and there was no recurrence of the fits. There was some headache for a day or two afterwards, but she made a good recovery, and the albumen in the urine disappeared. Dr. Easby remarked that convulsions usually occurred before or during labour or shortly after, and after careful search he had only been able to find records of one case in which so long as seventeen days had intervened. With regard to treatment, he placed most faith in morphia injections.

Dr. BRADBURY showed some Bronchial Casts from a case of Plastic Bronchitis. A young man, aged nineteen, who consulted him in August last for diarrhœa and pain in the stomach, informed him that he used occasionally to expectorate these casts, accompanied with a little blood. He complained also of some pain in the chest, and a double bruit was audible over the heart, the diastolic most marked to the left of the sternum. Nothing abnormal was heard in the lungs. The specimens had been kindly sent to him by Mr. Edwards, of Furneaux Pelham, and were preceded by some dyspnœa and cough. Dr. Bradbury referred to Dr. Clymer's analysis of forty-four cases; it appeared to depend upon some diathetic condition, either scrofula, gout, or rheumatism, but it was occasionally complicated with aneurysm. The best treatment was ammonia and iodide of potassium.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

AT the ordinary meeting held on Dec. 5th, Dr. Bell, the President, in the chair,

Mr. HEWITSON read a paper on the Connexion of Sick Headache with Astigmatism. He showed several patients in whom severe periodic headaches, accompanied by vomiting and visual disturbances, entirely ceased when they had been supplied with suitable cylindrical glasses. The patients were neurotic subjects, and the headaches, though almost constant in some instances, were aggravated by any special use of the eyes, such as reading or fine sewing. In some cases temporary relief was obtained merely by the use of atropine. In the discussion Dr. S. C. Smith, Dr. Allbutt, Mr. S. Snell, Dr. Jacob, and Dr. Hutchinson took part.

Dr. BARRS showed a case of Athetosis. Hemiplegia had occurred on the side several years ago, but the movements of the fingers were not confined to that side. In reply to some remarks by Dr. Allbutt on the possible peripheral origin of the movements, he upheld the central nature of the lesion as evidenced by the want of wasting and degeneration, and the electric reaction of the muscles.

Professor JESSOP exhibited a male patient, aged fifty, upon whom on October 2nd he had operated for Fæcal Fistula by abdominal incision and intestinal resection. The fistula, which was situated on the right side above the middle of Poupart's ligament, and had followed upon an operation for strangulated inguinal hernia in March last, was very patent, and allowed almost the entire intestinal contents to escape. In July an attempt to close the opening by a plastic operation had failed. The abdomen was opened by an incision about three inches long extending upwards from the fistula. The bowel, emptied by previous starvation, was detached from the abdominal wall and withdrawn, so as fully to expose the large irregular opening from which the gangrenous coil had been detached. It was now seen to be the ileum which was involved, and the opening measured in the length of the gut about an inch and a half, whilst it extended to within a quarter of an inch of the entire circumference. The edges having been pared, and a portion of the free margin of the distal end of the bowel, wasted by disease, cut away so as to equalise the two mouths, a series of six-and-twenty Chinese silk interrupted sutures was introduced, care being taken to oppose serous surfaces all round. The bowel was then returned, and the abdominal wound closed by deep wire sutures, as after ovariotomy. The progress of recovery was uninterrupted, and is now complete. In the discussion Mr. Hodgson Wright, Dr. Barr, and Dr. Jacob took part.

Dr. FARQUHAR gave details of a case of Phlegmasia Dolens, of which the broad features were its severity and erratic course, the swelling and inflammation having invaded both limbs twice alternately. The subject was a primipara a fortnight after confinement, which was premature, and accompanied by considerable hæmorrhage. Iodine and blistering were the most successful remedies. The pyrexia was high and constant. There was a crisis, when enemata, nutrient and purgative, with morphia and atropine under the skin, turned the scale favourably. Dr. Farquhar remarked on the consensus of opinion as to the insufficiency of research so far, with a view to discover the intimate course of this disease. Some insisted on a companionship with erysipelas, but such an alliance was inapplicable in all the cases he had seen. The industry of our workers in micro-organisms as pathogenic agents offered the likeliest solution of the causation of this obscure ailment. — Dr. BRAITHWAITE pointed out the part taken by the lymphatics in cases of this kind, and said he had observed the more frequent occurrence of thrombosis in cases where labour was much prolonged and the cervix uteri most usually bruised or lacerated.

Dr. SOLOMON C. SMITH read a paper on Massage, Faradisation, and the Zander Movement Cure, in which he attributed the good effects of each of these methods of treatment to their action in assisting the circulation through the lymph canalicular system and the flow of blood through the capillaries and veins; and he advocated their more extended use, not merely in local conditions, but in all cases in which, either from want of will or of power, large tracts of muscular tissue remained unused.—Dr. HUTCHINSON thought the principal use of these methods was to stimulate the circulation in the excretory organs, and thus to get rid of effete materials.—Dr. ALLBUTT, referring to the good effects obtained by nerve vibration, thought much of the effect to be due to reflex stimulation of the peripheral nerves, especially as most cases profiting by this form of treatment were emaciated, and not needing increased elimination.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY

A MEETING of the above Society was held at Rotherham on Nov. 20th, Mr. W. A. Garrard, President, in the chair.

Dr. KEELING showed a Suppurating Ovarian Cyst, removed from a patient in the Jessop Hospital.

Mr. SIMEON SNELL introduced a girl, aged between eight and nine years, for whom on May 23rd, 1878, he had Enucleated the Left Eyeball on account of Glioma of Retina (eyeball removed six and a half years since; no recurrence of disease). The disease had apparently existed some months, but was confined to the posterior part of the globe. Microscopic examination confirmed the diagnosis as to the disease being a glioma. Now, after the lapse of six years and a half, there had been no recurrence. Mr. Snell briefly alluded to the question of diagnosis in these cases, and mentioned that the specimen in this instance was com-

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pared with another case at the time, in which recurrence took place and death.

Mr. GARRARD introduced a patient, five months old, who had a Patent Urachus of unusually large size; the tube was as large as a man's urethra; the umbilicus looked like a ripe strawberry. A full-sized catheter could be passed into the bladder; urine always came through the opening, and sometimes all the urine was passed this way. A fortnight previously he had ligatured the protruding portion with gut, and, after freely paring the edges of skin all round, had closed the orifice by means of quilled and superficial sutures, including the thickened parts around the urachus. The umbilicus is now practically healed, and no urine has escaped since the operation.

Mr. GARRARD also introduced a man, aged thirty-two, suffering, as he thought, from Mollities Ossium, affecting the ribs and spine, and had done so for two years.

Mr. B. WALKER introduced a man, aged thirty-four, a miner, who had been injured by a fall of coal two years previously. On his admission into the Rotherham Hospital on April 25th, 1884, several sinuses, one of which led down to necrosed bone, in the patella were found; others communicated through the posterior part of the joint. On April 29th the knee joint was laid freely open and explored, with the view to probable amputation. No dead bone was found, with the exception of the patella; and, as the rest of the joint appeared to be not in a hopeless condition, it was decided to excise the whole of the patella. This was accordingly done, the wound was plugged with lint saturated with carbolic oil, the joint enveloped in salicylic wool, and kept at absolute rest by means of a back splint. Erysipelas attacked the limb a few days later, and did not entirely disappear until May 30th, since which time he was troubled with small cold abscesses travelling up from the foot, each one higher than its predecessor. On July 18th he had a sound but perfectly stiff joint; on Aug. 18th he could bear a little weight on the leg, and at the present time (Nov. 20th) he could get about much better. The President, Mr. Barber, Mr. Pye-Smith, and Mr. Jackson joined in the discussion.

Mr. ARTHUR JACKSON showed a specimen of the Cellular Uterine Polypus which he had removed on Oct. 2nd, 1884, from a woman aged twenty-seven. She suffered from dysmenorrhœa from April, but did not apply for medical aid till June, when menorrhagia set in. This continued till Oct. 2nd, when the polypus was removed. The apex of the tumour was close upon the perineum. There was no difficulty in tracing the pedicle to the left wall of the cervix, and removal with a pair of forceps was easy. There was no hæmorrhage, and she gradually recovered her strength. Remarks were made on the specimen by Dr. Keeling, Dr. Dyson, the President, Dr. Banham, and Mr. Favell.

Mr. ATKINS showed the Organs from a case of Hydatids of Liver, Spleen, &c. in the abdominal cavity in which death had resulted from persistent vomiting, due to pressure on the colon. The man, aged thirty-two, was admitted under the care of Dr. Bartolomé, at the infirmary, in an extremely emaciated condition; his symptoms—vomiting, abdominal tenderness, and difficulty in micturition—had only come on during the last three weeks; he was constipated, only passing small hard fæces occasionally, with a large quantity of slime. On examination, his abdomen was found irregularly swollen and tender; there was a well-defined mass in the cæcal region, giving a soft doughy sensation; there was also a transverse mass of dulness in the umbilical region, exactly in the position of the transverse colon; dulness was also found in the right lumbar region, but the lower edge of the liver and spleen were hidden by an immensely dilated stomach. The man died the day after admission; and at the autopsy the cavity was found a mass of hydatid cysts, one large one in the liver, and the spleen itself was simply a sac, five or six times its normal size, full of smaller cysts. Several of the cysts were suppurating. Mr. Jackson, Mr. Barber, Dr. Keeling, and Dr. Banham, joined in remarks in the case.

Mr. BALDWIN exhibited a man, shown by him at the corresponding meeting last year, with Exophthalmic Goitre. Then he suffered from inability to lie down, but he had been hop-picking this year, roughing it, and returned much better; drank cider, and can now lie on his side.

Dr. BANHAM read a paper on Otology in relation to General Medicine, in which attention was drawn to the frequent occurrence of ear symptoms, tinnitus, deafness, and vertigo, apart from any disease of the organs of hearing. The important relations existing between ear disease and certain constitutional conditions, as scrofula and tuberculosis, were insisted on, and attention drawn to the serious secondary affections of the brain arising as the result of disease of the middle ear. The opinion was expressed that some steps might with advantage be taken by the various examining Boards to secure the attendance of medical students upon the practice of the special departments. In the discussion which ensued the following gentlemen took part: Mr. Walker, Mr. Snell, Dr. Dyson, Mr. Pye-Smith, and Dr. Morton.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on Wednesday, November 19th, the President, Mr. T. F. Bartleet, F.R.C.S., in the chair.

Dr. SAUNDBY read a paper on Kussmaul's Coma based upon two recent cases. He described its symptoms, drawing attention to the peculiar character of the dyspnœa as constituting a distinguishing feature of pathognomonic significance, and especially insisted upon the fact that this form of coma is not restricted to diabetes, one of the cases related being an example of its occurrence in advanced renal disease. He referred to the various theories which have been advanced to explain it, and stated precisely the exact position of the acetonæmia question. He explained the methods used for testing for acetone and showed Le Nobel's test with nitro-prusside of sodium and ammonia. In his opinion the symptoms were due to the action of some poison nearly allied to acetone. He referred to Minkowski's suggestion that they might be the result of dealkalisation of the blood from the presence of β. oxybutyric acid or some other acid in great excess. After discussing the predisposing and exciting causes and the diagnosis, he pointed out that it is not invariably fatal, that treatment in the early stages should be eliminatory, by purgatives if the bowels can be got to act, and that later on the intravenous injection of a neutral saline solution should be tried, as the result in one of these cases was to restore animation for the time, and where recovery is possible more permanent results might be expected. Unfortunately in that case the alterations of structure were too profound to permit a hope of life being prolonged.

Mr. PRIESTLEY SMITH exhibited a boy, aged eight, whose left Crystalline Lens had become dislocated spontaneously on to the front surface of the iris. It was perfectly transparent, and presented the bright-golden reflex from the margin always visible in such cases. It retained a partial attachment to the suspensory ligament. The cause of the displacement was a congenital imperfection in the suspensory ligament, and this was present in the other eye also. The dislocated lens had, a few days previously, fallen backwards through the pupil while the eye was under examination, and had for a while been retained there by the use of eserine. It had now again fallen forwards, and would probably have to be removed by operation.

Dr. SUCKLING showed a man suffering from Complete Paralysis of the Left Arm. Eight years previously the patient had a sunstroke on board ship; he fell from the deck into the stoke-hole. In falling he caught his left arm over a handrail and dislocated his shoulder. He was unconscious for a considerable time after the fall. Dr. Suckling pointed out the great value of electricity in diagnosing the cause of the monoplegia, and was of opinion that it was due to a cerebral lesion, acquired at the time of the fall, in the region of the ascending frontal and ascending parietal convolutions on the right side. The following circumstances, in his opinion, proved the cerebral nature of paralysis:—1. Faradaism and galvanism to the nerves, motor points, and muscles of the left upper extremity showed only slight diminution in response; there were no qualitative changes. 2. Sensation was perfect and the reflexes were increased. 3. There was late rigidity in the muscles of the hand. 4. The man suffered from headache, especially on the right side; he was deaf, but worse in the right ear, and also had attacks of vertigo.

Mr. EALES exhibited a young woman, aged twenty-two, on whom, six months previously, he had operated for Extreme Divergent Strabismus of fourteen years' duration, caused by an unsuccessful operation (not by himself) for strabismus convergens. The internal rectus of each eye had been redivided and brought forward to its proper position, tenotomy of the opposing external rectus being at the same time performed. The result, which was most successful at

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the time, was maintained, the patient's eyes being now quite parallel as regards their visual axes, while excursions in all directions were free, and convergent power well sustained in near vision.

A meeting of this Society was held on December 3rd, the President, Mr. T. H. Bartlett, F.R.C.S., in the chair.

Mr. HASLAM read a paper on Medical Education, in which the question of what education a student should have before commencing his medical studies was discussed. Many students at present enter at a hospital with little or no knowledge of such subjects as chemistry, botany, or physics, and are consequently unable at once to study with advantage either physiology or chemistry. Moreover, they have not learnt how to work at scientific subjects, and so lose much time on this account. It was suggested that much benefit would be derived from having a medical college where boys intending to study medicine could enter after having passed one of the preliminary examinations and spend a year, acquiring some knowledge of those scientific subjects that would be of use to them later on; they would then be able on entering at a hospital to study with greater advantage the various medical subjects met with there, and would have more time to devote to attending hospital practice.

Dr. THOMAS exhibited a specimen of Tumour of the Bladder from a patient, aged one year and ten months, who had been under treatment at the Children's Hospital. The history of the case was given for the time it had been under his care, the symptoms being those of retention of urine and cystitis. The ordinary incision for lateral lithotomy was made for the purpose of exploring the bladder, when a hard mass was felt in front and to the left of the median line. The patient was relieved by the operation, and the wound allowed to heal. He was discharged, but returned in a month suffering from a low form of bronchitis, and with a mass protruding through the incision, which had reopened. Further exploration failed to define the tumour sufficiently for surgical interference, and the condition of the patient also made it inadmissible. He died shortly after. The tumour sprang from the base and front of the bladder, and in its growth had enlarged and occupied the base, so that there seemed to be a secondary bladder above it. It was composed of polypoid masses of considerable firmness springing from a common base. A microscopical report by Mr. Jones-Bateman was read, and sections of the tumour were shown. The report stated: "To what class of tumours the specimen should be assigned it is difficult to determine; the base of the tumour might fairly be called a myoma, but in the peripheral portion there is no muscular tissue. The peripheral portion however agrees very nearly with what Sir Henry Thompson calls 'tumours of a transitional type.'"

Mr. HUGH THOMAS showed a man in whom Congenital Absence of Auricle and External Meatus existed. The internal ear, Mr. Thomas thought, was intact. The patient's mother, when he was in utero, was frightened by one of her children being burnt on the side of the head and ear.

Dr. SUCKLING showed a woman suffering from Right Peripheral Facial Paralysis with Reaction of Degeneration, and demonstrated the existence of the reaction of degeneration. The woman, ten weeks previously, had fallen downstairs, after which there was a discharge of blood and watery fluid from the right ear, and her husband noticed the next day that her face was drawn to the left. She was in bed for a fortnight after the injury, and then applied at the Queen's Hospital. Dr. Suckling considered the case to be one of fracture of the base of the skull, the facial nerve in the aqueduct of Fallopius being severely injured. Taste was markedly affected on the right side of the tongue, the patient complaining of the loss. Tartaric acid, alum, sugar, and common salt could not be distinguished by the right side of the tongue.

BATH PATHOLOGICAL AND CLINICAL SOCIETY.

THE second ordinary meeting of the session was held at the Royal United Hospital on Tuesday, December 9th; Mr. S. Craddock, President, in the chair.

Dr. FOX read notes of a case of Tabes Dorsalis simulating in its early stages Myelitis. The patient was a syphilitic woman, aged twenty-five, who had been subjected to much ill-treatment. When in apparent good health she was suddenly seized with paraplegia and pains in the legs, together with girdle pains. The reflexes, both superficial and deep, were absent. No history of alcohol. At this time Dr. Fox was inclined to class the disease as one of myelitis, but subsequently all the reflexes, except patellar, returned, and the power of progression re-established itself, though with ataxic gait. The pupils throughout were contracted, neither responding to accommodation nor light.

Mr. H. W. FREEMAN showed a specimen of a Ruptured Uterus, which occurred during labour in a woman, the mother of eight children, who had been attended by a midwife. Although it was an arm presentation, labour was permitted to proceed for forty-eight hours, help only being sent for when the mischief was done. Mr. Freeman performed abdominal section, when the head of the child was found protruding through a rupture in the anterior wall of the cervix, the neck being tightly grasped by the contracted uterus. No hæmorrhage occurred during the operation. Death took place twelve hours later. At the autopsy no contraction of the pelvis was found. The specimen showed a second rupture in the upper and posterior part of the vagina, which was unexplained.

Mr. R. DAVIS produced a specimen of Cancer of the Pylorus, causing complete obstruction. The patient, a male, aged sixty, came under medical treatment only three months prior to death with symptoms of dyspepsia. The stomach was contracted.

Mr. H. G. TERRY exhibited microscopical sections of a spheroidal-celled Carcinoma of the Breast, undergoing cystic degeneration. The sections showed cysts in early formation. The transformation Mr. Terry considered rare.

Reviews and Notices of Books.

Pyuria, or Pus in the Urine and its Treatment. Comprising the Diagnosis and Treatment of Acute and Chronic Urethritis, Prostatitis, Cystitis, and Pyelitis, with especial reference to their Local Treatment. By Dr. ROBERT ULTZMANN, Professor of Genito-Urinary Diseases in the Vienna Polyclinic. Translated by permission by Dr. WALTER B. PLATT, F.R.C.S. Eng., Demonstrator of Surgery in the University of Maryland, Visiting Surgeon to Bayview Hospital, Baltimore. New York: D. Appleton and Co. 1884.—Dr. Ultzmann's clinic is well known to those who visit the vast Polyclinic of Vienna, and his teaching always attracts a large class of students, who are impressed with the success of his practice. Dr. Platt has done good service to those who are not at home with the German language in translating these clinical lectures on Pyuria. The subject is one of very great importance, and from both a diagnostic and therapeutic point of view the information contained in these lectures is to be welcomed. The point of practice that is chiefly interesting is Dr. Ultzmann's mode of irrigation for chronic inflammation of the prostatic urethra and neck of the bladder. He passes a short silver catheter just beyond the compressor urethræ muscle, and then injects ten or more ounces of a warm mild astringent lotion, which flows into the bladder and is subsequently expelled by the voluntary effort of the patient. In addition to translating the brochure Dr. Platt has added a few valuable suggestions in some foot-notes.

Aids to Public Health. By Dr. J. L. W. THUDICHUM. Baillière, Tindall, and Cox.—In this small volume Dr. Thudichum has succeeded in putting together in the smallest possible compass the general principles which govern the present sanitary laws, and of indicating how such matters as water-supply, sewerage, &c., should be carried out. Something that is useful is said about twenty-seven different and most varying subjects, including vaccination, quarantine, markets, slaughter-houses, smoke abatement, &c., and the whole is contained within fifty pages. The excessive concentration of information which the book exhibits may perhaps turn out to be a drawback, especially if students of

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public health rest satisfied when they have mastered its contents. The intention of such a work is doubtless to create such an interest in the subject it deals with as will lead the reader to study more exhaustive works.

Diabetes Mellitus. By HARVEY J. PHILPOT. London: Sampson Low, Marston, Searle and Rivington. 1884.—This little book does not lay claim to any originality. Its title page declares it to be a "synopsis of the pathology, physiology, etiology, incipient and progressive symptoms, causes of death, sugar tests, and treatment" of the disease. So far, then, it fulfils its purpose, and the comparatively recent discussion at the Pathological Society upon the morbid anatomy of diabetes has been turned to account in the chapter on pathology, which serves to illustrate how little is really known on this head. The chapter on treatment is furnished with a very ample list of articles of diet which may and may not be allowed to the diabetic, and the subject of urinary tests is more fully detailed than usual in works of this class. On the whole it is a creditable essay, written evidently by one who has carefully studied the subject.

Evolution in History, Language, and Science, pp. 158. London: Crystal Palace, and Simpkin, Marshall, and Co. 1884.—This book consists of four introductory addresses delivered by different lecturers at the Crystal Palace Company's Schools this autumn. Dr. Zerffi pleads for the study of general history; the Rev. W. A. Hales for improvement in the teaching of geography; Mr. Malden indicates the hereditary element working in historical families; Dr. Robinson Thornton gives a short sketch of the English language and its vicissitudes. The title of the book is pretentious, but the lectures, though necessarily somewhat superficial, are marked by some breadth of treatment.

Hints for Invalids and Travellers, with Observations on the Climate of Luxor and Egypt during a Three-years' Residence, 1877-78-79. By T. E. MACLEAN, M.B. Pp. 23. London: Lewis. 1884.—This brochure gives briefly but clearly an account of the various routes by which Upper Egypt may be reached, of the seasons at which it is advisable for invalids to reach and to leave it, of the precautions to be observed by them, especially in the way of clothing and exposure, and of the climate of Luxor as observed by the author during three winters. The information seems carefully drawn up, the advice judicious, and the data respecting the climate are likely to be useful to those who may think of passing the winter in, or sending patients with that view to Upper Egypt.

The Most Delightful Voyage in the World, England to the Cape of Good Hope, and South Africa as a Health Resort. By A. WILMOT, pp. 85. London: Richards and Co. 1884.—This is the second edition of a popular account of a voyage to the Cape and of Cape Town, Port Elizabeth, and Natal. To the information given in the first edition has been added a chapter on South Africa as a health resort, its climate and advantages. There appear to be two distinct climates, "one—that of the coast—of an Italian character, where perpetual summer may be said to reign. The other on the high inland tablelands, where the air is remarkably pure and dry, and where the mountain temperature is much lower than on the coast." There is a considerable amount of information given on the subject of the influence of the climate on lung disease, and an account of the spas or mineral springs of South Africa. The appendix gives some useful details respecting the cost of living in, and the social condition, of the Colony, as well as some interesting notes on the South African Gold Fields.

Recent Materia Medica. By F. HARWOOD LESCHER, F.C.S. London: J. and A. Churchill. 1884.—This is a work which is supposed to give information respecting the origin and uses of certain new remedies. The notes are so imperfect that it is difficult to imagine that anyone could derive any information from their perusal.

Leaders in Modern Philanthropy. By WM. GARDEN BLAIKIE, D.D., &c. With fifteen portraits. The Religious Tract Society.—A most commendable book, admirably adapted for use as a present at this benevolent season. Nor is it without interest to the earnest student of creeds and churches, as showing the creed out of which the most stupendous and the most minute philanthropies of the age have arisen; from the philanthropy that abolished slavery to that which overtook Timothy Daly in his too short workhouse bed. By the way, another chapter is wanting on such philanthropists as the late Dr. Anstie.

Diaries, Calendars, &c.—As usual at this time of the year we have received many specimens of Diaries and Calendars for next year. Prominent among them are *Letts's Rough Diary, Office Diary*, and *Clerical Tablet Diary*; T. J. and J. Smith's *Commercial Scribbling Diary* and *Daily Calendar*; and T. Pettitt and Co.'s Folio *Blotting Pad Remembrancer, Court Diary*, &c. All of these admirably fulfil the special purposes for which they are designed, and any one of them will prove useful to those blessed with numerous professional or commercial engagements or afflicted with a defective memory. The time saved by medical men in their professional work by the above aids is simply incalculable.

MAGAZINES, ETC.—*Good Words* and the *Sunday Magazine* (Isbister) maintain their well-deserved popularity. They occupy a distinct and honourable place in serial literature, being remarkable for their artistic illustrations as well as for the general merit of their literary articles.—Amongst the tales, grave and gay, which form the staple of *Longman's Magazine*, there are from month to month interspersed articles of a more solid character. Thus the first number for the new year contains a paper by Mr. R. A. Proctor, entitled "Two Sunlike Planets," which forms interesting reading.—The *Leisure Hour*, the *Sunday at Home*, the *Boy's Own Paper*, and the *Girl's Own Paper* (Religious Tract Society) can be mentioned only with commendation, their contents, as a whole, being of a kind which must exert a wholesome influence on the classes of readers to which they are addressed, judiciously combining as they do innocent amusement with instruction, social, scientific, and religious. The first-mentioned periodical gives in the volume for 1884 a series of papers by Mr. J. Cordy Jeaffreson on "Doctors out of Practice," which is of considerable interest to medical men.—Amongst Christmas numbers which have come to hand are those of the *Illustrated London News* (which is, as usual, of excellent quality), the *Christian Million*, and the *Pall Mall Gazette Extra*, which last is well calculated to hold its own beside its larger and more gorgeous competitors for public favour.

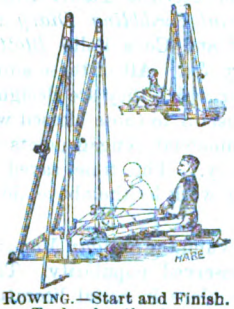
New Inventions.

CHADBORN AND CALDWELL'S PATENT EXCELSIOR HOME GYMNASIUM.

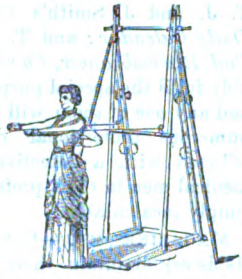
MESSRS. CHADBORN AND CALDWELL have submitted to us one of their Home Gymnasia, which undoubtedly meets most successfully a great and widespread want. The conditions of town life are rendering it more and more important that provision should be made for the suitable exercise of all parts of the frame. Gymnasia have been established in various parts of London, and in all good schools; yet they only partially supply the need that exists, for but a limited number of persons avail themselves of the advantages of these institutions. No doubt a trapeze, which can easily be fixed in nearly every house, will afford an excellent means of obtaining freedom and strength of movement; but the Excelsior Gymnasium has the great advantage that it combines in one a horizontal bar, trapeze,

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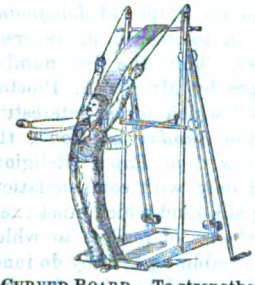
dumb-bells, clubs, spring board, and many other forms of muscular exercise, and that it is adjustable with the greatest ease to children of tender age and to the strongest athletes. The full-sized apparatus occupies about 4 square ft. of floor space, and is 8 ft. high, so that it is easily found room for in most houses. The accompanying cuts give a good idea of its general construction. It is very strongly made and yet light, the bulk of it is in maple, the horizontal bar is hickory, the rowing platform is of ash and the curved board, &c., are of bass wood. By a very simple arrangement the handles fastened to the ropes, which are connected over pulleys with weights, can be fixed at any height. The weights are common dumb-bells, and can be varied according to need from a few ounces to many



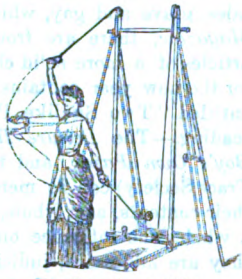
ROWING.—Start and Finish. To develop the Arms, Legs, and Back.



Direct Chest Movements. To deepen the Chest and draw the Shoulders back.



CURVED BOARD.—To strengthen the Back, Neck, Abdominal Muscles, and Expand the Chest.



For Curvature of the Spine.

pounds. There are about a hundred varieties of muscular exercise which can be taken with this machine. Not only may the muscles of the arms and legs be developed by it, but the chest be expanded, the spine strengthened, and the muscles of the hands brought into proper use. For young children there is a swing and a spring board which afford amusement, and simple movements that expand the chest. By means of the apparatus lateral curvature of the spine should with certainty be prevented, and no better means of curing this deformity is known to us. From personal experience of its use, we can testify that this gymnasium is thoroughly safe, simple, and efficient. It has the further important advantage of being extremely moderate in price.

CHARING-CROSS HOSPITAL SCHOOL.—The jubilee of this school was recently celebrated, and the annual report read by the Dean, Dr. Bruce, stated that the institution was never more prosperous than at the present time, the entry of new students during the present year having been larger than on any previous occasion. A dramatic performance was afterwards given by the Students' Club at Toole's Theatre, followed by a dinner of the hospital staff, and a ball given by the Dean.

CENTENARIANS.—Mr. James Reilly, of Ballyjamesduff, died last week at the alleged age of 115 years; and Bryan McDonnell, of County Louth, at 106.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN extraordinary meeting of the Council was held on Friday last, when a report (the fourth) of the Committee on the Mode of Election to the Council, and other matters relating to the Charters and Bye-laws of the College, were presented. The two principal objects for which the meeting was convened were—first, the consideration of a motion originating with Mr. Cadge relating to the mode of election of the President; and, second, the recommendations of the Association of Fellows. It was reported that a majority of the committee of six to three had negatived a motion to the effect that the President be elected annually by the Fellows. The minority, however, submitted a resolution in the form of an amendment, that the President should be elected by the Fellows substantially in the way recommended in the scheme prepared by the Association of Fellows. This minority report was signed by Messrs. Holmes, Erichsen, Cadge, and Smith. When put to the vote as an amendment, it was lost by fourteen to five. *For* it were Messrs. Erichsen, Holmes, and Cadge, Sir Joseph Lister and Mr. Allingham; *against*, Sir James Paget, Messrs. Marshall, Forster, Savory, Lund, Wood, Power, Bryant, Hulke, and Croft, Sir William Mac Cormac, Messrs. Lawson, Hill, and Durham. Five members of the Council were absent—namely, Sir Spencer Wells, Messrs. Hutchinson, Heath, Smith, and Jones. The resolution that the President be elected by the Council as heretofore was then carried *nemine contradicente*.

As to the recommendations of the Association of Fellows, some were adopted unaltered, some with verbal alterations, some in part, and some were wholly rejected.

The recommendations of the Association of Fellows which have been accepted by the Council are: (1) Any Fellow who has been a Fellow for ten years or a Member for twenty years shall be eligible to be a member of Council; (2) that any member of Council who may be absent for more than four successive meetings without leave shall *ipso facto* cease to be a member of Council, unless a satisfactory reason for such absence be assigned; (3) the appointment of scrutineers to take the ballot at the election of the Council; (4) the discontinuance of the payment of a fee on election by a member of the Council; (5) the appointment of a treasurer and the auditing of the accounts by a professional auditor; (6) the discontinuance of the payment of a fee on election by members of the Court of Examiners; (7) that Members of the College shall be eligible, as well as Fellows, for the examinerships in anatomy and physiology. (The Council will continue to select the examiners for the Primary Fellowship from among the Fellows); (8) that an annual general meeting of the Fellows and Members shall be convened, at which a report of the Council shall be presented, and that other meetings may be held either by the direction of the President or Council, or on a requisition signed by thirty Fellows or Members; and (9) that the minutes of each meeting of the Council shall be suspended in the hall of the College for the inspection of the Fellows and Members. (The Council has inserted the condition that only the *confirmed* minutes shall be suspended.)

The Council has agreed to make certain modifications as to the nomination of a candidate for a seat in the Council—e.g., three signatures only will be required instead of six. The Council declines to accept the following recommendations:—(1) That not more than one-half of the members of the Court of Examiners shall have seats in the Council; (2) that six members shall retire annually; (3) that "substitute" members shall be abolished; (4) that the Fellows shall elect the President; (5) that the members of the Court of Examiners shall be elected annually, and not hold office for more than five consecutive years; (6) that a new order of Honorary Fellows be instituted; (7) that no alteration shall be made in the constitution or relation of the College without the consent of the Fellows and Members convened to discuss such alteration.

At the same meeting of the Council Mr. Marshall's proposal to reduce the fee for the Membership when obtained through the combined examination from twenty guineas to fifteen was adopted. Sir James Paget gave notice that at the next meeting of the Council he would move that the Council take measures for placing in the College an appropriate memorial of the late Sir Erasmus Wilson.

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THE LANCET.

LONDON: SATURDAY, DECEMBER 27, 1884.

THE ANNUS MEDICUS 1884.

THE last number of THE LANCET of another year brings us again to the duty of "talking with our past hours." This is not always a pleasant exercise, but it may at least be made a profitable one. We generally show pity on our readers by a short preface, and by going at once to the principal items of our summary, and on this occasion we shall make no departure from this rule. Medical Science and Practice, with the fundamental sciences of Anatomy and Physiology, need no introduction to our readers. They are familiar as household words, save in their latest advances and bearings, which it is the chief object of our Summary to elucidate. Year after year gives fresh illustrations of the extensive and professional bearing of Medicine, in its largest sense, on the welfare of individuals and communities. What misery and what money France and Italy might have been saved this year by better methods of protecting and preserving the public health! The day will come when States will think more of averting epidemics and developing the health of citizens than of either coarse or curious systems of Representation, and when they will judge differently their greatest benefactors. This question is vital, not only for old countries like our own, but for new ones. Our columns have shown how unhealthy are the conditions of life in New York, giving a mortality of 34·01, against an urban mortality in England of 20·3. Meantime, Medicine is to be cultivated by its disciples silently and diligently for its own sake, for the people's sake, who need its guidance, and for the sake of Him whose agents we are, "who healeth our diseases."

Anatomy and Physiology.

The departments of Anatomy and Physiology have been enriched by numerous new and valuable works. Amongst these may be mentioned: YEO'S Manual of Physiology; PREYER'S interesting and original Physiologie der Embryo; VOGT'S Anatomie comparée; WALDEYER'S Anatomie; CHARLES'S Physiological and Practical Chemistry; HART'S Atlas of Female Pelvic Anatomy; RUDINGER'S Anatomie des Prostate; PURSER'S Manual of Histology; FOL'S Lehrbuch der Vergleichenden Mikroskopischen Anatomie; and PARKER'S Hunterian Lectures on Mammalian Descent, written in a semi-popular but truly original and extremely quaint style. Professor FOSTER and Mr. MORRANT BAKER have published new editions of their works on Physiology, and Mr. POWER an elementary text-book on the same subject. WERNICH and HIRSCH have commenced the issue of a valuable Biographical Lexicon of conspicuous names in medicine; the first volume includes an account of well-known physicians and surgeons in all countries as far as CHAVASSE, with an enumeration of their works. Quite recently an excellent translation by Dr. STIRLING of LANDOIS'S Physiology has appeared. Numerous memoirs have been published in PFLÜGER'S *Archiv*, the most important being those on the Disturbance of Vision after Injury of the Cerebral Cortex, by LOEB; the researches made by COHNSTEIN and ZUNTZ on the Blood Circulation and Respiration of the Mammalian Fœtus; the essays of WORM MÜLLER on the Excretion of Sugar and the Estimation of the Sugar excreted by the Kidneys in Man, and of KARL BOHLAND on the Quantitative Determination of Nitrogen in the Urine; and the interesting essay by GOLTZ on the Functions of the Brain. The School of Physiology at Cambridge is doing good work and attracting a yearly increasing number of students. When will Oxford follow the initiation of the younger university and bestir herself? FOSTER'S *Journal of Physiology* contains some excellent memoirs, the chief being those of BURDON SANDERSON and PAGE on the Electrical Phenomena of the Excitatory Process in the Heart of the Frog and the Tortoise, in which a method of obtaining photographic records of the phenomena of plant and animal electricity is detailed; KLEIN'S essay on the Swine Plague; and the essay of LANGLEY and SHERRINGTON on Secondary Degeneration of Nerve Tracts following Removal of the Cortex of the Cerebrum in the Dog. In Professor HUMPHRY'S *Journal of Anatomy*, Dr. BARRETT attacks the oft-disputed question of the Cause of the First Sound of the Heart, and arrives at the conclusion that it is exclusively due to the vibration of the auriculo-ventricular valves, and that muscular contraction has nothing to do with it; AINSLIE HOLLIS gives a good account of the Histology of the Central Grey Substance of the Spinal Cord, Medulla Oblongata, and Pons Varolii; and Dr. YOUNAN carefully describes the Histology of the Vitreous Humour.

Pathology.

Pathological science has lost this year one of its most brilliant and most able expounders. The death of JULIUS COHNHEIM in August not merely deprived Leipsic of a professor, but removed an acute thinker and laborious investigator in Pathology, which owes very much to the ideas he promulgated and the facts he discovered. One of COHNHEIM'S pupils and fellow-workers, Dr. C. S. ROY, was elected to the newly founded chair of Pathology at the University of Cambridge, and Mr. VICTOR HORSLEY, of University College, London, was appointed Professor to the Brown Institution in the place of Dr. ROY. The great subject of the year has been the cholera, and the interest taken in recent attempts to determine its true nature has been increased by the spread of the disease to Europe. In the spring Dr. KOCH and his two colleagues returned from India, having accomplished their mission in a manner which received adequate acknowledgment at the hands of the German Government and the profession in all countries. In July Dr. KOCH expounded his views upon the subject at a special conference, and staunchly maintained that the comma-shaped bacillus was the specific cholera organism. The leaders of the profession in Berlin, including VIRCHOW and HIRSCH, appeared convinced by the arguments adduced by KOCH. But this discovery has not been allowed to pass unchallenged. Dr. T. LEWIS in our columns pointed out the existence of similar organisms in the buccal secretion, and Drs. FINKLER and PRIOR of Bonn published an account of their researches into cholera nostras, in which they aver they have also detected the comma bacillus. To these and other objectors

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KOCH replied, still maintaining that his position was unshaken. The successful inoculation of cholera by direct intra-duodenal injection of the bacilli by NICATI and RIETSCH at Marseilles supplied a defect in KOCH'S argument for which he has been much assailed; and further testimony in support of this doctrine has been furnished by Dr. VAN ERMENGEN in Brussels and M. CORNIL in Paris. But the year passes without a determinate result, or anything approaching to unanimity on this important question. In this country Professor RAY LANKESTER has written to the lay press to discredit KOCH'S labours; and Dr. KLEIN, shortly after the news of the discovery became known, stated objections to it in the columns of *Nature*. The last-named gentleman was despatched with Dr. H. GIBBES by the English Government to India, to pursue a scientific inquiry similar to that undertaken by the German Commission in the previous year. So far as is yet known the English Commission have arrived at results which do not bear out the conclusions stated by KOCH. It is quite plain, then, that the pathology of cholera is still an open question, and it may remain for many years the battle-ground for pathologists which it has so long been. The next most important subject of the year has been the account furnished by Professor PASTEUR of his researches into the nature of the virus of rabies, and its mode of action on the body, together with his discovery of protective inoculation, which may not only greatly diminish the spread of the disease among dogs, but may possibly be found of invaluable service in protecting an individual from the development of hydrophobia; for M. PASTEUR thinks that the long period of incubation in this disease might afford time for a protective inoculation to take effect. The interest taken in the tubercle bacillus has suffered no diminution, and the publication of KOCH'S monograph on this subject, in the second volume of the Reports of the German Imperial Board of Health, has done much to maintain this interest. The same publication contained several important memoirs giving accounts of researches in that department of pathology which is most advancing—viz., the specific infective diseases; for instance, that on Diphtheria, by Dr. LÖFFLER, and on Typhoid Fever, by Dr. GAFFKY. FRIEDLAENDER'S discovery of a micrococcus in acute fibrinous pneumonia has been confirmed by other observers, and has been put to account by recent writers upon the etiology of a disease which in many respects bears a strong resemblance to a specific fever. The observation made last year by Professor KOCHER of Berne, that individuals who had undergone extirpation of the thyroid body became the subjects of a special cachexia, which bears a striking resemblance to myxœdema in its clinical features, has led to an experimental inquiry, the results of which have been recently expounded by Professor HORSLEY. The prosecution of this work may throw much light, not merely upon myxœdema but on the function of the thyroid and upon cretinism. Many interesting observations upon rickets in animals have been made by Mr. J. B. SUTTON, who has also pursued an investigation into ovarian disease in the lower animals which he detailed lately at the Pathological Society. Mention must also be made of the brilliant Bradshawe Lecture by Mr. SAVORY upon Cancer, which was as notable for its philosophical spirit as for the eloquent language in which it was couched. The year has not been signalised by any very notable additions to pathological literature, but the rapidity with which new issues of well-known treatises are called for is satisfactory proof of the growing interest taken in the subject and of its place in medical study. The laboratory opened at the Health Exhibition on the pattern of the Berlin institution is, we trust, the foreshadowing of a permanent foundation which will enable pathological research to be prosecuted in this country with facilities equal to those enjoyed on the Continent.

Therapeutics.

The past year has proved an eventful one for Practical Therapeutics. Recent experience seems to assign to cocaine the highest place in the class of local anæsthetics, though it is quite possible that future observations may not fully bear out all the flattering testimonies advanced in favour of the drug. The promise of the future lies possibly not so much in what cocaine itself may accomplish, as in the expectations which its properties seem to open out to us. If cocaine can do so much, are there not other alkaloids capable of effecting more? Meanwhile, we must hope for the further development of the resources of cocaine. Cases of sciatica may possibly find their cure in a few injections into the neighbourhood of the nerve of a weak solution of the muriate of cocaine. This method has already been tried by Dr. MURRELL for supra-orbital neuralgia, for which malady it would appear not to be suitable, as the pain of injection is so great. Nevertheless, a few minims of a solution of hydrochlorate of cocaine in oil of cloves, rubbed in with the finger, seem to have afforded instant relief. The value of cocaine in ophthalmic, aural, laryngeal, nasal, and oral surgery seems already to have been placed on a sure basis. Cocaine has occupied so much of our recent space that there is no need to dilate further on its properties in this place. Whilst the introduction of cocaine is the one grand triumph of the year, we must, nevertheless, not lose sight of the steady progress in other directions. Osmic acid, used in the form of subcutaneous injection, appears to have proved of much benefit in the treatment of some cases of obstinate neuralgia. Menthol as an external application has achieved success in a similar class of cases. Antipyrin and kairin have attracted a large share of attention as antipyretic agents, and the new drug thallin may be mentioned here. Various new oleates have been introduced into therapeutics by Dr. SHOEMAKER (THE LANCET, *ante*, p. 123). An infusion of the seeds of jequirity has been employed in cases of unhealthy, ulcerating, and granulating conditions of skin. The hypodermic injection of corrosive sublimate and other preparations of mercury has been suggested for the treatment of syphilis, but the method has not as yet been received with much favour. The comparative action of carbolic acid, convallaria, and atropia on the heart has been well studied in tortoises and frogs by Dr. BEYER, in Washington, U.S. Freezing the skin by means of chloride of methyl along the course of the sciatic nerve has been practised with success in cases of sciatica by M. DEBOVE. Whooping-cough has been treated by M. MONCORVO with a 1 per cent. solution of resorcin applied frequently to the pharynx and larynx by means of a brush mounted on a long handle. The value of the imbibition of large quantities of distilled water in the

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treatment of calculous disorders has received fresh attention; it is now some years since Dr. MURRAY advocated the continued use of soft water as a means of disintegrating small renal calculi. In surgical therapeutics the extension of the use of corrosive sublimate as an antiseptic dressing for wounds has been largely due to its advocacy by Sir JOSEPH LISTER, at a meeting of the Woolwich Military Medical Society in the early part of the year. The antiseptic treatment of wounds by dry and infrequent dressings was the subject of an excellent clinical lecture delivered by Dr. F. J. SHEPHERD at the Montreal General Hospital. In the night sweats of phthisis the active principle of the white agaric—agaricine—has been employed by M. SEIFERT, of Wurzburg, in the form of pills containing five milligrammes of the alkaloid. The treatment of maniacal delirium by means of the cold douche so favourably spoken of by Dr. BROADBENT has been tried with success by Dr. T. BARLOW. Dysentery in some of its forms is still as obstinate as ever to treatment, so that we welcome such attempts in the region of Practical Therapeutics as those of Dr. STEPHEN MACKENZIE on the voluminous injection of solution of nitrate of silver, and of Dr. J. EWART on the value of large doses of ipecacuanha given night and morning. The discussion and papers on the Cold Bath Treatment of Typhoid Fever by Drs. BRISTOWE, BROADBENT, CAYLEY, and COUPLAND was one of the most interesting features of the work at the Medical Society. As a scientific aspect to this practical treatment we may mention the researches of Dr. SASSETZKY on the use of cold in the abatement of fever (THE LANCET, vol. i., 1884, p. 14). Dr. HARE'S protest against the neglect of old-fashioned remedies such as leeches and venesection deserves to be mentioned for the simple reason that there is too much fashion in therapeutics. No doubt fashion may be merely an equivalent for giving a remedy a trial, and a failure of a remedy would necessarily lead to its falling out of use; so that in the onward march of therapeutics change of fashion, in a certain sense, must be regarded as an advantage. It cannot be questioned that we ought to be more thoroughly acquainted with the mode of action of our more familiar remedies than is at present the case. The scientific contribution of Dr. MATTHEW HAY on the mode of action of saline cathartics must be accorded a very high place in the list of new work which has attracted notice during the past year. Amongst the matters which call for consideration we may note the attempt to get rid of some of the evils which surround the present state of legislation in regard to patent medicines. This is a subject which we hope will in the coming year undergo reform. We may conclude this brief summary by praising the continued efforts of the pharmacists to present the profession with preparations from which all the disagreeable properties are hidden by means of elegant devices. We refer to the various compressed tablets, solid liniments, new forms of coated pills, and the like.

The Progress of Surgery.

For several years we have been accustomed to commence our review of the progress of Surgery during the previous twelve months by a notice of the development of the various modes of dressing wounds, and particularly the antiseptic treatment. Each year has witnessed some progress and change, and 1884 is no exception in this particular. The use of iodoform as a dressing for recent wounds has certainly become more general, and has been attended with excellent results. But attention has been chiefly directed to the employment of corrosive sublimate as a surgical dressing, and on the Continent especially this agent is very widely used, with most satisfactory results. Sir JOSEPH LISTER has dealt with the question in his usually careful and exhaustive manner, and, in a paper which appeared in our columns, has clearly pointed out the merits and demerits of corrosive sublimate, and how the latter may be counteracted. The cheapness of this material, and the ease with which it may be used, together with its valuable antiseptic properties, favour the likelihood of its being generally adopted as a dressing for wounds. The wood-wool dressing, which has been much used and highly spoken of in Germany, has not found so much approval here, being cumbrous and practically inferior to other materials. Dry dressing, in the form of sheets of pure absorbent cotton-wool, is very popular with many surgeons, and is more widely employed than formerly. Early in the year a very important debate was held at Woolwich on the adaptability of antiseptic surgery to the first dressings in military practice, and a very general expression of opinion in favour of the use of antiseptics—especially iodoform and corrosive sublimate—on the field of battle was elicited. Turning from the question of the treatment of wounds to the consideration of the extensions of the field of operative surgery effected or made known during the year, we find they are neither few nor unimportant. Quite recently, Mr. RICKMAN GODLEE has excised a gliomatous tumour from the cerebrum of a man, and has demonstrated the possibility of the procedure. This case is not yet completed, nor have we sufficient data to enable us to estimate the value of the operation, for at present we are in ignorance how far the removal of a cerebral tumour will be attended with relief to paralytic or other phenomena caused by it, and, what the probability of local recurrence may be. The case is, however, a triumph for the precision of medical diagnosis, and an evidence of the great advance of operative surgery during the present generation. The surgical treatment of gangrene of the lung and of basic pulmonary cavities has also attracted much attention, and Dr. CAYLEY and Mr. PEARCE GOULD have recorded two cases of gangrene treated by incision into the lung and drainage, which afford much encouragement to the further prosecution of this branch of surgery. Renal surgery has made steady advance, but there is still a wide difference of opinion as to whether the abdominal or the lumbar operation is the better when nephrectomy is necessary. Sir HENRY THOMPSON'S lectures at the College of Surgeons testify to the progress made in the exploration and removal of vesical tumours. Excision of the intestine has been practised in a few instances, and among the successful ones we may refer to one recorded in our columns by Dr. MACDONALD. The radical cure of hernia by operation and suture of the sac, or of the ring or of both, has gained in general favour, and is now largely practised, with results which certainly warrant the procedure. The surgery of the osseous system has established for itself a proud position. At the meeting of the International Medical Congress, at Copenhagen, Dr. MACEWEN read a valuable paper on Osteotomy, show-

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ing the great extent to which the operation has been practised, and the remarkable immunity from accident that attends it. In our columns have been recorded two cases of wound of the popliteal artery in connexion with division of the lower end of the femur, one of which ended fatally. Mr. BARKER has suggested the treatment of hallux valgus, when severe, by resection of a portion of the metatarsal bone of the great toe; and Dr. OGSTON read a paper at the Medical Society on the Treatment of Flat-foot by Resection of the Astragalo-scaphoid Joint. Mr. TREVES has introduced the plan of opening psoas abscess in the loin instead of at the groin, not only with a view to better drainage, but also to removing sequestra or to treating the disease of the spine directly when it admits of it. At present the latter object has not proved attainable in the majority of cases. Early in the year the discussion on catheter fever raged fast and furious, and was useful in directing attention to a subject of much importance that has been treated with too much neglect. Far from complete as is this review, it shows that the advance of surgery during the year has been distinct, and affords evidence of the enthusiasm and devotion with which it is practised.

Obstetrics and Gynæcology.

Much activity has been shown in the department of Obstetric Medicine. The papers read before the Obstetrical Society have been numerous and important, and we would refer to Dr. GRAILY HEWITT'S paper on the Vomiting of Pregnancy; Dr. E. S. TAIT on Puerperal Temperatures; Dr. MATTHEWS DUNCAN on Fœtal Revolution; DUNCAN and HURRY on Retroflexion of the Fœtus; and HOPKINS WALTERS on Post-partum Avulsion of the Uterus. Before the Obstetrical Society of Edinburgh Dr. BARBOUR read a valuable paper on the Anatomical Relations of the Uterus during the Third Stage of Labour and the First Days of the Puerperium. The papers of Drs. GRAILY HEWITT and HEHMAN on Anteflexion and Displacements of the Uterus, which appeared in our columns, deserve careful perusal. They show the two sides of this much-debated subject, and go far to set it at rest. Several works of great value have been published in this department, among which we would mention HART'S Atlas, DORAN'S Tumours of the Ovary, and TAIT'S Diseases of the Ovaries.

Ophthalmology.

Ophthalmology has received several important additions. Mr. HARTRIDGE has written an excellent little work on Refraction, which should be in the hands of all those who are engaged in the study of diseases of the eye. Dr. SWANZY of Dublin has published a handy and very useful compendium of the Diseases of the Eye in general, which we have very recently favourably reviewed in these columns. The Ophthalmological Society is prosperous, and has published its fourth volume, which contains many interesting memoirs. Abroad, Messrs. WECKER and LANDOLT have issued another part of their large Traité d'Ophthalmologie. SCHMIDT-RIMPLER has added one more to the numerous German Treatises on Augenheilkunde und Ophthalmoscopie. An effort has been made by Dr. MCKEOWN of Belfast to diffuse amongst the laity some knowledge of the danger, and the necessity for prompt and appropriate treatment if blindness is to be averted, of the purulent ophthalmia of infants, and it is much to be hoped, in the interests of humanity, that this effort will prove successful. By far the most interesting event of the year in this subject is the introduction into ophthalmic practice of two remedies—jequirity and cocaine. The former, the value of which has been strongly advocated by M. DE WECKER, is the small round or oval red seed with a black spot which is the product of the abrus precatorius. It has been largely employed in France and America, and to a small extent in this country and in Germany, as an agent for the cure of trachoma and superficial keratitis. The infusion, which is found to contain a base of an irritant character named jequiritine, and to be a fluid in which certain forms of bacteria propagate with great rapidity, to both of which its active powers have been attributed, sets up, when applied to the conjunctiva, very sharp inflammation. The result of the inflammation appears to be the contraction, and ultimately the obliteration, of the bloodvessels of the conjunctiva, leading to the disappearance of the granulations on the inner surface of the lid and the recovery of the transparency of the cornea. Some experience appears, however, to be necessary in the selection of appropriate cases, since bad results have been occasionally reported as occurring from its use. The value of cocaine is less open to objection, and there can be no doubt that a remedy of very great value has been added by Dr. KOLLER to the list of remedial agents applicable to ophthalmic surgery. Its effect, when applied in solutions varying from 4 to 20 per cent., is to produce local anæsthesia. It should be applied four or five times at intervals of about five minutes, its absorption being promoted by gentle friction upon the lids. It produces remarkable pallor, and such complete loss of sensibility that puncture and section of the cornea are scarcely felt. It is invaluable in cases of impaction of foreign bodies into the cornea, which are commonly attended with intense suffering, and such spasm of the lids as renders their extraction in many instances extremely difficult even in skilled hands; but whether it produces anæsthesia of the deeper tissues, as of the iris, still remains questionable. In the meanwhile the rarity and expense of the drug, at first considerable, are rapidly diminishing.

The Royal College of Physicians.

In the history of an institution that can boast of an existence ranging over three centuries the record of a single year does not leave much mark, unless in the course of that period some notable changes have been made affecting the constitution or the privileges of the body. The past year has witnessed such a change, and will be remembered by some with regret, by others with rejoicing, as the time when the College of Physicians voluntarily abandoned its right to confer a complete double licence, and, in conjunction with the sister College, established an examining board for England. The wisdom of the step has been questioned, but it was doubtless hastened by the renewed but once more abortive attempt at legislation which would have considerably affected the interests of both the Colleges, for the withdrawal of the Medical Act Amendment Bill was speedily followed by the promulgation of this combination scheme, which in due course was sanctioned by the General Medical Council. It is not possible to forecast the result of the new

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departure; it ought not only to extend the curriculum of the medical student, but should do much towards enforcing a more practical system upon the medical schools. The Conjoint Committee lost no time in preparing the details of the scheme, which is to be put into force at once, for under certain conditions it will have a retrospective effect. The College, of course, retains the right of conferring its Membership and Fellowship as hitherto. In regard to the last named-distinction, this year will be memorable for an event almost unprecedented in the annals of the College. The Fellows are elected by the Comitia, on the nomination of the Council, from among the list of Members. This year the nomination list was so unsatisfactory to many of the non-official Fellows, on account of names omitted, as well as of some included in the list, that this was referred to the Council. Legal opinion was taken, with the result that the day of election being overpassed no new Fellows were chosen this year at all. The Nomenclature Committee of the College completed its labours during the year, but the publication of the volume is still to come. The Pharmacopœia Committee has also made progress with its work of determining what new remedies shall receive "official" sanction and what old ones shall be disregarded. An attempt to stimulate the College to revert to its old prerogative of setting its hallmark upon drugs was made by the late Dr. MAHOMED, but failed to meet the support for which he so urgently pleaded. Amongst the questions debated at the College, the one bearing on the title of doctor excited some interest, but no conclusion was arrived at, and for the nonce at least there remains but one narrow portal whereby a London student can obtain the coveted degree in London. By the death of Dr. BARCLAY the College lost its treasurer, after a brief tenure of office, and he was succeeded by Dr. DYCE DUCKWORTH. A resolution appointing two Vice-Presidents was passed, and Sir W. JENNER was again chosen President. The Harveian Oration, delivered this year in October, was given by Dr. RUSSELL REYNOLDS; it was an eloquent panegyric. The Bradshawe lecturer, Dr. PHILIPSON (of Newcastle), took for his subject Diseases of the Lymphatic System. Dr. CLIFFORD ALLBUTT delivered the Gabstonian Lectures, on Visceral Neuroses; Dr. HUGHLING JACKSON the Croonian, on the Evolution and Dissolution of the Nervous System; and Dr. ANDREW the Lumleian, on the Etiology of Phthisis.

Royal College of Surgeons.

The Royal College of Surgeons of England has, during the year, attracted an unusual amount of notice, partly in consequence of certain agitations for domestic reform, and partly as the result of some important changes in what may be called the foreign policy of the Council. In order to follow the current of the present agitation for reform it is necessary to remember that on July 12th, 1883, a committee of the Council was appointed to consider and report on the mode of election to the Council and other matters relating to the Charters and Bye-laws of the College. The first report of this committee was presented on Nov. 8th, 1883, when it was recommended that Fellows should, in future, be allowed to vote at the election of the Council either in person or by voting-paper. This recommendation was adopted, and thereby compulsory personal voting was doomed. On Jan. 10th, 1884, the committee presented its second report, in which certain alterations were recommended to be made in the Charters of the College. The principal alterations proposed were: the increasing of the amount of the yearly value of the property in lands or rents to be held by the College from £2,000 to £10,000; the determining of the conditions of admission to the Fellowship by a Resolution of the Council instead of by Bye-law, as heretofore; the fixing the fee for the Fellowship by Bye-law instead of by Charter; and the abolition of the fee payable by Members of twenty years' standing who should be elected to the Fellowship. At the same meeting of the Council it was resolved, on the motion of Mr. ERICHSEN, seconded by Mr. HOLMES, to refer to the consideration of the Committee the 14th Section of the Charter of the 7th Victoria, relating to "Substitute" Members of the Council. On the 14th of the following month the Committee presented its third report, in which it was recommended that it was inexpedient to make any alteration in the said section. This report, like its predecessors, was adopted by the Council. It was then resolved, on the motion of Mr. ERICHSEN, seconded by Mr. CADGE, that the President should, in accordance with Section XVIII. of the bye-laws, convene a meeting of the Fellows and Members of the College for the following purposes:—"To report to the Fellows and Members the alterations in the Charters proposed to be made by the Council, and to receive from them any suggestions or recommendations with respect to these or any other alterations in the Charters which they may have to offer for the consideration of the Council." The general meeting of Fellows and Members was held on March 24th. The alterations proposed by the Council, having been read and discussed *seriatim*, were ultimately approved by a majority of those present. Thereupon, on the invitation of the President and in accordance with one of the purposes for which the meeting was convened, many suggestions and recommendations with respect to other alterations in the Charters were made and carried. Among these were (1) that the Fellows and Members should be invested with a larger share in the management of the College; (2) that there should be an annual meeting of the Fellows and Members, at which the annual report of the Council should be presented; (3) that the President should be elected by the Fellows, and not exclusively by the Council; and (4) that no alteration should be made in the constitution or relations of the College without the consent of the Fellows and Members convened to discuss such alteration. Another recommendation was also made, to the effect that the College should amalgamate with the College of Physicians to examine conjointly and confer degrees in medicine and surgery. The recommendations and suggestions made by the Fellows and Members at the general meeting were taken into consideration by the Council on May 8th, and were all rejected, except one that did not involve any alteration in the Charters—viz., that an annual meeting of the Fellows and Members be called at which a report from the Council shall be presented. This action of the Council was speedily followed by a result natural and inevitable. Many of the *Members* of the College had already formed themselves into an Association for the purpose of obtaining a larger share in the management of the College; and now the rejection by the Council of the recom-

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mendations adopted at the general meeting was promptly followed by the formation, at the instigation of Mr. PAUL SWAIN of Plymouth, of an Association of Fellows, to endeavour to secure a reconsideration of the rejected recommendations under more favourable conditions, and to promote reform generally in the College. The Association, which in two or three weeks numbered more than two hundred Fellows, held its first meeting in the rooms of the Medical Society of London on June 12th. At this inaugural meeting, under the presidency of Mr. GEORGE POLLOCK, three of the recommendations originally carried at the general meeting of Fellows and Members were re-affirmed—viz., that the Fellows and Members should be invested with a larger share in the management of the College, that no alteration should be made in the constitution of the College without the consent of the Fellows and Members convened to discuss such alteration, and that the report of the Council presented at the annual meeting should be discussed, and if approved, adopted. Lastly, a committee was appointed to take such steps as might seem desirable to further the objects of the Association. The succeeding events are so recent that they will be within the easy recollection of our readers. It will, therefore, be enough to mention that the committee appointed by the Association of Fellows drew up a scheme of reform, which was presented at a general meeting of the Association held on November 8th. A report of that meeting, including the various recommendations that were finally adopted and ordered to be submitted to the Council of the College, appeared in our columns on November 15th (p. 887). The Council considered the recommendations at an extraordinary meeting held on the 19th instant. An account of this meeting, at which the fourth report of the committee of the Council of the mode of election, &c., was presented, appears in the present issue, and shows to what extent the majority of the Council are in sympathy with the main body of the Fellows and Members.

The other matter of chief interest in the history of the College during the year is the combination into which the College has entered with the College of Physicians for the purpose of holding a complete conjoint examination in Medicine, Surgery, and Midwifery. The combination scheme was approved by the General Medical Council on Oct. 9th, and on Dec. 11th the Council of the College appointed its share of Examiners under the scheme (*see* THE LANCET, Dec. 13th, p. 1074).

Of the matters of more personal interest, it may be mentioned that Mr. FLOWER, F.R.S., has resigned the office of Curator of the Museum of the College, the duties of which he had for twenty-two years discharged with "admirable care, judgment, and zeal." Mr. FLOWER, who has been appointed by the trustees of the British Museum superintendent of the Natural History department at South Kensington, has been succeeded at the College by Mr. CHARLES STEWART. At the election of Council in July Mr. THOMAS SMITH was re-elected, and Messrs. LAWSON, DURHAM, HILL, and ALLINGHAM were elected. At a meeting of Council held on Aug. 5th the Honorary Gold Medal of the College was awarded to Sir ERASMUS WILSON. Though Sir ERASMUS was able to receive and appreciate the honour conferred upon him by the Council, he died three days later, leaving the College his residuary legatee, by which, it is expected, the College will eventually receive about £200,000.

Army, Navy, and Indian Medical Services.

Some important modifications have been introduced during the past year into the medical service of the army. The medical officers and the Army Hospital Corps have been united under the title of the Army Medical Staff Corps; the examination of surgeons before promotion has been restored, and that of surgeons-major introduced. A definite period has been fixed for retirement from the professorships in the Army Medical School at Netley; the appointment of a military commandant of the Royal Victoria Hospital, Netley, has been abolished; and some new regulations have been issued by the Horse Guards relating to the organisation of general hospitals at the base of operations in time of war. In the Navy an important change has been made in the system of nursing, by the introduction of trained lady nurses into the hospitals, and the organisation of a trained sick-berth staff to replace the untrained men nurses hitherto employed, both in the naval hospitals and on board ship. In the Indian medical service the absurd term of "unemployed pay" has been replaced by that of "grade pay" and the issue of the rates comprehended under that head has been restricted to officers who are in receipt of staff salary in addition to their pay; all surgeons not holding executive charges are in future to be placed on the same footing as those of the army medical staff similarly situated. We regret that no change has been made with regard to "officiating pay," nor in the regulations by which medical officers are required to pay their way to all appointments in which they draw higher pay without any reference to these having been made in the interests of the service or at the request and for the convenience of the officer.

The General Medical Council.

THE General Medical Council has held two meetings this year, the first one extending from March 24th to April 2nd inclusive; the second from Oct. 7th to the 16th. It would be a moderate estimate of the cost of these two meetings to say that they took more than £2000 out of the coffers of the Medical Council—that fund the balance of which the Government, in its Bill, proposed to use for "the good of the profession." Farewell now to the Bill and to the good of the profession. When the Council met in March last the President, with much earnestness, expressed his hope that before their next meeting medical legislation would be completed, and his belief that only by the passing of some such Bill as was then before Parliament could the questions be settled, and an agitated profession calmed. There was no question of moment to discuss, he said, nothing to occupy them more than two or three days. They sat eight days with little to show for it, but a few decisions on cases of irregular or infamous conduct, and the sanction of the Scotch Conjoint Scheme. At the October meeting the Council was in good spirits at the defeat of the Medical Bill and the demonstrated incapacity of Parliament, as at present constituted and conducted, to deal intelligently and firmly with legislation affecting the medical profession and through it, the public. They sat nine days, doing more than nothing. Sir HENRY ACLAND dealt lightly with the failure of legislation for which he had so

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hoped, and which, in March, he thought so indispensable. The Council did what it always does when it has nothing else to do—it spent whole days in tampering with its regulations on preliminary education, and in giving constant trouble to students and examining bodies. It is not two years since some of its last recommendations on preliminary education came into operation. As it had sanctioned a Scotch Conjoint Scheme in March, it with equal glibness, sanctioned an English Conjoint Scheme in October. It relegated various questions to the Branch Councils, on which they will spend a great deal of money and time, and which will all have to be reconsidered at further cost of money and time by the General Council. We should have said that at the beginning of the meeting Sir HENRY ACLAND was re-elected to the chair for the third time, not altogether unworthily. True, he lacks firmness and force. He is helpless in the hands of the representatives of half a score of corporations, which in the interest of the profession should be reduced to half a dozen. But that is partly the fault of a strong Government who did not use his strong words of March to press their Bill on the House of Commons.

The Medical Societies.

Of the various Medical Societies, the Clinical is still the most popular, and the renewed vigour of the Medical Society of London has not diminished. The Pathological Society is the one which needs most reform, and what we urged last year holds still good at the end of this. A stop should be put to the reading of papers on subjects which have been well nigh threshed out. It would be well if separate arrangements were made whereby specimens might be exhibited without publication in the Transactions. Some sort of understanding of this kind would no doubt meet the necessities of the case. Or it would be possible to increase the utility, powers, and work of the Morbid Growths Committee if members were allowed, on notification to the secretary, to have specimens submitted direct to the committee before being read at the meeting of the Society. The subjects which have attracted most attention at the various Societies have received so much comment and mention at our hands in various ways and on several occasions, that it is superfluous to recall them in the present summary. It will, therefore, suffice to record the chief landmarks in the year's progress. At the Clinical Society the *chef-d'œuvre* has unquestionably been the series of meetings devoted to the discussion of Charcot's Disease. Myxœdema and Spina Bifida still form the subjects of patient investigation by the committees which were appointed to inquire into these matters last year. Cholera was the most important attraction which the Epidemiological Society gave its members; the names of Sir JOSEPH FAYRER, Sir W. G. HUNTER, Surgeon-General LONGMORE, Dr. THORNE THORNE, and Mr. SHIRLEY MURPHY must be mentioned in this connexion. The treatment of Enteric Fever by cold was the most interesting of all the subjects which the Medical Society of London dealt with; and the debate on Catheter Fever may be described as the most exciting and brilliant, though its practical results can hardly be said to have been enhanced by the debate. The question was one of pathology, and we may sum up the debate by saying that the state of knowledge remains pretty much where it was prior to Sir ANDREW CLARK'S awakening of the subject. As matters brought before the Royal Medical and Chirurgical Society, we have to chronicle the discovery of the Nervi Nervorum by Mr. VICTOR HORSLEY; the contributions to Pulmonary Surgery by Dr. CAYLEY, Dr. K. FOWLER, Mr. PEARCE GOULD, and Mr. R. J. GODLEE, must be regarded as of considerable practical importance. The painstaking researches of Dr. PERCY KIDD on the Tubercular Bacillus and of Dr. F. C. CHAMPNEYS on Cervical Emphysema must not be allowed to pass without a word. The work done at the other London and provincial medical societies has been characterised for the most part by earnestne s and thoroughness; new facts have been added to our science, thereby swelling its general bulk, and it is to this accumulation of the results of observation that we trust for the steady development, and even progress, of medicine, in the widest application of the term.

The International Medical Congress at Copenhagen.

The International Medical Congress at Copenhagen well deserves a separate notice. The Congress was the eighth of the series of Congresses so well designed to advance medical science, and with it the deepest welfare of nations, as well as to improve the international sentiment. The number of members was large, larger even than in London, amounting to about 1700. It will surprise no one who has visited Denmark and the neighbouring countries to learn that Scandinavian hospitality was unbounded. From the King, who was at once the patron and the host of the Congress, and the Municipality, who also entertained the members, to the profession and the people of the country, one long hearty note of welcome and interest was elicited from Sunday, the day of the formal opening—the Danes are known to have no difficulty in doing both work and worship on Sunday—to the following Saturday. There were present at the opening the King and Queen of Denmark, the King and Queen of Greece, the whole of the Royal Family, the Corps Diplomatique, the President of the Rigsdad, the representatives of science and learning, and the members of the Congress. Professor PANUM was worthily elected president. The scientific work of the Congress has been described in some detail in our columns, and we need here only indicate the chief communications. The most brilliant and original of these was the paper by Professor PASTEUR on Pathogenic and Vaccinia Microbes, in which he emphasised the intensity of the pathological processes and the morbid poison in the medulla oblongata of animals affected with hydrophobia, and gave details of the wonderful demonstration of the way in which he has rendered animals proof against this disease by inoculation with the poison after its transmission through monkeys. The discovery that one kind of animal can mitigate the virulence of the morbid product of another is one of the most remarkable and significant of any that has been made in the history of the race, and is still only in its infancy. It was generous of M. PASTEUR to credit EDWARD JENNER, by his vaccination work, with making his own discovery more easy, but his generosity will not prevent mankind from extending to him equal praise for investigations that extend our idea of the relations and duties of different members of the animal kingdom, and raise our hopes of fresh triumphs over the most horrible of diseases

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affecting man and animals, and our estimate of the value of medicine to mankind. The communication of Dr. TOMMASI CRUDELI on Malaria and its dependence on a living organism, favoured by certain conditions of soil and temperature, and the value of arsenic in malarious disease, deservedly attracted much attention. Our readers are in full possession of his views. Sir WILLIAM GULL read what may prove a very important paper on the International Collective Investigation of Disease. Sir WILLIAM so warmly commended this subject to his audience that it had a truly great reception, and was warmly endorsed by the President. One of the most interesting communications read was that of Dr. AUSTIN FLINT on Auscultatory Sounds. Prof. ESMARCH opened a discussion on the subject of Antisepticism in the absence of Sir JOSEPH LISTER, which was one of the most conspicuous, as it was one of the most disappointing features of the Congress. The Scandinavian countries have been foremost in the appreciation of the antiseptic system of surgery, not the least testimony to which and to its distinguished living leader was expressed by the whole Congress rising in honour of him and his system. British surgery, however, was well represented in his absence by Sir JAMES PAGET, Sir SPENCER WELLS, Mr. BRYANT, Mr. KNOWSLEY THORNTON, Dr. MCEWEN, Mr. HENRY MORRIS, and others. English surgery, both in its aspects of safety and boldness, could not have had better illustrations than in the contribution on Colotomy, by Mr. BRYANT; on Nephrectomy and Nephrotomy, by Mr. THORNTON; and in that on Genu Valgum, by Dr. MCEWEN. Our readers will remember with pleasure two other communications to the Congress—one, by Professor MALLING HANSEN, containing some remarkable observations on the Normal Increase of Weight during later Childhood (from nine to sixteen years), and one by Professor PANUM, on Investigation of Food Rations for Men in Health and Disease. The country to be next honoured by the Congress is the United States.

Other Medical Associations.

Our notice of the Congress necessarily curtails our space for the notice of meetings of other Medical Associations.

The British Medical Association met in Belfast. The most noticeable features of the meeting were the Address in Medicine by Dr. ORD on some Disorders of Nutrition related with Affections of the Nervous System, Dr. REDFERN's Address on Physiology, and a communication by Dr. MADDEN on Alcoholic Disease in Children. The Reform Committee was under the painful necessity of explaining its conduct in accepting Sir LYON PLAYFAIR'S amendment of the Medical Bill; in other words, its unfaithfulness to the cardinal principle of all Bills for promoting medical reform, after having striven for it for fifteen years or more.

Among other associations, we may notice the meeting of the fifth International Congress of Hygiene at the Hague in August, the third of the Otological Congress at Basle, and the annual meeting of the British Dental Association. In connexion with this meeting, we may express our concurrence with the President in thinking that it is no slight discredit to the dentists that they are so slow to establish any theory of the decay of the teeth, which seems more general than ever under conditions of civilisation and with an unprecedented development of the dental specialty.

The Medical Profession and Legislation.

The Legislature, not to say the Government, have this year deeply disappointed the medical profession. The Medical Bill, based on the recommendations of a Royal Commission, was promptly reintroduced in the House of Lords by the Government; it was pressed heartily, and passed without difficulty. But on the second reading in the House of Commons the Bill was faintly praised and indirectly condemned by most of the medical members of the House, and by Sir LYON PLAYFAIR, who, in the previous year, had been a hearty supporter of the Bill. He soon after gave notice of an amendment aiming at the most fundamental clauses of the Bill, that providing for a conjunction of all the authorities for licensing to practise, and the Government soon showed signs of weakness. One of the many fallacies with which he misled the House was in the statement that the natural waste of the profession was 1600 a year. He wrecked the Bill, and with it, in a great measure, his own reputation and fitness to represent the medical profession. Without his opposition that of the Home Rulers might have been met and resisted. But he well knew that he was imperilling the Bill when he began to haggle with the Government in reference to giving up the conjoint principle.

Medico-Legal Cases.

Legal Medicine has had illustrations in practice in almost all its branches. Amongst a number of deaths by poisoning recorded in our pages the following may be noticed:—Arsenic, as usual, heads the list both as regards frequency and interest. At Liverpool CATHERINE FLANNIGAN and MARGARET HIGGINS were convicted and sentenced to death for the murder of THOMAS HIGGINS. During the investigation of this case new facts were brought to light and known ones received confirmation. The public and the profession were horrified at the disclosures of an incentive to homicide offered by a reckless system of life assurance. Chemical analysis has proved that the yellow patches found in the alimentary canals of persons killed by arsenic are not invariably composed of arsenious sulphide, and that lethal quantities of arsenic may be obtained from the viscera several years after burial. In a second case a woman named LEFFLEY took the life of her husband, adding sufficient arsenic to a rice pudding to kill more than sixty adults. It may be here remarked that Drs. VAUGHAN and DAWSON of the University of Michigan, U.S.A., have conducted a series of experiments showing that arsenic injected into the mouth and rectum post-mortem becomes widely diffused in the tissues and organs. A notable instance of death from strychnia was investigated before Dr. DANFORD THOMAS. A woman received from her paramour a powder avowed to consist of calomel, and, ignorant of its nature, she gave it to her father, who died from violent spasms within half an hour. Several other deaths have ensued from poison taken through inadvertence, or supplied by unqualified persons. A pupil at the Gloucester Infirmary, writing from the dictation of a physician, prescribed by mistake a drachm of chloral hydrate in place of the syrup; the patient died. Patent medicines have claimed their victims—e.g., a child succumbed to the action of Indian tincture (? Indian hemp) in a few hours. In one case a woman lost her life through taking lobelia sold to her by a herbalist. The coroner's

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jury acquitted the vendor on the erroneous assumption that lobelia was not a poison.

The study of animal poisons has made advances in spite of the intrinsic difficulties attending the prosecution thereof. Acute infectious disorders, such as foot and mouth disease, Texan fever of cattle, enteric fever, and puerperal fever, have received attention at the hands of pathologists and medical jurists. It must be admitted, however, that we are far from understanding the *modus operandi* of the morbid material in many instances, but still experience points to the conclusion that danger to health and life is to be apprehended from the direct transmission of the specific virus, and from the ingestion of meat rendered poisonous by toxic agencies generated under the influence of such virus. The opinion has gained ground that the so-called cadaveric alkaloids are largely answerable for the symptoms incidental to the taking of putrid food and tinned animal and vegetable matter. Allied to these "alkaloids," if not actually belonging to the same group, are the principles evolved in certain diseased states of the body. We refer more particularly to the condition known as acetonuria. HOPPE-SEYLER has described a case in which this followed poisoning by sulphuric acid; and in THE LANCET of May 3rd there is recorded a death from "Kussmaul's diabetic coma" of great medico-legal interest.

Three cases of strangulation that have happened during the year deserve notice. In the first of these, known as the "Stoke Newington murder," the victim, a young man, was strangled by means of his own handkerchief, and then thrown into a reservoir. The second case was that of a child found dead in the Surrey Canal, at Peckham, with its neck tightly constricted; it is noteworthy on account of the way the inquest was conducted. No medical evidence was called, the mortuary keeper being the scientific witness. Lastly, there was the murder of ANNIE YATES, a prostitute, living in Burton-crescent, who was found dead with a severe scalp wound and a towel tied round her neck. Supporting the theory of homicide was the fact that her right arm had been for a long time paralysed. In no one of these cases was the offender brought to justice.

Criminal abortion has been largely practised, and very differently punished in different cases. At the Liverpool assizes the capital sentence was passed. At the Central Criminal Court the two convicts escaped with fifteen and twelve years' penal servitude respectively. A woman was admitted to University College Hospital suffering from supposed typhoid fever, but post mortem punctured and lacerated wounds were discovered about the genitals, and in the uterus there were conclusive signs of recent delivery, and around it of cellulo-peritonitis. No clue to the person who procured the abortion has been forthcoming.

Several charges of malpraxis have been preferred against medical men. Two of these were in the colonies, and had reference to alleged neglect at confinements, whereby the uterus was ruptured in one case and wounded in the other. Sentence of imprisonment followed conviction in the former instance; in the latter the accused was acquitted. A surgeon at Hawkes' Bay was mulcted in damages of £175 for supposed unskilful treatment of a broken leg. A German doctor has been convicted of manslaughter because he did not adopt the Listerian method of dressing a wound. We have repeatedly had to criticise the mode of procedure in coroners' courts, and especially as regards the holding of inquests without post-mortem examinations and without medical evidence. The iniquity of the law of criminal responsibility was exposed when GEORGE BALDWIN, an inebriated epileptic, received sentence of death for the murder without provocation of an old man. Justice, however, prevailed over the statute, and the capital punishment was not inflicted. Mere mention of the name of WELDON will suffice to remind our readers of the lamentable defects in the existing Lunacy Acts. The post of Director of Criminal Investigation has been subjected to unfavourable comment, and at length a special committee has reported in favour of radical changes in the working of the office. It remains to be seen whether the executive will act upon the report and proceed with the needed reforms. The large number of queries addressed to us as to the remuneration of medical men for professional services in courts of law shows the system requires definition and codification.

Public Health and Epidemiology.

The first half of the year which is now passing away was not characterised by anything remarkable as regards public health in England and Wales. The general mortality was below the average, and the death-rate from the principal zymotic diseases was also less than the mean for the past ten years. Indeed, apart from some increase of small-pox, which at the time gave rise to anxiety, diphtheria alone, amongst this class of diseases, was in excess, and it is evident from the mortality which is now registered under that heading that this very obscure and often terribly fatal disease is steadily making inroads amongst us. To some extent the increase of registered diphtheria deaths may be due to improved knowledge leading to a more correct diagnosis, but this alone will hardly account for the large number of epidemics that are now so frequently recorded. The third quarter of the year was marked by an excessive death-rate, which was mainly the result of exceptional meteorological conditions. During the latter part of the second quarter of the year the rainfall was below the average, but during the third quarter the diminution was more marked, being 2·87 inches below the average; and this condition was associated with an excessive temperature. Indeed, during the month of August the excess above the average amounted to over 4° F. These two conditions coming concurrently into operation have always tended to an increased diarrhœa fatality, and during the past quarter the death-rate from that cause alone amounted to 2·7 per 1000, as opposed to an average of 1·9. Large towns were, as usual, mainly affected—Leicester, Preston, Nottingham, Northampton, and Norwich taking the lead. Owing to the prevalence of cholera on the Continent of Europe a larger proportion than usual of the diarrhœa deaths was attributed to cholera, but with one or two exceptions, to be referred to later on, there is no reason to believe that this disease succeeded in reaching this country. The prevalent drought led also to considerable difficulties as regards water-supply, and during the third and fourth quarters of the year considerable local outbreaks of disease resulted. Two outbreaks were of special magnitude—namely, those from enteric fever at Beverley and Kidderminster. Both were ascertained to be related to

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conditions of water-supply, and although the reports of the inspectors of the Local Government Board who inquired into them are not yet issued, yet it may be fair to assume that the sources of supply were in both cases influenced by the excessive drought which had preceded them. Small-pox bids fair before the close of the year to give some decided indications of a coming epidemic. The disease resisted the onset of summer weather for a longer period than is usual, and it has not failed since to show that many of the conditions favouring a large prevalence exist in several parts of the kingdom, and especially in the metropolis.

The present year is memorable in connexion with the epidemic of cholera, which, appearing first in the south of France, spread rapidly into Italy, and later on to Spain, Algeria, and then to Paris. The disease was in the first instance imported from the east into Toulon in June; thence it rapidly spread to Marseilles, some 900 and 1700 fatal attacks respectively occurring in those two cities. A large number of places in the south of France soon became invaded, one of the worst outbreaks being at Perpignan. From France the disease spread first into Italy and later on into Spain. The Spanish outbreak was not on a large scale; it was mainly confined to the coast province of Alicante and one or two other places, and no trustworthy statistics of its mortality have been published. The invasion into Italy was, on the contrary, of great severity. Commencing in August, the infection was rapidly diffused throughout a large portion of Northern Italy, Spezia being specially affected and suffering a loss of some 600 lives. Thence the disease was conveyed into the province and city of Naples, and some 7000 deaths, the majority of which took place in the city, were the result. In all, there cannot have been less than between 10,000 and 11,000 cholera deaths in the kingdom of Italy, and the disease clung with special tenacity to towns, such as Naples, Spezia, Genoa, &c., which had water-supplies subject either to constant or to occasional contamination; whilst, on the other hand, several importations of the infection into Rome, where an admirable water service is available, failed to bring about any spread. Early in November cholera was conveyed into Normandy, and a few days later the infection was announced as having reached Paris. In this city the mortality rose till it reached its highest point about the middle of the month; then an abatement commenced, and at the end of the month, when somewhat under 900 fatal attacks had been recorded, the epidemic as such was considered to have ended. Occasional cholera deaths, however, still occur in Paris, and the prospect of a recrudescence of the disease next year imposes on our sanitary authorities the great responsibility of being prepared in advance with an organisation which shall secure the detection and immediate isolation of the earliest attacks. On two occasions the disease has reached our shores this year. The most important importation was into the port of Cardiff, but owing to the system of medical inspection and to the means of isolation which were there available the infection failed to spread on shore. So far then, our national system of defence against cholera has served us well, and the experience recently gained from the working of the alternative system of quarantine, whether by land or by sea, in Southern Europe, has been such as to prove abundantly that in this matter England has chosen the good part. Unless our system is coupled with national and individual efforts to secure the utmost possible cleanliness in all our surroundings, it is hardly likely to prove in all points successful, but it can never fail more signally than quarantine has done.

The International Health Exhibition.

Another striking feature of the year has been the International Health Exhibition. Its success as an attraction was prodigious, though the financial result is likely to be more moderate than might have been expected. Our elaborate reports will be our best excuse for not noticing the Exhibition here at greater length. The Biological Museum, under Mr. CHEYNE, was perhaps the most valuable part, as it was the least frequented, of the Exhibition, and, let us hope, will prove the fair beginning of a State-endowed laboratory for the study of pathogenic organisms.

Miscellanea.

We cannot now detain our readers with any lengthy allusion to miscellaneous questions, which, however, are legion. No great honours have been awarded in the course of the year to the profession; the only one we recall, and that well deserved, was the promotion of Dr. ACLAND to the rank of Knight Commander of the Most Honourable Order of the Bath. The sympathy of the profession has been strikingly shown in several instances, notably in the fund raised in a few days to help Messrs. BOWER and KNATES to meet the legal expenses to which they have been put by a series, not yet completed, of heartless and harassing prosecutions, which, in the estimation of the judges, were entitled to the name of persecution. The historical expansion of national education in the last fourteen years has led to much misgiving as to the physical effects of school pressure on the children of the poor. At the request of Mr. MUNDELLA, Dr. CRICHTON BROWNE investigated this question from a medical point of view. His report was held back until its unfavourable suggestions could be counteracted by the concurrent publication of a report by a lay official of the Education Department, Mr. FITCH. This questionable device on the part of the Vice-President of the Council did not suffice to remove the wide impression produced by Dr. CRICHTON BROWNE'S report, which has been generally endorsed by the profession, and which will yet have far-reaching effects in modifying the pressure of school work. One of the most significant events of the year has been the appointment of a Royal Commission to report on the Dwellings of the Poor. Not the least noticeable feature of this Commission is that it is presided over by His Royal Highness the Prince of WALES, who has shown great personal interest and taken much personal trouble in the matter. The whole "case" of the poor is being "considered" by the rich with an unprecedented care, which speaks well for the future of both classes. In the spring the University of Edinburgh celebrated its 300th year of existence with rare proofs of its world-wide and well-sustained reputation, in spite of certain little parochial feelings which led it into unworthy opposition to the Medical Bill, and have not raised respect for it in the profession in England during the year. Various circumstances have lately directed English, and especially London, opinion to the monstrous absence in the metropolis of a Teaching University, and a powerful move-

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ment is on foot for supplying this great defect. We were among the first to expound this great need, and we shall not fail to support any well-devised scheme for placing London in this respect on a level with every other capital in the civilised world.

As on the borderland between Physiology and Sport, we may here notice the wonderful feat of Mr. WESTON, done under teetotal conditions, of walking fifty miles a day for a hundred days, Sundays and Christmas-day excepted. The feat was the more remarkable as Mr. WESTON set out with a bad cold, and suffered at first for weeks with a sore foot.

Obituary.

Death is seldom a welcome visitor, but in few years has he been less so than in the present, having removed many from our ranks who, to all human seeming, were destined for years of service and the achievement of fame. We can only, at a venture, recall a few of the names which have appeared in our obituary this year. Mr. PETER EVERSHED is a man to be mentioned. Born in the last century, in practice with his father before most of the present heads of the profession were born, a lover of nature, an enthusiastic fox-hunter, riding to hounds, and "riding well forward" up to his eighty-second year, he had time and strength for fifty years' continuous and honourable practice in the same village (Billingshurst, Sussex), and then for more than twenty years of "blest retirement." At the other end of life, and all too soon, we have had to record the death of ALEX. BAIRD, of Perth, whose contributions to our columns in the form of "Scottish Notes," from the bed to which he was long confined by paraplegia, were read with interest by many far beyond the limits of Scotland. Dying at the age of thirty he showed what are the risks of the medical profession. He had, at various times, incurred typhus, small-pox, and blood-poisoning, the latter in 1880, ending in myelitis, from which he never recovered. His energy and his geniality survived the typhus and the small-pox, and even the myelitis, and he wrote and worked to the last like a man without trouble or disease. When shall we end if we give way to the thoughts that rise in us as we recall the names of JOHN NETTEN RADCLIFFE, of FREDERICK A. MAHOMED, of ALLEN THOMSON, of JOHN HUTTON BALFOUR, of A. WHYTE BARCLAY, of J. HALL DAVIS, of GEORGE MAY of Reading, of FAIBLIE CLARK, of ALEXANDER TWEEDIE, of WILLIAM TAYLOR, J.P., of Scarborough, of HENRY WALKER, J.P., of Brierley-hill, of ARMAND LESLIE (killed at the battle of Teb), RICHARD SUMNER of Formby, Liverpool, ALEXANDER WOOD, CÆSAR H. HAWKINS, Sir ERASMUS WILSON, FREDERICK CHAMBERS, J.P., JOHN POPHAM, SAMUEL RABBETH, THOMAS CHAVASSE, GEORGE LUMGAIR, and DANIEL J. DUIGAN, Deputy Inspector of Hospitals; to say nothing of men of other nations, such as Prof. GROSS of Philadelphia, the "Nestor" of American Surgery, of COHNHEIM, of JEAN BAPTISTE DUMAS, &c. &c. The names speak for themselves, and will recall all that is thorough in science, all that is faithful in professional service, if they also illustrate the risks and the endurance of professional life, whether in civil or military conditions. Neither can we withhold here a word of respect and regret for Mr. B. R. WHEATLEY, the Librarian of the Royal Medical and Chirurgical Society, whose arduous and faithful labours and courteous and kindly manners will be long and gratefully remembered by the profession.

Conclusion.

We must now leave our readers for the year with all good Christmas sentiments. While individual members of the profession disappear, the great army of healers remains, and will remain to do brave battle with disease. THE LANCET grows apace with the growth of professional and scientific news. Ten years ago 64 pages sufficed to deliver our weekly message to the profession. These have been quite inadequate of late, and 96 and even 104 pages are now needed for this purpose. We can only rejoice to be able to meet the ever-widening demands on a journal which aims at the double function of being on the one hand a medium of medical news, science, and literature, and on the other of leading the public to a higher appreciation of the claims and labours of the profession, and which in both capacities meets with so generous a reception at home and abroad.

Annotations.

"Ne quid nimis."

WELLINGTON COLLEGE.

SINCE we called the attention of our readers for a second time, to the unsatisfactory state of health at Wellington College (THE LANCET, Dec. 13th, 1884), we have received communications, chiefly from the parents or other near relatives of boys, which tend to confirm the opinion we have expressed that there is something seriously wrong with the sanitary condition of the College or its surroundings. We are well aware of the objection which attaches to information thus received, that it is *ex parte*, that many of the circumstances adduced in support of it might be satisfactorily explained, and that in some instances, at least, the complaints may be unfounded, or exaggerated. But making all allowance for these possibly sources of error, there is yet enough to justify us in maintaining that a strong *prima facie* case has been made out for an inquiry, by a competent and independant body, into all the circumstances bearing on the health of the boys. Such a course is imperatively necessary in the interests of the College, for until some assurance has been given that these boys are, as far as possible, protected from preventable disease, we may fairly presume that many of the parents will send them to other schools where such matters are known to receive the necessary attention. It is also demanded in the interests of the Governors, for it will be a serious blot on their reputation if the School falls off in consequence of their neglect, real or supposed, of so important a duty. And it is, most of all, requisite, in the interest of the boys, for, in addition to the risk of life involved in the neglect of sanitation, there is the certainty that the health of some—who can say how many?—may be permanently injured and their future career impaired as a result of disease which might have been prevented by the adoption of judicious measures. We have done our duty in bringing the subject under public notice, and we have suggested the course which seems to us to be the best fitted to meet the case; it remains for the parents of the boys, many of whom are in a position which puts it quite within their power, to demand an inquiry into the state of health of the school, and an examination by skilled experts, medical and engineering, into the sanitary state of the College and its surroundings, and of the masters'

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houses. But the investigation must be conducted by men entirely independent of the College, the results must be unreservedly made known, and the measures which may be deemed necessary to improve the health must be carried out as promptly as possible. Unless some such course is adopted, it can scarcely be expected that Wellington College will maintain its numbers or continue to hold the position it has attained in the public estimation as one of our great and deservedly popular public schools.

DEATH FROM COMBINED EFFECTS OF ALCOHOL AND MORPHIA.

ON Monday, Dec. 22nd, the deputy coroner for Central Middlesex held an inquiry into the cause of death of Thomas Rice Webber, aged twenty-seven years. The deceased, habitually a temperate man, appears to have indulged freely in alcohol on the day previous to the fatal event. Soon afterwards his symptoms were those of "acute mania," and so violent was he that physical restraint had to be resorted to. Mr. Hazell, jun., of Oakley-square, was consulted, and this gentleman, to quiet the ravings of the patient, administered three-quarters of a grain of morphia by hypodermic injection. Within forty minutes sleep was induced, from which the deceased never awoke. Death ensued in about six hours. The post-mortem examination was conducted by Mr. Pepper in the presence of Mr. Hazell and another medical man. Beyond a few trifling bruises on one leg there were no marks of violence on any part of the body. All the internal organs were passively congested, indicative of the mode of dying. The mitral and aortic valves showed signs of previous inflammation, but the vegetations were small and dense. The left ventricle was moderately hypertrophied without dilatation. The brain was healthy. In short, there was neither albuminuria nor acetonuria; no disease was discovered sufficient to account for death. Mr. Pepper gave it as his opinion that the deceased succumbed to the combined effects of alcohol and morphia, and that the issue was accelerated by the exhaustion consequent on excessive mental and physical activity. The jury returned a verdict in accordance with the medical evidence, the same time acquitting Mr. Hazel of all blame. The above case is interesting on clinical, pathological, and medico-legal grounds. It shows the danger to be apprehended from morphia narcosis in conditions like those above enumerated, and the extreme care that should be taken when dealing with symptoms, and causes of death of doubtful and, perhaps, undeterminable quantity.

SMALL-POX AT SHEFFIELD.

IT is questionable whether the best way of bringing the objectors to vaccination to their senses is not to allow small-pox to have full sway amongst them. But this is a disastrous way. So we put on record from time to time overwhelming arguments, or rather facts, which to all reasonable people are enough. A very instructive paper by Mr. C. H. Willey, M.B., the superintendent of the Borough Hospital at Sheffield, giving his experience of the effect of vaccination in modifying small-pox, has been published for wide circulation in Sheffield, and is well fitted for distribution everywhere. It tells the same story that every similar report carries. There were 210 cases. Of these 157 had been vaccinated in childhood, 4 had been revaccinated, and 49 unvaccinated. To professional eyes the most striking part of this report is the occurrence of four cases in revaccinated people. But surprise is reduced to a minimum by the actual details of the cases. Thus, in three of the four the operation was not performed till *after* the patients had contracted small-pox, in the remaining case thirty-six years had elapsed since the revaccination was performed. It is not stated how far even that revaccination was successful. Of the 157 vaccinated cases 7 died, or a percentage of 4½. Of the 49 unvaccinated cases 14 died, or 28½ per cent. The difference in the severity of the disease in the vaccinated and the unvaccinated was great. In the vaccinated it was mild in 122 out of 157 cases. In no less than 47 out of the 49 unvaccinated cases the disease was of the more severe kind. The disablement for work was in the revaccinated 13½ days, in the vaccinated 22 days, in the unvaccinated 42 days! The complications of the disease occurred in 11½ per cent. of the vaccinated and in 71 per cent. of the unvaccinated. Three patients lost the sight of one eye—they were all unvaccinated. Among the *employés* of the hospital not one took the disease, all having been revaccinated on commencing duty. The committee of the Sheffield Borough Hospital do a good public service by the publication of these facts. They reveal nothing new to those familiar with the question. But every fresh illustration of the truth carries conviction to minds that are capable of weighing evidence. As for the minds in which this capacity does not exist—well, they prefer small-pox with six weeks' disablement, the risk of losing one or both eyes, permanent disfigurement, and a still greater risk of losing their life to the slight inconvenience and infinitesimal risk of vaccination. Of two evils they choose the larger one.

MR. WALLEY ON VETERINARY WORK.

THE inaugural address of Principal Walley at Dick's Veterinary College, Edinburgh, dealt with most of the topics now uppermost in the domain of veterinarian science and practice. He began by speaking of the recent pathological researches based upon the germ theory, and expressed the opinion that the ends attained had not been commensurate with the means employed to gain them. The all-important question was to know how to grapple with these diseases, and he boldly asked whether this knowledge was to be gained by the pursuit of experiments to test theories, or attempts to discover by experiment a physiological antidote, rather than by the adoption of energetic measures to stamp out the disease. When sheep-pox prevailed, twenty years ago, it was the practical, and not the scientific school that succeeded in arresting the plague. In checking the ravages of the rinderpest, which system, he asked, gained the day, the vaccination of the doctors or the science of the veterinarian? Years, and even valuable human lives, had been spent in the vain endeavour to find a [illegible] antidote for glanders; but we know that the disease can be arrested by enforcing a few practical regulations. Contagious pleuro-pneumonia was another instance of a disease in which protective inoculation had been attempted with such partial success as to be replaced by purely practical measures. As to rabies, he considered that science engaged in finding an antidote is playing with the malady which the experience of Edinburgh has shown can be exterminated by "purely practical measures in much less space of time, and with much less attendant danger to man and suffering to animals, than it can ever be by the adoption of purely scientific measures." The same seemed to be true of anthrax; and quoted the discrepant opinions of Pasteur and Koch as regards the value of protective inoculation in this disease. The discovery of the anthrax bacillus was of little value in veterinary practice, for it had not added to our knowledge of prophylaxis. At the same time Principal Walley did not wish to undervalue the efforts made to determine the true nature of these and other infective diseases; he desired rather to impress on his hearers the need of becoming fully acquainted with the measures to be taken to arrest the spread of these maladies. He dwelt at length upon the great importance of [illegible] and criticised severely the prevalent indifference to [illegible]

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in the housing of animals, which, indeed, has been shamefully neglected. It is the same with the food-supply and the evils of adulteration, which appear to abound in cattle-feeding, and in respect to which the British National Veterinary Medical Association is about to take action. Lastly, he referred to the need for humanity to animals, and took as an instance of the want of this the unnecessary and wanton practice of overstocking the udders of cows. We trust that his eloquent denunciation of this practice will have effect in causing its abolition.

PEPTONISATION.

AN observation communicated by M. Marcano to the Academy of Sciences is suggestive of what may prove a valuable process for the conversion of albuminoids into peptones. If a small quantity of the fresh sap of certain plants—the agave, for example—be added to chopped meat first covered with water, and the mixture be kept at a temperature of 39° to 40° C., an active fermentation is immediately set up, with evolution of inodorous gases. At the end of thirty-six hours the fibrin has disappeared and a liquid is left containing peptone equal in weight, when dried in a stove, to one-fifth of the fresh meat used. This fermentation appears to M. Marcano to be due to the vital action of micro-organisms, and to resemble the peptonisation of the gluten of flour by a bacterium which is said to take place in bread-making. In confirmation of this view it is stated that if the juice of the plant be saturated with chloroform the fermentation is not set up. Moreover, a "mucorinée" may be cultivated by sowing a few drops of agave sap in sugared water. This mucorinée is capable of completely dissolving fibrin in the presence of water. A large number of other fruits and juices are stated to be endowed with properties similar to those possessed by the sap of the agave. Papaw juice is said to be relatively weak compared with the peptonising activity of other juices which contain no digestive principle like "pepsin." M. Marcano is of opinion that the new method of peptonisation will afford a simple and economic means of preparing pure peptone quickly and at a low price, and suggests that it might be applied upon a large scale, so as to allow of the export of meat from South America in a form more nutritious and economical than the extracts.

THE UXBRIDGE TRAGEDY.

ON Friday last Elizabeth Gibbons, charged with having murdered her husband at Hayes, near Uxbridge, was convicted and sentenced to death at the Central Criminal Court. The proof of her guilt was to all intents and purposes sought to be established by circumstantial evidence, positive and negative. It was contended by the prosecution that James Gibbons, the husband, a well-to-do man, had not shown signs of previous mental aberration, and that on the night of the alleged murder he was cheerful in his manner. It was not denied that the revolver with which the fatal shots were fired was purchased by the deceased, at the same time there was nothing to show that this was done with the intention of using it for suicidal purposes. To our minds the case as presented to the jury hinged mainly on the question of motive, and we maintain that no sufficient motive was proved. It can scarcely be urged that a woman fifty-four years of age, who had lived in good-will with her husband for thirty-seven years, would of malice aforethought "kill and slay" him because of a feeling of jealousy aroused by an attachment of the latter to a child only just entered her teens, and yet this was the strongest point laid before the jury by the Crown lawyers. In Mr. Gilbert's play, "Pygmalion and Galatea," the relentless Cyniska, who it might be assumed was fired by the restless passions of youth, was content with solemn invocation to the goddess Artemis to call down blindness on her backsliding spouse. How little likely then that an elderly matron should with her own hand *deliberately* take the life of him on whom she depended for protection and sustenance? We do not say that such an explanation is not possible, but surely it is far removed from probability, and the underlying facts themselves were not, we submit, proved beyond "reasonable doubt." What, on the other hand, were the antecedents of James Gibbons? Suicidal tendencies were asserted to have existed in his family, and although nothing more than this and depression of spirits were put forward in support of the theory of his insanity, it must be borne in mind that they are frequently the only known precursors of an outbreak of madness of a most dangerous form. It did not at all follow because a bullet wound was found on the body of the deceased in such a situation that it could not have been self-inflicted that therefore it proved a criminal act by another person. It might have resulted from accident during a struggle for possession of the revolver, or from "justifiable homicide" for self-preservation. At most, in the absence of adequate conscious motive, the act was done in a sudden phrenzy, when the promptings to crime were no longer subordinated to the will; but then this is not murder.

Obviously the prisoner in this case *must be* respited. The inferences of the medical witnesses were at variance with similar known facts in other cases on record, in which a shot has been fired by a suicide in the interval between the infliction of a mortal wound—even of the heart—and death. Moreover, a wound in the back is peculiarly likely to be self-inflicted if the suicide falls forward or on his side while the arm, still clutching the pistol, is convulsively drawn, stiffened, and by the fall twisted back. We must confess our inability to understand how it came to pass that these well-known facts were not brought under the notice of the Court at the trial. A petition to the Home Secretary, praying for the respite of Elizabeth Gibbons, lies for signature at our office.

IMPRUDENT MARRIAGES.

AN inquest held lately at Whitechapel deserves comment, not only on account of the case involved, but also because of a remarkable opinion delivered in connexion with it. Matilda Buckham appeared before the coroner, Mr. Collier, to give evidence touching the death of her infant, aged three months, which was found dead in bed beside her. The child was the last of a family of seven, all of whom were dead. Of these, three had been the subjects of inquest, and all had died of convulsions or other allied disorders. The mother herself was an epileptic, and had a fit in court immediately after giving evidence. The verdict returned on the child's death was "Suffocation in bed," and the jury concurred in an observation by the coroner that the Legislature ought to make marriage on the part of persons suffering from such diseases as the mother's a penal offence. It is easy to see how one who witnessed a scene like that in the coroner's court on this occasion, especially after hearing evidence so strongly suggestive of hereditary disease, might feel himself impelled to fortify the verdict in the terms above mentioned. It is, however, a different matter when we come to the actual work of legislation. It may be theoretically correct and advisable that persons strongly tainted with transmissible disease should not marry, but the Government which would undertake directly to prohibit even such a union must incur a grave responsibility. It would assume to restrain personal conscience and liberty in respect of a most fundamental law of nature, and must be able to define the point at which a multitude of morbid states become insufferable, a point unknown to medicine. Further, its responsibility must extend to the regulation of the results

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which might arise in consequence of its action on the lives against whose continuance it had in a sense given judgment. What Government is sufficient for these things? Injunction informed by educated reason must, we think, mark the limit of judicious interference in such a matter, and this is permissible to all persons.

CONDENSED MILK.

MR. THOMAS MABEN, of Hawick, N.B., has presented to the Pharmaceutical Society an interesting paper on Condensed Milk. In conjunction with Mr. Dechan, Mr. Maben has analysed ten different kinds of condensed milk, seven of them sweetened and three unsweetened. In the former the water amounts to only about 30 per cent., whereas in the latter it varies between 64 and 69 per cent., the difference being made up by cane sugar. The unsweetened milk is concentrated to rather less than one-third of its original volume, but different brands show different strengths. To bring it to the ordinary standard of strength from two to three volumes of water can be added to it, but no more. The sweetened milk seems to contain about the same percentage of casein, fat, milk-sugar, and salts; but Mr. Maben points out that for infants' food it will stand much greater dilution, inasmuch as the cane sugar is a valuable element of food. He prefers to use a mixture of one part of the condensed milk with eleven of water. Such a diluted milk would, however, be much weaker than woman's milk, with which he compares it, and a more close resemblance would be produced by adding five parts of water to one of the sweetened condensed milk. It is quite true that nurses often use the condensed milk in too large quantities; but we confess that we are inclined to think that Mr. Maben errs on the other side. As to the general question of the use of condensed milk instead of ordinary cow's milk for infant food, we can confirm the experience of the medical friend whom Mr. Maben quotes. We have known infants who constantly suffered from diarrhœa, green stools, and the like, when fed on ordinary cow's milk, but who recovered at once on condensed milk. Of course we do not say that this is always the case.

EXTENSION OF THE PENNY DINNER MOVEMENT.

ON Dec. 6th a meeting of representative School Board managers and others was held at the Society of Arts, Adelphi, to consider the subject of penny dinners for school children. Mr. Sydney Buxton, M.P., presided. In his opening remarks Mr. Buxton dwelt on the close connexion between over-pressure in school work and insufficiency of food. He urged the importance of settling the difficulty as to nutrition without recourse to aid from the Government. Mr. Mundella, in an address of considerable length, referred to the Jews' School in Spitalfields, and the schools under the penny-dinner system of Sir Henry Peek at Bonsdon, and of the Rev. Mr. Moore Ede at Gateshead, in illustration of the happy effects of a cheap and wholesome diet in resisting the strain of educational work. He bore personal testimony to the sound and palatable character of the food supplied to children at the rate of one penny per meal. The Rev. Mr. Ede also gave some interesting details of the working of this plan in his own neighbourhood. Though a penny was the fixed rate of payment, it was found in practice that when many children dined together, while there was no stinting, the rate of consumption was distinctly under a penny per child, a margin being thus left which was sufficient to cover cooking expenses. Mr. H. Forbes Clarke read a statement showing that the penny dinner was already an institution in fifteen Board Schools, and was favourably regarded by the managers of others. His catalogue of the various viands set before the children sufficiently proved the substantial nature of this movement. The meeting, we are pleased to note, did not separate without appointing a Central Council, consisting of influential sympathisers with its object, under the presidency of Mr. Mundella, to assist the various local committees in placing this simple and efficient system on a self-supporting basis.

CLINICAL AND PATHOLOGICAL SOCIETIES.

THE officers and council of the Clinical Society proposed for election for the year 1885 are as follows:—President: Thomas Bryant. Vice-Presidents: J. W. Ogle, M.D.; J. Andrew, M.D.; W. Cayley, M.D.; A. E. Durham; W. M. Baker; T. Pickering Pick. Treasurer: Christopher Heath. Council: H. R. Crocker, M.D.; Sidney Coupland, M.D.; A. W. Edis, M.D.; W. Ewart, M.D.; D. W. Finlay, M.D.; F. de Havilland Hall, M.D.; D. B. Lees, M.D.; F. Semon, M.D.; T. G. Smith, M.D.; J. Williams, M.D.; A. E. J. Barker; H. H. Clutton; M. C. Davies-Colley; C. Dent; A. P. Gould, M.S.; J. W. Haward; R. C. Lucas; J. H. Morgan; H. Morris; G. Ransford. Hon. Secretaries: Stephen Mackenzie, M.D., and R. J. Godlee, M.S. The officers and council of the Pathological Society proposed for election for the year 1885 are the following:—President: John Syer Bristowe, M.D., F.R.S. Vice-Presidents: H. Charlton Bastian, M.D., F.R.S.; W. Cayley, M.D.; G. Johnson, M.D., F.R.S.; S. Wilks, M.D., F.R.S.; A. E. Durham; J. W. Hulke, F.R.S.; George Lawson; T. P. Pick. Treasurer: John Wood, F.R.S. Hon. Secretaries: J. F. Goodhart and H. T. Butlin. Council: Robt. Barnes, M.D.; A. E. J. Longhurst, M.D.; Norman Moore, M.D.; J. F. Payne, M.D.; G. V. Poore, M.D.; F. T. Roberts, M.D.; Felix Semon, M.D.; S. J. Sharkey, M.B.; F. C. Turner, M.D.; S. West, M.D.; A. E. J. Barker; W. W. Cheyne; H. H. Clutton; W. H. Cripps; F. S. Eve; C. H. Golding Bird; A. P. Gould, M.S.; R. C. Lucas; H. Morris; L. G. Shattock.

CRUELTY TO ANIMALS.

WE regret to read that when the Pulborough sparrow-shooting case again came before the magistrates at the Petworth Petty Sessions on Saturday last, the Chairman (Mr. Peachy) said they had, in compliance with the decision of the Court above, to pass sentence, but the Act (the Wild Birds' Protection Act of 1880) provided that for a first offence the Bench could only reprimand the defendants and order them to pay the costs. He accordingly reprimanded them; and the costs, which in some cases amounted to 11s., and in one to 24s., were paid by the defendants. Seeing that Mr. Justice Hawkins, when sending back the case to the magistrates to convict, had expressed a hope that "when they do convict they will pass an exemplary sentence on all who took part in the brutal sport of shooting at these wretched birds," we can only express our astonishment and regret at the law's apparent inadequacy to give effect to such a strong expression of opinion on the part of a judge.

BUILDING ON DISUSED BURIAL-GROUNDS.

TAKEN in conjunction with the ravages and recent decline of cholera in Paris and on the Continent generally, and with our own immunity so far from that justly dreaded disease, the recent judgment by Mr. Hannay, since confirmed by a superior court, with reference to the opening up of the Old Peel Burial-ground in Bethnal-green must appear to be one of very questionable propriety. In opposition to the Metropolitan Board of Works, he has maintained that the area in dispute does not come within the operation of a bye-law of the Board, which forbids the use for building purposes of land impregnated with animal or vegetable matter before the removal of the soil so affected,

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and he has accordingly sanctioned the erection of buildings upon it. Now, the Old Peel Burial-ground was during the cholera epidemic of 1849 literally packed with the remains of the victims of this malady. There is nothing to show to what extent the contagion then entombed has been starved out of existence during the subsequent period in which the ground has been unused. It may very well be that under the favouring conditions of sufficient heat and moisture which the earth of cemeteries is known to furnish the germs of disease are still preserving a subterranean life. There is no slight risk in such a case that the drainage and water-supply of the houses to be built at this spot will become the conduits of infection. It were therefore better in our view that a soil once so impure should be left altogether undisturbed; but if the time for this possibility is past, there only remains the greater necessity for the removal of all contaminating matters and the thorough disinfection of the sites to be occupied. These observations, which apply in a special degree to the case before us, have, moreover, a practical significance which should not be forgotten in dealing with the same subject in all its aspects.

THE London correspondent of a Northern contemporary states that the inquiry into over-pressure by the London School Board is likely to collapse, as the Board has refused to sanction the payment of retaining fees for medical evidence. A compromise has been effected in the committee, to the effect that the medical expert's evidence is not to be received as final, but, subject to the deliberations of the committee, is to be treated as evidence only; it is, however, unlikely that the majority of the Board will rescind their resolution on the subject.

FROM the report made by Messrs. Crookes, Olding, and Tidy on the composition and quality of daily samples of the water supplied to London during the month of November, it appears that of the 172 samples examined, all, excepting one which was recorded as slightly turbid, were found to be perfectly clear, bright, and well filtered. The proportions of organic matter present in the water have continued low, and below the average for the season of the year, though not to so exceptional a degree as in the samples examined in the preceding month.

THE *Surrey Advertiser* says:—"The Farnham Board of Guardians has done well, we think, to vote a gratuity of £10 to Dr. Young, of Aldershot, for extra services connected with the outbreak of diphtheria at Ash and Normandy. In such cases it is well thus publicly to recognise the valuable services of medical officers, who, as with the ability and devotion manifested on this occasion by Dr. Young, render such important services to the community at large."

DR. N. TIRARD has been elected Professor of Materia Medica to King's College, and Assistant-Physician to King's College Hospital, in succession to Professor Baxter, who has been compelled to resign these offices from ill-health.

THE announcement that Dr. R. von Leudenfeld has discovered histological elements having nervous functions in the sponges of the Australian shores possesses considerable interest for biologists.

MR. D'A. WENTWORTH THOMPSON, of Trinity College, Cambridge, has been appointed Professor of Biology at University College, Dundee.

MR. F. C. CARR-GOMM has succeeded Mr. J. H. Buxton as chairman of the House Committee of the London Hospital.

ANOTHER CHOLERA MICROBE.

AT a recent meeting of the Medical Society of Munich Privat-Docent Dr. Rudolf Emmerich gave a preliminary account of the observations which he had made in connexion with the epidemic of cholera at Naples. The paper will be published in the forthcoming number of the *Archiv für Hygiene;* but having been favoured with the perusal of an early proof, we avail ourselves of the opportunity of placing some of the more striking features of its contents before our readers. Dr. Emmerich was specially sent to Italy by the Bavarian Government for the purpose, as he says, of making a pure cultivation of the Bacillus Asiaticæ Kochii, and of bringing it back with him to Munich in order that its properties might be investigated. He was accompanied by Dr. Escherich, who volunteered his assistance.

Feeling, however, that the mere finding of a peculiar microbe in the intestinal contents, and apparently nowhere else, in cholera was not sufficient to account for the disease, Dr. Emmerich did not limit himself to searching for comma-shaped bacilli, but determined to ascertain whether he could not bring to light, by means of cultivations in various nutritive media, the existence of specific organisms in the tissues and organs of cholera-affected persons. He reached Naples early in November, and succeeded in cultivating what is believed to be a peculiar pathogenic organism from the blood of a young woman in the collapse stage of the disease. The blood was obtained about six hours before death from the median vein. The surface having been carefully washed with water, alcohol, and a 1 per cent. solution of corrosive sublimate, the vein was punctured, and the blood, which was observed to be thick, trickled slowly out. The first drops having been carefully got rid of, a previously heated platinum wire was passed into the vein, and on being withdrawn was then introduced into a test-tube containing solidified nutrient gelatine, and the latter was pricked in three places. Ten such tubes were inoculated in this manner, and it was afterwards found that organisms developed in three of them; the remaining seven tubes continued to be sterile.

The organisms thus cultivated were of one kind, of cylindrical form with rounded ends, and found either singly or in pairs (seldom with more segments than two); and the length of each microbe was about one and a half times that of the width. According to Cohn's classification, therefore, they are bacteria, and as regards form and size are very like those found in diphtheria, but are to be distinguished from the latter by the form presented by their "colonies" when grown in gelatine and examined under a low power. They grow at ordinary temperatures in slightly alkaline gelatine (which is liquefied) as solid opal-glass-like patches. Under a power of 100 diameters such of the colonies as develop in the deeper portions of the nutrient gelatine on the glass plate present the form of a hone, and those on the surface simulate flat, circular, mussel-shells. The deeper colonies are yellowish-brown by transmitted light, white by reflected light, and have a finely granular appearance. The more superficial colonies are pale-yellow towards the middle and whitish at the margin; and they manifest a tendency to spread over the surface as a thin transparent coating.

These organisms have not only been cultivated from the blood, but also from the internal organs of nine persons who had died of cholera. They were found to be most numerous in the kidneys and liver, then in the lungs, and least numerous in the spleen. Dr. Emmerich found that the greater number of the gelatine plates which were inoculated with the blood and with the juices of the several organs in cholera yielded, even in the first generation, a "pure culture" of this bacterium. The microbe has also been detected without resorting to cultivation in sections of the intestine and of

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the kidney. Other organs have not as yet been examined. Great numbers may be detected in the dejections and in the intestinal contents after death. They were found to grow in every gelatine-plate cultivation of choleraic alvine material, and in some cases occupied almost the entire surface of the plate; whereas in other cases, though more seldom, comma-shaped bacilli prevailed, but never to the exclusion of the particular organisms in question.

The most important part of Dr. Emmerich's communication, however, refers to the inoculation experiments which he, in conjunction with Dr. Sehlen, made at the Hygienic Institute of Munich. The animals experimented upon were for the most part guinea-pigs, and it is believed that lesions have been induced in animals by inoculation with this bacterium which simulate those observed in persons who have died of cholera, and especially as regards the small intestine. The changes have been noticed to vary from a simple desquamative catarrh, with rice-water-like intestinal contents, to hæmorrhagic exudation and ulcerative destruction of the mucous coat. A couple of drops of a solution prepared by the addition of a fragment (about the size of a pin's head) of this bacterial cultivation to two or three drachms of distilled water, injected subcutaneously or into the lungs, give rise to a protracted illness of from five to six days, accompanied with deep-seated changes in the intestinal mucous membrane; whereas the injection of a larger fragment of the cultivation, covering, say, an area of about a quarter of an inch, suspended in water, is followed by death in from sixteen to thirty hours, but with less emphasised pathological lesions in the intestine; the severity of the intestinal lesions being thus the more marked the more protracted the course of the disease, and the larger the dose the earlier the fatal termination.

Several other matters of much interest in connexion with the subject of cholera causation are dealt with in Dr. Emmerich's paper; but the space at our disposal does not permit of our doing more at present than to bring before our readers the salient points of the evidence adduced in support of the specific characters and pathogenic properties of the apparently new cholera microbe to which he calls the notice of the profession.

Pharmacology and Therapeutics.

EULACHON OIL.

EULACHON OIL is advocated by Dr. Lyons of Detroit as a substitute for cod-liver oil. The bays and estuaries of the Pacific coast of British America and Alaska are annually visited by immense shoals of a small fish popularly known as the candle fish, eulachon, or outachon. This fish belongs to the family of the salmonidæ, and bears the scientific name of Thaleichthys pacificus. The candle fish is less than a foot in length. The spawning season is in April and the first half of May. The fish is chiefly prized on account of its oil, which is used as food by the Indians. So rich in oil is the entire fish that when dried it serves the natives for torches, whence its name. The commercial oil contains much palmitin, and probably stearin, so that at common temperature it is only semi-fluid. The olein, which for medicinal purposes at least must be regarded as eulachon oil, forms a limpid fluid of a pale-straw colour and fishy odour, unlike that of cod-liver oil, and is perhaps to many less repulsive. Its specific gravity is not very different from that of cod-liver oil, but it is rather more viscid. When mixed with sulphuric acid (five volumes of oil to one of acid) the temperature rose to 55° C., with cod-liver oil the elevation of temperature is about double this. The colour reactions with acids are very different from those of cod-liver oil. Sulphuric acid does not produce with eulachon oil the rich purple colour which obtains with cod-liver oil and other oils containing biliary ingredients; it produces a deep brown tint. The oil probably contains a trace of iodine. The fatty acids obtained after saponification amounted to 95·85 per cent. Eulachon oil contains about 13 per cent. of an unsaponifiable substance, which is the most peculiar and interesting constituent. The low specific gravity of this peculiar ingredient, and its indifference to most reagents, remind one strongly of the paraffins; and now that petroleum and petroleum oil are recognised as having a positive influence on tuberculous complaints, we shall not be surprised if eulachon oil be found to owe any therapeutic efficacy it may have to the presence of this peculiar body.

ASEPTOL.

This antiseptic agent, which is chemically known as orthoxyphenyl sulphurous acid, is a body belonging to the aromatic series, and is allied in chemical composition to salicylic acid; the comparison of the rational formulæ will show the resemblance and difference between the two bodies:

Aseptol ... ... $(C_6H_4OH)(SO_2OH)_2$.
Salicylic acid ... ... $(C_6H_4OH)(COOH)_2$.

Aseptol is an acid phenol, and it is the acid property it possesses which neutralises the ammoniacal bases which accompany the processes of putrefaction. Aseptol is a syrupy liquid of amber colour, and possesses a density of 1400. It has a faint characteristic odour, which is, however, disagreeable. It crystallises at 8° C., and boils at 130° C. With ferric chloride it shows a violet colour like that given by salicylic acid. Treated with potash it yields pyrocatechin, resorcin, and hydrochinon. A small dog, weighing seven kilogrammes, took by the mouth seven and a half grammes of aseptol without experiencing the least distress; carbolic acid in a dose three times as small produced violent convulsions and grave disturbances, followed by death. Aseptol is believed to be preferable to salicylic and phenic acids wherever an antiseptic agent is required—e.g., in cases of disease of mucous membranes, especially the conjunctiva.

NAPHTHALINE.

Dr. Rossbach has used naphthaline as an antiseptic agent with a view of checking diarrhœa, and, it is said, with excellent results. The medicament is believed to be efficacious in cases of intestinal catarrh, even when chronic, with or without structural alterations, provided the changes are not of a cancerous nature. The good effects are obtained after the use of the drug from five to ten days. The same remedy appears to be useful in cases of diarrhœa due to tubercular disease of the bowel. Naphthaline in small quantities escapes with the urine, and seems to have a beneficial influence on some diseased conditions of the mucous membrane of the bladder, such as vesical catarrh. After the lapse of a few days the microbes which abound in the alkaline urine disappear, the deposit of muco-pus diminishes, and the general condition participates in the amelioration. Naphthaline is nearly always well borne, the digestion is not disturbed, and small doses are said to improve the appetite. The exhibition of the drug may be continued for many months without causing inconvenience.

APOMORPHIA.

From an investigation into the action of apomorphia on some cases of epilepsy and chorea, M. Weill has come to the conclusion that this powerful agent may be beneficially employed in cases of nervous disturbance. The hydrochlorate is used in doses of from two to six milligrammes. All diseases associated with spasmodic action are relieved by it. Hiccough, epilepsy, and chorea have been much benefited thereby. A sedative action is produced without nausea or vomiting, provided the doses be as small as above mentioned.

Correspondence.

"Audi alteram partem."

CHARCOT'S DISEASE.

To the Editor of THE LANCET.

SIR,—The recent discussion on Charcot's disease, and the interesting features it disclosed, naturally suggest the question whether the disease can be traced in the pathological researches of the insane, as, from its affiliation to neurotic disorders, one would suppose might be the case. Dr. Moxon seems to have implied something of the kind in his off-hand allusion to the prevalence of certain fractures among the inmates of asylums, and I venture to think the idea is worth pushing further. It has been frequently asserted that a morbid fragility of bone is sometimes detected in the insane, and I have myself seen the condition of the

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ribs so altered as to admit of the bones being readily snapped between the finger and thumb in subjects undergoing post-mortem examination. We also know as a fact that fractures of ribs may occur without any history of violence, as the records of some asylums prove. It is undoubtedly a matter for serious regret that the immense fields of pathological research possessed by many of these institutions should be so inadequately cultivated. Judging from my own experience of one of the principal public asylums with which I was for some years connected, the opportunities of garnering valuable pathological knowledge is too lightly esteemed. I occasionally contributed a few more important specimens of disease to the Pathological Society and Hunterian Museum, but it was, to my mind, simply deplorable that so little in the way of cultivating a collection of specimens to elucidate particular forms of disease was ever attempted. The bare records of each autopsy was invariably entered in a book provided for the purpose, but beyond this nothing. Had the opportunity ever occurred, it had been my intention to have established a museum of pathology in that asylum, and I strongly suggest that by such means a greater impetus would be given to work of this important description. Indeed, scientific work in our public asylums, especially in connexion with the deadhouse, cannot be too urgently insisted on. While writing on this subject I should like to offer another suggestion—viz., that all the attendants be subjected to a system of special training, as nurses are in general hospitals. I do not know if under the present improved management such a system is carried out, but it is undoubtedly one of great importance, no less for the patients than for the attendants themselves, that they should be carefully trained and instructed in their duties. Apologising for the length of my communication,

I am, Sir, yours obediently,

J. HAWKES, M.D.

Queen's-park terrace, W., Dec. 22nd, 1884.

COCAINE AS A LOCAL ANÆSTHETIC.

To the Editor of THE LANCET.

SIR,—In spite of all that has lately been written about cocaine, we have probably much more to learn of the valuable properties of this drug as a local anæsthetic. Last evening I had occasion to recommend circumcision upon a patient, aged twenty-three, who had come to consult me in the surgery. Having explained to him the nature of the new drug, he readily consented to give it a trial. A 4 per cent. solution of the hydrochlorate of cocaine was made in distilled water, and of this 4 minims were injected through the foreskin at four different points—one on the dorsum, one near the frænum, and one on either side—altogether sixteen minims. In about twelve minutes anæsthesia was complete all round, and with the assistance of Mr. R. B. Hughes, of University College, the operation was performed, the patient watching the proceedings with considerable interest, and being greatly surprised at feeling no pain whatever after the pricking of the needle for the hypodermic injection. It will be observed that rather a large quantity was injected, yet, so far as we could make out, no constitutional effects whatever were produced upon the patient, and the local effects lasted long enough for the man to walk home and go to sleep without feeling any pain. This morning, however, he tells me that he awoke twice in the night with pain. I have never before performed this operation without chloroform, the administration of which must always involve some risk and a very considerable amount of trouble.—I am, Sir, yours faithfully,

OWEN PRITCHARD, M.D.

Southwick-st., Hyde-park, W., Dec. 23rd, 1884.

To the Editor of THE LANCET.

SIR,—I was consulted this morning by a patient suffering from the various symptoms of stricture of the urethra. The urethra was in this instance so very sensitive, and the patient so nervous, that I found it quite impossible to make a satisfactory exploration. Having by me a 4 per cent. solution of a new sample of muriate of cocaine, just manufactured by Corbyn and Co., I injected half a drachm, and retained it within the urethra for five minutes. I found that I could now pass a metal bulb almost without pain, and easily made out a stricture of 17 millimetres circumference, in a urethra of 30 millimetres normal calibre, at a distance of 4 centimetres from the meatus. I now attempted to make a more complete examination with the urethrometer, but found that the urethra beyond the stricture was still very sensitive. I injected some more solution of cocaine, and this time caused it to be retained nearly half an hour. Finding that I could apparently now perform any manipulation upon the urethra without pain, and not finding a deeper stricture, I determined to operate at once, and divided the stricture with my modification of Otis' urethrotome up to the normal calibre of the urethra. The patient informed me that the operation was almost entirely painless. As patients generally complain of a good deal of pain while the instrument is being screwed up to put the stricture tissue on the stretch, the absence of it upon this occasion is more worthy of note. Of course definite conclusions cannot be arrived at by the result of one case, but the prospect seems very promising. If the observations of other medical men and my own future experience shall be found to coincide with the result of this case, I think we shall find that operations upon the urethra will be greatly facilitated by the use of this drug. By dispensing with a general anæsthesia, we render the patient able to assist the operator by his intelligent co-operation. I am of opinion that it will be found that the passage of the large instruments and evacuating tubes used in our modern operation of lithotrity can be rendered entirely painless by a preliminary injection of this drug, and the treatment of irritable stricture by dilatation robbed of more than half its terrors.

Yours faithfully,

GEORGE HERSCHELL, M.D. Lond.

Moorgate-street, E.C., Dec. 20th, 1884.

LIVERPOOL.

(From our own Correspondent.)

CHRISTMAS CHARITIES.

THERE seems every prospect that in this city the wishes expressed in last week's issue of THE LANCET will, to a very considerable extent, be realised. Our present mayor, Alderman David Radcliffe, has originated the happy idea of presenting 1000 "hot pots" to the poor on Christmas Day. They are to be distributed through clergy, priests, and ministers well acquainted with the poorer classes. Each "hot pot" is to contain 10 lb. of meat and potatoes, to be accompanied by a large loaf of bread, and to be supplied by a well-known firm, whose name is sufficient guarantee of the excellence of their quality. As might have been expected, such munificent generosity has proved contagious. Another gentleman has promised 500 "hot pots" to the deserving poor of St. Jude's district, to be distributed through its present incumbent in charge. A third generous donor promises a quart of best ale to each holder of a ticket for the mayor's bounty. A fourth has promised to distribute 1000 ¼ lb. packets of good tea. It is possible that in the interval between now and Thursday further generous donations may be announced. For many years past Christmas breakfasts have been provided to a number of the deserving poor, and this is to be repeated on Thursday. Hence, for at least that day, starvation will be forgotten by many, and a large number of the hungry will be filled with good things. Judging also by past experience and present appearances the poor in all the local hospitals will be well cared for, and their Christmas be made happy, if it cannot be made merry.

DEATHS OF LOCAL MEDICAL PRACTITIONERS.

Many old associates of King's College will learn with deep regret of the death of Mr. George Henry Snape, which occurred on the 13th inst., after a long and painful illness, at the early age of forty. The deceased was the second son of Mr. Joseph Snape, who still lives and enjoys excellent health, and who formerly enjoyed a large practice as a dentist, first in Chester, then in Liverpool. He was joined by the deceased about sixteen years ago, and on the retirement of the former some years ago the whole of the practice was carried on by the deceased, aided by competent assistants. His death is sincerely lamented by a large circle of friends, professional and general, to whom he had greatly endeared himself by his amiable temper and genial manners. The deaths are also announced of Mr. Arthur Prince May, surgeon, of Crosby;

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of Dr. Crichton, of Walton-on-the-Hill; and of Dr. Adolphus Frederick Graham. This last occurred under very sad circumstances. The deceased, who was forty-eight years of age, and formerly enjoyed considerable reputation as a successful ovariotomist, had been lately in failing health, and was much depressed in spirits. On Saturday last he committed suicide by cutting his throat, dying soon after being found. He had practised in Liverpool for twenty-two years.

Liverpool, Dec. 22nd.

BIRMINGHAM.

(From our own Correspondent.)

HOSPITAL OUT-PATIENT REFORM.

IT is interesting to notice in what a variety of modes public opinion is formed on certain subjects, and how gradually but surely the different details tend ultimately to the same focus. At the Birmingham Debating Society a discussion lately took place upon the above question. The motion being that "the out-patient department of hospitals and the public dispensaries (casualties excepted), as at present administered, do more harm than good." Some animated speeches were made on both sides, and much interest displayed in the numerous facts quoted. The result was a large majority for the affirmative. Doubtless the knowledge gained at this meeting will be utilised in the right direction when time has ripened this important matter for more immediate action.

HEALTH LECTURES.

The second series of Public Lectures on Health has been again remarkably well attended. Last week the subject taken by Dr. Malins was "Health and Education," in which exercise was made the fundamental note in the use of the mind, the body, and the moral sentiments. Allusion was made to the vexed question of over-pressure, and the consequences of it forcibly pointed out. On Tuesday the last of the series was given by Mr. Chavasse, to men only, entitled "Practical Hints on Personal Health." Popular ignorance on many subjects was pointed out, and the evils of quacks especially exposed and denounced in an able and eloquent manner.

MEDICAL CERTIFICATES OF DEATH.

The coroner for the borough has replied to some facts which have been made prominent in the daily papers in reference to the giving of death certificates in cases where the patient has not been seen for some time previously by the medical attendant. With regard to the practical application of the law, the certificate itself in its wording affords sufficient latitude, being framed in such a manner that the information as to death may be given as direct or indirect.

PENNY DINNERS.

By the efforts of a philanthropic lady the first start was made a few days ago in providing cheap dinners for the poorest children of certain districts. About two hundred were furnished with penny tickets at various schools, and at the appointed time each child had the choice between a pint of savoury soup with four ounces of bread, or a plate of about twelve ounces of peas pudding. The soup was composed of lentils, onions, carrots, pearl barley, flour, and beef bones, and was evidently much appreciated. The dinner was decidedly a success. A plan for variety in the composition and flavour of the soup will give a pleasant change from time to time. The penny it is calculated will defray not only the cost of the food supplied, but will also cover the expense involved in the use of the rooms and wages of the attendants. Other committees have been formed in different parts of the town in connexion with elementary schools, and the experiment is looked forward to in the winter months with enthusiasm and as one likely to be successful.

DONATION.—The Medical Staff of the Mater Misericordiæ Hospital, Dublin, have given £100 towards the funds of that institution.

THE Kingston Town Council have decided to promote a Bill in Parliament for the dissolution of the Lower Thames Valley Main Sewerage Board.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

ORAL TEACHING OF THE DEAF AND DUMB.

MR. B. ST. JOHN ACKERS, of Painswick, Gloucestershire, recently delivered a most interesting lecture on the above subject. The lecturer commenced his address by referring to the various causes of deafness, and described the two present systems of educating the deaf and dumb, known as the French or sign system, and the German or modern pure oral system. He claimed for the latter all possible advantages, and scarcely had a good word to say for the French or sign system. He stated further that those congenitally deaf educated under the French system "seldom rose in life," a statement that was scarcely in accordance with the experience of some of his hearers. In short, Mr. Ackers is evidently an enthusiast as regards the German system; but in the discussion following his lecture the true position of the oral system was assigned, by some speakers who had experience in teaching deaf mutes, to selected cases where a knowledge of language had been originally possessed, and afterwards lost through deafness. There can be no doubt that it is most desirable to keep up speech when it can be at all accomplished, and so in such cases the German system is certainly preferable. The German system is not altogether new after all, for we know down here that, according to the Venerable Bede of Jarrow, John Bishop of Hexham taught a deaf-mute man to speak and repeat sentences; and it is also on record by the same writer that John de Beverley, Archbishop of York, taught two deaf and dumb men to speak. These events are recorded as taking place in the sixth century.

SMALL-POX IN DURHAM.

The reports of the small-pox epidemic as regards the city of Durham point to a steady decrease; in some of the surrounding villages, however, the disease would appear to have taken a somewhat firm hold; in the village of Langley Moor, a short distance from Durham; the medical officer of health reports twenty cases.

THE MILK-SUPPLY QUESTION.

The *Newcastle Chronicle* gives an interesting account of a successful endeavour of the workpeople at one of our Northumbrian collieries to supply themselves with new milk on the co-operative system. North Seaton is the name of the place where the experiment has been tried. The workpeople clubbed together and established a dairy. The first attempt was on a small scale, with only three cows; but after one or two failures from loss of cows the farm is now firmly established with a stock of fourteen animals, and after twelve years' operations it must, besides supplying the want for which it was originated, be regarded as a commercial success, for the last half-yearly report shows that, after paying all expenses and setting up a reserve fund to meet accidents and losses of animals as well as deterioration of stock, there remained for the members a dividend of 10 per cent.

PERMANENT OR TEMPORARY HOSPITALS FOR INFECTIOUS DISEASES.

In view of the spread of small-pox in the county of Durham, the sanitary authorities of the various boards are much interested in the question as to whether it is better to make use of a temporary building or erect a permanent hospital. Much is to be advanced on both sides; but the economists in one of our unions "scored a point" when they pointed out that a temporary hospital of wood and patent felt, as now manufactured at Copenhagen, would not cost more than £500 to erect, with all its fittings; the board, however, very prudently deputed a committee to visit one of these hospitals, which is at present in operation at King's Norton, near Birmingham, and report upon it.

THE EXTENSION OF THE NEWCASTLE INFIRMARY.

The proposed extension of the Newcastle Infirmary, at a probable cost of £13,000, is the subject of conversation in medical circles here, and it is well-known that some of the medical staff are very strongly opposed to the project, and would regard any permanent extension of the house on its present objectionable site as "a blunder." I shall refer to the matter again in a future letter.

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TYPHUS AT SUNDERLAND.

At a late meeting of the Sunderland Board of Guardians the master reported that in the previous fortnight five cases of typhus fever had been admitted into the hospital, and one case discharged, leaving nine cases under treatment.

THE NEWCASTLE MEDICAL OFFICER OF HEALTH'S REPORT.

At the City Council meeting to-day the report of our medical officer was adopted, and spoken of in the highest terms as displaying on the part of Mr. H. E. Armstrong much ability and zeal in the performance of his duty.

Newcastle-upon-Tyne, Dec. 17th.

THE SERVICES.

Deputy Surgeon-General J. G. Faught, who was appointed to the Staff of Major-General F. A. Willis, C.B., Northern District, a short time ago, has been appointed principal medical officer at the Cape of Good Hope.

ARTILLERY VOLUNTEERS.—The Tynemouth: Surgeon Frank Rennie, M.D., resigns his commission; Acting Surgeon William Pope Mears, M.D., to be Surgeon.

RIFLE VOLUNTEERS.—1st Battalion of the Gordon Highlanders: Surgeon Angus Fraser, M.D., is granted the honorary rank of Surgeon-Major.—1st Battalion of the Lancashire Fusiliers: Acting Surgeon Jonathan Edward Lees, M.B., to be Surgeon.

Obituary.

HENRY MUSCROFT, M.D. ST. AND.

DR. HENRY MUSCROFT died on Dec. 5th, 1884, from disease of the heart (dilatation of the left ventricle, &c.), from which he had suffered in a marked degree for the last two or three years.

Dr. Henry Muscroft was born on the 7th of March, 1830, and was the fourth son of the late Dr. James Muscroft of Pontefract. He studied medicine at the Leeds School, and became M.R.C.S. in 1854 and L.R.C.P. in 1862, and M.D. St. And. in 1871. He was placed on the Commission of the Peace in 1872. Amongst the appointments he held were House Surgeon to the Leeds Infirmary and to the Scarborough Dispensary; Medical Officer for the Pontefract Union Workhouse, and for No. 1 District Rural Sanitary Authority; Medical Officer of Health for Pontefract; Factory Surgeon; Surgeon to the Police, and Consulting Physician to the Pontefract General Dispensary. He was surgeon to the 1st West York Militia (now 3rd Battalion South Yorkshire Regiment) from its embodiment nearly thirty years ago, during which time he saw five years' embodied service in England, Ireland, and Scotland. From 1879 up to his recent illness he had charge of the Pontefract Brigade Depôt, being one of the few militia surgeons who were given charge of regular troops.

On March 1st, 1870, he married the youngest daughter of the late Rev. Dr. Bisset of Bourtie, Aberdeenshire, and niece of the Rev. Dr. Bisset, formerly Vicar of Pontefract. He leaves four children, three boys and, the youngest, a girl.

It is only those who were thrown in contact with Dr. Muscroft in his professional capacity who can fully realise the causes which so endeared him to all. He took with him to the bedside of the poorest the same tenderness, sympathy, and anxiety for their welfare that he showed in the treatment of those most dear to him. It may readily be believed that in a man of his anxious temperament a continuance in the exercise of his profession was not to be desired once the disease from which he suffered had fully declared itself. But situated as he was, with a young family dependent in great measure on his exertions, he did not think it his duty to relinquish work. And how far he thought his duty took him may be shown in the following instance. A few days before he finally had to give up work an accident happened to a man who was taken to the Workhouse Hospital. Though extremely ill, and though some of his medical friends would gladly have relieved him of the labour, he left his house at night to attend the case himself. He had frequently to rest on his way, attacks of dyspnœa being very urgent, and remained in attendance on the case for two hours. This may be said to have been his last effort. On the return of his partner from his holiday Dr. Muscroft gave up work, and after an illness of fifteen weeks, borne with that patience and cheerfulness which distinguished him, he died on December 5th, and Pontefract lost one who, it may fairly be said, cannot be replaced; one who in his too short life never made an enemy, and who always found the best thing possible to be said about others.

The funeral took place on December 9th, and was attended by the mayor, corporation, and borough officials, as well as by the staff sergeants of his old regiment, by volunteers from the depôt, by many of the officers quartered there, and by numerous private friends. But that which was the most striking sight was the great number of the working classes, many of whom had hurried from their work and devoted their dinner hour to paying their last tribute to one they so much respected and esteemed. At the cemetery it seemed as if each one present had lost a dear and treasured friend.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise on the 18th inst.:—

Armstrong, Leonard H., Newcastle-upon-Tyne College of Medicine
Barnett, Lawrence, University College.
Bradbury, Harvey, London Hospital.
Gaston, Harry Percival, Charing-cross Hospital.
Going, Joseph Andrew, London Hospital.
Good, John, Charing-cross Hospital.
Hazell, Robert William, London Hospital.
Harries, John Frail, King's College Hospital.
Meller, Charles Booth, M.R.C.S., L.R.C.P., St. Bart.'s Hosp.
Morris, Collier Dwight, London Hospital.
Phillips, Wm. Edw. Picton, Guy's Hospital.
Reece, Richard James, St. Bartholomew's Hospital.
Wild, Robert Briggs, Owens College, Manchester.
Volckman, Bernard, London Hospital.

THE "CEYLON."—We understand that this pleasure steam yacht will start from Gravesend on Jan. 24th next, for a sixty-five days' cruise. The office is at 7, Pall-mall, S.W.

AT a meeting held at Henley on the 18th inst., a committee was appointed to consider a scheme for the establishment of an infectious diseases hospital for Henley and neighbourhood.

THE International Society for the Prevention of Blindness and the Amelioration of the Condition of the Blind has adjudged to Dr. Mules, Surgeon to the Manchester Royal Eye Hospital, one of two prizes offered for an essay on the "Causes and Prevention of Blindness."

DISUSED BURIAL-PLACES AS RECREATION-GROUNDS.—The Consistory Court of London has decreed that a faculty should issue to convert the disused burial-ground of West Hackney into a recreation-ground for the use of the parish.

AUSTRALASIAN SANITARY CONFERENCE.—The first meeting of this conference was held at Sydney on Sept. 17th. Various matters important to the colony were discussed, and a series of resolutions defining the scope of the body and the regulations which are to guide it were adopted.

AT an inquest held at Islington on the 18th inst., by Dr. Danford Thomas, on the body of Mr. John Barrow, Surgeon, who died from the effects of morphia which he had taken in the form of pills for the relief of sleeplessness, the jury returned a verdict of "Death from misadventure."

A PARISIAN jeweller has been fined fifty francs for homicide through imprudence, and ordered to pay 150 francs damages to the parents of a child whose death he had caused by piercing its ears for earrings too high up, the operation having been followed by inflammation.

DEATH FROM CHLOROFORM.—At an inquest on the 16th inst., at the Royal Surrey County Hospital, relative to the death of a man in that institution while under the influence an anæsthetic, the jury returned a verdict of death by misadventure through the administration of choloform.

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BOOKS ETC. RECEIVED.

ALLEN, E. W., London.
The Story of a Great Delusion, in a series of Matter-of-Fact Chapters. By Wm. White. pp. 627.
Forty-five Years of Registration Statistics, proving Vaccination to be both Useless and Dangerous. By Alfred R. Wallace, LL.D. pp. 38.

APPLETON & CO, New York.
Osteotomy and Osteoclasis for Deformities of the Lower Extremities. By C. T. Poore, M.D. pp. 187, with illustrations.

BAILLIÈRE, TINDALL, & COX, London.
A Manual of the Theory and Practice of Equine Medicine. By J. B. Gresswell, M.R.C.V.S. pp. 399.
Nature's Hygiene. By C. T. Kingzett, F.I.C., F.C.S. Second Edition. pp. 341.

BROWN & NOLAN, Dublin.
Lessons in Domestic Science. By F. M. Gallaher. pp. 243, with illustrations.

CHURCHILL, J. & A., London.
The Harveian Oration, 1884. By J. Russell Reynolds, M.D., F.R.S.
The Ear: its Anatomy, Physiology, and Diseases. By Chas. H. Burnett, A.M., M.D. Second Edition, rewritten. pp. 585, with 107 illustrations.

HEYWOOD, J., Manchester & London.
Health Lectures, delivered in Manchester in 1882, 1883, and 1884. Sixth and Seventh Series.

HIRSCHWALD, AUG., Berlin.
Vorlesungen über Pharmacologie. Von Dr. C. Binz. II. Abtheilung.

KEGAN PAUL, TRENCH, & CO., London.
The New Chemistry. By J. P. Cooke, LL.D. Eighth Edition, remodelled and enlarged. pp 400
Helps to Health; with a Chapter on Pleasure and Health Resorts. By Henry C. Burdett. pp. 249, with 19 illustrations.

KIMPTON, HENRY, London.
Nursery Hygiene. By B. B. Joll, M.B.Lond. pp. 109.

LEWIS, H. K., London.
Theory and Practice of Obstetrics. By Professors Cazeaux and Tarnier. Seventh Edition, edited and revised by R. J. Hess, M.D. pp. 1081, with 12 plates and 165 wood engravings.

MACMILLAN & CO., London.
Charley Kingston's Aunt. By Pen Oliver. pp. 316.

PENTLAND, YOUNG J., Edinburgh.
Practical Pathology. By G. Sims Woodhead, M.D., F.R.C.P.Ed. Second Edition. pp. 534, with 162 coloured plates.

PUTNAM'S SONS, New York & London.
A Pharmacopœia for the Treatment of Diseases of the Larynx, Pharynx, and Nasal Passages. By G. M. Lefferts, M.D. Second Edition. pp. 101, with illustrations.

SANITARY INSTITUTE OF GREAT BRITAIN.
Transactions of the Sanitary Institute of Great Britain. Vol. V., 1883-4. pp 400, with Appendix.

SHAW & SONS, London.
The Public Health, 1875, annotated; with an Appendix. By W. G. Lumley, Q.C., and E. Lumley, B.A. Second Edition, with extensive additions, by W. Patchett, Q.C., and A. Macmorran, M.A. pp. 1075.

SIMPKIN, MARSHALL, & CO., London.
A Monograph on Fever and its Treatment by Hydro-therapeutic Means. By the late J. M. Gully, M.D. pp. 96.

SMITH, ELDER, & CO., London.
Transactions of the Pathological Society of London. Vol. XXXV. pp. 509, with plates.
Dictionary of National Biography. Edited by Leslie Stephen. Vol. I. Abaddie—Annie. pp. 474.

De l'Intervention Chirurgicale dans le Traitement et le Diagnostic de la Vessie dans les deux Sexes; par le Dr. A. Poussou. (Masson, Paris)—It Won't Come Right; by F. S. J. B.—The Revival of Ovariotomy and its Influence on Modern Surgery; an Address delivered at Birmingham by Sir Spencer Wells. (Churchill).—The Law of Similars the Scientific Principle of Vaccination; by J. C. Burnett, M.D.—Facts about the Skin; by A. J. Neale, M.B.—Brass Repoussé Work; by Madame Amélie.—Public Opinion in Europe and the United States on the American Exhibition.—Revolution in the Practice of Medicine; by Dr. J. F. Banton.—Wasting in Infants; by T. C. Railton, M.D.—Soils and Sites; by Arthur Ransome, M.D.—Nature and Treatment of Blackwater Fever; by J. F. Esmon. (Gold Coast.)—Hints on Health to the Overworked; by Dr. Stewart.—Educational Almanack, 1885.—Eye Diseases of Children; by Surgeon G. C. Hall (Allahabad). Longmans' Magazine, Jan., 1885.—Dr. Koch's Method of Cultivating the Micro-organisms in Tubercle; by Charles Creighton, M.D. The Thames and the London Sewage; by J. C. Melliss, C.E.—Good Words Sunday Magazine for Jan. 1885.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BOOBBYER, PHILIP, M.R.C.S., has been appointed Medical Officer of Health to the Basford Rural Sanitary Authority, vice Buckby, resigned.

CLUBBE, WM. HENCHMAN, M.R.C.S., L.S.A.Lond., has been appointed Consulting Surgeon to the Lowestoft Hospital.

EWART, C. THEODORE, M.B., M.Ch.Aberd., has been appointed Assistant Medical Officer to Leavesden Asylum, vice Lloyd Francis, M.B.Oxon., M.R.C.S., resigned.

HEYGATE, W. N., M.R.C.S., L.S.A.Lond., has been appointed Surgeon to the Central or City District of the Bath Friendly Society, vice H. C. Hopkins, resigned.

KEALY, JOS. PATRICK, L.K.Q.C.P.I., L.R.C.S., has been appointed Medical Officer to the Hillstone Hospital, New South Wales; also Government Medical Officer and Public Vaccinator at Hillstone.

MACKENZIE, JOHN HUGH, F.R.C.S.Ed., has been appointed Government Medical Officer and Vaccinator for the District of Temora, New South Wales.

MASKEW, JOHN SHEPPARD, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for part of the Third District of the New Forest Union.

MASTERTON, JOHN, M.B., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Second District of the Alston-with-Garrigill, Parish, vice Jefferies, resigned.

MURRAY, H. MONTAGUE, M.D., M.R.C.P., has been appointed Assistant-Physician to, and Lecturer on Practical Medicine at, the Charing-cross Hospital.

RAY, JAMES, M.R.C.S., L.S.A.Lond., has been appointed Surgeon to the Lowestoft Hospital, vice Clubbe, resigned.

RICHARDSON, FRANK L. C., L.R.C.P., L.R.C.S.Ed., has been appointed Medical Officer to the Rhayder District and Workhouse, Rhayder Union, vice R. Richardson.

SALMON, ARTHUR GUY, M.B., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Fifth District of the Bodmin Union, vice Couch, deceased.

THURSTAN, Dr. HUGH C., has been appointed Resident Medical Officer to the Bristol Royal Infirmary.

WHITCOMBE, P. PERCIVAL, M.R.C.S., L.S.A.Lond., has been appointed Resident Obstetric Officer to St. Mary's Hospital, London.

Births, Marriages, and Deaths.

BIRTHS.

CLARE.—On the 19th ult., at Sutton's Pasture, Vere, Jamaica, the wife of Henry L. Clare, M.B., District Medical Officer, of a daughter.

STEVENSON.—On the 20th inst., at Camberwell-grove, Denmark-hill, the wife of Leader Stevenson, M.D., of a daughter.

THOMSON.—On the 18th inst., at Sinclair-road, West Kensington-park, W., the wife of G. Crawford Thomson, M.B., M.R.C.S., of a daughter.

MARRIAGES.

BUXTON—CLARKE.—On the 18th inst., at All Saints', Odiham, Hants, by the Rev. T. G. Clarke, M.A., Vicar of Odiham, father of the bride, assisted by the Rev. H. I. Wilmot Buxton, M.A., Vicar of St. Giles's in the Wood, Torrington, brother of the bridegroom, and the Rev. Prebendary Stephenson, M.A., Rector of Lympsham, and the Rev. W. Clarke, M.A., Vicar of Hook. Dudley Wilmot Buxton, M.D., M.R.C.P., son of the late Harry Wilmot Buxton, Esq., Barrister-at-Law, to Louisa Frances Agnes.

LOVELL—TICKLE.—On the 30th Oct., at the Cathedral, Sydney, N.S.W., Robert Haynes Lovell, L.R.C.P.Lond., M.R.C.S., eldest son of Major R. Haynes Lovell, of Barnstaple, N. Devon, to Florence Mary, daughter of J. B. Tickle, Esq., of Sydney.

STEELE—JOHNSTONE.—On the 17th inst., at the Church of St. Michael and All Angels, Bedford park, by the Rev. A. Wilson, M.A., Warwick Charles Steele, M.R.C.P., M.R.C.S., second son of Edward Steele, Esq., J.P., Wollaston House, Dorchester, to Eliza (Lizzie) Julia, fourth daughter of the late Robert Johnstone, Esq., M.D., of Trinidad.

TEEVAN—HALL.—On the 4th inst., at Trinity Church, Rathmines, Dublin, Thomas Teevan, Deputy Surgeon-General, to Elizabeth Jane, only child of the late Edward Hall, Esq.

WOMACK—CHRISTMAS.—On the 18th inst., at St. Mary's, Kilburn, Frederick Womack, M.B., B.Sc.Lond., second son of Jas. Womack, of Abbey-road, N.W., to Ada, only daughter of Walter Christmas, of Mowbray-road, Brondesbury, N.W.

DEATHS.

AYLING.—On the 19th inst., at his son's residence, 94A, Great Portland-street, Portland-place, W., William Henry Ayling, L.R.C.P.E., M.R.C.S.E., and L.S.A.Lond., aged 67.

BARROW.—On the 14th inst., suddenly, at 219, Tufnell-park-road, John Barrow, M.R.C.S., L.S.A.Lond., eldest son of the late Rev. John Barrow, aged 33.

DALBY.—On the 19th inst., at his residence, Belvedere House, Torquay, William Bennett Dalby, M.D., F.R.C.S.Ed., &c., aged 60.

LACY.—On the 18th inst., at his residence, Saumarez Lodge, Guernsey, Thomas Saumarez Lacy, Deputy Inspector-General of Hospitals, H.M. Indian Army (Retired), and for many years Garrison Surgeon at Agra, aged 68.

MAY.—On the 18th inst., at Great Crosby, A. P. May, M.R.C.S., aged 62.

TEBAY.—On the 20th inst., very suddenly, Thomas George Tebay, M.D., of 37, Belgrave-road, S.W., aged 69. R.I.P.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

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Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE EXTINCTION OF CHOLERA EPIDEMICS IN FORT WILLIAM.

THE insertion of Deputy Surgeon-General Marston's communication on the above subject is unavoidably postponed until next week.

Mr. Lewis Bishop.—We do not prescribe.

Mr. Greig-Smith's paper will appear in an early number.

"SCOTCH MEDICAL EDUCATION AND EXAMINATIONS."

To the Editor of THE LANCET.

SIR,—Will you grant me the space these few lines will occupy to enable me to correct a misstatement which appeared in the letter of Mr. E. K. Campbell, in your issue of Dec. 13th, under the above heading.

With commendable filial affection, Mr. Campbell lauds the glorious *alma mater* which gave him professional birth; but in the excess of his devotion at his particular shrine he scarcely does justice to the sister university of Aberdeen, though certainly not thereby impairing the force of his argument in the case of Scotch *v.* English schools. In Aberdeen we now enjoy the privilege of a separate paper in Pathology in the Final M.B., and, moreover, we may be said, strictly speaking, to possess the only Pathological Chair in the kingdom; for though Edinburgh must always be accorded the credit of being the pioneer in this most important by way of the *via medica*, yet her advantage only extends to the length of a lectureship, while our "Erasmus Wilson" Chair demands the sole and undivided attention of the Professor. And perhaps the fact that the same wise restriction from the distractions of private and hospital practice applies in the several cases of the professors of botany, natural history, physiology, anatomy, and chemistry (subjects which are the very foundation-stones of the truly scientific structure), entailing, as it does, closer personal supervision of the men's work by the most competent guide, and more opportunity for the practical "laboratory" exercise on which we northmen pride ourselves. I say this condition is not the least important of the factors which go to place Scotch university education in the foremost position we are pleased to believe it occupies. No one, not even the most infatuated and clannish of Scots, believes that we have a monopoly of perfection as regards either our mode of education or our method of examination; but those of us who have any knowledge of how these things are managed by the English corporations have certainly a strong prejudice against being reformed on their lines.—I am, Sir, yours truly,

Yeovil, Dec. 15th, 1884. A. ERNEST ROBERTS, M.B. Aberd.

To the Editor of THE LANCET.

SIR,—Looking over the correspondence in your issue of Dec. 13th, I was greatly surprised to read the statement made by Mr. E. K. Campbell, M.B.Ed., M.R.C.S. For his information, and to correct the erroneous impression he may have given to many of your readers, I beg to state that the University of Glasgow for many years has set a special paper in Pathology, and also holds an examination in Practical Pathology, whereby each candidate is required to mount and describe two pathological specimens. From this it is plain that the Edinburgh University is not the only examining board that now sets a special paper on Pathology, as stated by your correspondent.—Yours truly,

Glasgow, Dec. 16th, 1884. DAVID MOFFAT, M.C.S., C.M.Glas.

To the Editor of THE LANCET.

SIR,—Referring to Mr. E. K. Campbell's letter in your issue of to-day, I beg to state, as a graduate of Glasgow University, that he is wrong in supposing that Edinburgh University is the *only* examining body that sets a separate paper on Pathology. We have a separate written examination in Pathology at Glasgow, and a special oral examination, together with microscopical and naked-eye examinations of pathological specimens. I am, Sir, yours faithfully,

Guilford-street, W.C., Dec. 13th, 1884. ALEX. HOWIE.

Senex.—We are certainly of opinion that the distribution by book-post without special precautions of pamphlets on so delicate and difficult a question is, however well meant, to be condemned.

Dr. H. Neale is thanked.

N. E. D.—The lines are scarcely suitable for our columns.

COCAINE IN DIPSOMANIA.

T. G. T. is referred to an article by Freud, published in the "Centralblatt für Therapie," Wien, July, 1884. The article has also appeared in a separate form.

Chirurgeon is referred to our advertising columns for the information he desires.

SANITATION IN THE BEDROOM.

To the Editor of THE LANCET.

SIR,—Beds are occupied night after night, year after year, by divers persons in sickness and in health, in summer's heat and winter's cold, and as to when bedding is remade and purified each one can judge by his own experience? Compare this with the use of the South American hammock, which only requires a stout blanket inside, and in winter a woollen sleeping dress as well of suitable make—*i.e.* drawers, socks, and a loose jacket, all periodically washable. The sanitary difference becomes at once startling to those who have never considered the subject before. The South American hammock is made of the fibres of the young leaves of the ita palm (*Mauritia flexuosa*), so woven that it yields to every movement and projection of the body in every direction, except lengthways, in which direction the weight of the body establishes its own support, the same as in chairs with the loose canvas backs. Hammocks are very easy to get into and out of, and one cannot fall out of them when asleep. They should be swung the same distance from the ground as the seat of a chair. They form an excellent seat. Sitting down, one draws the back of the hammock up as high as one may desire. The proper way to get into a hammock—for there is a proper way—is first to sit down on it, and then throw the legs up and the back down, wrapping yourself up in its soft, elastic, and ample folds. The best way to lie is crossways. The position can be varied in three or four ways. The writer has passed several nights in such a hammock and blanket, exposed to the damps of a South American forest, and risen perhaps more refreshed than if he had slept in a bed. For bed-ridden people their use would be invaluable. Those who have been confined to a bed or water-bed for three or four months know how fatiguing and disgusting they become. In many cases in hospitals such hammocks would be real sanitary appliances. The hammock I have comes from the Essequibo Indians in British Guiana. I do not know why a similar mode of open weaving (more like knitting without the knots) of some material having the mellow feeling of the rush used in rush-bottomed chairs could not be managed in this country.

I am, Sir, your obedient servant,

Dec. 8th, 1884. TRAVELLER.

CASSAN *v.* FYFE.

To the Editor of THE LANCET.

SIR,—I enclose a copy of a resolution passed at the annual meeting of the Lincoln Medical Society, held on the 19th inst., when the above case was brought forward.—I am, Sir, yours truly,

Dec. 22nd, 1884. W. A. CARLINE, M.D., Hon. Sec.

"That the Secretary be requested to convey to Mr. Cassan the sympathy of this meeting with him in reference to the late trial at the Lincoln Assizes, and to inform him that a sum of £10 was unanimously voted towards defraying his legal expenses."

THE CASE OF DAVID BRADLEY, M.D.

WILL the correspondent who forwards a circular respecting the above kindly furnish us with his name and a report of the case?

STRANGULATED HERNIA IN AN INFANT THREE WEEKS OLD.

To the Editor of THE LANCET.

SIR,—The following case may be worthy of a place in your columns.

On Sept. 22nd, 1884, I visited a child three weeks old, for whom I had prescribed for symptoms of what the father described as "spasms." The child had been in great pain all night, and had been vomiting frequently; the abdomen was immensely distended with flatulence, and the child was evidently very ill; the skin of the face was pinched and shrunken. Over the right external inguinal ring, and into the scrotum, was a very evident hernial swelling, which, the parents said, was not present the previous day. Chloroform was given, and taxis fairly tried, but with no effect upon the hernia. I therefore arranged to operate as soon as possible, which I accordingly did the same evening, when, after thorough insensibility was produced, taxis was again tried, both by myself and my friend Mr. Arthur Shipton, whose valuable co-operation I had throughout; but we failed to produce reduction. On cutting down upon the tumour a very tightly strangulated direct inguinal hernia was brought into view. Reduction was impossible without opening the sac. The constricted portion of bowel was very dark plum-coloured, and formed a loop of about four inches in length. The division of the stricture was by no means easy, owing to the minute size of the tissues rendering it impossible to make good use of the finger in finding the stricture. However, with time and great care a director was passed under the constricting edge, and the stricture divided. Even then reduction was not at all easy, and the appearance of the bowel so tightly bent round on itself renders it easy to imagine that reduction without operation was out of the question. The further progress of the case was very gratifying. The sickness ceased, the bowels acted naturally the following day, and the child to-day (Nov. 11th) is looking extremely well. I would strongly advise any surgeon having a case of a similar nature to select daylight for operating. A similar case was related in THE LANCET of May 31st, 1884, by Dr. Dobbin, Bambridge, Co. Down. I am, Sir, yours truly,

Buxton, Nov. 11th, 1884. A. HASLEWOOD.

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Dr C. W. C. Madden-Medlicott.—We regret that we cannot publish our correspondent's able and interesting letter. Touching, as it does, on a very delicate phase of the subject, it would probably provoke an amount of correspondence and discussion for which we could not possibly find room.

Madame Belloc.—We think the best course would be to advertise.

INTESTINAL OBSTRUCTION.

To the Editor of THE LANCET.

SIR,—In common with no doubt most of your readers I have been much interested in the discussion on intestinal obstruction which lately took place at Liverpool. Reading the discussion reminds me of a case I attended in my practice three years ago. I have unfortunately mislaid the notes I then took; but the salient features of the case are distinctly present to me. It was the case of a woman fifty-eight years of age. When called to her she had pain, some tenderness, and slight swelling of the abdomen; there had been no motion of the bowels for four days previously. I commenced treatment by ordering poultices, rubbing the abdomen with belladonna ointment, and giving subcutaneous injections of atropine with soap enemata each night. This made no impression. I then ventured to give pills composed of two grains of subchloride of mercury with extract of hyoscyamine and soap. It was of no avail; the distension increased, and the prostration became very considerable. Morphia was given to allay pain, and ice to stop the almost incessant vomiting. This treatment, with some variation, was continued for twenty-eight days, and still there was no relief, the bowels remaining obdurate. By this time the distension was much increased, and the condition of the patient became very serious. To relieve the flatulence I punctured the bowel with a No. 1 trocar, and a few hours afterwards administered an enema of turpentine and castor oil. A slight quantity of fæces came away at the time, and on repeating the injection a copious evacuation took place, much to my delight. At intervals of a few hours several stools ensued, and a fortnight afterwards I had the gratification of seeing the patient walking about. But alas! for human hopes, about ten days after she had a relapse, through I believe some indiscretion in diet, and in the next ten days she sank from exhaustion, with all the appearance and symptoms of blood-poisoning from the absorption of morbid material from the bowels. I had not the opportunity of making an autopsy, I regret to say; but my experience has convinced me of the importance of puncturing the bowel in such cases, a point referred to by Dr. Rich. Another feature in the case is the length of time that may elapse without the issue being necessarily fatal. I may further refer to the tolerance of the alkaloid atropine, the doses I gave being much beyond the recognised limits of safety. I am, Sir, yours faithfully,

Nottingham, Dec. 22nd, 1884. COLIN MACMILLAN.

COMMUNICATIONS, LETTERS, &c., have been received from—Lady John Manners; Mr. Callander, London; Mr. Miller, Newport; Dr. G. M. Sternberg, Baltimore; Dr. Maunsell, Bath; Dr. Timothy Lewis, Bywood; Madame Belloc, London; Dr. Silvester, London; Mr. J. Abbott, Exeter; Dr. Laffan, Cashel; Mr. J. W. Pratt, Wiveliscombe; Mr. Douglas, Perth; Mr. W. A. Edgar, Dartford; Mr. Macmillan, Nottingham; Dr. Herschell, London; Dr. Lucas, London; Mr. R. Margerison, London; Dr. Finlayson, Glasgow; Mr. N. E. Davies, Sherborne; Mr. Runnalls, Saltash; Dr. Neve; Mr. Prosser White, Wigan; Dr. Carline, Lincoln; Mr. George Smith, Walton; Mr. G. S. Robinson, W.; Captain Hobson, London; Dr. Harding, Whittlesea; Dr. F. Page, Newcastle-on-Tyne; Mr. G. St. J. Oldham, Pontefract; Dr. F. J. Allan, London; Mr. Rockwell; Mr. Pentland, Edinburgh; Mr. Palmer, Weston-super-Mare; Dr. Rutherford, Dumfries; Dr. Mackintosh, Nairn; Mr. Codley, Norwich; Mrs. Tillett, Cheltenham; Dr. Deas, Exeter; Dr. Bramwell, Tynemouth; Messrs. Burgoyne and Co., London; Dr. Penny, Alfreton; Dr. Neal, St. John's-wood; Mr. Ponder, Bath; Dr. Brown, Gloucester; Messrs. Savory and Moore, London; Dr. Wise, Engadine; Mr. Clegg, Bolton: Mr. Islop, Church Stretton; Mr. Bilney, Oxford; Messrs Mackay, Edinburgh; Mr. E. W. White, Chartham; Mr. C. Day, London; Messrs. Paterson, Son, and Garner, London; Mr. Startin, London; Dr. T. D. Savill, Algiers; Dr. Sturges, London; H. N. W., Edinburgh.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Ker, Halesowen; Messrs. Boake and Co., Stratford; Dr. Archer, Bermuda; Dr. B. Meadows, London; Mr. Steele, Southsea; Mr. Ayling, London; Mr. Bindley, Dartmoor; Messrs. Reynolds and Co., Leeds; Mr. Howarth, Twickenham; Mr. Muras, Wolverhampton; Dr. Woodman, Exeter; Mr. Saunders, Camden-town; Mr. Guillanders, Fort Rose; Mr. Harper, Wigan; Dr. Home, Sandwick; Dr. Wells, Uxbridge; Mr. Peck, Sydenham; Mr. Shepherd, Haltwhistle; Mr. Crasweller, Clapton; Mr. Diggens, Lancaster; M.B.; Medicus, Oban; D. M.; Alpha; Argonaut; Lema.

Dawlish Times, Lowestoft Standard, England, Pontefract Telegraph, Pontefract Express, Babyhood, Young England, &c., have been received.

Medical Diary for the ensuing Week.

Monday, December 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M

Tuesday, December 30.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M., and on Fridays at 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall: The Sources of Electricity.

Wednesday, December 31.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, January 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall: The Sources of Electricity.

Friday, January 2.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M
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KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, January 3.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
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